Increasing America's Energy Efficiency




Institute for 21st Century Energy | U.S. Chamber of Commerce

A Key Pillar for Securing America's Energy Future

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The mission of the U.S. Chamber of Commerce's Institute for 21st Century Energy is to unify policymakers, regulators, business leaders, and the American public behind a common sense energy strategy to help keep America secure, prosperous, and clean. Through policy development, education, and advocacy, the Institute is building support for meaningful action at the local, state, national, and international levels.

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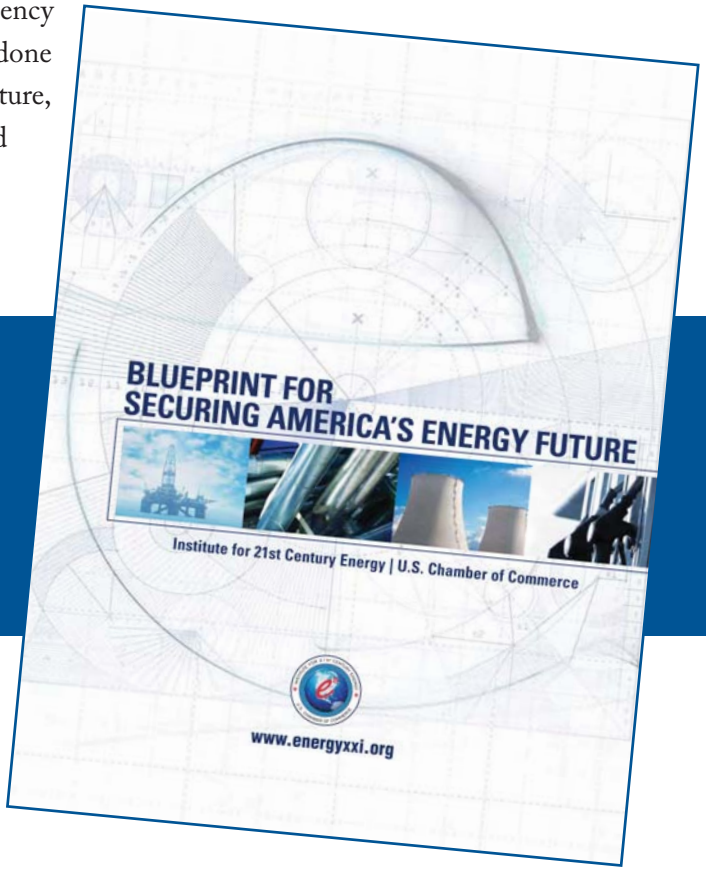
"The next best source of new energy is the energy we can save every day. Immediate benefits can be realized by increasing building efficiency and appliance standards, two areas with high energy savings potential. We must explore new business models that reward energy savings, especially for utilities and ultimately the customers. We must expand the suite of voluntary programs, mandates, and fiscal incentives for greater benefits of energy efficiency."

— Excerpt, Open Letter to the 44th President of the United States and the 111th U.S. Congress, from the Institute for 21st Century Energy

Introduction

Steering the country toward a more secure energy future requires a comprehensive policy plan that does more than merely focus on the energy issue of the day. The Institute for 21st Century Energy, an affiliate of the U.S. Chamber of Commerce, provided such a comprehensive approach in 2008 with our *Blueprint for Securing America's Energy Future*. The Blueprint's analysis included nearly 90 specific recommendations for Congress and the Administration that remain a relevant guide for transitioning our country to a more stable, secure, and clean energy future. Seven of these recommendations focused on aggressively improving U.S. energy efficiency.

The Institute for 21st Century Energy has actively promoted these recommendations in Congress, the Administration, and state lawmakers. Since the Blueprint was released, there has been noteworthy progress in incentivizing energy efficiency across sectors. However much more needs to be done to transition to a cleaner, more efficient energy future, and this report highlights unfinished business and key actions that would harness opportunities and yield huge energy efficiency gains.



While the Blueprint incorporates all 13 pillars identified for a sound energy policy, this report is the first in a series that will examine each of the pillars individually to provide greater analysis and updated recommendations. By releasing status reports on each pillar, we intend to both inform the public debate with facts, and shed light on the building blocks necessary for securing America's energy future.

Overview

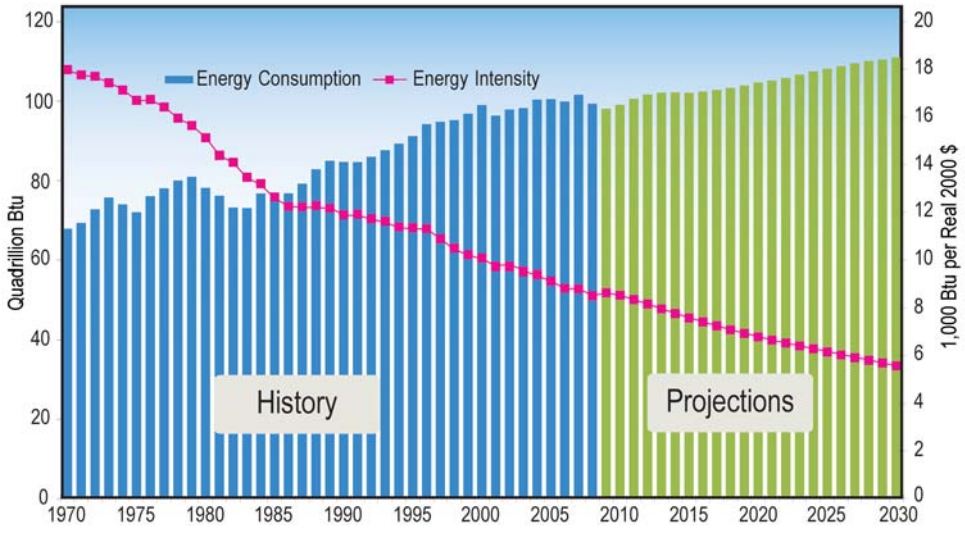
Solving our energy challenges is a long-term proposition; however, we can achieve immediate economic and environmental benefits by better harnessing the energy we unintentionally waste each day. Putting into practice more robust energy efficiency programs is a crucial component of our nation's energy security. We can free up significant amounts of energy for more productive purposes and eliminate unnecessary expenditures on the part of both businesses and consumers. This paper examines key factors affecting energy efficiency and provides recommendations for how increased efficiency can be realized in the United States.

Energy Intensity

The United States has steadily improved its energy intensity—energy use per unit of gross domestic product (GDP)—over the last four decades. High energy prices, new regulatory requirements, and advances in technology have continued to stimulate greater efficiency. About 18,000 British thermal units (Btus) were required to produce one dollar of GDP in 1970; it now takes a little less than half that amount. By 2030, the Energy Information Administration (EIA) projects it will take only 5,580 Btus for each dollar of GDP, largely reflecting a continuation of the historical rate of improved energy intensity of about 1.8 percent per year since 1990.

U.S. energy intensity, however, continues to be significantly higher than that of other industrialized nations. For example, Japan and the European Union (EU) use less energy to produce a dollar of GDP than does the United States. In 2006, energy intensity in Japan and the EU was 6,496 and 6,540 Btus respectively, compared with 8,840 Btus in the United States. Regardless, total primary energy demand in 2008—at just over 99 quadrillion Btus—was nearly 1,113 quadrillion Btus less than it would have been without energy intensity improvements made since 1970.

Figure 1. Historical and Projected U.S. Energy Consumption and Energy Intensity: 1970-2030



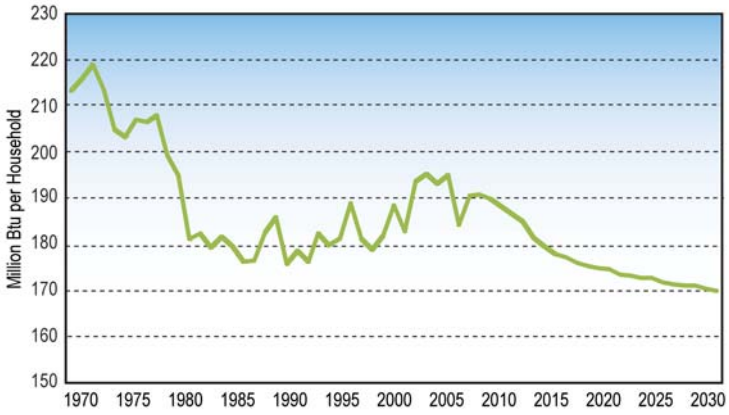
Source: Energy Information Administration and Department of Commerce, Bureau of Economic Analysis.

Other Measures of Efficiency

While energy intensity offers a relatively good proxy for a country's overall economic efficiency, it is not strictly an efficiency measure. Energy intensity can be affected, for example, by changes in the manufacturing sector's share of economy. As an economy shifts away from energy-intensive manufacturing toward service-based activity, energy intensity can be expected to fall. Though a measure of national energy efficiency is thereby difficult to come by, other measures within specific sectors can give us an indication of improvements in energy efficiency.

Figures 2 and 3 show residential energy use per household[1] and commercial energy use per square footage of commercial buildings for 1970 through 2007. During that period, the amount of energy used per square foot of commercial building and per household has decreased by about 28 percent and 11 percent, respectively. Both show very large declines in energy use though the late 1980s and more modest improvements thereafter. In fact, since about 1990, the decrease in residential energy consumption per household has slowed, but this is likely due to the construction of larger homes rather than a reversal in residential energy efficiency.[2] Looking to the future, EIA projections suggest continued improvement, but at a slower rate than occurred in the 1970s and early 1980s.

Figure 2. Residential Energy Efficiency: 1970-2030



Source: Energy Information Administration and Department of Commerce, Bureau of the Census.

Figure 3. Commercial Energy Efficiency: 1970-2030

Source: Energy Information Administration.

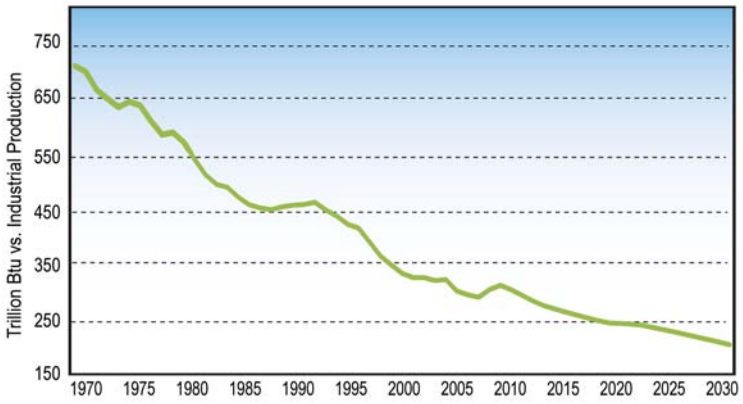
[1] Households are an imperfect measure, but data on total square footage for residential buildings are unavailable.

[2] Since 1985, the median size of a home has increased about 10 percent.

Not surprisingly, the industrial sector has seen even greater gains in efficiency, measured as the amount of energy used per dollar of production. It now takes about 60 percent less energy to produce a dollar of output than it did in 1970. EIA expects these gains to continue into the future (Figure 4).

Improvements in technologies and higher energy prices account for the majority of these gains, but public policies, such as appliance and vehicle efficiency standards and building codes, are responsible for at least 20 percent of the improvement.

Figure 4. Industrial Energy Efficiency



Source: Energy Information Administration and Federal Reserve.

The Need to Do More

Despite the substantial efficiency gains that have been made since the 1970s and improved rates of energy intensity, the projected growth in U.S. energy demand cannot be met with current electricity generation and efficiency efforts. More work is needed to moderate the nation's energy consumption.

For the past three decades, public policy has been and will continue to be a key factor affecting how quickly and widely we can improve the efficiency of our economy. Energy efficiency measures generally require a substantial upfront investment in exchange for long-term energy savings. How rapidly these reductions take place, however, will be determined by the turnover of capital stock, technological advances, growth of capital investment, and removal of numerous regulatory and structural barriers. For example, changes in the federal tax code to allow for more rapid depreciation of capital equipment would provide incentives for new investment that could accelerate reductions in energy intensity and carbon intensity (the amount of carbon by weight emitted per unit of energy consumed).

Reduced energy consumption is not the only goal of increased efficiency. Other lasting benefits can also be obtained by employing more energy-efficient practices in every stage of energy production and use. There are many opportunities to improve the efficiency of not only how we extract, process, and distribute fuels, but also how

we generate and distribute power from those fuels and renewable sources. Moreover, we can improve existing communities and transportation systems, and plan new ones, to enhance energy efficiency. Improved information and communication technologies, (including telecommuting and ride sharing) can also reduce transportation-related energy consumption. We must increase efficiency throughout the entire energy delivery chain by employing new technologies, even as we make our buildings, appliances, lighting, and automobiles more energy efficient.

Residential and Commercial Buildings

Markets generally incentivize energy providers and users to maximize efficiency and thus lower costs to the consumer. In some instances, however, the market does not deliver the most efficient products or services within the timeframe required by our strategic interests. Consequently, it is important to understand that decisions about energy efficiency are not made in a vacuum. Businesses, for example, typically look for investments that deliver the greatest (and quickest) return. Although investments in energy efficiency usually pay for themselves over time, they must compete (and win) against other investment opportunities.

Competitive pressures can lead to products that are not as energy efficient as they could be. For example, a builder who designs and constructs a new residential or commercial building has a tremendous incentive to maximize investments in options that will visibly attract buyers and realize higher returns. There is still little incentive in many U.S. markets for the builder to invest in heating, cooling, and lighting systems that are initially more expensive and whose efficiency is invisible. After all, the tenant or homeowner, rather than the builder, will be the beneficiary of lower energy bills.

Residential and commercial buildings account for roughly 40 percent of U.S. energy consumption.[3] Most of this energy is used for space

[3] This includes purchased electricity; total primary consumption in the building sector is about 10 percent of total U.S. consumption

ventilation and air conditioning, water heating, lighting, refrigeration, cooking, and running a wide variety of appliances and equipment. In the near-term, widespread adoption of advanced commercially available technologies can improve the efficiency of energy-intensive equipment in these primary areas.

Appliance Standards

The Energy Policy Act of 2005 and Energy Independence and Security Act of 2007 required new efficiency standards for a range of appliances and equipment.

The Energy Policy Act of 2005 (EPAct 2005) and the Energy Independence and Security Act of 2007 (EISA 2007) required new efficiency standards for a range of appliances and equipment. In 2006, DOE settled litigation concerning missed deadlines for new standards required by earlier laws by signing a consent decree committing the agency to issue 22 overdue standards by mid 2011. When the U.S. Department of Energy (DOE) published its semi-annual report to Congress in February 2009, the President tasked DOE with quickening the pace of issuing energy efficiency standards for appliances, while continuing to meet legal and statutory deadlines. Since that time, DOE has published eight final rules for 20 products, including energy conservation standards for gas ranges and ovens, clothes washers, water heaters, and commercial packaged boilers. DOE estimates these new standards will provide consumers more than $250 billion in savings through 2030. In July 2009, DOE issued its final rule on fluorescent lamps, which are commonly found in residential and commercial buildings, and incandescent lamps that are used in recessed and track lighting. These types of lamps represent approximately 38 percent and 7 percent of total lighting energy use, respectively; however, this rule does not take effect until 2012. DOE must publish new standards for various products according to specific deadlines established by EPAct 2005 and EISA 2007, as well as by earlier legislation and consent decree. More than fifteen additional new standards are due by January 2013.

In October 2009, the nation's leading manufacturers of residential central air conditioners, furnaces, and heat pumps signed a voluntary agreement with leading energy efficiency organizations in support of new federal standards for those products. The agreement calls for regional efficiency standards to replace current national standards,

thus recognizing that appropriate investments in heating and cooling efficiency depend on usage, which varies by regional climate. This agreement mirrors EISA 2007 in that it too allows for regional standards. The new standards are projected to save U.S. consumers upwards of $13 billion in today's dollars between 2013, when they begin to take effect, and 2030. The recommended standards also will save 3.7 quadrillion Btus of energy nationwide, which is equivalent to all the energy consumed by approximately 18 million households in a single year.

Beyond these efforts to set mandatory and voluntary standards for appliances, there are several other programs that are furthering the purchases of more energy efficient appliances by the general public. The success of the voluntary ENERGY STAR® program demonstrates that, when properly informed, consumers do value energy efficiency. Recent surveys indicate that more than 75 percent of U.S. households recognize the ENERGY STAR brand, which continues to expand into new consumer product lines.

Nearly $300 million was included in the American Reinvestment and Recovery Act of 2009 (ARRA)—also known as the "stimulus bill"—to enable states and territories to provide consumers with rebates for the purchase of qualifying ENERGY STAR appliances to replace less efficient models. The rebates have recently become available with product types, requirements, and rebate amounts varying by state.

Advances in building design, equipment, and appliances, as well as integrated systems, have the potential to achieve a 70 percent reduction in a building's energy use by 2025.

"Smart" Building Codes

Advances in building design, equipment, and appliances, as well as integrated systems, have the potential to achieve a 70 percent reduction in a new building's energy use by 2025, according to data compiled from the respective industries. Further, with on-site generation technologies, such as solar photovoltaic panels, it is possible that many buildings could become self-sustaining and even net electricity producers in the not-too-distant future.

Likewise, "smart" building systems can integrate sensors, controls, and inputs from various building systems to inform an "energy management system" that simultaneously optimizes comfort and

energy efficiency. Intelligent buildings can also communicate with the local utility to participate in peak shaving "demand-response" initiatives to substantially lower the building owner's energy bills, while also reducing stress on and enhancing the reliability of electric power grids. While Presidential executive orders have sought to increase the efficiency of federal buildings, legislation at both the national and state levels could further catalyze smarter and more efficient use of energy with targeted tax credits and by requiring improvements in government buildings and facilities.

The use of fully integrated "smart" building technologies, however, is more often the exception than the rule. Building developers or owners typically focus on initial cost rather than life-cycle costs, and as a consequence, most of our buildings deliver something less than full energy efficiency. This can be addressed with new business models and lease structures that make energy efficiency improvements profitable for building developers, owners, and tenants alike.

Stronger building codes can also make a substantial difference. While building codes are the province of state and local governments, national model codes based on regional climates are developed by code-setting organizations and certified by DOE, and states are required to consider these certified codes, and for commercial buildings to adopt codes with similar energy savings. DOE's Building Energy Codes Program is working with national code organizations, the building industry, and state and local officials to develop and promote building codes that are more energy efficient than the current national model.

Legislation pending in Congress would direct DOE to work with the code organizations to realize a 30 percent improvement in the energy efficiency of model codes in the next development cycle and a 50 percent improvement by the middle of the decade. The legislation would require state adoption to follow within 2-3 years of each target as well as provisions for improving compliance with the codes. Legislative progress in both Houses of Congress has helped spur the authors of the leading model energy codes—the International Code Council (ICC) and the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)—to action. In 2010, the ICC will take final action on proposals boosting the efficiency

of both its residential and commercial codes by at least 30 percent, compared with the 2006 version.

Some states automatically adopt ICC and ASHRAE codes, most others do not. In 2009, Congress tied billions of dollars of federal funds for state clean energy programs, including building codes, to their commitment to implement the current model energy codes, thus significantly enhancing the likelihood that the more efficient codes will be implemented nationwide.

Industrial Energy Use

Industrial energy use is another area in which there is huge potential for efficiency gains to reduce overall consumption. Industry accounts for about 31 percent of the energy consumed in the United States today.[4] There are significant differences in the patterns of energy use across industrial sectors. Metals, petroleum refining, chemicals, fertilizers, glass, pulp and paper, and cement are very energy intensive. Other sectors, such as automobile manufacturing, appliances, electronics, textiles, and food and beverages, are much less so. About 80 percent of industrial energy use is attributed to the use of motors, steam, compressed air, pumps, fans, process heating, combustion, and combined heat and power.

Industries can take advantage of off-the-shelf technologies—many of which are common across a wide range of industries—together with industry best-practices and better energy management to save significant amounts of energy (and money). Plant energy audits sponsored by DOE's Industrial Technology Program, for example, have been very successful in identifying ways to reduce energy use while improving productivity, recovering energy efficiency investments, and saving money—all in an attractive timeframe. The industrial sector can adopt advanced technologies (as they become available) that could dramatically change basic manufacturing.

[4] This includes purchased electricity; total primary energy consumption in the industrial sector is about 21 percent of total U.S. consumption.

These may include on-site energy generation, process efficiency improvements, advanced sensors and controls, and recovery and reuse of materials. The development and adoption of advanced industrial technologies would clearly improve the nation's energy security, while also helping to maintain the competitiveness of U.S. industry.

Demand Response

Electricity generation accounts for about 40 percent of total U.S. energy consumption and the power sector provides another example of an imperfect market. Because bulk electricity cannot easily be stored, the demand for and the supply of electricity must be carefully balanced on a minute-to-minute, hour-by-hour basis. As utilities bring more-expensive, less-efficient generating units online to meet the periods of greatest or peak load on the system, the cost of electricity generation can rise sharply. And yet, in most areas of the country, consumers pay flat rates for electricity. They are shielded from market realities and thus lack the incentive to curtail energy use during peak periods.

Electricity generation accounts for about 40 percent of total U.S. energy consumption.

It may be impossible to tap into the full range of cost-effective energy efficiency measures without also considering the utility regulatory environment. Consequently, we must explore innovative new regulatory models that reward efficiency, especially for utilities—and ultimately their customers—for saving electricity through energy efficiency programs and new approaches to the delivery of energy services. For example, utility regulatory policies such as "decoupling," which reward the more efficient use of energy rather than the sale of generated electricity and natural gas, must be encouraged.

State regulators are looking to utilities to transform the energy efficiency paradigm and are encouraging them to treat investments in energy efficiency in essentially the same manner as investments for generation, transmission, and distribution. Many state legislatures and public utility commissions have recognized the importance of this transformation and have implemented policies to remove this disincentive and to reward efficiency instead. Policies that have had measurable success include: 1) cost recovery from the rate base for implementing efficiency programs, or to compensate for resultant lost

marginal revenue; 2) separating fixed-cost revenue recovery from the volume of energy provided; and 3) creating financial incentives for efficiency investment by utilities.

States have also started grappling with shareholder incentive mechanisms that focus on giving utility investors financial signals. For efficiency to become a "big business" for utilities, their shareholders must be able to achieve demonstrable earnings from what utilities spend on the demand side. If shareholders see earnings potential from utility investments in efficiency, they likely would be more interested in seeing utilities move aggressively in this direction.

All states, through their legislatures and public utility commissions, would be wise to embrace these examples and create other mechanisms that make demand reduction as profitable for utilities as increasing supply. Today's challenge of reducing greenhouse gas emissions while meeting the country's steadily rising demand for electricity makes this shift in focus essential.

"Smart Grid" Technology

Needless to say, we must also promote new technologies that optimize energy efficiency and "smart grid" technologies that allow consumers (and their residences, office buildings, and vehicles) to interact with the power grid. For example, a smart grid would allow a utility to shut off certain appliances during expensive peak times and enable their use during off-peak periods. The "stimulus bill" brings crucial funding to modernize our antiquated electrical system. To put this in perspective, it is estimated that $880 billion will need to be invested in electrical transmission and distribution by 2030 to maintain reliable electricity.

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Such a grid would also benefit transportation. Plug-in hybrid cars and light trucks that operate on electricity for much of their driving cycle can reduce oil consumption and improve air quality, and also provide a source of emergency home power in the event of an electrical power failure. In addition, electric vehicles could provide power back to the grid during periods of exceptionally high demand, enhancing grid stability and reliability. Placing the generation source closer to end-users minimizes electricity losses through the transmission process;

however, the capacity of the current electricity grid must be expanded and modernized to support significant deployment of distributed generation systems.

The Federal Energy Regulatory Commission (FERC) is working to encourage opportunities for improving grid efficiency and reliability by expanding the capabilities of the grid to allow for increased use of renewable energy sources for power generation. FERC is also examining facilitating peak load reduction by increasing the use of demand-response technologies, such as time-of-day metering, to reduce power consumption in times of electricity supply shortfalls and power supply intermittency.

Securing Our Future

There are still technological and economical barriers to surmount and standards to be established to leverage the most from intelligent buildings, smart grids, and integrated plug-in hybrid cars and trucks. Perhaps the most daunting barriers, however, are the regulatory, institutional, and market barriers that exist at the local, state, regional, federal, and international levels. Therefore, the benefits and opportunities of energy efficiency must be broadly communicated and embraced at every level of our society—from the White House and Congress, to Governors and state legislatures, to utility regulatory commissions, utilities, electrical cooperatives, and end-users.

Leveraging policies, markets, and technology can yield tremendous progress toward promoting energy efficiency. Energy efficiency, in turn, is largely regarded as the fastest, least-expensive method of helping to reconcile increasing demand for energy with increasingly constrained supplies—while at the same time reducing per capita emissions. Therefore aggressive pursuit of energy efficiency is a key pillar in the blueprint to secure America's energy future.

Energy Efficiency Recommendations

In its 2008 publication, *A Blueprint for Securing America's Energy Future*, the Institute for 21st Century Energy put forth nearly 90 specific recommendations for Congress and the Administration, seven of which focused on aggressively improving U.S. energy efficiency. The government accepted and began implementing many of the Institute's recommendations to improve energy efficiency. However, much more is needed to transition to a more efficient energy economy. The following is a status update on progress made to date toward implementing the seven recommendations, including unfinished business and key actions that would yield needed energy efficiency gains.

Recommendation 1

The U.S. Department of Energy (DOE) should move expeditiously to promulgate the appliance standards as required by both the Energy Policy Act of 2005 (EPAct 2005) and the Energy Independence and Security Act of 2007 (EISA 2007). Although DOE issued its final rule on fluorescent and incandescent lamps in June 2009, it needs to focus on completing the efficiency requirements in EPAct 2005 and EISA 2007, many of which are unfunded, underfunded, and behind schedule.

Status: In its most recent semi-annual implementation report to Congress (August 2009), DOE reported publication of six final rules for 13 products, including energy conservation standards for gas ranges and ovens, beverage vending machines, and commercial packaged boilers. The Department's target date for completion of the standards required under EPAct 2005 and EISA 2007 is March 2017.

Unfinished Business: DOE should make accelerating its pace on finalizing these efficiency rules a higher priority. DOE should accelerate completion of standards that offer the greatest potential savings.

Recommendation 2

Allowing more rapid depreciation of capital equipment through the federal tax code would provide incentives for targeted new investment that could accelerate reductions in energy intensity and carbon intensity. Revising the tax code to could bring about these reductions:

- Reduce the recovery period for investment in electricity transmission lines and smart grid devices from 20 years to 10 years;
- Reduce by 50 percent the cost-recovery period for installation of the best available energy efficiency devices by commercial facilities and small businesses; and
- Provide for immediate expensing of investments that meet the standard for breakthrough low carbon technologies.

Status: The Emergency Economic Stabilization Act of 2008 (P.L. 110-343) provides accelerated depreciation for smart electric meters and smart electric grid equipment by amending Section 168. The bill allows taxpayers to recover the cost of this property over a 10-year period, compared with a 20-year period prior to this change. Neither Congress nor the Administration has acted on the second and third tax incentives listed above.

Unfinished Business: The Congress and the Administration should move expeditiously in the second session of the 111th Congress to act on the second and third tax incentives listed above to use the federal tax code to encourage new private investments that would accelerate reductions in energy intensity and carbon intensity.

Recommendation 3

Congress should increase annual funding for DOE's Buildings Program from the current level of about $110 million to $250 million, and its Industrial Technologies Program from the current level of about $65 million to $175 million.

Status: The FY 2010 budget for DOE includes over $200 million for building technologies, $60 million over the FY 2009 omnibus funding of $140 million; and $96 million for industrial technologies, a $6 million increase from FY 2009 appropriations.

Unfinished Business: Provide sustained research and development funding to ensure that these two DOE programs aggressively advance energy efficiency measures.

Recommendation 4

Congress and the Administration still need to act by first determining which approach to improving building efficiency they will adopt:

Status: The adoption of national building code energy savings targets has been included in the climate bill (H.R. 2454) that passed the U.S. House of Representatives in June 2009, and forms part of the Senate energy proposal (S. 1462), which was approved by the Energy Committee but has not yet reached the Senate floor. While different, both bills include financial and technical incentives to help code setting bodies and states meet 30% and 50% targets, and improve compliance, with DOE-set codes a "last resort." To date, neither proposal has been enacted into law.

Unfinished Business: Congress and the Administration still need to determine which approach to improving building energy efficiency they wish to enact: 1) Setting energy-saving targets for code setting bodies and states and localities, and directing the U.S. Department of Energy to step in if they fail to meet the targets; 2) Incentivizing states and localities to improve codes, without penalty or backstop for any failures; 3) Approving a variation of these two proposals; or 4) Crafting an entirely different approach than has already been suggested.

Recommendation 5

Congress should require that federal energy efficiency grants to states be contingent on the adoption of building codes that emphasize energy efficiency, consistent with model building codes certified by DOE.

Status: Section 410 of the American Recovery and Reinvestment Act of 2009 (ARRA) provides $3.1 billion in stimulus funding, conditioned on state governors' assurance that their states will adopt the latest building efficiency standards, and will implement a plan to achieve compliance in 90% of new and renovated buildings by 2017.

A group of national building energy organizations—noted for their broad leadership role in national energy efficiency policy—developed an explanatory statement for state and local governments to clarify what Congress intended when it linked building energy code adoption and enforcement with funding under this section of ARRA. All 50 states committed to do three things:

- Adopt a residential building energy code that meets or exceeds the 2009 International Energy Conservation Code;
- Adopt a commercial building energy code that meets or exceeds the American National Standards Institute (ANSI)/American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)/Illuminating Engineering Society of North America (IESNA) Standard 90.1-2007;
- Develop and implement a plan, including active training and enforcement provisions, to achieve 90% compliance with the target codes by 2017, including measuring compliance each year.

Unfinished Business: All 50 states must follow through with these commitments as soon as possible. The Energy Institute will monitor the progress of these commitments to ensure that they are met and implemented as a condition of receiving additional state energy grants.

Recommendation 6

Congress should expand the tax deduction created in EPAct 2005 for commercial buildings that reduce energy consumption by one-half to a value of at least $2.25 per square foot.

Status: The Emergency Economic Stabilization Act of 2008 (P.L. 110-343) extends the existing tax credit of $1.80 per square foot to December 31, 2013.

Unfinished Business: Congress should increase the tax credit to at least $2.25 per square foot to encourage greater deployment of energy efficiency systems, consistent with this recommendation.

Recommendation 7

States should establish appropriate regulatory mechanisms to treat utility investments in energy efficiency comparable to other investments.

Status: The American Recovery and Reinvestment Act of 2009 makes some $3 billion in energy grants to the States contingent on the respective Governors certifying that they have obtained assurances from state regulators ensuring that utility investments in energy efficiency will be treated comparable to other investments.

In conventional utility regulation, utilities make money based on how much energy they sell. Decoupling breaks the link between the utility's ability to recover its agreed-upon fixed costs, including the profit margin, from the volume of sales that occur through a rate adjustment mechanism. If a utility promotes less energy use, they are rewarded rather than punished.

As of February 2009, at least a dozen states, including New York, North Carolina and California, had decoupling measures in place; while 26 others—from Maine to Idaho and Nevada—were reviewing or implementing them.

Utilities are becoming increasingly interested in decoupling, because it affords them protection during a tough time—when electricity usage is already falling, due to the recession, or weather fluctuations—and decoupling can help utilities make up this lost revenue.

Unfinished Business: The federal government should continue to devise incentives that reward utilities for how well they meet their customers' energy service needs.

Energy Institute Platform for Securing America's Energy Future

1. Aggressively Promote Energy Efficiency
2. Reduce the Environmental Impact of Energy Consumption and Production
3. Invest in Climate Science to Guide Energy, Economic, and Environmental Policy
4. Significantly Increase Research, Development, Demonstration, and Deployment of Advanced Clean Energy Technologies
5. Immediately Expand Domestic Oil and Gas Exploration and Production
6. Commit to and Expand Nuclear Energy Use
7. Commit to the Use of Clean Coal
8. Increase Renewable Sources of Electricity
9. Transform our Transportation Sector
10. Modernize and Protect U.S. Energy Infrastructure
11. Address Critical Shortages of Qualified Energy Professionals
12. Reduce Overly Burdensome Regulations and Opportunities for Frivolous Litigation
13. Demonstrate Global Leadership on Energy Security and Climate Change

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