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ENERGY EFFICIENCY AND CONSERVATION

HEARING

BEFORE THE

COMMITTEE ON ENERGY AND NATURAL RESOURCES UNITED STATES SENATE

ONE HUNDRED EIGHTH CONGRESS

FIRST SESSION

TO RECEIVE TESTIMONY REGARDING FEDERAL PROGRAMS FOR ENERGY EFFICIENCY AND CONSERVATION

MARCH 11, 2003

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CONTENTS

STATEMENTS

	Page
Blum, Jared O., Chair, Federal Energy Productivity Task Force	41
Garman, David K., Assistant Secretary, Energy Efficiency and Renewable Energy, Department of Energy	2
Keith, Erbin, Senior Vice President, Sempra Energy Solutions	24
Lynch, Paul, Assistant Commissioner of Business Operations, Public Buildings Service, General Services Administration, accompanied by Mark Ewing, Director, National Energy Center	8
McGuire, Joseph M., President, Association of Home Appliance Manufacturers, on behalf of the High Tech Energy Working Group	19
Murkowski, Hon. Lisa, U.S. Senator from Alaska	1
Nemtzow, David M., President, Alliance to Save Energy	11

APPENDIX

Responses to additional questions	47

ENERGY EFFICIENCY AND CONSERVATION

TUESDAY, MARCH 11, 2003

U.S. SENATE,
COMMITTEE ON ENERGY AND NATURAL RESOURCES,
Washington, DC.

The committee met, pursuant to notice, at 10 a.m. in room SD–366, Dirksen Senate Office Building, Hon. Lisa Murkowski presiding.

OPENING STATEMENT OF HON. LISA MURKOWSKI, U.S. SENATOR FROM ALASKA

Senator MURKOWSKI. Calling to order the Committee on Energy and Natural Resources. Good morning.

This hearing will take testimony this morning on energy efficiency and conservation programs at both the Federal and State levels. Energy efficiency and conservation are important elements of any national energy strategy. In the past 30 years, the U.S. economy has grown by 126 percent while our energy needs have only grown by one-fifth that rate.

Had we not become more efficient over the past three decades, we would need nearly 80 percent more energy to power today's economy than we do now. Federal Government programs and policies play an important role in making the Government more efficient through the Federal Energy Management Program, setting efficiency standards for appliances and other consumer products, and providing funding to States and local communities to improve their efficiency and conservation efforts. And we will hear about these programs this morning.

In last year's energy bill conference, the conferees agreed to a number of energy efficiency and conservation provisions. I think the committee will also be interested in hearing from today's witnesses their thoughts on that proposed agreement.

We have five witnesses with us today: The Honorable David Garman, the Assistant Secretary of Energy for Energy Efficiency and Renewable Energy—and I understand you will provide an overview of DOE's efficiency and conservation programs—Mr. Paul Lynch, Assistant Commissioner of Business Operations, GSA Public Buildings, to describe how the GSA is improving energy efficiency in Federal buildings and efficiencies; Dr. David Nemtzow, president of the Alliance to Save Energy, who will provide the Alliance's priorities in the area of energy efficiency and conservation—good morning—Mr. Joseph McGuire, president of the Alliance of Home Appliance Manufacturers, to discuss its views on the energy efficiency provisions agreed to in last year's energy conference; and

Mr. Erbin Keith, senior vice president, Sempra Energy Solutions, to describe the Energy Savings Performance Contracting program and its use in improving Federal energy efficiency.

I thank all of the witnesses for attending today and look forward to your comments. I will forgo an opening statement so that we can hear from the witnesses. And if any of my colleagues would like to make an opening statement, you are welcome to do so as part of your first round of questions.

Before we begin, I would like to inform members that the record will be open until 6 p.m. today in order to allow for members to submit questions to witnesses and provide statements for the record.

With that, Senator Bingaman, if you would care to make some opening remarks.

Senator BINGAMAN. Madam Chairman, I do not have opening remarks. I think it is an important hearing, an important set of issues. There is a lot we can do to improve energy efficiency and particularly in the Federal sector, and I look forward to hearing from the witnesses about what still remains to be done.

There are a lot of things we tried to do in last year's energy bill, when we were working on it on a bipartisan basis, and I hope very much we can enact those provisions that related to energy efficiency. I think there was good consensus to do so last year. And maybe we can improve on them based on this testimony.

Thank you.

Senator MURKOWSKI. Great. Thank you.

Well, with that then, we will go to the Honorable David Garman. Mr. Garman, your testimony please. Welcome.

STATEMENT OF DAVID K. GARMAN, ASSISTANT SECRETARY, ENERGY EFFICIENCY AND RENEWABLE ENERGY, DEPARTMENT OF ENERGY

Mr. GARMAN. Thank you, Madam Chair, members of the committee. I appreciate this opportunity to appear today to discuss the Federal programs for energy efficiency and conservation within the purview of my office.

An entire chapter of the President's National Energy Plan was devoted to the topic of energy efficiency and conservation. We believe that the easiest and least expensive place to find new energy resources for the Nation is to look first to areas where energy is currently wasted.

From 1972 to 2000, the energy used per dollar of GDP in the U.S. economy fell by roughly 40 percent. Had our energy intensity remained at 1972 levels, the United States would have used 171 quadrillion Btus of energy in 2000, rather than the 99 quads that we used. We estimate that 36 to 48 quads of the savings were attributable to energy efficiency improvements.

My office at the Department of Energy is working to continue this progress through a variety of approaches. For example, we manage important research and development. In partnership with industry, we have developed or advanced a number of important technologies ranging from low-e glass and highly efficient refrigerators to fuel cells. Second, we established minimum appliance standards. We have developed performance standards for a variety

of products including refrigerators, washing machines, and air conditioners.

Third, we promote energy-saving through the Energy Star Program. We use that program to build consumer awareness and develop technical criteria for products—a variety of products, working jointly with the Environmental Protection Agency. Fourth, we partner with States. We have established strong partnerships with the 50 States, the territories, the District of Columbia, including financial incentives and grant programs to promote the deployment of energy efficient technologies.

And finally we are leading by example through Federal actions. The Federal Government is the Nation's largest single energy user. We spend almost $8 billion annually on energy costs, and we operate over 500,000 buildings and 600,000 vehicles worldwide. Therefore, our Federal Energy Management Program or FEMP focuses on energy use by the Federal Government.

Between 1985 and 1999, the Federal Government as a whole reduced its energy use in buildings by more than 20 percent, thereby reaching and achieving its goal for the year 2000. The Government also saved more than $1.3 billion in 2001 in energy costs relative to 1985 and—much of which can be attributed to energy improvements.

But there is clearly more that we can and should do. For example, when we build new Federal buildings, we want to do a better job of incorporating smart design and energy-efficient technologies and more cost-effective renewable energy technologies.

Second, we must continue to make improvement in the Federal Government's existing building stock. Because agency budgets often have a tough time financing energy improvement projects, we support the use of privately-financed energy savings performance contracts and utility contracts to replace inefficient building systems with state-of-the-art equipment that will save both energy and money.

Alternative financing through the Energy Saving Performance Contracting, however, is in jeopardy because the statutory authority for that contracting will sunset on September 30, 2003 without legislative action. So we urge Congress in consideration of a comprehensive energy bill to extend this important authority.

We also need to promote greater efficiency in the products that the Federal Government purchases. The President highlighted an important energy saving opportunity when he personally became aware of the potential impacts of reducing so-called standby power, in many products that are being purchased by both consumers and the Federal Government. As a result, he issued an Executive Order requiring the Federal Government to purchase products that use minimal standby power.

As a result of this order and the purchasing power of the Federal Government, product manufacturers are subsequently introducing significant design changes that dramatically reduce standby power of products used by consumers and businesses throughout the world.

We also need to continue the progress we have made in improving the efficiency of the Federal transportation fleet and to promote the use of alternative fuels in those fleets. Executive Order 13149

directs the Federal agencies to reduce overall petroleum consumption in fleets by 20 percent by the year 2005. Some agencies—all agencies are taking that mandate very seriously. Some are even beginning to order advanced technology vehicles and are planning to order vehicles such as hybrids that do provide sufficient or significant energy efficiency benefits.

We will continue and improve these efforts in the years ahead and look forward to working with this committee and the Congress as we develop a comprehensive energy bill that touches on these efforts and many others.

Thank you for that opportunity, and I will be pleased to answer any questions that the committee has either now or in the future.

Senator MURKOWSKI. Thank you, Mr. Garman.

[The prepared statement of Mr. Garman follows:]

PREPARED STATEMENT OF DAVID K. GARMAN, ASSISTANT SECRETARY, ENERGY EFFICIENCY AND RENEWABLE ENERGY, DEPARTMENT OF ENERGY

Mr. Chairman and Members of the Committee, I appreciate the opportunity to appear today to discuss the Federal programs for energy efficiency and conservation within the purview of the Office of Energy Efficiency and Renewable Energy at the Department of Energy.

An entire chapter of the President's National Energy Policy was devoted to the topic of energy efficiency and conservation. The President has challenged us to continue the progress in improving energy efficiency in vehicles, in manufacturing and other industries, in appliances, in buildings, and in electricity power generation and transmission.

We have made tremendous progress in increasing the efficiency of energy used in our economy over the past 30 years. From 1972 to 2000, the energy used per dollar of GDP produced fell by roughly 40 percent. (In comparison, from 1949 to 1972, energy used per dollar of GDP only fell by about 10%). One-half to two-thirds of this reduction in energy intensity was due to improvements in energy efficiency, with the remaining one-third to one-half related to changes in the structure of the economy. Had our energy intensity remained at 1972 levels, the United States would have used about 171 quads of energy in 2000, rather than 99 quads, with energy efficiency improvements accounting for about 36-48 quads of the savings.

These savings are greater than the increase in energy supply since 1972, totaling about 26 quads, including changes in domestic production of coal (+8.9 quads), natural gas (–2.5 quads), oil (–7.6 quads), nuclear (+7.4 quads), and renewables (+2.2 quads); and increased imports of natural gas (+2.6 quads) and oil (+11.8 quads). Assuming the current average energy price of $6 billion per quad remained the same, these 36-48 quads correspond to savings of roughly $200-$300 billion per year. A recent National Academy of Sciences report notes that the EERE programs played a dominant or influential role in three of the technologies the considered to be among the most important energy efficiency innovations since 1978 (low-e glass, advanced refrigerators, and electronic ballasts).

Over the years, the private sector and state and local governments have demonstrated successes at improving energy efficiency on their own or with support from the federal government. I believe this is why the President's National Energy Plan wisely instructs us to rely on the combined efforts of industry, consumers, and federal, state, and local governments to improve energy efficiency, nationally.

The President's Energy Policy envisions six general strategies to guarantee America's continued growth and prosperity:

- First, we will aggressively reduce demand by employing energy efficiency technologies and encourage sound conservation measures as essential components of our energy policy.
- Second, we accept the fact that even the most aggressive energy efficiency and conservation programs will not, by themselves bring domestic supply and demand closer into balance. We must also increase energy supply, with special emphasis on domestic supply.
- Third, to enhance energy security, we must maintain a diversity of primary energy sources.
- Fourth, we must dramatically upgrade our national energy infrastructure to deliver energy from the source to the consumer.

- Fifth, we must accomplish these strategies while simultaneously building on our successful record of environmental protection.
- And sixth, we realize that our energy challenges will extend beyond 20 years. Therefore, we need to prepare for a future that moves us beyond current thinking about the sources and uses of energy.

The Federal Government, including the Department of Energy, is working to do its part. In my office, we are working to improve energy efficiency in a variety of important areas. For instance:

- In partnership with industry, we are making significant investments in research and development toward new energy efficiency products and processes.
- We have developed appliance standards that create reasonable but challenging efficiency guidelines for various products.
- We have worked to establish consumer awareness programs such as Energy Star that help market, promote, and create a demand for efficient products.
- We have established strong partnerships with the states; including financial incentives and federal grant programs to support states and localities.
- And we have lead by example in striving to meet energy efficiency targets that Congress has established for federal buildings and transportation fleets.

Today, I will elaborate on a few of our ongoing and new activities that will help promote greater energy efficiency and conservation. Before I begin, I'd like to highlight how the President's Management Agenda has helped us focus our resources and become better stewards of the taxpayers' dollars. For example, the R&D investment criteria help us guide budget decisions to ensure we fund only activities that can provide real public benefits and that the private sector would not undertake without our help. And the budget-performance integration initiative, through the Program Assessment Rating Tool (PART), has helped us to focus on continuing to improve our performance goals, and to identify program planning and management strengths and challenges.

Two years ago, the President's Management Agenda pointed out that Federal government R&D programs in general "do not link information about performance to our decisions about funding. Without this information, decisions about programs tend to be made on the basis of anecdotes, last year's funding level, and the political clout of local interest groups." This year, our funding request is in better alignment with what it will take to achieve our goals.

PROMOTING EFFICIENCY IN TRANSPORTATION

A top priority of my office is to work to dramatically reduce or eventually even end our Nation's dependence on foreign oil. The centerpiece of this effort is, of course, the FreedomCAR partnership and the President's Hydrogen Fuel Initiative. Because that was a subject of a hearing before this Committee last week I need not repeat my testimony from last week.

As important as we believe hydrogen is for the long term, however, we are still working, in cooperation with other federal agencies, to maintain a robust, and in some areas growing, research and development program in non-hydrogen transportation technologies.

Under the FreedomCAR partnership we have proposed a funding increase in fiscal year 2004 for our hybrid (gasoline-electric and diesel-electric) technology, as well as increases in materials technology. We believe many of these technologies will deliver fuel savings both prior to and after the introduction of fuel cell vehicles, since lightweight materials and hybrid technologies are expected to be incorporated into fuel cell vehicle designs. Therefore, these investments are expected to pay off in the interim, as well as over the long term.

In addition, we had a number of interim strategies in mind as we established specific, measurable performance goals for our program. And our FY 2004 budget is aligned with these goals. For example:

- We are working to develop technologies for heavy vehicles by 2006 that will enable reduction of parasitic energy losses, including losses from aerodynamic drag, from 39 percent of total engine output in 1998 to 24 percent;
- The 2006 goal for Transportation Materials Technologies R&D activities is to reduce the production cost of carbon fiber from $12 per pound in 1998, to $3 per pound; and
- The 2010 goal for Hybrid and Electric Propulsion R&D activities is to reduce the production cost of a high power 25kW battery for use in light vehicles from $3,000 in 1998 to $500, with an intermediate goal of $750 in 2006. Achieving these goals will enable hybrid vehicles to be more cost competitive with conventional vehicles in the marketplace.

Automakers are introducing technologies that have resulted in part from DOE's work in this area. At the recent North American International Auto Show in Detroit, the major U.S. automakers announced that they will have a variety of new hybrid gasoline-electric models entering the market in the 2004 to 2008 timeframe.

Of course, hybrid vehicles are still more expensive compared to conventional vehicles, which is why the President proposed a tax credit for hybrid vehicles in his National Energy Plan, and subsequent to that in his 2004 budget submission. We urge that Congress adopt this important incentive for more efficient vehicles.

IMPROVING ENERGY USE IN OUR FEDERAL BUILDINGS

The Federal Government is the nation's largest single energy user. We spend almost $8 billion annually on energy costs and operate over 500,000 facilities and almost 600,000 vehicles worldwide. Therefore, our Federal Energy Management Program (FEMP) focuses on energy use in federal government buildings and complexes.

The President's National Energy Policy recognized the role that the Federal government can play in helping make the United State the world leader in energy efficiency in the 21st century by directing that Federal agencies to conserve energy and to reduce energy use during peak hours, particularly in areas where outages are likely.

Federal agencies have already accomplished tremendous success in energy management. In response to Executive Order 13123, between 1985 through 1999, the federal government as a whole reduced its energy use in its buildings by more than 20 percent thereby reaching its goal for 2000, one year early. The Government also saved more than $1.3 billion in 2001 relative to 1985, in reduced energy bills, much of which can be attributed to energy improvements. But there is still much we can do. Let me highlight a few of the opportunities we have to lead by example.

It is much easier to incorporate and finance energy-saving technology in new construction compared to retrofits. So with every new building we build, we should incorporate smart design and energy efficient and renewable technologies. These buildings will show our commitment to saving energy, saving money, and protecting the environment.

The Federal government's existing building stock offers another opportunity for tremendous energy savings. We provide Federal agencies with access to technical assistance so that agencies can make wise choices as they consider options for retrofitting and upgrading their buildings. In some cases, when cost-effectiveness can be demonstrated, FEMP may recommend private sector financing, through energy savings performance contracts and utility contracts, to pay for these upgrades. FEMP provides agencies with easier access to these unique contracting vehicles. However, alternative financing through Energy Saving Performance Contracting (ESPC) is in jeopardy because the statutory authority will sunset on September 30, 2003 without legislative action.

The Federal government can also make a difference by making smart purchasing decisions. The Federal government spends more than $10 billion each year on energy-using equipment. According to a recent study conducted by Lawrence Berkeley National Laboratory, the Federal government could save at least $120 million in annual energy costs by 2010 just by buying energy efficient products that are readily available.

Executive Order 13221, issued by President Bush in July 2001, offers a compelling example of how, by working with industrial partners, the federal government's purchasing decisions can pull the market for energy efficient products. To help implement E.O. 13221, which requires the federal government to purchase products that use minimal standby power, FEMP initiated negotiations with office product manufacturers. As a result, office product manufacturers are introducing significant design changes that dramatically reduce the standby power of products used by consumers and businesses throughout the world. Through prudent product specifications and purchasing criteria, the federal government is encouraging the development of more energy efficient and renewable energy products and services.

Responding to E.O. 13221 the federal government will save approximately $10 million in annual energy cost savings. U.S. consumers will save approximately $210 million in annual energy costs. The federal government will save electricity equivalent to the amount needed to power approximately 18,000 homes. U.S. consumers will save electricity equivalent to the amount needed to power approximately 270,000 homes. Savings are expected to grow as low standby products become standard in the market.

The Federal Government can also reduce energy use through a continued focus on the supply side of the equation. Federal agencies invest in distributed energy resources to provide power closer to the point of use. These distributed energy tech-

nologies include fuel cells, microturbines, and biomass systems, to name a few. Using distributed generation, we increase the available supply, improve reliability, and reduce demand on our constrained power system. Many of these technologies can be used as combined heat and power systems—in other words, they can recapture heat that is otherwise wasted.

And, Mr. Chairman, we are also pursuing significant efforts to increase the energy efficiency of Federal fleet operations. One driver for this is Executive Order 13149, which directs Federal agencies to reduce overall petroleum consumption in fleets by 20 percent by the year 2005. To meet this goal, we are working with other agencies to improve the efficiency of fleet operations, increase the use of alternative fuel, and encourage the purchase of energy efficiency vehicles. Some agencies are ordering advanced technology vehicles such as hybrids. The Administration has also requested that agencies reduce the size of their fleets. While fleets for some agencies performing law enforcement and security activities are expected to increase, these increases will be more than offset by decreases in other agencies' fleets, as agencies begin to manage their fleet resources more efficiently.

BUILDINGS FOR THE FUTURE

Energy use by residential and commercial buildings accounts for over one-third of the Nation's total energy consumption—including two-thirds of the electricity generated in the U.S.—and costs the Nation about $240 billion annually. Improving the energy efficiency of buildings and equipment reduces energy consumption—especially during critical peak demand periods—which also reduces America's vulnerability to energy supply disruptions, energy price spikes and constraints on the Nation's electricity infrastructure. In addition, since energy for buildings also contributes one-third of urban air pollution and roughly a third of our carbon emissions, new energy efficiency technologies can have significant economic and environmental benefits.

With a growing population and increased amenities that require more energy, building energy consumption will grow from 34 to over 40 quadrillion Btu by 2020. Therefore, we are working on technologies needed for new generations of buildings that will be more efficient, comfortable and simpler to operate and maintain. Our office buildings, Federal buildings, homes, and stores can be more self reliant, less vulnerable to outages, adaptable to changing work requirements, and more responsive to users needs. Many could actually produce more energy than they consume by combining highly efficient design with solar, geothermal, and other distributed energy and cogeneration technologies.

Our Building Technologies Program, in partnership with industry, government agencies, universities and national laboratories, develops technologies, techniques and tools to make residential and commercial buildings more energy efficient, productive and affordable. Its portfolio includes improving the energy efficiency of building components and equipment as well as developing highly-efficient, whole-building, system-design techniques. The program also supports the development of building energy efficiency codes and national energy efficiency standards for appliances and building equipment; integrates renewable energy systems into building design and operation; and conducts technology transfer, education and information exchange. The program works to forge consensus on research directions and priorities, and industry-wide codes and standards.

Within our buildings research portfolio we have a new focus in 2003—solid state lighting—a new technology being developed to advance more efficient lighting systems. Consider the lights that illuminate this room. They are a major consumer of electricity. Nationwide, lighting consumes seven quadrillion BTUs or more in a given year, or 7 percent of all energy usage. Less efficient incandescent bulbs produce large amounts of heat that our climate control systems must manage, so we pay an additional energy penalty.

While modern florescent bulbs with electronic ballasts are more efficient, they remain glass nodules filled with gas not unlike the vacuum tubes of the last generation of electronics. The time has come to take the next step toward solid state lighting. The inorganic light emitting diode is to florescent lamps what transistors were to vacuum tubes, or what the automobile was to the horse-and-buggy. It's a revolutionary technological innovation that promises to change the way we light our homes and businesses.

APPLIANCE STANDARDS PROGRAM

Over the last year, the Department undertook a major analysis to respond to the National Energy Policy which directed continued support and expansion of the scope of the program for covered products, setting higher standards where technologically

feasible and economically justified. We completed a review of the standards program and identified residential furnaces and boilers, commercial central air conditioners and heat pumps and electric distribution transformers as high priority standards rulemaking activities. Further work in these areas is presently underway.

In addition, the Department identified energy savings opportunities for incandescent reflector lamps, torchieres, commercial refrigerators, vending machines, and ceiling fans and are assessing whether to expand the scope to include any of these products in the program.

DISTRIBUTED ENERGY AND ELECTRIC RELIABILITY PROGRAM

Distributed energy involves the use of relatively small-scale and modular energy generation devices installed onsite or near the customer's premise. Electric reliability involves the use of electric energy systems for addressing electricity transmission and distribution problems, including grid congestion, outages, power quality disturbances, and line losses. Technologies include industrial gas turbines, microturbines, reciprocating engines, chillers, desiccants (for humidity control), integrated energy systems and CHP, energy storage devices, utility interconnection equipment, transmission and distribution systems, communication and control systems, and high temperature superconducting materials and equipment.

To address regulatory and institutional barriers to the use of distributed energy and electric reliability technologies, the program conducts analysis, and education, and outreach activities in partnership with industry groups and Federal and State government agencies. The aim is to streamline siting, permitting, and interconnection procedures, accelerate distributed energy project development timetables, and lower installation costs.

The Distributed Energy and Electric Reliability Program works to strengthen America's electric energy infrastructure and provide utilities and consumers with a greater array of energy efficient technology choices for the generation, transmission, distribution, storage, and demand management of electric power and thermal energy.

The program contributes to several national energy and environmental goals. For example, expanding the use of distributed energy and electric reliability technologies upgrades America's aging electric power infrastructure, relieves congestion on transmission and distribution systems, reduces the use and increases the supply of electricity during periods of peak demand, and reduces environmental emissions, including greenhouse gases. The program supports EERE's strategic goal to increase the reliability and efficiency of electricity generation, delivery, and use.

Mr. Chairman, the Grid Study published last year called for the establishment of a new office of Electricity Reliability. We are now in the process of implementing that recommendation, and expect to be able to provide details on the structure and functions of this new office in the months ahead.

Mr. Chairman, I hope I have conveyed some of the elements of our vision of the future and how our programs are working to attain that vision. I will be pleased to answer any questions you may have.

Senator MURKOWSKI. Let us next go to Mr. Paul Lynch.

Mr. Lynch, your testimony, please.

STATEMENT OF PAUL LYNCH, ASSISTANT COMMISSIONER OF BUSINESS OPERATIONS, PUBLIC BUILDINGS SERVICE, GENERAL SERVICES ADMINISTRATION, ACCOMPANIED BY MARK EWING, DIRECTOR, NATIONAL ENERGY CENTER

Mr. LYNCH. Good morning. Madam Chairman, thank you for the opportunity to present testimony regarding Federal programs for energy efficiency and conservation.

The General Services Administration has a long history of supporting Federal energy efficiency in our facilities. We also recognize the importance of our unique leadership role as the Government's landlord in demonstrating energy efficiency and sound asset management. GSA's actions in the area of efficiency closely follow mandates set forth in public law and numerous Executive Orders; most recently President Bush's Executive Order 13221, and Executive Order 13123, Greening the Government through Energy Efficiency.

In fact, GSA annually develops an implementation plan to ensure that all the energy management strategies identified in the Executive Order are being pursued. Energy reduction and utility cost reduction goals are tracked as part of GSA's performance evaluation to the President on an annual basis. Results are also reported to GSA senior management on a quarterly basis. Senior management and regional senior management executives have energy performance included as part of their performance evaluation as well.

We believe we are making good progress. Since 1985, GSA has reduced energy in our facilities classified as standard by about 21 percent compared with the 1985 base year. This agency achieved this reduction by directly investing in Federal conservation opportunities with paybacks of 10 years or less. From 1990 through 2002, GSA has invested approximately $316 million in energy projects.

GSA has also reduced energy in our energy-intensive-type buildings, industrial and laboratory. We have actually reduced consumption by 37.2 percent compared with the 1990 baseline that was established.

GSA also benchmarks our performance with the private sector. We use a utility benchmark, established by the Building Owners and Managers' Association, and that index actually shows PBS is operating Federal facilities 34 percent below comparable commercial facilities for the same period ending fiscal year 2002.

GSA is also proud of our efforts to earn the Energy Star Building Label. To date, GSA has earned the Energy Star Building Label for 93 of its owned facilities and 1 leased facility. That approximates 28 million square feet, which is about 19 percent of our eligible square footage and 15 percent of our facilities agencywide.

GSA also has a well-developed strategy for providing leadership to energy efficiency. GSA's actions can be broken down into two key categories, leadership and management; and, secondly, energy efficiency performance and implementation strategies.

Under the management and administration piece, GSA created an energy management infrastructure, designated a senior agency official responsible for meeting the goals; that is me. We have also formed a technical team to—consisting of appropriate personnel to expedite and encourage the use of strategies identified in the various Executive orders and law.

GSA also utilizes a wide variety of management tools including such things as award programs for our associates, performance evaluations, training and education workshops and designation of our buildings as showcase energy facilities.

GSA activities in energy conservation are implemented and managed by a national Energy Center of Expertise. The Center, supported directly by GSA associates from all of our GSA regions across the country, are responsible for coordinating energy activities. The Center monitors and coordinates energy usage. They develop and implement energy savings projects. They leverage our purchasing power through national contracts and buys. They establish and manage Energy Savings Performance Contracts; and they develops annual implementation plans and strategies to achieve our goals.

I would like to take a minute to introduce Mark Ewing. Mark is the Director of the National Energy Center, and he really makes a whole lot of things happen at the Public Building Service.

The second broad category pertains to energy efficiency performance and implementation strategies. To know our portfolio and what our needs are, GSA maintains a 10-year audit plan in which we look at 10 percent of our space each and every year.

These audits identify energy conservation measures that may lead to future energy conservation projects or other viable alternatives, in addition to an energy conservation proposal. GSA associates have a wide array of tools to take action. They include energy projects, use of renewable energy, and sustainable building design.

Direct appropriations for energy savings projects in today's world are difficult to count on. I think everyone agrees with that. GSA is maximizing the use of available alternative financing contracting mechanisms as a strategy. To give you some sense, in 2002 GSA awarded a total of seven alternatively financed projects, all seven, which were ESPs. This brings the total to 23 ESPs and 19 service savings contracts with utilities currently active and in place.

We also have an additional 13 projects in various stages that will be awarded some time this year. The total dollars associated with this effort are approximating $179 million of private sector money.

GSA also considers opportunities for solar and other renewable energy in building design and retrofits. In fiscal year 2002, GSA received an estimated 3,200 million Btus in energy use from self-generated projects. Approximately 156 megawatt hours of this coming from 6 of our 6 Photovoltaic installations, 1,779 million Btus coming from GSA's 5 solar thermal projects.

We have also had very good success in purchasing renewable energy. In fiscal year 2002, GSA purchased a total of 24,306 megawatt hours of electricity from renewable energy through competitive power contracts and the use of green power.

Looking toward the future in our capital program, GSA requires all new buildings and all new major repairs and alterations of existing buildings to conform to the Leadership in Energy and Environmental Design, the LEED, rating, Silver requirements. The LEED, established by the Green Building Rating System, is a voluntary, consensus-based national standard for developing high-performance, sustainable buildings.

Members of the Green Building Council, representing all segments of the building industry, developed LEED and continue to contribute to its evolution. Our ultimate goal with the LEED program is to bring new buildings into our inventory that are energy-efficient, while optimizing the energy performance of our existing building inventory.

To close, GSA is committed to providing leadership to energy efficiency and conservation. Meeting the 30 percent reduction goal in our buildings by the year 2005 and 35 percent by 2010 is definitely hard work. We are in the process right now of issuing a national business strategy. It contains four tenets that will help our associates across the portfolio, actually make us successful in meeting our 2005 and 2010 goals.

With that Madam Chair, I would be pleased to answer any questions you or other members of the committee may have on this matter.

Senator MURKOWSKI. Thank you, Mr. Lynch.

Next, let us go to Mr. Nemtzow. Welcome.

STATEMENT OF DAVID M. NEMTZOW, PRESIDENT, ALLIANCE TO SAVE ENERGY

Mr. NEMTZOW. Thank you. Thank you, Madam Chairman and Senator Bingaman, and members of the committee for the opportunity for the Alliance to Save Energy to testify today.

We are a bipartisan, nonprofit coalition of business, government, consumer, and environmental leaders who promote energy efficiency.

Over 70 businesses belong to the Alliance to Save Energy because they understand that energy efficiency is the quickest, the cleanest, and the cheapest solution to our Nation's energy problems.

The U.S. Congress is faced with debating another energy bill, as you did in the last Congress, but things have certainly changed in the 2 years that this debate started. As you meet today, Madam Chairman, oil prices are at the highest levels we have seen since the Persian Gulf War and are probably headed higher. Gasoline prices have cracked $2 a gallon in most of the country for many of your constituents. And we are facing an oil problem as we have not seen in a decade.

And there are many reasons for that, but one of the underlying reasons, of course, is that our Nation's demand and supply are just out of sync with each other. The United States uses 40 percent of the world's gasoline. And that kind of pressure is changing the marketplace throughout the world.

The energy bill that the 107th Congress almost produced that you asked us to comment on is a good bill. The provisions in that that Senator Bingaman and that Senator, now Governor, Murkowski and the other committee members worked on together are all good provisions.

What is notable about that bill is not what is in it but, of course, what is missing. That bill failed to deal with fuel economy, and that failure will haunt the Nation for years to come, unless this Congress addresses it.

Senator Dorgan and President Bush and others have called for a major investment in hydrogen and fuel cells. That makes a lot of sense. That bill, S. 461, deserves this committee's attention.

But in addition to dealing with fuel cells and hydrogen, you need to deal with the shorter term problems. In addition to the defeat CAFE faced in the 107th Congress, the alternative approach that Senators Carper and Specter proposed, setting a blanket goal of saving 1 million barrels per day in the transportation sector was also defeated. That is unfortunate.

There are a variety of ways for the Senate to improve fuel economy without changing CAFE. I recommend we change CAFE. Even *Business Week*—if you have not seen this cover story from 2 weeks ago, I highly commend it. And even *Business Week* writes that this is completely doable. They write, "Raise car and truck MPGs, boost

that fuel economy to 40 miles per gallon, and oil savings will top 2 million barrels a day." Detroit says that is too high a goal, but the technology already exists to get there.

Business Week is right. But if the politics are not there, if the votes are not there, there is still a variety of measures that you can take to improve fuel economy. You can improve the efficiency of tires or set up a labeling system so that consumers can choose efficient tires. You can mend the dual fuel loophole, so that it is not continually abused. You can improve truth in CAFE testing, and certainly you can close the light truck loophole.

Beyond CAFE there are a variety of provisions, the clear tax incentives that Senator Hatch and others have introduced. Beyond that, there are additional tax incentives that you should consider, the R&D that we have heard about. And on the non-vehicle side, there are tax incentives, the Energy Star program, and let me add program education.

We are facing a national security—a homeland security crisis right now. And rightfully, Secretary Ridge is on TV and radio doing public service ads educating the public about those dangers.

We are facing an oil crisis in this country, an energy crisis, but Secretary Abraham is not doing public service ads to educate the public. They should be doing that. They should be increasing their public education effort to help consumers. They, consumers, already know about high oil prices. They need to know what to do about it.

Beyond oil, there are a lot of provisions. I want to just generally endorse the provisions that were worked out in the 107th Congress on Federal energy management, on appliance and equipment standards, the various new authorizations, and the tax incentives that came from Senate Finance. There are a few provisions you should consider this year.

I submit one is on the Federal energy side. Right now, energy service companies, like Mr. Keith's company, can bring in innovative contracts to buildings, to improve buildings with their private capital.

They are not authorized to do that outside the building sector. You should allow them to do it for transportation and for high energy facilities. So, for example, a Navy ship that wants to get new generators can use Mr. Keith's company or the many others in that industry, to swap that out.

They will lay out the capital. They will get paid back over time with the savings. That reform to get beyond the building sectors to the mobility sector deserves your attention and support.

Secondly, there is a matter on Federal energy management that has nothing to do with legislation, Madam Chairman. It is plain old oversight. When you are not having hearings, the managers at the Federal facilities—and I am not referring just to GSA, but throughout the Government, VA and Defense and Housing and Urban Development, they like to forget about this issue.

When the Executive Order goes away, when the President goes away, they forget about the Executive Orders. You need to have periodic oversight, send them letters, hold hearings, hold them accountable.

Federal energy management is a war of attrition. It is not a war that you will win with a single legislative change. So I encourage you to do that.

Again, thank you for allowing the Alliance to Save Energy to testify. We hope that you will pass the provisions that you passed in the 107th Congress and then add the missing provisions, particularly regarding fuel economy. Thank you.

Senator MURKOWSKI. Thank you. I appreciate your testimony.

[The prepared statement of Mr. Nemtzow follows:]

PREPARED STATEMENT OF DAVID M. NEMTZOW, PRESIDENT, ALLIANCE TO SAVE ENERGY

INTRODUCTION

Mr. Chairman, Senator Bingaman, and Members of the Committee, thank you very much for the opportunity to testify before you today about the role of energy efficiency in serving as the foundation of national energy policy.

My name is David Nemtzow. I am President of the Alliance to Save Energy, a bi-partisan, non-profit coalition of business, government, environmental, and consumer leaders dedicated to improving the efficiency with which our economy uses energy. Senators Charles Percy and Hubert Humphrey founded the Alliance in 1977; it is currently chaired by Senator Byron Dorgan and former CEO of Osram Sylvania, Dean Langford, with Senators Susan Collins and Jeff Bingaman serving as Vice Chairs.

Over seventy companies and organizations currently belong to the Alliance to Save Energy. If it pleases the Chairman, I would like to include for the record a complete list of the Alliance's Board of Directors and Associate members, which includes many of the nation's leading energy efficiency firms, electric and gas utilities, and other companies providing economic savings and pollution reduction to the marketplace.

The Alliance has a long history of researching and evaluating federal energy efficiency efforts. We also have a long history of supporting and participating in efforts to promote energy efficiency that rely not on mandatory federal regulations, but on partnerships between government and business and between the federal and state governments. Federal energy efficiency programs at the Department of Energy (DOE), the Environmental Protection Agency (EPA), and other agencies are largely voluntary programs that further the national goals of environmental protection, as well as broad-based economic growth, national security and economic competitiveness.

Mr. Chairman, one thing that nearly everyone agrees on is that an energy bill should be a balance between measures to increase energy supply and demand, energy production and energy efficiency. President Bush again led the energy section of the State of the Union address with efficiency. House and Senate leaders have been unanimous in their call for strong efficiency measures as a cornerstone of an energy bill. There seems to be no argument.

The only problem, Mr. Chairman, is that neither the President's Energy Plan, the House Energy Bill of 2001, nor the Senate bill of 2002 includes adequately strong energy efficiency measures. Each of those efforts amounted to missed opportunities whose great failing is that they aren't really going to change things significantly. There were good provisions that we strongly support, such as tax incentives for efficient products and practices, new products for which DOE is to set minimum standards, and better guidance for saving energy in federal facilities. But in the larger picture, the potential of energy efficiency to help our economy, our environment, and our national security was largely left untapped.

Mr. Chairman, my testimony will focus on what last year's Senate energy bill did right, and where it failed. I recognize that you are holding separate hearings on transportation, electricity, fuel cells and other topics that I will discuss in this testimony; I include them because it is impossible to discuss energy efficiency without discussing these and other issues.

OIL DEPENDENCE AND THE ECONOMY

Mr. Chairman, last year, even if the Conference Committee had successfully finished negotiations on the energy bill, it would have failed to propose any meaningful solution to our deadly dependence on foreign oil.

I know that no one in the United States today needs to be reminded of the —and growing—increase in oil prices that we're experiencing today (nor of our stubbornly high natural gas prices). Unfortunately, Americans may also soon be reminded of the simple fact of economic history that every significant oil price shock in our history has been followed by a recession.

A study by Oak Ridge National Laboratory estimates losses to the United States due to oil market turmoil—and the subsequent macroeconomic losses—at $7 trillion as of 1998. Such an incomprehensible figure doesn't even include the downturn that began with the gasoline price shock of 2000, nor does it count the losses that are mounting daily as prices at the pump and fuel oil terminals have shot to all-time highs throughout the nation.

While the uncertainty in Iraq and the Venezuela situation are the leading immediate causes of these increases, the key underlying cause is that over time U.S. and world petroleum demand is outstripping oil supply, pushing up crude and product prices for all oil consumers and depressing overall economic growth. That is why, Mr. Chairman, if—as holds a basic tenet of market economics—people acted truly in their rational economic self-interest, every CEO of a non-auto industry company would be in Washington, D.C. lobbying hard for an increase in fuel economy standards. They would be lead by airline and petrochemical firms, and followed by all others with a stake in our overall economic growth with the clear message that unnecessary and excessive oil dependence leads to oil price shocks which in turn slow the economy and send consumer confidence plummeting. They cut profits, put Americans out of work, and endanger the well-being of families and children.

The Alliance to Save Energy applauds President Bush's initiative to accelerate research into hydrogen fuel cells. It is potentially a long-term solution that can help wean us from this cruel addiction to oil. It is not, however, a sure thing. President Bush sounded hopeful that we would have fuel cell cars on the market in 16 years. That may be very optimistic. Mr. Chairman, in the late 1970s, scientists told us that large scale use of fusion energy was 40 years away. The common estimate is that it is still 40 years away. We sincerely hope that widespread use of hydrogen does not turn out to be another "fusion." But we cannot rely on that gamble.

Just last month, Senator Dorgan introduced S.461, the Hydrogen Fuel Cell Act of 2003 a plan that would not only invest $6.5 billion over 10 years to develop hydrogen fuel cells, stationary cells, and the necessary infrastructure, but also set bold targets and timetables for bringing those vehicles to market with the tax credits to help make that happen. Senator Dorgan's bill offers an aggressive Apollo-like program for a hydrogen and fuel cell future. But in the meantime, we must still ask the tough questions: what will it take to lessen U.S. oil dependence?

How do we get the auto industry to the table in a meaningful way? Congress can't seem to force them to do anything meaningful on fuel economy. Do we take $50 billion out of the multi-hundred billion dollar stimulus package to make their vehicles more efficient? Can the industry be coaxed—dare I say "bribed"—with such an incentive? Are there other things that can be done beyond CAFE standards to make a dent? Are the tax credits for hybrid and fuel cells cars big enough? Should they also promote super-high efficiency traditional internal combustion vehicles?

What will it take to solve the problem?

This great nation restructured its economy to win World War II and rebuild Europe. We built the atomic bomb and won the Cold War. We put men on the moon. We're the world's only superpower—not just militarily but in IT and medical technology.

Surely we can reduce demand for oil, and thus help to grow our economy, and that of the entire world. Lessening pollution and our deadly dependence on Middle East oil would seem a mere sideshow.

FUEL ECONOMY AND OIL DEPENDENCE

The fuel efficiency of America's vehicles is at a 22-year low and slipping, while our oil consumption continues to increase—rising 15 percent in the last decade.[1] Much of our oil comes from unstable, undemocratic regimes in the Middle East, many who have made the news lately as often as has Michael Jordan.

It has—once again—become apparent that OPEC is driving our oil dependence, and we gave them the keys.

As you know Mr. Chairman, last year, the Senate stripped out the only section of the energy bill that would have significantly saved oil an increase in the Cor-

[1] 1990 U.S. Oil consumption = 16,988 thousand barrels per day. 1999 U.S. Oil Consumption = 19,519 thousand barrels per day, *World Petroleum Consumption, 1980-1999*, Energy Information Administration, DOE.

porate Average Fuel Economy (CAFE) standards. Then, when Senators Carper and Specter introduced legislation that would have saved one million barrels a day by 2015, the Senate again denied Americans the chance to wean ourselves from our growing dependence on oil. But rather than go back and try to tackle this problem another way, Congress effectively chose to walk away from what is a bull's eye on our nation's economic and national security. Today, the auto companies just say no while Americans take the economic hit, despite the fact that enormous gains in fuel economy could be made affordably and safely just by better deploying existing technologies, as documented by the National Academy Sciences (NAS). Why?

The winning opposition to fuel economy standards says that they are listening to market forces—which consumers care more about false safety claims and onboard entertainment than the connection between their engines and our national security. National security and environmental protection may not be a top priority for American's when purchasing a vehicle. After all, Americans elect Congress to make decisions on these public issues, to make the tough decisions that will strengthen our hand against the oil-producing nations who hold us hostage and to protect us against the longer term problem of global climate change. Tough decisions that take many forms—CAFE is one proven effective way of reducing our oil dependence. In fact, the National Academy of Sciences said that the current fuel economy standards currently save America 2.8 million barrels of oil each day.[2] While some members of the Senate are clearly loathe to ask the automakers of this country to take any additional strides to protect this country, there are others who will. The Alliance to Save Energy continues to respectfully urge Members of this body to increase fuel economy standards.

Mr. Chairman, there are other means of increasing the efficiency of our fuel use and reducing our oil dependence without touching the fuel economy standard but by fixing the system upon which the standard runs.

One, Congress should establish standards for tires so replacement tires are as efficient as the tires are on a new car that drives off the lot, or even just a tire efficiency labeling system that would give consumers the information they need when they purchase replacement tires.

Two, Congress should ensure that the fuel economy credits for dual fuel vehicles actually represent dual fuel usage. Because these credits are currently provided to vehicles that rarely see alternative fuels, they have increased the consumption of oil 18.4 million barrels beyond what would have been consumed in the absence of the credit.[3] That loophole should be mended, or if not, ended.

Three, Congress should require the testing procedures for the fuel economy of vehicles to represent real-world driving and call for "truth in testing" of the mileage ratings on vehicles.

Four, and perhaps most importantly, Congress should consider allowing automakers greater flexibility by ending the light truck loophole, as Senators Feinstein and Snowe and others have called for, and adopting a single standard for all of a manufacturers' vehicles.

Mr. Chairman, we are certainly not asking automakers to stop selling SUVs—just put the technologies currently available into these vehicles so that consumers who want to purchase a light truck can purchase an efficient one. It's that simple. Manufacturers are currently using high efficiency technologies that could significantly and cost-effectively increase the fuel economy of their passenger cars and light trucks. Over the past few years, we have seen more hybrid electric vehicles on the road, and more manufacturers are finding an increase in consumer demand. Sport utility vehicles and other light trucks are incorporating this new technology. In January 2003, General Motors Corp. announced that it will offer optional hybrid powertrains on several of its most popular models including trucks, SUVs and midsize sedans starting in late 2003.[4] In the same month, Toyota announced the first hybrid luxury vehicle in America, the Lexus RX SUV, will be offered in about two years and will play a role in Toyota's plan to "bring 300,000 new hybrid vehicles to market annually by mid-decade"[5] Ford is testing their Escape hybrid, an SUV hybrid with a fuel economy of "nearly 40 miles per gallon" that will "offer the same functionality and performance of the base product, including ensuring that the hy-

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[2] *Effectiveness and Impact of Corporate Average Fuel Economy Standards*, National Research Council, July, 2001

[3] U.S. Department of Transportation, U.S. Department of Energy, U.S. Environmental Protection Agency. ″Report to Congress: Effects of the Alternative Motor Fuels Act CAFE Incentives Policy,″ March 2002, Table V-4.

[4] http://www.gm.com/company/gmability/environment/road—to—future/adv—tech—vehicles/tomorrows—hybrids

[5] http://129.33.47.206/about/environment/news/index.html

brid's unique regenerative braking system delivers the same functionality and feel that have made Escape's brakes best in their class," according to Mr. Pahokee Patel, chief engineer for the Escape hybrid.[6] With this new light truck surpassing most passenger cars in fuel economy, there is no technological reason not to require a significant increase in fuel economy standards for all light trucks.

Unfortunately, without higher CAFE standards such technological and marketplace progress will be intermittent at best, and will not lead to improvements across the fleet of cars, SUVs, pickups and minivans.

There are also vehicle, engine, and transmission technologies that can boost traditional internal combustion engines fuel economy, both safely and cost-effectively. There is a great deal of improvement that can be made to increase the energy efficiency of today's cars and light trucks. About two-thirds of fuel energy is lost in the operation of our vehicles, much of that waste can be curtailed through efficient design and technology. In fact, the NAS report notes over two-dozen current and emerging technologies that can help to increase vehicle fuel economy. Many of these—such as variable valve control engines, lightweight aluminum engines, five-speed automatic transmissions, continuously variable transmission, and light weight materials—are being used in some cars and light trucks today. In addition, there are other technologies, such as turbochargers,[7] which could make significant improvements in fuel economy if used more widely to increase fuel efficiency while lowering emissions and providing more power. Turbochargers can increase fuel economy and results in emissions reductions in CO_2 and NO_X of approximately 20 percent. An engine with a turbocharger may have a power output that's as much as 40 percent higher than it would be without a turbocharger—delivering the same power with a smaller engine without having to reduce vehicle size.

Of course, rather than set standards for auto companies it is possible to directly affect consumers' calculus through price signals, such as by applying higher gasoline taxes. A gas tax—incorporating the externalities or the cost to the environment, our national security, and health impacts into the fuel—would force the consumer of the fuel in question to pay the consequences of its consumption. Yet, gas taxes are far more popular with economists than politicians, as Americans have been spoiled by artificially low gas prices. In the U.S., a gallon of gas is still cheaper than a gallon of milk and about half the price of a large latte in the "CUPS" coffee shop in the basement of Russell—yet as gas prices go over $1.50 and perhaps even $2, cries are heard around the country. And those cries will be heard this spring as retail gasoline prices are expected to set an all-time high with the U.S. Energy Information Administration predicting a peak of $1.76 a gallon as a national average next month beating the May 2001 record.

Rather than making automakers to do the right thing through standards or convincing consumers through price signals, we can entice their progress through tax credits. This is not, in anyway a replacement for standards. Unless otherwise legislated, auto companies will still be taking fuel economy credits for making the vehicles on which consumers get a tax break. Senator Hatch and others reintroduced the bi-partisan CLEAR Act this year to provide tax credits for the purchase of high efficiency, advanced technology and alternative fuel vehicles. Not only did this legislation receive support from members of the environmental community and auto companies, but it was bi-partisan legislation largely incorporated into the Senate-passed version of H.R. 4 last year at a cost of a mere $1 billion over five years.[8] Mr. Chairman, can't we do more? With a national oil import bill of over $100 billion dollars per year,[9] we seem to be sending money overseas to purchase oil rather than putting it into the pockets of Americans to spend or invest closer to home. Mr. Chairman, I encourage you and your colleagues to pass a tax credit for high-efficient, environmentally friendly vehicles this year.

PRODUCT STANDARDS AND VARIOUS AUTHORIZATIONS

Mr. Chairman, the federal appliance energy efficiency standards program began in 1987 and has been tremendously successful in saving energy, reducing pollution, and saving consumers money. At a cost of roughly $10 million annually to the federal government, the standards program, through the year 2000 had reduced U.S. electricity use by 2.5 percent (88 billion kwh annually) and reduced peak generating demand by approximately 21,000 megawatts. Even greater energy savings potential remains. By the year 2020, projected savings are expected to reduce U.S. electricity

[6] http://www.hybridford.com/index.asp
[7] Honeywell's Garrett Engine Boosting Systems, http://www.egarrett.com
[8] http://www.house.pov/ict/x-44-02.pdf.
[9] Alliance to Save Energy estimate based U.S. Department of Energy, Monthly Energy Outlook.

consumption by 7.8 percent enough to displace 240 large (500 MW) fossil fuel power plants and reduce carbon emissions by 75 million metric tons. At the same time, consumers will save $186 billion about $1,750 per household.

We urge the Committee to include the package of standards agreed to last year by the House-Senate Conference Committee on H.R. 4. That package was composed of consensus energy-efficiency standards negotiated between energy efficiency interest groups, including the Alliance to Save Energy, and the manufacturers of the products proposed for regulation. The agreement would have established standards, in law, for: torchiere lamps, dry-type transformers, exit signs, and traffic lights. It would also have required DOE to establish standards through rulemakings for: ceiling fans, commercial refrigerators, vending machines, unit-heaters, and so-called "vampire" or "stand-by" energy use by certain products that consume energy even when they are turned off. It was estimated that enactment of this package would result in cumulative energy savings from 2002-2020 of 12.8 Quads,[10] making it the single most powerful energy savings element agreed to in last year's conference. The annual savings in the year 2020 were estimated to be 100 Trillion Btu, and the resulting reduction in carbon emissions were estimated at 21.4 million metric tonnes.

There are several additional standards that are currently under discussion with manufacturers, such as a standard for compact fluorescent lamps. These lamps have dramatically reduced the amount of electricity needed for lamps designed to accept the standard screw-in incandescent bulb. However, further work may be needed to assure that products meet acceptable quality and reliability standards. Negotiations are underway between energy efficiency advocates and manufacturers to develop standards to resolve these concerns on a consensus basis. We ask the Committee to be open to including any agreement that may be reached in the coming months so that consumers can be assured not only of energy savings but of quality and reliability.

Finally, we fully support and urge your inclusion of the other related provisions agreed to last year that would:

- authorize the Next Generation Lighting Initiative and the Energy Star Program;
- improve energy efficiency in the industrial sector by establishing voluntary reduction targets in industrial energy intensity;
- establish a program for consumer education on the benefits of air conditioning, heating and ventilation maintenance;
- authorize federal support for energy efficient appliance rebate programs;
- direct a rulemaking on the effectiveness of consumer product labeling by the FTC;
- direct a study by the National Academy of Sciences on whether the goals of energy efficiency are best served by measurement of energy savings at the site of energy consumption or through the full fuel-cycle; and
- encourage federal participation in state and regional demand reduction programs.

FEDERAL ENERGY MANAGEMENT

Since 1995, the Alliance to Save Energy has brought together private-sector companies and organizations with an interest in cutting federal government energy waste as the Federal Energy Productivity Task Force. I have already submitted the full testimony of the Chairman of the Task Force, Mr. Jared Blum, for the record and to summarize those views that also represent the position of the Alliance.It is important that the federal government lead the nation in energy efficiency by setting an example for wise energy use in its own facilities and operations. Few federal programs have been as cost-effective as the U.S. Department of Energy's Federal Energy Management Program (FEMP). At an average cost of $20 million per year, FEMP has helped cut federal building energy waste by nearly 21 percent from Fiscal Year 1985 to Fiscal Year 1999 a reduction that now saves federal taxpayers roughly $1 billion each year in reduced energy costs. Again, we urge the Committee to include the package of provisions that were agreed to in last year's Conference Committee on H.R. 4 including:

1. updating agency energy reduction targets;
2. extending and expanding Energy Savings Performance Contract (ESPC) authority and including water savings and new replacement buildings;
3. requiring cost-effective metering so that federal energy officials can know what to measure and manage;

[10] Analysis by the American Council for an Energy-Efficient Economy, Washington D.C.

4. increasing performance standards for new federal buildings;
5. strengthening federal procurement requirements; and
6. increasing federal fleet fuel-economy requirements.

We commend Senator Bayh for his introduction of S. 1358 last Congress, the "Federal Facility Energy Management Act" and Senator Bingaman for including many of its provisions in the Chairman's mark.

In addition, the Alliance and the Task Force respectfully urge the Committee to include a provision to further expand the authority for ESPCs. Since 1992, nearly $1.1 billion in private-sector capital has been invested in energy improvement projects in federal government buildings. Given this success, it is now time to determine whether the ESPC model can be applied to projects outside of federal buildings—to transportation, where over half of federal energy use occurs, as well as to energy-intensive operations.

There are uncertainties in how ESPC contracts would need to be modified in response to the differences between building and transportation (or "mobility") energy efficiency projects. Accordingly, we urge the Committee to authorize a pilot program that could gauge the level of interest in such expanded ESPC authority and that would allow agencies and private-sector partners to work-through the necessary contract modifications for a range of typical non-building projects. The testimony of Mr. Blum sets forth this proposal in detail, including draft legislative language.

The potential savings and benefits of the proposal are enormous. In a recent article, Amory Lovins, who was a member of the Department of Defense Science Board Task Force on Increased Fuel Efficiency,[11] stated that the potential for DOD fuel savings alone are "upwards of ten billion dollars a year . . ." Given the success of the ESPC program, and the potential benefits from its expansion, we look forward to working with the Committee to determine its feasibility through this proposed pilot program.

ELECTRICITY

The other big ticket area that Congress failed to incorporate energy efficiency is in the electric sector. Senator Bingaman had a provision in his original energy bill that could have saved upwards of 100,000 megawatts and drastically reduced the number of new power plants that will need to be built over the next 20 years to meet spiraling demand for power. It would have created a fund that would help more states invest in efficiency as more than twenty are doing on their own. But again, many utilities and others just "said no", and huge potential savings in the electric sector with significant reductions in carbon emissions will go unrealized because Congress ceased to consider energy efficiency in the debate over an electricity title.

Again we need to keep asking the question, what will it take? If we do truly believe in energy efficiency—as nearly all say they do—we must keep working to find a mechanism that will help capture the potential saving that are available. How do we continue to change out end use technology that is wasteful and obsolete? Would a standard of increasing energy efficiency by 1 percent per year by utilities be unreasonable? How do we accelerate the adoption of new, more efficient generation and transmission technologies? Can't we simultaneously stimulate investments in the grid that would make it "smarter", more demand responsive, more energy-efficient in moving electricity—and all the while more reliable? How do we capture available efficiency gains in the electric system?

Mr. Chairman, I hope this is an oversight we can correct in the energy bill expected from your Committee.

TAX INCENTIVES

As I mentioned earlier, Mr. Chairman, the Alliance to Save Energy is strongly supportive of the package of tax incentives for energy efficient products and practices put forward by the Senate Finance Committee last year. We commend and thank the leadership last year of three Members of the Senate Finance Committee in particular, Senators Bingaman, Snowe and (Frank) Murkowski. We are confident that these provisions will help transform markets particularly in the homes sector—to greater embrace energy efficient technologies and practices.

Tax credits for highly efficient new homes will show home builders across the nation that incorporating energy-efficient technologies into homes is neither as difficult nor as expensive as they now think it is. Tax credits to upgrade the efficiency

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[11] *More Capable Warfighting Through Reduced Fuel Burden*, The Defense Science Board Task Force, Washington D.C. January 2001.

of existing homes will get homeowners back into the business of plugging leaky houses and help them cope with severe volatility in natural gas and heating oil markets. Tax credits for highly efficient refrigerators and clothes washers will encourage the manufacture and purchase of energy and water-saving appliances. The commercial buildings deduction will give business owners the incentive to outfit their commercial space with energy efficient equipment, and thus save money in the process. The list goes on, including highly efficient appliances, fuel cells, combined heat and power, advanced meters, vehicles, and others.

CONCLUSION

A comprehensive national energy policy must seize the opportunity to exploit energy efficiency in each of these critical areas. Public opinion is overwhelming that a true effort to increase efficiency is desired by the nation. Many times, Mr. Chairman, I have sat in hearings and listened to Senators and Representatives say that, despite our best efforts at energy efficiency, we still need to focus on production. I do not now, nor have I ever said that energy-efficiency can do all that needs to be done to provide for the energy needs of this country. I will say, however, that—as a nation—we have not even begun to give our best effort to make our economy more efficient.

We will need new energy production in this nation but not before improved energy efficiency. A balanced, comprehensive energy policy must take aggressive steps to save energy wherever it is cost-effective and feasible. Energy-efficiency is our second largest energy resource, but it should be our first energy priority.

Thank you again for the opportunity to testify before your Committee today. And I thank you Mr. Chairman for your career-long commitment to energy policy and for this and the extensive series of hearings that you are holding this year. I am happy to address any questions you might have.

Senator MURKOWSKI. Mr. McGuire.

STATEMENT OF JOSEPH M. MCGUIRE, PRESIDENT, ASSOCIATION OF HOME APPLIANCE MANUFACTURERS, ON BEHALF OF THE HIGH TECH ENERGY WORKING GROUP

Mr. MCGUIRE. Thank you, Madam Chair, members of the committee.

My name is Joe McGuire, and I am president of the Association of Home Appliance Manufacturers. We represent manufacturers of major, portable, and floor care appliances. I am here today on behalf of a broad-based coalition of consumer, business, and technology product manufacturing associations and companies.

Our members include AHAM, the Air-Conditioning and Refrigeration Institute, the American Electronics Association, the Association for Competitive Technology, the Consumer Electronics Association, the Electronic Industries Alliance, the Gas Appliance Manufacturers Association, the National Electrical Manufacturers Association, the Information Technology Industry Council, and many of our individual member companies.

We are here today to testify about the energy efficiency title that the committee will consider in the emerging energy legislation. We support strong, national energy legislation, and many of our groups have worked hard for its enactment.

We are pleased to report that as the process moved forward last year, the Congress developed mostly balanced and appropriate provisions with a mix of voluntary, incentive and regulatory programs. We are also pleased to report that in general, with the exceptions I will discuss, we are supportive of the energy efficiency provisions adopted in the House-Senate Conference last year. However, there are important improvements which will protect the technology and manufacturing sectors of our economy while enhancing overall energy efficiency.

The balance to be struck is to motivate and move these sectors to improve energy efficiency, where it can be done on a cost-effective basis and benefit consumers.

Let me specifically discuss how last year's conference agreement on energy efficiency met those criteria in part and where it can be improved.

The first area concerns standby power. There are undoubtedly opportunities for improving energy efficiency in some product applications, but the significance of standby energy use and opportunities for improvements have been grossly exaggerated. Many standby modes for products are situations where the product is engaged in a secondary but nonetheless significant function such as timing, monitoring and recharging.

Arbitrary limitations to 1 watt or any other level threaten the functionality, reliability, and economies of these products. The standby provision adopted by the conference last year was essentially that developed by this committee on a bipartisan basis, and we believe that it is reasonable and useful.

Let me turn to energy standards. The appropriate level for energy regulation of products manufactured for and distributed on a national basis should be at the Federal level, if at all. The essence of legislation such as the National Appliance Energy Conservation Act, EPACT, is that Federal standards were either legislated or required to be developed by DOE in exchange for virtual absolute preemption of State standards except under extremely narrow circumstances.

The committee's legislation last year contained a number of new product standards and rulemakings for product standards, mostly supported by industry as well as advocates. The Coalition proposes to add to that list some additional products and to specify standards.

Legislation is pending in a number of States to impose standards, testing, paperwork and other requirements on those products thereby impeding interstate commerce. It is economically disruptive for manufacturers to meet diverse State standards. In order to avoid severe ruptures or balkanization of interstate commerce, it is necessary for the Federal Government to preempt the field.

When the Congress enacts a legislative standard, it is appropriate that preemption be immediate and absolute upon the date of enactment of the legislation. Where DOE is undertaking a rulemaking and is clearly moving towards filling a regulatory vacuum, we propose that preemption occur on the date in which an advance notice of proposed rulemaking is issued.

In this way, national economies of scale can be maintained for product manufacturer, distribution and sale but the benefits of energy efficiency through regulation can be achieved.

With regard to Energy Star, we support the first-time statutory authorization and expansion of Energy Star, which has become a powerful market force in many product segments and has been incorporated into Federal and State procurement, utility incentive programs and tax credits. However, we are concerned that as Energy Star has grown up, it has not enhanced its procedures for public and partner input into decisions.

We support language which would require the Energy Star agencies, namely EPA and DOE, to develop public plans, including those establishing criteria for expansion and program implementation, and to solicit stakeholder input on new and revised product categories, and to respond to those comments.

We have been troubled about undue reliance on contractors and lack of transparency and responsiveness. The program can remain agile and flexible while allowing for more accountability. I will note that DOE has made some important adjustments in the past year in moving Energy Star toward a more sophisticated program that deals with a much broader constituent base.

Let me lastly turn to energy labels. We recommend that in addition to considering what new products should use energy labels and whether the current labels should be revised, that FTC also be asked to consider whether the labels have become obsolete for certain product categories. Where Energy Star has become predominant in the marketplace, it may be that the yellow labels are no longer effective or needed.

Lastly, a new, modest but potentially significant program was developed in the Senate legislation and adopted by the conferees last Congress. Under this program, DOE would match to specified levels, State funding of qualified appliance rebate programs to encourage the purchase of highly efficient products.

We support this market-oriented approach in light of a number of active State programs, which could be even more effective with Federal partnership assistance.

I thank you for your time and would be happy to answer any questions.

Senator MURKOWSKI. Thank you. I appreciate your time this morning.

[The prepared statement of Mr. McGuire follows:]

PREPARED STATEMENT OF JOSEPH M. MCGUIRE, PRESIDENT, ASSOCIATION OF HOME APPLIANCE MANUFACTURERS

Mr. Chairman and Members of the Committee, thank you for providing us the opportunity to testify. My name is Joe McGuire and I am President of the Association of Home Appliance Manufacturers (AHAM). We represent manufacturers of major, portable and floor care products. I am here today on behalf of a broad-based coalition of consumer, business and technology product manufacturing associations and companies. Our members include AHAM, the Air-Conditioning and Refrigeration Institute, the American Electronics Association, Association for Competitive Technology, the Consumer Electronics Association, the Electronic Industries Alliance, the Gas Appliance Manufacturers Association, the National Electrical Manufacturers Association, the Information Technology Industry Council and many of our member companies.

We are here today to testify about the energy efficiency title that the Committee will consider in the emerging energy legislation. We support strong, national energy legislation and many of our groups have worked hard for its enactment.

Our working group was formed in 2002 when it became clear that a coordinated product manufacturer voice was important to help develop balanced legislation. We are pleased to report that as the process moved forward last year the Congress developed mostly balanced and appropriate provisions with a mix of voluntary, incentive and regulatory programs to improve the overall energy efficiency of products offered to American consumers and businesses without impairing product utility or restricting developing technology. In general, with the exceptions I will discuss, we are supportive of the energy efficiency provisions adopted in the House-Senate Conference last year. However, there are important improvement, which will protect the technology and manufacturing sectors of our economy while enhancing overall energy efficiency.

We are guided by the principle that all sectors of the American economy should share in improving energy efficiency. The industries and companies represented here have been promoting energy efficiency for many decades and have invested heavily to make dramatic improvements in their products. These improvements have been driven by the marketplace, voluntary initiatives and incentives, Energy Star, and, in some cases, standards. The balance to be struck is to motivate and move these sectors to improve energy efficiency where it can be done on a cost-effective basis but not overburden sectors which already are suffering in a poor economy, adversely impacting their economic well being, competitiveness and the critical benefits that their products bring to the world and the U.S. economy today and in the future. Let me specifically discuss how last year's Conference agreement on energy efficiency met those criteria in part and where it can be improved.

ENERGY STANDARDS RESTRICTING STANDBY POWER USE

Advocates and consultants, looking for fresh ideas to stimulate regulatory mandates as well as new consulting contracts, have promoted globally in the last three years the idea that there are huge amounts of energy being consumed in so called standby power mode which can be easily and without much cost eliminated. This "one size fits all" thinking has resulted in mantra-like cries for limiting so-called standby power losses to one Watt for literally thousands of product categories.

There are undoubtedly opportunities for improving energy efficiency in some product applications but the significance of standby energy use and opportunities for improvements have been grossly exaggerated. Many standby modes for products are situations where the product is engaged in a secondary but nonetheless significant function such as timing, monitoring and recharging and is not actually in standby at all. For example, an air conditioner or furnace thermostat is monitoring the temperature of conditioned space when the unit is not operating.

Arbitrary limitations to one Watt or any other level, applying to everything from baby monitors, smoke detectors to complicated computing functions, threaten the functionality, reliability and economics of these products. A dishwasher in standby, for example, may be waiting until non-peak load periods to initiate operation, thereby helping to shave peak load.

This Committee is to be commended for recognizing the irrationality of the calls for across-the-board new regulations and for developing last year a well-balanced provision which allows DOE, in consideration of its other priorities, to evaluate rationally where there may be opportunities to reduce standby use. Any possible regulation, for example, must account for the consumer interest that cordless, rechargeable vacuum cleaners recharge quickly and maintain that charge constantly before use. The standby provision adopted by the Conference was essentially that developed by this Committee on a bipartisan basis, and we believe that it is reasonable and useful.

NEW FEDERAL STANDARDS FOR PRODUCTS

It has been recognized in the Energy Policy and Conservation Act and in all its revisions that the appropriate level for energy regulation of products manufactured for and distributed on a national (usually North American or even international) basis should be at the federal level, if at all. The essence of legislation such as the National Appliance Energy Conservation Act of 1987 and EPACT in 1992 is that federal standards were either legislated or required to be developed by DOE in exchange for virtual absolute preemption of state standards except under extremely narrow circumstances.

The Committee's legislation last year contained a number of new product standards and rulemakings for product standards, mostly supported by industry as well as environmental advocacy groups. The Coalition proposes to add to that list some additional products and to specify standards. Legislation is pending in a number of states to impose standards, testing, paperwork and other requirements on those products thereby impeding interstate commerce. It is economically disruptive for manufacturers to meet diverse state standards. In order to avoid severe ruptures or "balkanization" of interstate commerce, it is necessary for the federal government to preempt the field.

In particular, we recommend that those commercial clotheswashers used in laundromats and laundry rooms, which are similar to federally regulated residential clotheswashers, be required in the legislation to meet the DOE standards which will apply to residential products in 2004 and 2007. This will result in significant energy and water savings.

Certain distribution transformers would meet legislated standards based on well-recognized industry standards. Exit signs would be required to meet specified En-

ergy Star levels. Torchieres would meet a legislated federal standard to consume not more than 190 watts of power. Traffic signals would comply with standards at levels already set by the Energy Star program. NEMA and AEEE are proposing to add standards for medium base compact fluorescent lamps (CFL's) based on Energy Star levels. These CFL's are direct replacements for incandescent "light bulbs" and consume about one-fourth the electricity.

Similarly, a wide variety of commercial refrigeration products and packaged air conditioning equipment would meet legislated standards. Commercial refrigeration product offerings are complex and manufacturers will be offering standards for the equipment with the highest shipment volumes and largest consumers of energy. In the case of packaged air conditioning units equal to or exceeding twenty tons of cooling capacity, products would meet the American Society of Heating, Refrigerating, and Air Conditioning Engineers' consensus standard, 90.1-2001. For unit heaters, we propose that DOE undertake rulemakings rather than have Congress set the standards.

Where the Congress enacts a legislative standard it is appropriate that preemption be immediate and absolute upon the date of enactment of the legislation. Where DOE is undertaking a rulemaking and is clearly moving toward filling a regulatory vacuum, we propose that preemption occur on the date in which an advance notice of proposed rulemaking is issued. In this way, national economies of scale can be maintained for product manufacturer, distribution and sale but the benefits of energy efficiency through regulation can be achieved.

ENERGY STAR

We support the first-time statutory authorization and expansion of Energy Star, which has become a powerful market force in many product segments and has been incorporated into federal and state procurement, utility incentive programs and tax credits. However, we are concerned that as Energy Star has "grown up" it has not enhanced its procedures for public and partner input into decisions affecting products into which manufacturers have collectively invested billions of dollars to develop and market and that consumers have come to rely on as the most efficient.

We support language which would require the Energy Star agencies, EPA and DOE, to develop public plans, criteria for expansion and program implementation, solicit public comments on new and revised product categories, and respond to these comments. The agencies should consider the cost-effectiveness of Energy Star compared to other programs and whether labeling works for all product categories. They need to become more concerned about product design and production lead times and provide adequate notice for new programs. The agencies should take care not to drown participants in paperwork. This is basic good government and the responsibility of any government agency and program.

Energy Star was conceived as a voluntary program and public/private partnership. As such, it has achieved worldwide prominence and, according to DOE and EPA, produced significant reductions in carbon emissions. Accordingly, we do not want or think that the program needs all the requirements of the Administrative Procedure Act, including judicial review, to apply to Energy Star actions. But, we have been troubled about undo reliance on contractors and lack of transparency and responsiveness. DOE has made some first efforts in the stakeholder consultation that we ask be incorporated in statute. The program can remain agile and flexible while allowing for more accountability, commensurate with its increasing power in the marketplace and tie in with other programs.

LABELING

We support FTC revisiting the existing energy guide label and program. However, the Congress should make clear that FTC, in addition to considering expansion and revisions to the programs, should consider whether some of the labels serve any further useful purpose in light of other means of communication of energy use, such as the voluntary Energy Star label.

The FTC labeling program was developed at a time when Energy Star did not exist. Energy Star may have supplanted the FTC label in the marketplace for certain product categories in terms of impact, and there may be no need for dual and confusing labels. It also should be made clear that there is no preconception by the Congress that the existing label needs to be changed but you are looking for a fresh and unbiased review.

FEDERAL MATCHING FUNDS FOR STATE APPLIANCE REBATE PROGRAMS

A new, modest but potentially significant program was developed in the Senate legislation and adopted by the Conferees in the last Congress. Under this program

DOE would match to specified levels, state funding of qualified appliance rebate programs to encourage the purchase of highly efficient products. We support this market-oriented approach in light of a number of active state programs which could be even more effective with federal partnership assistance.

As you can see Mr. Chairman, the members of our coalition are not reflexively anti-regulatory or opposed to all federal intrusions but rather seek to maintain an appropriate balance so that consumer energy economics are enhanced, national security interests protected and climate change mitigated. We urge you to consider our modest but important proposed revisions to the legislation. I would be delighted to answer any questions.

Senator MURKOWSKI. Mr. Keith.

STATEMENT OF ERBIN KEITH, SENIOR VICE PRESIDENT, SEMPRA ENERGY SOLUTIONS

Mr. KEITH. Madam Chair, members of the committee, my name is Erbin Keith. I am with Sempra Energy Solutions. Today, I am speaking on behalf of the Federal Performance Contracting Coalition. I thank you for the opportunity to discuss this and the options of the Energy Savings Performance contracts, which are known as ESPCs.

The program was created by Congress in 1992 in response to two major national challenges. Conflict in the Middle East made energy security a high——

Senator BINGAMAN. You might want to use that microphone a little better there. If you push the button, that will work.

Mr. KEITH. Oh, I am sorry. Is this better?

Senator MURKOWSKI. Thank you.

Mr. KEITH. Okay. Conflict in the Middle East made energy security a high priority. Congress realized that any program aimed at reducing our energy dependence has to address the Federal Government's own use of energy, as the largest energy consumer in the Nation.

The Government has half a million buildings, whose average age is about 50 years. And these buildings waste a lot of energy and taxpayer money. But getting at that energy waste requires money up front, which leads to the second problem confronting Congress a decade ago.

The Nation in 1992 was facing an energy crisis at the time of budget deficits and tough pressure on spending. Appropriating the money needed to upgrade all these facilities would have been a major drain on the Federal budget. Congress came up with an answer in the Energy Policy Act of 1992 that allowed the Government to tap private expertise and private capital through these ESPCs.

In an ESPC contract, the private contractor analyzes and designs the systems for a Federal facility, and then finances and implements the work. The ESPC contractor gets repaid out of the energy savings they generate. No savings, no repayment.

The Agency gets modern energy-efficient facilities at no up-front cost and gets a share of the savings over the life of the contract. Once the contract is over, the Agency gets all the savings and ownership of all the improvements.

To date, over $1.2 billion in private capital has been leveraged to upgrade Federal facilities through ESPCs. In fiscal year 2001, every dollar spent by DOE to manage its own super ESPC program resulted in $16 in private investment, and $33 in operating savings.

This program has proven its effectiveness and value. Let me show you some quick examples on these charts that detail the benefits of the facilities. For the sake of time, I will just focus on the cost savings.

The first project, Hill Air Force Base, is a Sempra Energy Solutions project covering over 1,400 buildings at the base. We financed $22 million in upgrades, and the Air Force base is seeing $2.3 million a year in energy savings.

Hill is the largest energy consumer in Utah. And this project reduced energy consumption by over 20 percent. The savings for this project and other projects are not in the margins. They are typically in the range of 10 to 30 percent at these facilities.

The second project, Fort Bragg—Honeywell, another FPCC member, has a project covering 6,000 buildings. They have financed $51.6 million to date, and are—we are seeing annual energy savings of $8.4 million per year at the Fort.

The next project is Twenty-Nine Palms Marine Base. FPCC member Johnson Controls has financed $62 million in upgrades that are showing $6.9 million in savings per year for the Marines.

The final project is the Veterans Administration Medical Centers project for Ameresco, another FPCC member. It covers eight medical facilities in four States. The $28 million investment is producing $2.3 million in energy savings a year.

These are just a few examples of projects that are providing hundreds of millions of dollars in taxpayer savings annually. And they are providing substantial improvements in working and living conditions for the personnel in the facilities.

But the program authorization is set to sunset in just 7 months. Given the lengthy process involved in these contracts, this has meant the program is effectively ending already. And we are seeing a drop in contracting activity.

Recently, Congress acted on an appropriations bill to extend the sunset. Last year, both Houses of Congress included language in the energy bill to eliminate the sunset. That language must be added now. And if the energy bill's passage is delayed, then that language should be pulled out and moved independently.

Last June, you also went a step further and added language to expand the reach of the program by including water savings projects. For many facilities, these added savings can make the project workable, and they can open up yet more savings for Federal agencies.

The crises confronting you this year echo those in 1992 when the program was created. These projects are just as important this year as they were then for much of the same reasons.

Taking these actions will keep the program alive and also send a clear signal to the agencies that Congress continues to see this as a critical program for them to pursue.

Thank you, and I am pleased to answer any questions.

Senator MURKOWSKI. Thank you, Mr. Keith.

[The prepared statement of Mr. Keith follows:]

PREPARED STATEMENT OF ERBIN KEITH, SENIOR VICE PRESIDENT, SEMPRA ENERGY SOLUTIONS

I. INTRODUCTION

Mr. Chairman and members of the Subcommittee, thank you for inviting me to address the Committee today on energy efficiency policy. I am Erbin Keith, Senior Vice President of Sempra Energy Solutions, overseeing operations. I also serve as a member of the Secretary of Energy's Federal Energy Management Advisory Committee. I am here to testify on behalf of the Federal Performance Contracting Coalition (FPCC), which is composed of Energy Savings Performance Contractors who provide the capital and expertise to upgrade federal facilities.[1] After a brief review of the Federal Government's Energy Savings Performance Contract program, I will concentrate my remarks on potential legislative proposals that affect private sector financing of energy improvements in federal government facilities.

Based in San Diego, Sempra Energy is a Fortune 500 company with more than 12,000 employees. My part of the company, Sempra Energy Solutions, offers commercial and industrial businesses outsourcing services that help them thrive in the changing energy environment. The company provides its customers an integrated mix of services such as facility management, supply and price risk management, energy efficiency, energy asset management, performance contracting, infrastructure ownership, energy information and billing management.

Like other energy service companies that are members of the FPCC, we design, install and service new energy efficient equipment, such as monitoring and control systems, HVAC systems, chillers and lighting—all done so that buildings use less energy. Included in our service offering is energy savings performance contracting.

II. THE FEDERAL ENERGY SAVINGS PERFORMANCE CONTRACTING PROGRAM

The largest single consumer of energy in the United States is the federal government, spending $4 billion a year for energy use in its 500,000 buildings. The federal government's three billion square-feet of floor space consumes over 60 billion kilowatt-hours of electricity each year. A significant amount of this is wasted money. The average age of these buildings is around 50 years, and being older, makes many of them substantial energy wasters. Addressing this problem in a meaningful and a lasting manner cannot be done by fiddling with the thermostat, but rather requires retrofitting existing buildings with energy-efficient equipment. That requires up-front capital spending.

In 1992, Congress and then-President Bush recognized that the nation was facing a dual challenge. Conflict in the Middle East heightened our awareness of the need for energy security. Since the government was using the largest share of energy, this meant that it must find ways to use energy more efficiently. At the same time, the federal government was facing the problem of budget deficits that diminished its ability to finance the needed facility upgrades. The solution was to create a mechanism that could leverage private capital and private expertise to upgrade facilities and enhance government operations in a manner that would protect and benefit the taxpayer. That is where the Energy Savings Performance Contracting (ESPC) process really began.

Under an ESPC, an energy services company (ESCO) like Sempra Energy Solutions, Johnson Controls, Honeywell, Ameresco, and others, privately finance the investment of installing energy efficient equipment with no up-front costs to the government agency. The investment includes identifying a building's energy requirements and then financing, acquiring, installing, operating, and maintaining the energy-efficient improvements to the facility. The ESCO is repaid for these improvements, over time, from a portion of the dollars saved by the agency on its energy and maintenance bills. This means that for the duration of the contract, the agency does not pay any more for utility costs than they would have paid without the ESPC and the new equipment. The agency, and ultimately the taxpayer, is protected since the ESCO only is repaid if they produce the promised energy savings. After the investment is paid off, the agency gets ownership of the improvements and all of the subsequent savings—without having spent federal dollars to achieve these improvements. It's a win-win situation.

Essentially, a federal agency has two choices. The agency can continue routinely paying its utility bill, and in the end, all it will have is a paid-up, current account. Or the agency can go with an ESPC, and in the end, have a rebuilt infrastructure

[1] Members of the Federal Performance Contracting Coalition include Sempra Energy Solutions, Johnson Controls, Honeywell, and Ameresco.

as a part of comprehensive energy upgrade—all paid for by the savings actually realized by the agency. This result is guaranteed by the ESCO.

III. THE ESPC SUCCESS STORY

The creation of ESPC's by Congress has been a unique success story. Energy service companies are helping federal agencies all over the country save hundreds of millions of dollars per year in reduced energy costs through ESPC's. These federal facilities now have critically needed infrastructure improvements, without having to seek direct appropriations from Congress. In the so-called DOE "Super ESPC" regional contracts, alone, private contractors have invested over $325 million in federal facilities—money that has not been drained from the federal budget. These Super ESPC projects have life cycle cost savings for the government of nearly $1 billion. A summary of the ESPC program is set forth in the table below.

GOVERNMENT-WIDE ENERGY EFFICIENCY PROJECT INVESTMENTS BY SOURCE

[Millions of As-Spent Dollars)

	FY 1988-1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002 preliminary	Cumulative since 1998
Site-Specific ESPC	$ 112.7	$ 72.4	$ 92.4	$ 8.0			$ 285.5
DOE Super ESPC		6.6	41.10	62.0	121.3	96.9	327.7
DOD/Other Super ESPC		10.2	151.2	217.0	126.0	200.2	704.6
UESC	138.9	53.4	110.7	191.2	230.4	94.1	818.7
Private Sector Investment	251.6	142.6	395.3	478.2	477.7	391.3	2,136.6
Appropriations	1,455.4	261.3	205.2	121.1	131.3	130.2	2,304.5
Total	$1,707.0	$403.9	$600.5	$599.3	$609.0	$521.5	$4,441.1

DOE/FEMP SUPER ESPC PROGRAM METRICS

[Millions of As-Spent Dollars]

	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	Cumulative since 1998
FEMP Budget for Super ESPC Program	$ 6.9	$ 8.3	$ 7.9	$ 7.7	$ 6.9	$ 37.7
Private Sector Investment from DOE Super ESPCs	6.6	41.0	62.0	121.3	96.9	327.7
Total Cortract Price ($ Returned to the Economy)	15.0	91.8	123.2	251.4	306.9	788.3
					Guaranteed Average Annual Cost Savings	$48.5
					Cumulative Guaranteed Cost Savings	$794.8
					[1] Project Estimated Annual Energy Savings	2,621,745
					[2] Project Estimated Annual Energy Savings	450,085
					[1] Cumulative Projected Energy Savings	42,948,956
					[2] Cumulative Projected Energy Savings	7,373,211

[1] Million Btu.
[2] Barrels of Oil Equivalent.

Let me provide you with a few specific examples that show how these projects actually work.

1. Hill Air Force Base

FPCC member Sempra Energy Solutions implemented the first base-wide, ESPC at Hill Air Force Base. The base houses 1,400 buildings and is home to many operational and support Air Force missions. Sempra implemented base-wide retrofits and replacements to lighting systems, chillers, boilers, cooling towers, motors, steam system components, and irrigation controls. The total investment by Sempra in this federal facility was approximately $22 million. The annual savings realized by Hill Air Force Base are approximately $2.3 million per year.

2. Fort Bragg Army Post

FPCC member Honeywell has an ESPC covering one of the largest Army bases in the world, with over 6,000 buildings. The total contract amount to date is $51,600,000, and the annual energy savings are $8,400,000 per year, with ancillary savings of $2,900,000 per year. The project involved installation of a new natural gas distribution system, central plant upgrades with full system maintenance, new steam and hot water boilers, base energy metering, and post-wide high-efficiency lighting technology, among other technologies. The project has increased comfort and security for base personnel, and provided greater energy security to the base.

3. Twenty-Nine Palms Marine Base

FPCC member Johnson Controls has an ESPC with the Twenty-Nine Palms Marine Base in California. The $62 million private sector investment in this project produces $6.9 million in annual savings to the Marines. Included in the benefits are three chilled water plants and air conditioning upgrades to 30 buildings, improving the quality of life on base; a seven megawatt, dual fuel cogeneration plant to increase power reliability and security for the base; solar photo-voltaic arrays, and an energy management system and day lighting to reduce on-peak energy demand.

4. Veterans Administration Medical Centers

FPCC member Ameresco has an ESPC with eight VA medical centers in four states. The $28 million private sector investment produces $2.3 million in savings per year, reducing energy use by over 41 million BTUs per year. The project includes a broad spectrum of technologies, including separate water meter and service, new boilers, boiler economizers, laundry equipment replacement, heat pipe recovery, steam trap replacement, chiller plant upgrades, lighting system upgrades, and energy efficient motors upgrades, among other items.

IV. THESE ARE THE KINDS OF PROJECTS THAT WORK—WHY AREN'T WE DOING MORE?

There is no debate about whether the ESPC program is producing meaningful results. As these examples demonstrate clearly, ESPC is a great tool for the federal government. Yet our companies are seeing a noticeable drop-off in contracting activity by federal agencies. The last two or three years have seen reductions in the use of ESPC and other alternative financing options across the federal government. From 2001 to 2002 we saw the number of ESPC projects reduced by almost half while the cumulative investment was reduced by more than 25 percent. This does not reflect a shift to direct financing through appropriations, the alternative option, since it comes at a time when direct appropriations for energy upgrades are not available.

We believe a number of factors are at work:

- Lack of adequate agency funding for the management of ESPC implementation. As noted in the chart above, in the last five years of the DOE's Super ESPC program every dollar spent by the agency on the management of the ESPC program has resulted in nearly $9 in private investment in federal facilities and nearly $21 in energy and operating savings to the federal government. In FY 2001 every dollar spent by DOE on management of the ESPC program resulted in nearly $16 in private investment in federal facilities and nearly $33 in energy and operating savings to the federal government. (Query: where does the federal government receive a better, more verifiable, return on its appropriated dollars?) DOE funding of ESPC has been largely flat over the last few years. Funding for ESPC management activities by most other federal agencies has declined. This has resulted in a significant reduction in ESPC activity for most agencies along with the resulting reduction in private sector investment in federal facilities.

- Alternative financing is just that: alternative. It is different from the way things are usually done within the federal bureaucracy, and therefore needs extra support and encouragement from a high level.
- The change in leadership at a high level in the various agencies with a new Administration, however, has meant a reduction in the institutional knowledge about these innovative programs. And that has been reflected in less support from the top of the government.
- Federal energy managers are losing their jobs in an effort to tighten our fiscal belts; therefore, the managers with institutional memory on how to do ESPCs are not present, in many cases.
- Ironically, the pressure to reduce costs to the government, in the absence of such clear signals of support, has had a perverse impact on the use of third party financing. Since they are being pushed to demonstrate reduced costs, some within the agencies feel that the "cost" of financing projects with the private sector is more than the "cost" of directly appropriating dollars. This has led to a de-emphasis on private financing—even though those directly appropriated dollars are not actually available.

This unfortunate loss of momentum on this important program is happening at a time when the need for ESPCs is just as clear and significant as it was in 1992 when the program was created. We are, again, confronting the need to address energy security, as your focus on an energy bill makes clear, and we must do it under tough federal fiscal constraints. Indeed, in the past several years as energy supply problems visited parts of our country, we also learned the additional value of reducing energy consumption in many of these facilities as a mean of helping address regional infrastructure adequacy and reliability.

V. FPCC RECOMMENDATIONS

Your committee advocated important provisions related to ESPCs in the energy bill last year; provisions that won consensus approval in the Conference Committee. With enactment of these provisions we can continue to provide the important benefits that flow from ESPCs. The most obvious and urgent need, of course, is to address the impending sunset of the program. Without action by Congress, this program is in its final months. Other steps that were taken by the committee last year would go beyond preserving the program, and seek to help expand its potential reach. Your action on these provisions will send a clear signal to the agencies that will help reverse the recent erosion of contract activity. Let me highlight two of these provisions, which we feel are critical:

1. Remove the sunset to ESPC contractual authority

ESPC authority in the federal government ceases at the end of this fiscal year, less than seven months from now. Extension of authority needs to happen immediately. Experience has shown that when the sunset date approaches, some agencies become concerned to begin developing projects for fear the authority may not last long enough to process the project.

When the program was created it was a bold experiment in addressing federal energy use while avoiding a drain on available appropriations. Experience has shown clearly, and without question, the value of these projects. ESPCs are a proven, reliable method to save energy, reduce operations and maintenance costs, provide new equipment for federal agencies and reduce pollution. For the program to continue providing its benefits, it is essential that any comprehensive energy bill include language similar to that agreed to by both the House and Senate last year that removed the sunset provision from the law altogether. Given the extremely time-sensitive nature of this problem, we also urge this committee to support separate ESPC legislation that, at a minimum, extends or repeals the sunset provisions. We believe other improvements to the program can be made, but none is more important that simply extending the program's statutory authority.

2. Expand the authority of ESPCs to include water conservation, in addition to energy

Currently water saving projects are not available to civilian agency ESPC programs. Consequently, many federal facilities miss out on tremendous potential cost savings and water resources continue to be wasted by the government. DOE General Counsel has ruled that water savings are limited under the statute governing ESPCs at civilian agencies (42 USC 8287).

In contrast, water savings have been allowed for years at DOD facilities. A different defense statute (Title 10, Sections 2865 & 2866) authorizes ESPCs for DOD facilities and it allows water savings. When the Defense Department originally passed Section 2865, it quickly realized that water savings were not allowed under

the legislation. One year later Congress, through the Armed Services Committees, approved DOD's request to add water cost savings to ESPC under Section 2866.

In some areas of the country, such as the southwest where my company is headquartered, water savings are as significant, if not more important, than energy savings and contribute greatly to the facility's monetary savings.

3. FPCC recommended enhancements to ESPC legislation

In addition to the language in last year's Conference Committee, there are other steps Congress should consider to boost this important program. Examples of such steps would include:

a. Allow replacement and new construction facilities to be eligible for ESPCs.

We support the expansion of ESPC authority to allow application of ESPC to replacement facilities and new construction. Having this new authority could open new opportunities for energy savings. This option was included in the Senate proposals last year, and is in the House this year. However, there were concerns about the baseline energy data that would be used for comparison. We still believe the obstacles can be worked out to everyone's satisfaction and the potential energy and cost savings to the federal government are significant.

b. Mandate that federal agencies report on reasons they do not use alternative financing.

Currently, agencies must report to DOE on the number and value of the alternative financing projects they complete. They should also be accounting for the facilities in which they opt not to use alternative financing and enumerate the reasons why. This type of reporting was requested by the VA Subcommittee on Appropriations for VA facilities and led to a great increase in the number of ESPCs completed.

c. Require that agencies report alternative financing activities to Congress.

Currently, agencies must report ESPC and alternative financing use to the Office of Management and Budget. They should also be required to report to Congress, including their individual appropriations subcommittee. Additionally, they should be reporting on the buildings in which they opt not to use alternative financing. This will encourage greater accountability than currently exists.

d. Stabilize the term of Army and Air Force contracts.

Due to the way the military has set up their contracting system, what began as a 25-year term for individual projects has shrunk over the last eight years to only 17 years. Unlike the DOE contracting approach, under the Army and Air Force approach, each year their authority continues, a year is taken off the potential term of projects that can be negotiated. Fairly soon, this will lead to missed opportunities for large scale energy reductions based on central power, space conditioning and other expensive, yet high value energy improvements. The legislation or regulation should be made clear that ESPC projects can last for a term of up to 25 years, no matter when they are executed during the term of the overall contracting mechanism.

e. Encourage interagency cooperation and confirm ordering authority between agency ESPC contracts.

The Energy Policy Act of 1992 designated the DOE as the lead agency for ESPC. The DOE has developed efficient contracting mechanisms, staffing and expertise in implementing ESPC projects. Many agencies, civilian and DOD, make use of the DOE's expertise and contracts in implementing ESPC projects. However, one DOD agency has made a determination that the Economy Act (31 U.S.C. 1535) precludes the agency from ordering ESPC services off the DOE's Super ESPC contract. No other DOD agency reached this conclusion and most use the DOE "Super ESPC" contract. Nevertheless, Congress can remedy this concern by clarifying that the Economy Act does not preclude any DOD agency from ordering off another agency's ESPC contract.

f. ESPC's should be expanded to include transportation and power generation applications.

ESPCs could be expanded to include shipboard energy improvements and other transportation applications. Some of the FPCC members participate in the Alliance to Save Energy and support their efforts to have ESPCs expanded to both transportation and power generation applications.

VI. CONCLUSION

We commend the Committee for its efforts to illuminate the issues that will be discussed today. It is critical that the government supports a sustained effort in meeting its energy conservation goals, if these efforts are to continue to have a positive impact. In the private sector, through the ESPC program, we have demonstrated our willingness to invest in the government's effort. Indeed, the private sector has already invested over $1.2 billion in the federal ESPC program. However, we cannot continue to engage our best people in these endeavors without the commitment of the federal government to: (i) remove the sunset to ESPC contracting authority, (ii) provide "top-down" executive and legislative support for the ESPC program, and (iii) provide adequate agency funding to manage the governments obligations under the ESPC program. We seek your support in securing this commitment.

This concludes my testimony. Thank you for the opportunity to testify today and I would be happy to answer any questions.

Senator MURKOWSKI. And I thank you to all of you this morning for appearing and giving your testimony before the committee.

As Mr. Keith has pointed out, this energy savings performance contract has been a very useful mechanism for improving the Federal energy efficiency. And I—apparently, there has been a suggestion that it be expanded—the authority be expanded to include the non-building uses.

And I would ask you, Secretary Garman: Does the Department support the expansion of the ESPC authority to the non-building uses?

Mr. GARMAN. We are very intrigued by the concept and would welcome some method of a pilot program on a limited basis to explore it further. There are some interesting procurement issues and some other issues. And it might involve a completely different set of players that would need to be educated, but it is something that we would enjoy exploring with both the committee and the Congress, were we to be given that kind of authority, and the stakeholders and potential participants in such a program.

Senator MURKOWSKI. And when you suggest a pilot program, do you have anything in mind that you might be able to——

Mr. GARMAN. A limited number of projects, say 10, that could be tried and evaluated as a potential model for whether or not the authority should be fully expanded. It is a new and innovative idea, and I would not want to close the door to it.

Senator MURKOWSKI. What about the Department's position on a permanent extension of the ESPC program?

Mr. GARMAN. We do support an extension. We might quibble over whether it is a 5-year extension or a permanent extension. But we would like to have an extension that gives some certainty in the ESPC market among the energy service companies, so that they can have the confidence that this is authority that is going to be in place for some time.

Senator MURKOWSKI. How do you determine which programs then—and this is still these energy service companies. How does the Department determine who is eligible for them?

Mr. GARMAN. There are a couple of different ways that a Federal agency can approach the use of an energy savings performance contract. They can either go it alone and do their own procurement and open the door to a number of energy service companies to come in and do this kind of work for them. Or they can use something we call super ESPCs or super energy savings performance con-

tracts. And what we have tried to do to make it easier for Federal procurement officials to come in and use this tool is to make it as absolutely simple for them as we can. And so we have on a regional basis set up these, what we call, super ESPCs where the Agency really does not have to do much other than sign up. And this eases their load.

Currently, any energy service company is free to team up with an agency if they are doing it alone. If they are going it on one of these established super ESPC programs, they need to use an energy service company on the list of approved energy service companies that were given authority to do this work when the super ESPC was first set up.

For us to expand the list of service companies eligible for super ESPCs, it would, frankly, eat up some—we would have to recompete. And so we are hesitant to do that, because that could take away a lot of resources that could otherwise be used to actually perform these contracts and get the work done.

But today any Federal agency is free to sign up with—for ESPCs—the energy services company of their choice.

Senator MURKOWSKI. Now, are you adding more energy service companies, recognizing that the statutory authority is due to sunset this year? Are more companies being added?

Mr. GARMAN. We are not envisioning adding more companies to what we call the super ESPCs. But we are not constraining companies from participating outside of that arrangement.

Senator MURKOWSKI. Okay. All right.

And then this would be a question to you, Mr. Lynch. As the ESPC projects relate to the Department of Veterans Affairs, I understand that Veterans Affairs has cancelled some of the pending ESPC projects at apparently costs of hundreds of millions of dollars to the participating companies. Do you know what Veterans Affairs plans to do about these projects for which notices of intent to award have been issued?

Mr. LYNCH. Madam Chair, I am not aware of that situation at the Veterans Administration, and I would actually defer to my good friend David from the Department of Energy.

Senator MURKOWSKI. Thank you.

Mr. GARMAN. This is an issue that has arisen, I think, when the Veterans Affairs Department determined that they had special authority under their law, and their law alone, called Extended Service Lease Contracting, or something like that. They cancelled a number of ESPCs they had in the pipeline. I was concerned enough about this to go and actually seek a meeting with the Deputy Secretary of Veterans Affairs to encourage them to be fair to those that they had in the pipeline.

It is something that I think they still have under some consideration, but they have a special authority that, once they discovered it, they found that they could probably achieve some energy savings at lower costs than going outside to the energy service companies. So they have a balance they are trying to strike there.

Senator MURKOWSKI. Well, I will probably have some more questions on that, but I would like to at this point in time go to Senator Bingaman.

Senator BINGAMAN. Well, I thank you very much.

Let me ask Mr. Nemtzow if he would just elaborate on this idea of expanding the authority for using ESPCs so that they could be applicable to things other than buildings. If you could, just elaborate on what you would intend there. You mentioned one example. If you could give us any others, that would be great.

Mr. NEMTZOW. Certainly, Senator. As you know so well, the U.S. Federal Government is the largest energy consumer on planet Earth. The Federal Government spends $8 billion per year on energy. That is before the recent price increases, so we will shudder to think what the new tab is.

Of that $8 billion, a little under half is spent on stationary objects. Most of those are buildings, as Assistant Secretary Garman said, the Social Security Office and all of these, this building, all of the others.

The next category are high-energy-use facilities that are not regular office buildings, but have special uses, perhaps irrigation and other uses.

But the bigger piece, more than half, a little over $4 billion is transportation, that fleet of vehicles from F16 fighters all the way to the cars around town. Currently, ESPC authority is only for that first category, only for regular buildings. That covers a wide range, military housing to Social Security offices, but that total misses well over half of the total bill.

And so it is to get those next two categories, the high energy facilities and transportation. The example I gave is auxiliary power. Every Navy ship of any size has auxiliary power when they are not running their main propulsion, so that they have power throughout the ship. Those are old facilities. They are not part of the actual military use of it, so they do not keep them up-to-date. So we can switch those out.

I do not know who those players are. I would imagine companies like G.E. or Siemens, the ones who made them in the first place—lighting onboard ships. Think how many light bulbs there are on them, on a modern huge ship. That can be swapped out, just as lighting in a building like this, on an ESPC basis.

We could even perhaps go further, and this, as Assistant Secretary has said, has not been tested, but think how old the engines are. Senator Dorgan, you have a pretty large fleet of B52s, I believe, in your home State, and, as you know, some of those—that fleet is aging and some components such as the engines, perhaps, could be swapped out for better performance and better fuel efficiency.

For the military, the military spends 60 gallons of fuel for—to get a gallon of fuel into a combat zone, because of the logistical pipeline. So the efficiency of the actual aircraft has enormous positive implications.

So that is why we want to experiment. I support Assistant Secretary Garman's suggestion that this be a pilot program. I think that is fair and fine for a new idea. And we would support that.

Senator BINGAMAN. Let me ask you, Secretary GARMAN. I think Mr. Keith said in his testimony the number of ESPC projects has been reduced by almost half from 2001 to 2002. What explains that?

Mr. GARMAN. I think there is probably a variety of factors. First of all, a lot of the low-hanging fruit has been plucked, meaning that a lot of the clear energy savings opportunities, for instance, changing T12s lamps to T8s and other types of things that you do with fluorescence, changing old ballast to new, a lot of that work has been done in many Federal buildings. That is one constraint. I am not saying there is not a lot more that can be done.

Another constraint is the low price of energy that the Federal Government often pays for energy. The Department of Energy's electricity purchase price is remarkably low. In some facilities, it is 3 cents, 4 cents a kilowatt hour.

I think even at headquarters, we are paying around 5 cents a kilowatt hour and managing to get 17 percent renewable energy at that low cost. I do not want to take anything away from the folks we have that negotiate these power purchase contracts because they do a very good job, but when energy prices are low, it is often difficult to get a lot of these deals—using the alternative financing. So it is a combination of factors.

Senator BINGAMAN. Let me ask one other question. The Energy Star program, I think each of you on the panel have talked about that and how useful that program has been. Why is the administration proposing to cut that budget by 40 percent?

Mr. GARMAN. Well, actually, we are not proposing to cut the budget by 40 percent. Energy Star is a shared program between the Department of Energy and the Environmental Protection Agency. Between the two agencies last year, the appropriated amount was $53.9 million. This year the requested amount is $52 million, so there is a slight decrease.

I think the 40 percent you are referring to is in the Department of Energy's part of that budget. We received last year a little over $4 million after the final appropriation reductions were done. And we have asked for $3.7 million.

In the division of responsibility between DOE and EPA, EPA does most of the promotional work. We do some of the criteria setting. And we have a sufficient amount of money with our request this year for the criteria that we have outlined for the coming year. We want to finish up work on residential windows and we want to undertake what I think will be a pretty daunting challenge with residential water heaters on Energy Star.

Senator BINGAMAN. Thank you very much.

Senator MURKOWSKI. Senator Dorgan.

Senator DORGAN. Madam Chairman, thank you very much.

Mr. Nemtzow, let me ask you to talk just for a moment about the SEER standards for air conditioners. As you know, we had some work in Congress on that issue, and some disagreement on it, as a matter of fact. Talk to me about that, if you would.

Mr. NEMTZOW. That was also one of the great missing pieces of the bill that came through the 107th Congress. Air conditioners represent an enormous part of electricity load in certain parts of the country.

In California, in summertime, air conditioning represents 30 percent of peak load. In Texas, it is closer to 70 percent. In North Dakota and Alaska it is obviously considerably less, but for most of the country, including parts of the country that have the greatest

stress on their grid, air conditioning is a big part of the action on those hot, sweaty days, when the grid is having the most trouble. This is why the SEER 13 standards proposed under the Clinton administration was the right answer.

If you look at the calculus of this and you look at the energy savings, the improvement to the environment, and, of course, the improvement to the reliability of the grid, it would call for the 13 standard.

When the Bush administration came in, they redid the numbers. They did not sufficiently, I think, account for the role of the liability, and they have proposed a SEER 12 standard, a lower standard, losing almost half the savings from the current baseline. The matter is now in the courts, for the courts to settle.

Senator DORGAN. Now, for someone that does not understand much about SEER standards that might be listening in to your answer, they say, "Well, what is the difference between 12 and 13? It does not sound very significant." Tell us the energy savings that would result.

Mr. NEMTZOW. The savings are significant. I do not have those numbers available, Senator. I would be happy to provide that for you and for the committee. But the reason the savings are significant is the current legislative standard that was adopted by this committee in legislation is SEER 10. But that standard might have been aggressive at the time in the early nineties, but now all the manufacturers beat it. The national average—even though the standard is 10, the national average is almost 11. It is about 10.9.

Senator DORGAN. Were there some manufacturers that supported the 13 standard?

Mr. NEMTZOW. The number two manufacturer, Goodman, who sells under the Amana air conditioning label supported it, as well as some smaller ones. So the industry was divided, because they all make these higher products. This is not some out-there technology. They all make them. They are all capable of it. They just do not want to.

Senator DORGAN. Mr. Garman, what is your impression of the SEER 13 standard debate we had last year in Congress?

Mr. GARMAN. Well, of course, I did take note of the fact that the Senate opted for the 12 when it did come for a vote in the bill.

Senator DORGAN. What was your position on it?

Mr. GARMAN. Our position was that—and just to clarify, the administration raised the SEER 10 to a SEER 12, as our proposal. David and some of the other advocates were, of course, favoring that we raise it to a 13. But we opted that using the criteria that we are told to use in the law, the Energy Policy Act—12 was the right number from a cost effectiveness point of view.

Senator DORGAN. Without respect to the law in terms of what you were told to use, do you personally believe that moving to a SEER 13 would be advantageous from an efficiency standpoint?

Mr. GARMAN. What we try to do is to try to differentiate between the minimum national standard that has to be applied nationwide and the opportunity that other consumers have to go beyond that. And I think that is the magic of the Energy Star program.

Senator DORGAN. I do not understand that answer.

Mr. GARMAN. Well——

Senator DORGAN. Tell me, I mean——

Mr. GARMAN [continuing]. What we do is we said——

Senator DORGAN. My direct question is: Notwithstanding all the other issues, would you think—the technology exists. Would you think going to the higher standard would make sense?

Mr. GARMAN. It would not make sense for every consumer. If you are a consumer——

Senator DORGAN. But we are talking about public policy. I am asking your opinion on public policy in terms of the efficiency and the national savings that result from it.

Mr. GARMAN. If the only relevant criteria that we were to use were the energy savings, and we were not to concern ourselves with cost-effectiveness for the consumer, or the price that a consumer was going to pay or whether the consumer would ever get a payback from the use of the technology—if energy efficiency were the only criteria, then a higher standard would be better.

Senator DORGAN. Mr. Nemtzow, the point that Mr. Garman just made is the point that those who opposed, particularly the air conditioning manufacturers who opposed the SEER 13 standards, this is the point they made last year. Respond, if you will, to that question of the effect on the consumer.

Mr. NEMTZOW. Well, Mr. Garman is right. There are examples where it is not cost-effective. If you have a vacation home in Vermont that you use a few days in the summer, that air conditioning may have a very long payback. But those are the exceptions.

The bulk of the U.S. population uses air conditioning. In fact, 83 percent of new homes in this country now have central air conditioners in them, so this is prevalent, and especially in the parts of the country, Texas, California, Florida, where there is growth in population, there is strain on the grid.

And so this program is a national program, just as the grid is becoming increasingly a national grid as the administration supports. So you have to take a national answer to it.

The number of "losers" who will have a longer payback is minuscule compared to the number of winners. And even people who do not have air conditioners, Senator, especially the elderly, will benefit the most, because they are the—at the greatest health risk when there is a blackout.

Senator DORGAN. Yes. I did not intend to use most of my time talking about efficiency of air conditioners. We have had precious little need for air conditioners in recent months in my State, but because of the debate we had last year, both on this committee and on the floor of the Senate, this is one of those pieces of efficiency standards that I think is important.

Let me ask one additional question, if I might, perhaps of any on the panel that wish to respond, and of Mr. Garman first.

As you look at the major areas of accomplishment with respect to improving energy efficiency, I notice that 19 percent of the Government's eligible square footage, as you indicate in your testimony, has earned the Energy Star award. That seems low. I am wondering what can be done to increase that.

And second, you mention that low-hanging fruit has been plucked, but there must be many other promising areas of efficiency. What do you assess those to be?

Mr. GARMAN. I agree with you that 18 or 19 percent of Federal building square footage under the Energy Star label is not enough, and we would like to raise that. And I think it is going to take a concerted effort on all of our parts, Congress and the executive branch and the public to try to change the culture, if you will, of a Federal procurement official and underscore the fact that this is important, this is part of their jobs, to do what they can, whether they are designing a new building or retrofitting an existing one, to incorporate energy efficiency into their thinking.

We are trying to do that. In fact, as an example, we had a meeting scheduled—it had been scheduled for the day of the big snow, but of all of the agencies, senior agency officials to come to the White House and essentially receive their report card on how well they are doing—and some are doing better than others—and to have administration officials and officials from the Office of Management and Budget and others kind of say, "Listen, here is how you are doing. Here is how you need to do better" and to try to encourage from within.

I think David's suggestion of continued congressional oversight on the agencies to underscore the fact that this is very important is something else that the Congress can do as well.

Senator DORGAN. I am wondering whether it might not be valuable for you to do a scorecard, or a grading sheet on the agencies, since you are the one who would be able to take a look at agencies and tell the public and us which agencies are not doing well with respect to efficiency.

After all, we are the largest purchaser of energy in the world, as the Federal Government, so it might be helpful to all of us if you would give us a scorecard; which agencies should we compliment when they come up here, and which agencies should we light a fire under.

Mr. GARMAN. I will take that as a question that you are asking us for the scorecard that we are providing the agencies, and we will do that just as soon as we provide them to the agencies.

Senator DORGAN. I think that would be very helpful.

Anyone else want to respond to the question of where the obvious early additional targets are for efficiency?

Mr. MCGUIRE. Senator, you mentioned the low-hanging fruit that has been plucked. It is true that in the equipment——

Senator DORGAN. Well, I was simply quoting Mr. Garman. I do not necessarily subscribe to that.

Mr. MCGUIRE. Well, let me associate myself with his remarks then. Most of it was in terms of appliances, and products, and equipment. One of the areas where, I think, manufacturers and advocates have come together to try to go to the next step is to combine the national minimum standards with incentives.

And there are two examples I would point out. One is in the State of Maryland. Sales tax was waived on products that meet the Energy Star designation and has been successful in moving more of those products into a consumer's home.

The second is legislation that was included in the energy bill last Congress, introduced in the Senate by Senators Lincoln and Grassley, which would provide a tax credit to manufacturers of super-efficient appliances, appliances that go beyond the national mini-

mums and Energy Star to get those products stimulated into the marketplace. So I think there is a lot of agreement among advocates and industry on those types of things.

Senator DORGAN. Do you have something?

Mr. KEITH. Mr. Dorgan—oh, go ahead.

Mr. NEMTZOW. May I respond? Let me agree with Mr. Garman and Mr. McGuire for that list, and add three items of low-hanging fruit that are out there. One is new cars and light trucks. This is mature technology that needs to be deployed throughout the fleet.

Two is existing homes, that stock of over 100 million residences in this country, some of which is quite old, Joe just talked about getting newer appliances into them through incentives. That is right. We need Energy Star. We need tax incentives. In addition to that one, we need tax incentives to upgrade existing homes and we need public education, so that consumers will know what to do.

The third area is powerplants. The powerplants fleet in this country is embarrassing. Even with the new independent power projects, the new combined cycle gas turbines, it is still a very inefficient fleet. And there is no legislative or Federal pressure on them right now, direct pressure to be more efficient.

Powerplants in this country waste more energy—just the powerplants waste more energy than the entire country of Japan uses in a year for all purposes. And that waste can be cut, and that is low-hanging, cost-effective fruit.

Senator DORGAN. Mr. Keith.

Mr. KEITH. Perhaps, I can also address the low-hanging fruit issue. As representing the groups of folks that go out and look at Federal facilities to identify these opportunities, we feel certainly there is much more out there that we can harvest. We are—this program is somewhat unique in that we take a lot of that development risk as an ESCO. So we are tasked with going out at our expense and locating these opportunities at Federal facilities.

What we are looking for is repeal of the sunset, so that we can continue to do this and provide adequate funding for agencies to manage this ESPC program.

One of the issues that was raised earlier is: Why is there a decline in the program? Part of that is the reduced funding to manage these programs, particularly at the Department of Defense area.

Secondly, we need top-down support from Congress and the executive branch, too, for this program. And then finally, we need accountability. And I do support reporting to Congress as to ESPC activities as well as OMB and the Department of Energy.

When folks are coming to you all seeking appropriations to do energy efficiency improvements, I think it begs the question: Have you explored other opportunities? And then why have you not taken advantage of them prior to appropriating that money?

Senator DORGAN. Mr. Lynch.

Mr. LYNCH. Senator, I think I was the one that first said the word that you called into question. I guess I would like to say a couple of points. We really took it seriously in the first year I think, when EPA first came up with the Energy Star label. I think we constituted something like 25 percent of all the buildings in that portfolio.

One of the things that we are doing—and I guess I would caution everyone not to look at buildings, because we have 1,800 buildings in our portfolio. Some of them are cow sheds. I would encourage folks to look at square footage. And basically, what we are doing is we are trying to key in on 61 key buildings in our portfolio that have the most square footage at stake. And I think it is probably half the square footage. It is almost the 80/20 rule. So I think you are going to see some dramatic changes, at least from the public building service in the future in the Energy Star perspective.

Again, the other thing that we are focusing on, these new courthouses we are bringing online, we need to make sure that they are attaining Energy Star consensus as well. So I mean we are working at it, and we do have a plan to really get those numbers up from a square footage——

Senator DORGAN. I think what we are paying for these new courthouses that are being built, if they are not complying with everything in the free world, there is something wrong. I would like to know if there is a problem with complying with these matters, because these courthouses are enormously expensive.

I have overstayed my time for questions. Thank you very much.

Senator MURKOWSKI. Thank you, Senator Dorgan.

Well, thanks to all of you on the panel this morning. I think the issues that have been raised, the suggestions that have been brought up have been helpful. Certainly, the ideas of a scorecard, greater oversight, and accountability, and just the education, as you have noted, Mr. Nemtzow, I mean, all of this is critical. All of this is important as we must work towards greater efficiencies. So I appreciate your input this morning.

And if there are those that have questions that need to be submitted, we will make sure that you receive them, so that we can enter those into the records.

So with that, we will close for the day, and thank you.

[Whereupon, at 11:10 a.m., the hearing was adjourned.]

[Subsequent to the hearing, the following statement was received for the record:]

PREPARED STATEMENT OF JARED O. BLUM, CHAIR, FEDERAL ENERGY PRODUCTIVITY TASK FORCE

I am Jared O. Blum, President of the Polyisocyanurate Insulation Manufacturers Association (PIMA) and current Chair of the Alliance to Save Energy's Federal Energy Productivity Task Force. Since 1995, the Task Force has brought together private-sector companies and organizations with an interest in cutting Federal government energy waste (list of members attending the past two Task Force meetings attached). The Task Force:

- monitors the status of DOE's Federal Energy Management Program (FEMP);
- develops and articulates positions on Federal energy management policies;
- provides guidance and input to the FEW program and the Federal Energy Management Advisory Committee (FEMAC); and
- encourages and Federal agencies to meet the energy reduction requirements set forth in Federal law, regulations, and executive orders.

In 1998, the Task Force and the Alliance published, *Leading By Example*, (copy enclosed) which discussed many of the current issues and problems related to Federal energy management and outlined a series of recommendations from the Task Force for improvements. As a direct result of these recommendations, Executive Order 13123 was issued, setting new goals for Federal agencies to reduce energy use. Over the past two years, our Task Force has worked with members of Congress

and their staffs to develop legislation to revise the Federal government's energy management objectives and to strengthen the ability of agencies to meet those goals.

We appreciate this opportunity to provide our views to the Committee as you gather input for developing comprehensive energy legislation. As the largest coalition of private-sector advocates for improved Federal energy management, and in recognition of the economic, environmental and energy security benefits of cutting Federal energy waste, we urge the Committee to include the provisions regarding Federal energy management that were agreed to during last year's Conference Committee on H.R. 4. In addition, we urge the Committee to include language (draft attached) that would expand authority, on a pilot basis, for Federal agencies to enter into Energy Savings Performance Contracts to include non-building energy savings projects.

H.R. 4 CONFERENCE COMMITTEE AGREEMENT

Last Fall, the House and Senate conferees on H.R. 4 agreed to a package of Federal energy management provisions that would have:

1. Updated agency energy reduction targets. Established each agency's energy reduction goal at 2 percent per year from 2003 thru 2012, as compared to energy use in 2000; and required DOE to recommend, in 2011, the percentage reduction goals for 2013 thru 2022.

2. Extended and expanded Energy Savings Performance Contract (ESPC) authority. Repealed the October 1, 2003 "sunset" on ESPC authority. Expanded the definition of the benefits under an ESPC to include savings resulting from: improvements in operations and maintenance, increased use of cogeneration, a reduction in the cost of water, and replacement buildings. Required DOE, within 180 days, to review the ESPC program to identify obstacles that prevent Federal agencies from fully utilizing the program.

3. Required cost-effective metering. By 2010, all Federal buildings shall be metered or submetered and, to the maximum extent practicable, each agency shall use advanced meters. Within 180 days, DOE shall, in consultation with DOD, GSA, and representatives of the metering industry and others, issue metering guidelines based on cost-effectiveness criteria. Required agencies to submit a Metering Plan to DOE within 6 months of enactment.

4. Increased Federal building performance standards. Directed DOE to revise Federal building energy performance standards within 1 year to 30 percent below consumption in ASHRAE 90.1 for commercial buildings, or 30 percent below IECC for new residential buildings, if cost-effective. It further directed DOE to determine, within one year, whether amendments to these codes should trigger further revision of the Federal standards. Required that agencies, in their annual budget requests, Include lists of new buildings and a statement on whether they meet the revised standards.

5. Strengthened Federal procurement requirements. Required procurement of Energy Star or FEMP designated products unless they are not cost-effective or are not reasonably available. Required GSA and DLA to clearly display Energy Star and FEMP designated products in their catalogs and, after existing inventories are exhausted, shall only replace with Energy Star or FEMP designated products. Within 120 days, DOE shall designate electric motors of 1 to 500 horsepower for use by agencies.

6. Increased Federal fleet fuel economy requirements. Each agency shall determine its baseline fuel economy based on automobiles purchased in 1999 and shall manage procurement to increase average fuel economy by 1 mpg by September 30, 2003; and by 3 mpg by September 30, 2005.

While last year's agreement does not represent anyone's ideal legislative package, it is a strong and balanced set of provisions which deserves the consensus support it gained last year. Enactment of these provisions is vitally important to the continued, successful efforts of the FEMP program to reduce Federal energy use and save taxpayer dollars. For example, DOE would be better able to monitor agency progress toward energy savings targets and agencies would be less able to "game" the measurement of their performance if energy reduction targets are updated from the fiscal year 1985 to the fiscal year 2000 baseline. Federal procurement of energy consuming products and the construction of energy-efficient buildings will be strengthened by updating these Federal standards to reflect the most recent energy-efficient technologies, and the most recent industry and government consensus efficiency standards. Finally, advances in metering and a commitment to energy savings demands that the Federal government require metering where it is cost-effective. After all, how can agencies manage something they cannot measure?

Enactment of these provisions would revitalize a program that has a remarkable history of success. DOE's most recent report to Congress on Federal energy management, dated January 11, 2001, stated that energy consumption per gross square foot in Federal buildings had declined 20.7 percent from Fiscal Year 1985 to Fiscal Year 1999. This reduction in energy intensity saves the federal government on the order of $1 billion every year in reduced utility costs. Additional savings of this magnitude remain achievable if Congress enacts the provisions that were carefully negotiated last year. Enactment of these provisions would also demonstrate Congress's continuing commitment to Federal energy savings, and would send a powerful message to government managers that cutting energy waste remains a national priority.

REPEALING THE ESPC "SUNSET"

One essential factor in reducing Federal energy use is obtaining the funding needed to implement energy savings projects. This funding may be available from three sources: direct appropriations, through utility programs, and from private-sector sources under ESPCs. In recent years, ESPC funding has become increasingly important because less funding is available from direct appropriations and utility programs. Appropriations have been curtailed as a result of overall pressure on Federal spending, and utility funding has been reduced as a consequence of electricity market restructuring. The ESPC program has been extraordinarily successful in tapping private-sector funding and expertise to achieve energy savings. Since 1992, nearly $1.1 billion in private-sector capital has been invested in Federal energy improvement projects under ESPCs, resulting in hundreds of millions of dollars in permanent savings to the U.S. taxpayer—and the creation of private-sector jobs.

With the "sunset" date of October 1 approaching, Federal agencies, and their potential private-sector partners, are beginning to lose the incentive to negotiate new ESPCs. If the authorization extending ESPC authority is not enacted before October 1, then Federal agencies will lose the ability to tap into a stream of investment that currently averages over $200 million per year. We not only urge that you include this provision in the Committee's energy bill, but that you remain open to working with us to explore other ways to enact this provision if it appears the bill cannot be enacted by the October 1, 2003 deadline.

ESPC EXPANSION

Given the tremendous success of ESPCs in attracting private-sector investment in energy efficiency projects in Federal buildings, it is now appropriate to determine whether ESPCs can be applied to non-building projects—where most Federal energy consumption occurs.

Thirty-three percent of the Federal government's energy consumption occurs in Federal buildings and 60 percent occurs in government vehicles such as cars, trucks, ships and aircraft (so-called "mobility" fuel use). The other 7 percent occurs in "energy intensive operations" such as irrigation, energy intensive government manufacturing operations, and research and development activities.

While no specific estimates are available of the potential energy savings from such "non-building" ESPC projects, a recent article by Amory Lovins, stated that the potential for DOD fuel savings alone are "upwards of ten billion dollars a year, because the few billion dollars of direct annual fuel savings can trigger far larger avoided fuel delivery costs."[1] He also states that, "The Army uses about $0.2 billion worth of fuel a year, but pays about 16 times as much, $3.2 billion a year, just to maintain 20,000 active and 40,000 reserve personnel to move that fuel."

A recent Department of Defense Science Board Task Force report[2] found that "Ten years after the Cold war, over 70 percent of the tonnage required to position today's U.S. Army into battle is fuel"; and that, "The Air Force . . . spends approximately 85 percent of its fuel budget to deliver, by airborne tankers, just 6 percent of its annual jet fuel usage." The Task Force further found that "High payoff, fuel-efficient technologies are available now," and recommended that DOD, "specifically target fuel efficiency improvements . . ."

The expansion of ESPC authority we propose would create opportunities for private-sector investment in Federal energy efficiency projects, create jobs, reduce oil demand, save taxpayer dollars, and reduce pollution. As stated in the DOD report, increased fuel efficiency would "also improve military capability by reducing the size of the fuel logistics system, reducing the burden of high fuel consumption on agility, reducing costs and dampening the budget impact from volatile oil prices."

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[1] Battling Fuel Waste in the Military, Amory B. Lovins, www.rmi.org, 2002.

[2] The Defense Science Board Task Force on Improving Fuel Efficiency of Weapons Platforms, *More Capable Warfighting Through Reduced Fuel Burden*, January 2001.

There are uncertainties in how ESPC contracts would need to be modified to respond to the differences that exist between building and non-building energy efficiency projects. For example, there are differences in how energy savings would be measured and verified, and how payments to private-sector partners would be made. While most of these potential uncertainties appear resolvable, agencies and their potential energy service company partners cannot be expected to work-through these issues and negotiate ESPCs for non-building projects unless they can eventually enter into contracts. Accordingly, we urge the Committee to authorize a pilot program. Authorization for 10 pilot projects should be adequate to gauge the level of interest in such expanded authority by Federal agencies and the private sector, and for them to work-through contract modifications for a range of typical non-building projects. The results from those 10 projects could then be reported to the Congress along with recommendations on whether to extend the authority. Attached is draft language that would:

- authorize DOD and the heads of other Federal agencies to enter into up to ten non-building ESPC projects;
- require the Secretary of Energy, in consultation with the heads of Federal agencies, to select up to 10 ESPCs projects to demonstrate the applicability and benefit of energy savings performance contracting to a range of non-building energy efficiency improvement projects; and
- require the Secretary to report to Congress, by December 31, 2005, on the results of the pilot program, including the energy and cost savings resulting from the projects, their cost effectiveness, and recommendations as to whether the authority to enter into such contracts should be continued.

Energy efficiency has direct benefits for the Federal government. It reduces costs and environmental impact, saves taxpayer dollars and enhances energy security. As representatives of the private-sector, the Alliance's Federal Energy Productivity Task Force supports Improved Federal energy efficiency because it also creates jobs and opportunities for Federal/private-sector partnerships. While the Federal government uses only 1 percent of the nation's energy, its' actions have a substantial impact on the attitudes and behavior of others in recognizing and acting to gain the benefits of increased efficiency.

We urge you to include last year's Conference Committee agreement on Federal energy management, and our proposal for a pilot program to expand ESPC authority to non-building projects, not only for the direct economic, environmental and security benefits to the Federal government, but also to demonstrate—by example—the continuing commitment of Congress and the Federal government to achieving the benefits that energy efficiency offers to the nation.

Thank you again for the opportunity to contribute to the Committee's deliberations on national energy legislation.

SEC.——. PILOT PROJECT TO EXPAND ENERGY SAVINGS PERFORMANCE CONTRACTING TO NON-BUILDING INVESTMENTS.

(a) Title VIII of the National Energy Conservation Policy Act (42 USC 8287) is amended by adding the following new section at the end:

"SEC. 805. PILOT PROGRAM FOR ENERGY SAVINGS PERFORMANCE CONTRACT INVESTMENTS IN NON-BUILDING ENERGY SAVINGS PROJECTS.

"(a) Authorization. The Secretary of Defense and the heads of other interested Federal agencies are authorized, on a pilot basis, to enter into up to ten energy savings performance contracts under this Title for the purpose of achieving savings, secondary savings, and benefits incidental to those purposes, in non-building energy efficiency improvement projects.

"(b) Selection of Projects. The Secretary of Energy, in consultation with the Secretary of Defense and the heads of other interested Federal agencies, shall select up to ten contract projects for this pilot program. The projects shall be selected to demonstrate the applicability and benefit of energy savings performance contracting to a range of non-building energy efficiency improvement projects.

"(c) Definitions. For the purposes of this section,

"(1) the term 'non-building' means any vehicle, device, or equipment that is transportable under its own power by land, sea, or air and consumes energy from any fuel source for the purpose of such transportability, or to maintain a controlled environment within such vehicle, device or equipment; or any Federally owned equipment used to generate electricity or transport water."

"(2) the term 'secondary savings' means additional energy or cost savings that are a direct consequence of the energy savings that result from the energy efficiency improvements that were financed and implemented pursuant to the en-

ergy savings performance contract. Such 'secondary savings' may include, but are not limited to, energy and cost savings that result from a reduction in the need for fuel delivery and logistical support. In the case of electric generation equipment, secondary savings may include the benefits of increased efficiency in the production of electricity.

"(d) Report. No later than three years after the enactment of this section, the Secretary of Energy shall report to the Congress on the progress and results of this program. Such report shall include: a description of all projects undertaken; the energy and cost savings, secondary savings, other benefits and problems resulting from such projects; and the overall cost-benefit of such projects. The report shall also include recommendations, developed in consultation with those agencies that undertook projects under the program, as to whether the authorization to enter into energy savings performance contract for non-building projects should be extended, expanded, or otherwise modified."

(b) Section 547(c)(3) of the National Energy Conservation Policy Act (42 USC 8256) is amended by striking the word "facilities", and inserting the words "facilities, equipment and vehicles", in lieu thereof.

APPENDIX

RESPONSES TO ADDITIONAL QUESTIONS

ALLIANCE TO SAVE ENERGY,
Washington, DC, April 25, 2003.

Hon. PETE V. DOMENICI,
Chairman, Senate Committee on Energy and Natural Resources, Dirksen Senate Office Building, Washington, DC.

DEAR MR. CHAIRMAN: Please find attached my replies to questions submitted for the record from the March 11, 2003 hearing of the Senate Committee on Energy and Natural Resources. Thank you again for giving the Alliance to Save Energy this opportunity to contribute as you consider this important legislation.

Sincerely,

DAVID M. NEMTZOW,
President.

RESPONSES TO QUESTIONS FROM SENATOR DOMENICI

APPLIANCE STANDARDS

Question 1. Is it your sense that the participants in last year's negotiations on efficiency standards still support the package placed before the energy bill conference?

Answer. Yes, the package of efficiency standards agreed to in the conference committee last year was a good package that we continue to support. We remain hopeful, and urge, that additional consensus agreements that have been made, and that are expected to be made in the coming weeks or months, will be added to the Senate's energy bill before its final passage and that they will be enacted.

Question 2. What new products have been discussed for legislated standards, and where have you found consensus?

Answer. Consensus has been reached with respect to standards for unit heaters and for compact fluorescent lamps, and I'm pleased that those agreements have since been adopted by the Committee. Negotiations are ongoing with respect to commercial clothes washers, and commercial refrigerators/freezers and freezers and large packaged HVAC equipment.

Question 3. Should new Federal standards enacted by legislation "pre-empt" State standards on those same products that may exist as of the date of enactment.

Answer. No, we believe that pre-emption of state standards should occur upon the effective date of the new federal standard. There is always the possibility that an administrative or legal issue could delay the federal effective date. In that case, the state standard would be pre-empted without the federal standard actually coming into effect.

Question 4. How should we handle those products for which a rulemaking process is ordered by statute? Should Federal preemption extend to the period between the enactment of the law and the conclusion of the rulemaking?

Answer. We believe that preemption should occur when the federal standard actually becomes effective, not before, because there is always the possibility that an administrative or legal issue could delay the federal effective date. In that case, the state standard would be preempted without the federal standard actually coming into effect.

ENERGY SAVINGS PERFORMANCE CONTRACTS

Question 1. What are the major impediments to the expanded use of ESPCs? Are those addressed by the provisions in last year's energy conference agreement?

Answer. We believe that the most immediate impediment to the expanded use of ESPCs is the looming "sunset" date of September 2, 2003. Last year's bill agreement would solve this problem by repealing that date.

Beyond that, ESPCs cannot now be used for non-building projects, where two-thirds of federal energy use occurs, because of the limitation of the existing authority to projects in federal buildings. It is for this reason that we have proposed that the authority be expanded to non-building projects, such as air conditioning systems on Navy ships, on a pilot basis, in order to determine whether the ESPC model can be adapted to non-building projects. Such a pilot program was not included in either the House or Senate bill last year, but we urge its consideration and inclusion this year.

Question 2. How do other alternative financing programs such as Utility area-wide contracts and Enhanced Use Leasing Compare to ESPCs?

Answer. Utility area-wide contracts, Enhanced-use leasing and ESPCs all serve specific markets for private financing of energy efficiency projects in the Federal government that, for the most part, do not overlap. ESPCs are the most flexible approach with several pre-selected vendors available to competitively serve all federal agencies' energy efficiency project financing needs. Utility area-wides can only be used in those cases where there are utilities with active demand management programs that offer this service to their non-federal customers. Moreover, the exact structure of these programs differs among the utilities that offer the service. Enhanced-use leases can only be used in those cases where two conditions are met. One, the federal agency is authorized to use such leases; two where there are energy savings opportunities under such a lease, such as the installation or improvement in co-generation facilities.

Question 3. How would expiration of the ESPC authority affect pending contracts and contract negotiations? How has the impending expiration affected your ESPC opportunities?

Answer. The impending expiration date has caused a sharp drop in ESPC investment. ESPC contracts typically take over a year to negotiate, the approaching expiration date is increasing the risk of, and therefore is undermining, pending contracts. It has effectively stopped the initiation of new contracts that are unlikely to be concluded before the deadline.

CORPORATE AVERAGE FUEL ECONOMY (CAFE)

Question 1. Given the Administration's effort of hydrogen vehicles, should we consider CAFE credits for these vehicles as a way to encourage their manufacture and sale?

Answer. It may be appropriate to offer CAFE credits for vehicles that use hydrogen for fuel. However, these credits should be applied for vehicles going onto the roads and available to consumers that are using hydrogen.

Question 2. How would you propose to fix the problems you see with the "dual-fuel" vehicle credits?

Answer. We oppose the extension of the dual-fuel vehicle incentives as currently written because it will not benefit America's oil dependence, national security, consumers, or the environment. It is our judgment that the current program design, which provides a bonus formula for rating vehicles for CAFE credits when they are capable of running on alternative fuels, offers an incentive for vehicle manufacturers to add dual-fuel capabilities in lieu of further increasing the efficiency of their fleet in order to meet fuel economy requirements.

For this program to succeed, the amount of CAFE credits must be linked to the actual amount of alternative fuel used. We urge that the dual fuel CAFE credit program be modified in this manner, in the interest of both improved fuel economy and reduced gasoline consumption.

The dual-fuel vehicle incentive established by the Alternative Motor Fuels Act of 1988, has resulted in consequences counter to the original laudable intent of the law. While AMFA was successful in bringing more vehicles that had alternative fuel capabilities onto the roads, the lack of alternative fueling stations meant that most of these vehicles never used these fuels—though their manufacturers used the AMFA credits to meet their fuel economy requirements. In fact, the National Academy of Sciences 2001 report on fuel economy standards addresses this issue and recommends the eliminations of the dual-fuel program because the program failed to produce the intended benefits.[1]

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[1] National Research Council, *Effectiveness and Impact of the Corporate Average Fuel Economy Standards*, July 2001.

The AMFA program does not reduce oil consumption nor help protect national security. According to a joint report to Congress by DOT, DOE, and EPA, there are only 5,236 alternative refueling sites (121 that offer E85) of the 176,000 gasoline stations nationwide although there are currently some 1.2 million dual-fuel vehicles on the road.[2] Furthermore, the joint report notes extending the program through 2008 will increase petroleum use by an additional 1.2 billion gallons a year, further increasing our dependence on foreign oil.

Modifications to the program could help increase the consumption of alternative fuels. Highlights of these modifications include:

- A new vehicle labeling requirement to ensure that consumers are fully aware of the dual fuel capabilities of their vehicle at the time of sale.
- A new requirement for the permanent marking of vehicles to ensure that operators of the vehicles are aware of the dual fuel capabilities when refueling.
- A requirement that any fueling of dual fuel vehicles at or prior to time of sale be exclusively with E85—potentially tripling E-85 sales by the end of MY 2005.
- A stable, multi-year program.

Question 3. Is "miles per gallon of gasoline" an appropriate efficiency metric if we are using hydrogen instead of gasoline in the future?

Answer. Yes, it is appropriate.

Question 4. Is the CAFE program "broken"? Do you recommend replacement with a gasoline tax or other similar measure?

Answer. CAFE standards are a proven means of increasing the fuel economy of the fleet of vehicles on America's roads. The National Academy of Sciences report, issued in July of 2001, concludes that the current CAFE standards save 2.8 million barrels of oil a day.[3]

In fact, increasing vehicle fuel economy standards would decrease oil consumption, help consumers, and protect the environment. The Alliance to Save Energy recommends a significant increase in vehicle fuel economy as numerous studies have shown that America's fleet could reach 40 miles per gallon in the next decade by using current and emerging technologies. This would not only save Americans billions of dollars annually, but also help protect the environment and stem global warming pollution.

While politically difficult, a gasoline or carbon tax on fuel would make the most polluting fuels more expensive, thus making alternative fuels and high fuel economy more attractive to consumers. The Alliance to Save Energy has been a long-supporter of including externalities—national security, environmental, health impacts—into the cost of energy. In 1998, the Alliance called for a phased-in carbon tax in the study *Price It Right, Energy Pricing and Fundamental Tax Reform.* The 1993 Alliance to Save Energy Study, *Federal Energy Subsidies: Energy, Environmental, and Fiscal Impacts*, documented that the federal government provided $35 in subsidies to traditional energy supplies (coal, petroleum, natural gas, and nuclear) for every $1 provided energy-efficient and renewable energy sources. The 1994 Alliance study, *State and Local Taxation: Energy Policy by Accident*, showed that 80 percent of the states effectively tax energy at rates below the tax rate they apply to sales of goods and services. Subsidizing fossil energy and taxing energy at lower rates than other goods makes little economic sense in light of fossil energy's environmental externalities.

RESPONSES TO QUESTIONS FROM SENATOR BINGAMAN

ENERGY SAVINGS PERFORMANCE CONTRACTS

Question 1. In response to testimony that the agency activity on ESPCs is declining, DOE attributed the fall off to the probability that the "low hanging fruit" has been picked by the agencies already. Do you agree with that assessment?

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[2] U.S. Department of Transportation, U.S. Department of Energy, U.S. Environmental Protection Agency. *Report to Congress: Effects of the Alternative Motor Fuels Act CAFE Incentives Policy*, March 2002, Table V-4. *A new path for alternative fuels is needed.* As the AMFA credits and dual-fuel vehicles have not successfully encouraged a significant increase in alternative fueling stations, the Alliance suggests fixing the program so that it provides credits for vehicles which actually run on alternative fuels. Additional focus on programs that help develop the infrastructure for alternative fuels may be necessary. This would prevent auto manufacturers from using these credits to circumvent increasing vehicle fuel efficiency, and prevent the desire for alternative and renewable fuels to compete with the need for increased energy efficiency.

[3] National Research Council, *Effectiveness and Impact of the Corporate Average Fuel Economy Standards*, July 2001.

Answer. We do not believe that this is the reason ESPC investment is declining. Rather, we see the looming "sunset" date of September 30, 2003 as the cause of the slowdown. The typical ESPC takes over a year to negotiate and we are now well within a year of that termination date. Therefore, it is now unlikely that companies or agencies for that matter can initiate new contracts and have them enter into force before the deadline. The program is, in effect, shutting down.

Question 2. Questions were raised in the hearing as to the current level of activity on ESPCs by the Veterans Administration. Have your member companies seen a decline in VA activity?

Answer. Companies tell us that the VA has terminated processing all ESPCs, even those for which there were letters of intent to proceed. We have inquired with the DOE, as the federal coordinating agency for ESPCs, whether they know the reasons for the VA's apparent new policy not to enter into ESPCs. We have been told by DOE that the VA has suspended ESPC activity while they conduct an internal review. While requests have been made to be involved in this process, the VA is unresponsive.

Question 3. What is your reaction to DOE's mention of a 5-year extension of the sunset on ESPCs, as opposed to a repeal of the sunset as both Houses of Congress proposed in last year's energy bill?

Answer. We support repeal of the sunset, not an extension, because DOE has not given any reason why there should not be a full repeal. After ten years, the ESPC program has grown to be very successful, tapping over $1 billion in private-sector investment for federal energy efficiency projects. At this time, its greatest problem is the looming sunset date that is cutting off new investment. To us, it does not make sense to establish another relatively short termination date that would, in several years, again undermine the incentive for private-sector partners to initiate new contracts.

RESPONSES TO QUESTIONS FROM SENATOR BUNNING

Question 1. Why has the DOE stated a preference for a change to the program which appears to stifle competition and lessens choices for consumers? Does the DOE believe that its preference for a 3-zone map will ultimately lead to loss of jobs for workers in the industry?

Answer. We cannot speak for DOE, but we can give you the reasons why the Alliance to Save Energy supports the 3-zone map. This alternative offers the potential to reduce cooling demand—and consequently to reduce greenhouse gas emissions and to provide summer peak energy savings. In addition, the simplicity of the 3-zone alternative is beneficial for consumers. We believe that the 3-zone alternative will promote low solar heat gain window products in cooling-dominated climate zones where reducing air-conditioning load is important.

It is important to note that Energy Star is a voluntary program, so that pyrolitic technology can continue to compete throughout the U.S. Additionally, there are other government-sponsored programs working to create demand for pyrolitic coatings and other efficient window technologies. One of these programs is the Efficient Windows Collaborative which educates consumers about all of the different energy-efficient technologies available in the market, and helps consumers to make the best choice based on a host of considerations including climate, design, energy prices, etc.

Question 2. What criteria will DOE be using as it makes its selection?

Answer. This question can only be answered by the DOE.

Question 3. Given the current surplus in peak energy supply, high price of natural gas and its impact on home heating costs, is DOE rethinking its decision to support the 3-zone alternative?

Answer. We continue to support the 3-zone alternative. Although there are a number of benefits for consumers of Energy Star products—such as saving money through energy savings—the purpose of the Energy Star program as stated on the program's web site is to provide a "voluntary labeling program designed to identify and promote energy-efficient products to reduce greenhouse gas emissions." The 3-zone alternative offers the potential to reduce cooling demand which depends on electricity, while the 4-zone proposal provides potentially greater heating savings which depends primarily on natural gas. Consequently, the 3-zone proposal has greater potential to reduce greenhouse gas emissions and to provide summer peak energy savings. Support for the 3-zone alternative is consistent with the Alliance to Save Energy's goals of working to achieve a cleaner environment and energy security through energy efficiency.

SEMPRA ENERGY SOLUTIONS,
San Diego, CA, April 25, 2003.

Hon. PETE V. DOMENICI,
Chairman, Senate Committee on Energy and Natural Resources, Dirksen Senate Office Building, Washington, DC.

DEAR MR. CHAIRMAN: Please find attached my replies to questions submitted for the record from the March 11, 2003 hearing of the Senate Committee on Energy and Natural Resources. Thank you again for giving the Federal Performance Contracting Coalition this opportunity to contribute as you consider this important legislation.

Sincerely,

ERBIN B. KEITH,
Senior Vice President,
Operations & Commercial Pricing.

[Enclosure]

RESPONSES TO COMMITTEE QUESTIONS

Question 1. Can ESPCs be used by the Department of Defense? What are the issues involved in doing so?

Answer. Yes, the Department of Defense (DOD) has the statutory authority to enter into ESPCs. In addition to using Department of Energy, Indefinite Delivery Indefinite Quantity (IDIQ), ESPC contracts ("Super ESPCs"), the DOD has the authority to enter into its own stand-alone ESPC or IDIQ ESPC contracts. Early on in the ESPC program, the DOD generated considerable ESPC activity [in comparison to other Federal agencies]. In recent years the DOD ESPC activity has significantly diminished. In my written testimony, I cited a number of factors for this, including, lack of funding for the management of ESPC programs and the lack of support and encouragement from high levels within the Department of Defense and the executive branch.

Question 2. What are the major impediments to the expanded use of ESPCs? Are these addressed by the provisions in last year's energy conference agreement?

Answer. The provisions of last year's energy conference agreement addressed some of the specific impediments. For example, the conference agreement dealt with the repeal of ESPC sunset provisions and the addition of water conservation to civilian ESPC projects. However, significant impediments and untapped ESPC opportunities remain that could be addressed. In my written testimony I recommended a number for additional measures that will serve to preserve and reinvigorate the program as well as expand its potential reach. In summary, those recommendations were:

i. Allow replacement and new construction facilities to be eligible for ESPCs;
ii. Mandate that Federal agencies report reasons they do not use alternative financing for capital improvement projects;
iii. Require that agencies report alternative financing activities to Congress;
iv. Stabilize the term of Army and Air Force ESPC contracts;
v. Encourage interagency cooperation and confirm ordering authority between agency ESPC contracts;
vi. Expand ESPC to include transportation and power generation applications.

Question 3. How do other alternative financing programs such as Utility area wide contracts and Enhanced Use Leasing compare to ESPCs?

Answer. The implementation of capital improvement projects under utility area wide contracts is often referred to as a utility energy services contract (UESC). Setting aside the fact that there is no explicit authority for implementing capital improvement projects under UESC, UESC and ESPC programs have several common characteristics, yet differ in important ways. Under both programs, a Federal agency contracts with the private sector to implement projects that reduce energy demand and consumption at the agency's facility. Under the UESC, the private sector entity is the local utility company. Under ESPC, the private sector entity is an energy services company (ESCO) that has been pre-qualified to perform energy services by the Department of Energy. Under both programs, the private sector entity provides the funding for the project.

The differences between UESC and ESPC programs become more significant in the details. First, ESPC program management services are competitively procured. UESC program services are not. The legislation and rules governing ESPC require competitive procurement of ESPC services. Under UESC, an agency contracts directly with the local utility company. The UESC contract is procured without com-

petition from ESCOs or other private sector entities that have the capability and interest in performing the services.

Second, energy savings resulting from ESPC services are guaranteed by the ESCO. Energy savings resulting from UESC services are not. The legislation and rules governing ESPC require the ESCO to guarantee the agency that the realized energy savings will pay for the project. There is no legislation or rule requiring that energy savings resulting from a UESC pay for the project.

Third, if guaranteed energy savings resulting from the ESPC are not realized by the agency, the agency is not obligated to pay (dollar-for-dollar) the ESCO for the project. Under UESC, there is no legislation or rule that allows to government to withhold payment for services that do not generate expected savings.

Fourth, ESPCs have contract terms of up to 25 years. UESC contract terms may not exceed ten years. In some cases, longer contract terms enhance the project scope and energy-savings opportunities. It is the risk that is transferred from the government to the ESCO, through the energy savings guarantee and other ESPC requirements, that justifies longer contract terms for ESPC projects.

Enhanced-use leasing (EUL) is a venture arrangement for the development of government property, under which that property is made available to a public or private entity through a long-term lease. The leased property may be developed for non-agency and/or agency uses, and in return for the lease, the agency receives consideration for the use of the property. Consideration may be revenue or consideration in-kind. Consideration in-kind may include the provision of goods or services of benefit to the agency, including construction, repair, remodeling, or other physical improvements of agency facilities, maintenance of agency facilities, or the provision of office, storage, or other usable space.

EULs can involve energy or non-energy related leases. For example, a commercial storage firm decides to lease a former warehouse located at an agency installation. The parties could enter into an ESL that leases the warehouse to the storage firm. The lease generates rental income for the agency and provides use of an otherwise unneeded facility. Energy related leases involve cogeneration opportunities at agency facilities. Such an example is when a developer and agency enter into a EUL, in which the agency leases land to the developer for the installation oft he developer's cogeneration system. In consideration for the lease, the developer provides output (electricity, hot water, steam) from the cogeneration system to the agency. Under the lease the developer may also provide energy conservation services to the agency as part of the in-kind consideration for the lease. The cogeneration system also may sell output to third parties. The availability of a third-party purchaser of the output is often critical to the viability of a EUL involving cogeneration.

The EUL is more closely related to ESPC than UESC. The EUL shares the ESPC's characteristics of competitive procurement, risk shifting and guaranteed results. However, the viability of energy related EULs are limited by the viability of cogeneration or some other supply side opportunity (e.g., district cooling and/or heating plants). ESPC does not have this constraint, thus, has much broader application to Federal facilities.

Question 4. How would expiration of the ESPC authority affect pending contracts and contract negotiations? How has the impending expiration affected your ESPC opportunities?

The looming expiration of ESPC authority already is having an impact on ESPC opportunities. ESPC projects take a number of months to implement. Due to the sunset of ESPC, some agencies are reluctant to commence projects that may not come to conclusion before the sunset deadline.

ESPC projects already under a "notice of intent to award" that are not awarded prior to the sunset likely will result in contractual claims for the abandoned ESPC services. ESPC projects under way that have not received a notice of intent to award may result in equitable claims for the abandoned services.

Question 5. In response to testimony that the agency activity on ESPCs is declining, DOE attributed the fall off to the probability that the "low hanging fruit" has been picked by the agencies already. Do you agree with that assessment?

Answer. No. DOE's own analysis demonstrates that the opportunity for additional ESPC activity and investment to be between $2 and $3 billion. In September of 2000, Pacific Northwest National Laboratory (PNNL) issued the report, "Economic Energy Savings Potential in Federal Buildings." The report was prepared for the DOE to estimate the available economic energy savings potential in Federal facilities. Among other things, the report concluded that the potential annual energy savings were estimated to be 25 MBtu/ksf/yr or 0.066 Quads/yr. The report estimated that the capital investment required to achieve the energy savings to be $5.2 billion, and the annual dollar savings to be $0.95 billion. The report goes on to state that between 0.040 and 0.048 Quads/yr of the 0.066 Quads/yr in annual energy savings

could be achieved through cost-effective alternative financing [ESPC] through private investment of $2 and $3 billion. In summary, the drop in ESPC activity is related to the factors cited in my testimony, the potential for a robust ESPC remains.

Question 6. Questions were raised in the hearing as to the current level of activity on ESPCs by the Veterans Administration. Have your member companies seen a decline in VA activity?

Answer. Yes, this past year the Veterans Administration placed a hold on ongoing ESPC activity pending an internal review of the ESPC program. The VA retained a consultant to prepare a report critical of the VA's ESPC program. Notably, the report did not receive critical input or commentary from ESCOs or the Department of Energy. The report has not been widely distributed outside the VA and has not been officially shared with ESCOs. It is alleged that the report is baseless and full of rhetoric bent on reaching an unfavorable conclusion of ESPC. We would look forward to the opportunity to review and comment on the VA report.

Question 7. What is your reaction to DOE's mention of a 5-year extension of the sunset oil ESPCS, as opposed to a repeal of the sunset as both Houses of Congress proposed in last year's energy bill?

Answer. We are surprised and disappointed. The ESPC program has demonstrated that it can make a substantial and cost-effective contribution to meeting the Federal government's energy goals and infrastructure improvement needs. The ESPC program is no longer the pilot program that was contemplated by EPACT. Indeed, despite a slow start through the rulemaking process, private sector investment in the DOE's Super ESPC program alone exceeded $360 million from 1998-2002. This will lead to a total energy savings to the government of over $836 million in energy costs. Total private sector investment in the Federal ESPC program exceeds $1.2 billion. The DOE's position on ESPC is inexplicably inconsistent with its involvement in the UESC program. UESC authority does not provide for competitive procurement of services or guaranteed results that exist under ESPC authority. However, UESC "enjoys" perpetual, albeit dubious, authority. It is illogical to suggest that ESPC should remain under a sunset while UESC remains a perpetual program.

ASSOCIATION OF HOME APPLIANCE MANUFACTURERS,
Washington, DC, April 29, 2003.

Hon. PETE V. DOMENICI,
Chairman, Committee on Energy and Natural Resources, U.S. Senate, Washington, DC.

DEAR CHAIRMAN DOMENICI: Enclosed are answers to questions from the Committee on Energy and Natural Resources generated from my testimony on Tuesday, March 11, 2003. Thank you for this opportunity to respond to the Committee.

Sincerely,

JOSEPH M. MCGUIRE,
President.

RESPONSES TO COMMITTEE QUESTIONS

APPLIANCE ENERGY EFFICIENCY STANDARDS

Question 1. Is it your sense that the participants in last year's negotiations and efficiency standards still support the package placed before the Energy Bill conference?

Answer. In general, AHAM and industry support last year's conference agreement on energy efficiency. However, since that time, events have developed which require some revisions. For example, there has been state activity on regulating the energy efficiency of commercial, residential-style clotheswashers used in laundromats and multi-family housing. There is an effort under way to develop a proposal to be contained in this Congress' energy bill.

Question 2. What new products have been discussed for legislative standards and where have you found consensus?

Answer. Since the hearing, the Committee's markup of the energy bill has added specified standards for several products. There are still discussions under way and efforts to add additional products, such as commercial clotheswashers, mentioned above.

Question 3. Should new federal standards in legislation preempt state standards on those same products that may exist as of the date of enactment?

Answer. Preemption should occur as early as possible. Where there are legislative standards, preemption should occur on date of enactment and where standards are

set by regulation, preemption should occur as early as possible after a concrete step of the regulatory process.

APPLIANCE STANDARDS

Question 1. You have made a number of suggestions for changes and additions of provisions on appliance efficiency. Please provide the record of separate summary and justification of those changes and suggestive legislative language.

Answer. AHAM and its industry coalition allies suggest several changes to last year's conference agreement.

First, we believe that the authorization of the Energy Star Program should include strong and clear language requiring justification of EPA or DOE proposals for new or revised categories and opportunities for stakeholder comment. The agencies should be required to respond to issues raised by stakeholders and justify different views. These should be sufficient lead-in when qualification levels change.

This proposal to add procedural and due process provisions Energy Star recognizes that although it is not strictly a mandatory program it has such substantial and direct linkage and impact on federal and state procurement and public and private incentive programs as well as the marketplace in general that agencies must show a higher level of responsibility in developing and revising programs. Too much work in Energy Star is delegated to contractors and decisions are made arbitrarily and without consideration of proper lead times before categories are added and changed. We do not seek Administrative Procedure Act application, or OMB or judicial review for Energy Star program actions but transparency and responsiveness.

AHAM and the coalition also recommended a number of legislated product standards to be added to the bill, most of which have been added by the Committee in subsequent markup. There are still some products, such as commercial clotheswashers, for which industry requests the legislative standard, hopefully on a consensus basis.

May 5, 2003.

SHANE PERKINS,
Staff Assistant, Committee on Energy and Natural Resources, U.S. Senate, Washington, DC.

DEAR SHANE: Please find attached below the responses to the questions submitted to Paul Lynch, Assistant Commission, Office of Business Performance, Public Buildings Service, from the hearing held on March 11 regarding Federal Program for Energy Efficiency and Conservation.

If you need additional information, please contact me on 202-501-3956.

Thanks,

WANDA SIMMS.

RESPONSES TO COMMITTEE QUESTIONS FROM PAUL LYNCH, ASSISTANT COMMISSIONER, OFFICE OF BUSINESS PERFORMANCE, PUBLIC BUILDINGS SERVICE

Question. What is your overall budget this year for federal energy management? How does that compare with GSA's total budget?

Answer. GSA's budget in Fiscal Year 2003 for energy efficiency projects is $3.457 million. That money is divided among training ($49,000), Energy Savings Performance Contracts and/or Utility Energy Service Contracts negotiation/administration ($650,000), and "green power" purchases ($2.758 million).

Even including the salaries for the staff members of GSA's Energy Center of Expertise, the total budget for energy management in comparison with GSA's overall budget of over $18 billion, federal energy management programs account for a very small amount of the overall agency budget.

Question. GSA is the landlord for many federal agencies. You either own the buildings and lease them to the agencies or you lease them from the private sector and sublease to the agency. I understand the split is about 55% owned to 45% leased. I have a chart from FEMP that indicates GSA controls 6% of the square footage of federal facilities. Does that include the buildings leased from the private sector?

Answer. No, this does not include buildings leased from the private sector. The 6% figure accounts for the percentage of federally-owned space that GSA oversees (approximately 182 million square feet of GSA-owned space out of the 3 billion square feet of total federal-owned space).

GSA actions account for approximately 44% of all federally leased space from the private sector (153 million square feet of GSA leased space out of the 347 million square feet of total federal leased space).

If the leased and owned properties by GSA were combined on a square foot basis, then GSA would control approximately 10% of the square footage of federal facilities (335 million square feet of GSA feet out of the 3.3 billion square feet of total federal space).

Question. Can you explain to the committee how the Federal Energy Management Program works in the case of a privately owned building leased to GSA? Are some of those buildings built specifically to be leased to GSA? Are there any efficiency goals or requirements with respect to any of your leases? If not, why not?

Answer. The guidance issued by DOE for reporting progress toward EO 13123 states that if an agency controls its Federally-owned building space or directly pays the utilities in its leased space then the agency must report its aggregate energy consumption for the site. The majority of GSA's leases are fully serviced leases in which the lessor is responsible for utility costs. Consequently, the energy usage of these sites is not included in our annual report to Congress and does not count toward our reduction goals mandated under EO 13123.

There are some privately owned buildings that are specifically built to be leased to federal agencies. However, it depends on who is responsible for the payment of the energy costs as to whether or not the consumption would be included in agency consumption figures. If GSA were responsible for the utility costs then the efficiency goals under EO 13123 would apply.

EO 13123 guidance does not include any goals for leased locations where the lessor is responsible for the utilities because the tenant agency has little control in managing the costs at the site and does not see a return on investment (i.e. lower utility costs from implementing an efficiency project for the site). Often these sites are locations where the federal agency does not occupy the entire building and if the energy is not submetered, monitoring the energy usage is difficult.

Question. How about the buildings that you own and lease to other agencies? Who is responsible for meeting the goals of Executive Order 13123 or the FEMP statute?

Answer. GSA is responsible for reporting energy data for all space that we own that is leased to other agencies and is also responsible for meeting the goals of EO 13123 for these sites. However, if an agency has been delegated responsibility by GSA for operation and maintenance of the building it occupies, then that agency is responsible for reporting its energy consumption and for meeting the appropriate efficiency goals under EO 13123.

Question. How do you track savings when agencies move or reorganize? For example, how will the energy efficiency of the buildings occupied by the agencies that are now part of the Department of Homeland Security be accounted for?

Answer. Most of the sites GSA deals with are office buildings. GSA manages a portfolio of buildings in which it strives to minimize vacancy rates. GSA tracks the energy usage of the entire building and is responsible for all of the energy costs. When one agency vacates a space, it is generally backfilled with another tenant agency very quickly. Unless the new tenant has very different hours of operation, the overall energy usage of the building will not vary much. There are justifications for moving a site to energy-intensive category under EO 13123 or even for exemptions from the goals.

Question. (FEMP Baseline) The energy conference agreement on federal energy management would amend current law to establish energy reduction goals at 2 percent a year from 2003 through 2012 as compared to energy use in 2000. Would it make sense to move the baseline to 2002 or 2003 in order to improve the accuracy of the data on energy use?

Answer. The selected baseline year should be one for which a reasonably complete set of energy consumption data is already available. Selection of a different baseline year other than the year 2000 would have no impact on the accuracy of the energy use data.

Question. (Alternative Financing/ESPCs) Are there other alternative financing programs for funding energy efficiency available to federal agencies (Utility AreaWide Contracts or Enhanced use Leasing)? How do they compare with ESPCs in terms of energy savings and cost?

Answer. The primary difference/benefit with Utility Financing is that Utility Companies typically are willing to finance a smaller project. Most contractors under the Super ESPC program are not interested in projects that are not at least $1.5 million.

Question. (Equipment Procurement) The federal government spends over $10 billion/year for energy-related products. Is non-defense procurement centralized at

GSA? How does GSA ensure that these are the most energy efficient products available? What is the Department of Energy role?

Answer. Yes—non-defense procurement is centralized at GSA. GSA's Federal Supply Service has various contracting centers that contract for energy-related products. These contracts and products are made available to the entire Federal community.

The Department of Energy and EPA (Energy Star) determine the criteria for energy efficiency. GSA's Federal Supply Service implements the criteria into its contracting language to ensure contractors are aware of the minimum criteria which their respective products must meet to qualify.

A number of factors go into the awarding of contracts: In the multiple award situation—which is the scenario for these energy related items—a number of contracts are awarded and the customer agencies determine the item(s) that best meet their needs with energy efficiency being only one among other best value factors.

Question. (Energy Star Buildings) I note that GSA has earned the Energy Star building label for 15% of its buildings. Can you explain for the record what that designation means in terms of energy performance? How does that compare with the rest of the government? Is this a goal we should establish for the rest of the federal government?

Answer. EPA and DOE have established criteria for commercial office buildings, hospitals, grocery stores and K-12 school buildings. The basis for these criteria is benchmarking building energy consumption on a 1 to 100 scale. Buildings that are among the top 25% nationwide in terms of energy performance (earning a benchmark score of 75 or greater) and maintain an indoor environment that conforms to industry standards can qualify to receive the Energy Star label for buildings.

There are also some eligibility requirements that have kept some GSA locations ineligible for applying for the Energy Star label. Many of these criteria, which are listed below, would also prohibit other facilities owned by other Federal Agencies from applying for the label as well:

1. Gross building area greater than or equal to 5,000 square feet;
2. Building must have been occupied for 11 or more of the last 12 months;
3. Building has 50% or more gross square feet designated as primary office space (This sometimes eliminates courthouses from being eligible);
4. Building has 10% or less of its gross square feet as secondary space designated as computer data center space. (Data centers are often eliminated with this requirement);
5. The average annual vacancy rate of the primary space is less than 20%.

Applying for the Energy Star label is probably the least expensive of the options (ASHRAE standard, LEED rating system, Energy Star) and certainly is more user friendly. Searching the Energy Star website for labeled federal buildings, the only other Federal agency listed other than GSA was the Department of Veterans Affairs. Since the Energy Star label is currently only available for offices, hospitals, schools and grocery stores, this would probably prohibit federal buildings such as courthouses, labs and DoD sites from being eligible for the label.

Question. (New Federal Buildings) One of the provisions in the energy bill conference agreement requires that new federal buildings mee4rg building energy-performance requirements that are 30% more efficient that the ASHRAE 90.1 building code energy consumption levels. How does this ASHRAE based standard compare with the Energy Star rating or the LEED rating system? Which standard will result in the most energy efficient federal buildings?

Answer. ASHRAE Standard 90.1—1999 establishes minimum requirements for the energy efficient design of buildings. This standard sets out design criteria for energy efficiency.

The Energy Star rating for buildings is a relative rating among other existing buildings in the national building market. Energy Star candidates are benchmarked against other properties' energy performance in existing buildings; being rated on the history of energy bills while factoring out local climatic differences that bias energy use data for certain locations.

The LEED Green Building Rating System focuses on energy efficiency in the Energy & Atmosphere section of its scorecard. As a prerequisite to earning LEED points in this section, the ASHRAE standard must be met. Within the LEED 2.1 rating system, points are only awarded to those building projects that exceed ASHRAE Standard 90.1—1999 for energy efficiency.

ASHRAE is a building standard. The Energy Star rating and the LEED rating system are both voluntary programs; there is no requirement to use either of these systems in building design or construction.

Within the LEED rating system, it is the project team's choice as to how efficient to make the building. Once the ASHRAE standard is met, LEED points are awarded

for efficiency levels above the ASHRAE standard. The following chart shows the number of LEED 2.1 points that can be earned by exceeding the ASHRAE standard for both new buildings and existing buildings:

Exceed ASHRAE standard by:		LEED 2.1 Points
New buildings	Existing buildings	
20%	10%	2
30%	20%	4
40%	30%	6
50%	40%	8
60%	50%	10

The new LEED for Existing Buildings pilot is offering an option for earning energy performance points; the building can either exceed the ASHRAE standard by a certain percentage (as above), or it can achieve a particular Energy Star label.

If new federal buildings are to meet building energy performance requirements that are 30% more efficient than the ASHRAE 90.1 Standard, then the conference agreement provision will be the most stringent. Both LEED and Energy Star have the flexibility to go above this 30% target, but neither of these is a building design requirement.

Question. (Metering) The Energy conference agreement requires that all federal buildings be metered, with advanced meters if possible, by 2010. The bill that passed the Senate included a provision that would have required metering by 2004. It seems logical to me that an energy manager for a federal agency should know how much energy his buildings are using so that he can understand his costs and design the most effective energy efficiency improvements. Is there any reason we can't expedite the metering process so that the end date is 2004 instead of 2010?

Answer. Accelerating the installation of advanced meters in this manner would likely create concerns regarding the added costs of installation that may result and the practicability of meeting such a requirement, given the actual time and resources available to carry out installation.

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