

## Business Council for Sustainable Energy

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# Moving the nation towards a Clean Energy Economy



# Executive Summary



# Moving the Nation Towards a Clean Energy Economy

The nation sits at a critical crossroads with the immediate need to address multiple policy challenges: an economy in turmoil, the threat of global climate change, and increased demand for electricity in the face of rising fuel prices and declining investments in new energy infrastructure.

If any country is capable of rising to meet these challenges it is the United States, a country that has long been the global leader of entrepreneurial activity. Rich in resources and innovative spirit, the United States has used its collective ability to rise above pressing challenges. At this critical time, the United States can tap into its available renewable energy, energy efficiency and natural gas resources to take advantage of the vast opportunities these resources offer to expand and create new industries and jobs at home while providing energy security and addressing global climate change.

Clean energy technologies, including advanced batteries, biomass, biogas, fuel cells, geothermal, hydropower (including new waterpower resources such as ocean, tidal and instream hydrokinetic), solar, wind, natural gas, and supply-side and demand-side energy efficiency, are ready today to lead the U.S. economic recovery. In order to do so, Congress and the new Administration need to take the following actions to ensure that the past growth in the clean energy sector continues in the current economic environment.

1. Focus legislation on a strategy rather than individual programs by designing comprehensive, consistent and complementary policies to direct investments in renewable energy, energy efficiency and natural gas needed to jump start the clean energy economy;
2. Adopt policies to improve energy efficiency, including supply-side and demand-side energy efficiency in buildings, industries, appliances, and utilities;
3. Adopt policies to aggressively accelerate deployment of existing clean energy technologies, including adjusting the recently-enacted renewable energy tax credits so the incentives work as originally intended, especially in the current economic conditions; establishing an aggressive renewable electricity standard, modernizing and expanding the transmission grid; and aggressively pursuing federal procurement of renewable energy resources.
4. Recognize the important role of natural gas in clean technology deployment; and
5. Enact climate change legislation to send clear, predictable signals to the market about the cost of carbon in order to direct investments in existing clean energy technologies and to provide real and near-term greenhouse gas emissions reductions.

These policy actions coupled with investments in clean energy and energy efficiency as recommended in the Council's *January 2009 Economic Recovery Legislation Recommendations* will help the nation move toward a sustainable, clean energy economy. The Business Council for Sustainable Energy welcomes the opportunity to work with the Obama Administration and the 111th Congress to address these critical challenges in a way that will enhance the diversity of the nation's energy supply and help the United States regain global leadership in technology development.

For further information, please contact the Council's offices at 202-785-0507 or [bcse@bcse.org](mailto:bcse@bcse.org).



# Contents



Executive Summary ..... v

Part I: The Path Forward..... 3

Part II: Energy Efficiency and Clean Energy Technologies Can Lead the U.S. Economic Recovery..... 5

Part III: Policies Must Be Comprehensive, Consistent and Complementary..... 9

Part IV: Recommendations to Increase Energy Efficiency ..... 11

Part V: Recommendations to Accelerate Deployment of Existing Clean Energy Technologies ..... 19

Part VI: The Role of Natural Gas in Clean Technology Deployment..... 25

Part VII: A Blueprint for the Reduction of Greenhouse Gas Emissions..... 27

Conclusion..... 32

# Part I





# The Path Forward

As economic concerns and unemployment numbers continue to rise, the first priority for the 111<sup>th</sup> Congress and the Obama Administration will be to bolster the American economy and get people back into the workforce.

Clean energy and energy efficiency industries are ready today to lead the U.S. economic recovery. The right policies, coupled with an investment in research, development, and deployment of readily available clean energy technologies — energy efficiency, renewable energy and natural gas — will help the United States emerge as a global leader in the new green economy and put millions of people to work.

The Business Council for Sustainable Energy urges Congress and the Obama Administration to take quick, decisive action to adopt the following recommendations to move the nation toward the new energy economy, while providing energy security and reducing greenhouse gas emissions. These recommendations represent some of the Council's longer-term energy and climate change goals. The Council has prepared a separate document outlining its short-term economic recovery priorities for inclusion in the legislation currently being developed by Congress and the Obama Administration. Please refer to the Council's *January 2009 Economic Recovery Legislation Recommendations* for more details.

The Council believes the focus should be on a workable strategy rather than on individual programs. Therefore, these recommendations include a broad package of options that are complementary and that seek to address different barriers. This package represents a “snapshot” of today's economic, energy and climate situation; however, this situation can change significantly from day to day, as witnessed in recent months. Therefore, the Council's views on this suite of proposals will continue to evolve as these situations change and as Congress considers various legislative proposals, including economic recovery legislation, energy legislation and climate change legislation. The Council pledges our support to work with policy makers to enact solutions in this rapidly changing environment.

It is important to note that as a diverse business coalition, not all Council members endorse or take positions on the entire set of recommendations provided in this document.

*The Council is an industry coalition that includes businesses and trade associations representing the energy efficiency, renewable energy and natural gas industries. These industries showcase a suite of currently available technology options that can strengthen domestic energy security and also reduce emissions of greenhouse gases that contribute to global climate change.*

*For over a decade the Council has represented the views of clean energy technology industries in the development of energy and climate change policy at state, regional, federal and international levels. Given its broad business representation, the Council is uniquely positioned to provide policy guidance on energy policy and the major design elements of a federal, economy-wide and market-based approach to climate change.*

*For additional information about the Council, please visit its website at [www.bcse.org](http://www.bcse.org)*



# Part II



# Energy Efficiency and Clean Energy Technologies Can Lead the U.S. Economic Recovery

The nation sits at a critical crossroad with the immediate need to address multiple policy challenges: an economy in turmoil, the threat of global climate change, and increased demand for electricity in the face of rising fuel prices and declining investments in new energy infrastructure. At this crucial time, the United States can tap into its renewable energy, energy efficiency and natural gas resources to take advantage of the vast opportunities these resources offer to expand and create new industries and jobs at home while addressing global climate change.

The Business Council for Sustainable Energy believes that in order to address these challenges in a coordinated, cost-effective manner, all technologies will be required over a long time horizon. However, it is existing clean energy technologies, such as renewable energy, energy efficiency, and cleaner fuels such as natural gas that can provide immediate solutions to the energy and environmental challenges the United States faces in the near-term. Policies must be enacted to rapidly and aggressively deploy these existing clean energy technologies to:

1. Create new, high quality jobs at home;
2. Ensure energy reliability, security, and independence;
3. Mitigate natural gas and electricity price increases; and
4. Reduce greenhouse gas emissions at a rate that will support longer-term emissions reduction targets

## 1. Deployment of Existing Clean Energy Technologies Can Keep America Competitive and Provide New High Quality Jobs at Home

Wind, solar, hydropower, and other clean energy projects, along with energy efficiency investments, are proven economic engines that will foster U.S. economic growth and create new high-quality jobs. Already these sectors are creating millions of new, well-paying jobs that are vital to the nation's economic competitiveness and prosperity, and that offer significant growth potential in the years ahead.

According to the Apollo Alliance report, *New Energy for America*, adoption of a federal market-based, economy-wide cap-and-trade approach to greenhouse gas emissions reductions will drive domestic technology deployment and create employment opportunities that result from the manufacture, installation, operation, maintenance, service, development and support of clean energy and efficiency projects.<sup>1</sup> It is important to note that these jobs are often related to specific structures or locations and that they cannot typically be outsourced, thereby resulting in critical employment in the United States.

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<sup>1</sup> *New Energy for America*, Apollo Jobs Report, January 2004, [http://apolloalliance.org/downloads/resources\\_ApolloReport\\_022404\\_122748.pdf](http://apolloalliance.org/downloads/resources_ApolloReport_022404_122748.pdf)

## 2. Deployment of Existing Clean Energy Technologies, and Energy Efficiency Will Ensure Energy Reliability, Security, and Independence

The challenges of energy security and climate change will require the nation to employ a wide array of technologies, and the clean energy options of energy efficiency, renewable energy and natural gas are uniquely positioned to play a critical role in addressing these issues.

The United States has already witnessed a significant retrenchment in planned investment in coal-fired power plants and any expansion of nuclear energy could take as much as a decade or more to permit and construct. Yet the Energy Information Administration (EIA) forecasts continued energy demand growth — the policy path for this country must ensure that this energy demand growth is met reliably, efficiently, and responsibly.

While there has been concern that only natural gas can cover this additional electricity demand in the next ten to fifteen years, the Council's analysis in fact indicates that renewable energy and energy efficiency could fill this role in the next decade and actually trigger a drop in demand in natural gas as a fuel for electricity generation. An expanded role for natural gas in specific efficient end-use applications, based on full fuel cycle analysis, can also reduce the need for new electricity production. However, given its ability to respond quickly to changes in electricity demand, natural gas can be an important back-up source of electricity production and serve as a transition fuel to less carbon-intensive power generation.

Energy efficiency, renewable energy and natural gas can be viewed as the legs of a three-legged stool - each leg is mutually beneficial and supported by the other. Together they provide the foundation for the new energy economy to provide high quality jobs, energy security, and reduce greenhouse gas emissions.

Furthermore, expanded large-scale deployment of renewables will likely be supported by natural gas technologies to ensure baseload demand capabilities. The natural gas infrastructure can be a new means to deliver renewable products to industrial, residential and commercial customers. Deploying energy efficiency will provide the means to utilize existing fossil fuel in the most efficient manner thus reducing carbon emissions and stretching the impact of domestically produced supply. All these activities will expand deployment of new technologies and create new jobs while reducing our nation's dependence on energy imports. The synergies between energy efficiency, renewable energy and natural gas need to be exploited not only to optimize energy production from domestic sources but also to achieve the greatest potential carbon reductions in the near-term.

For long-term high-potential carbon reductions, the accelerated deployment of carbon capture and storage (CCS) technologies for coal will also play a critical role (see also part VI).

## 3. Clean Energy Technologies Lower Energy Costs

Quick deployment of existing clean energy technologies, such as renewable energy and supply-side and demand-side energy efficiency will not only help meet rising energy demand, but will also help mitigate impacts on consumers'

# Energy Efficiency and Clean Energy Technologies

energy expenses. Studies show that deployment of these technologies would yield significant savings in lower electricity and natural gas bills. For example, a December 2007 study by the American Council for an Energy-Efficient Economy reported that consumers could experience a 1.5 % reduction in retail electricity rates by 2025 if a Renewable Electricity Standard of 15% renewable energy by 2015 were coupled with a cap-and-trade climate bill.<sup>2</sup>

Further, a May 2008 Department of Energy report found that expanding deployment of wind energy “potentially reduces demand for fossil fuels, in turn reducing fuel prices and stabilizing electricity rates.” The report estimated the 20% wind scenario would avoid more than 80 gigawatts of new coal capacity and reduce demand for natural gas across all industries by 11%.<sup>3</sup>

## 4. Deployment of Existing Clean Energy Technologies Can Immediately Reduce Greenhouse Gas Emissions

Between now and 2020, existing clean energy technologies such as renewable energy, energy efficiency and natural gas are the first phase solution for the United States to meet increasing energy demand and reduce greenhouse gas emissions. In fact, according to a December 2007 report by McKinsey & Company, the United States could reduce greenhouse gas emissions in 2030 by 3.0 to 4.5 gigatons using existing technologies and high-potential emerging technologies.<sup>4</sup>

The Council’s views on climate change policy are founded on the principle of sustainable development, *i.e.*, economic development that meets the needs of both present and future generations. The

Council believes that sustainable economic development and environmental protection are compatible goals and that clean energy technologies provide solutions to the dangers of climate change. The United States should work toward a national and international framework that will send predictable signals to capital markets to:

- a) Provide certainty about the emissions reductions to be achieved; and
- b) To direct new investments in low- and zero-carbon technologies.

More in-depth discussion on the design of a market trading program is contained in Part VII of this document outlining the Council’s *Blueprint for the Reduction of Greenhouse Gas Emissions*.

The Council believes that sustainable economic development and environmental protection are compatible goals and that clean energy technologies provide solutions to the dangers of climate change.

<sup>2</sup> [Assessment of the House Renewable Electricity Standard and Expanded Clean Energy Scenarios](#), American Council for an Energy Efficiency Economy, December 2007

<sup>3</sup> *20% Wind Energy by 2030: Increasing Wind Energy’s Contribution to U.S. Electricity Supply*, U.S. Department of Energy, May 2008. Available online at <http://www1.eere.energy.gov/windandhydro/pdfs/41869.pdf>

<sup>4</sup> Please see McKinsey & Company report, *Reducing U.S. Greenhouse Gas Emissions: How Much at What Cost*, December 2007



# Part III



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# Policies Must Be Comprehensive, Consistent and Complementary

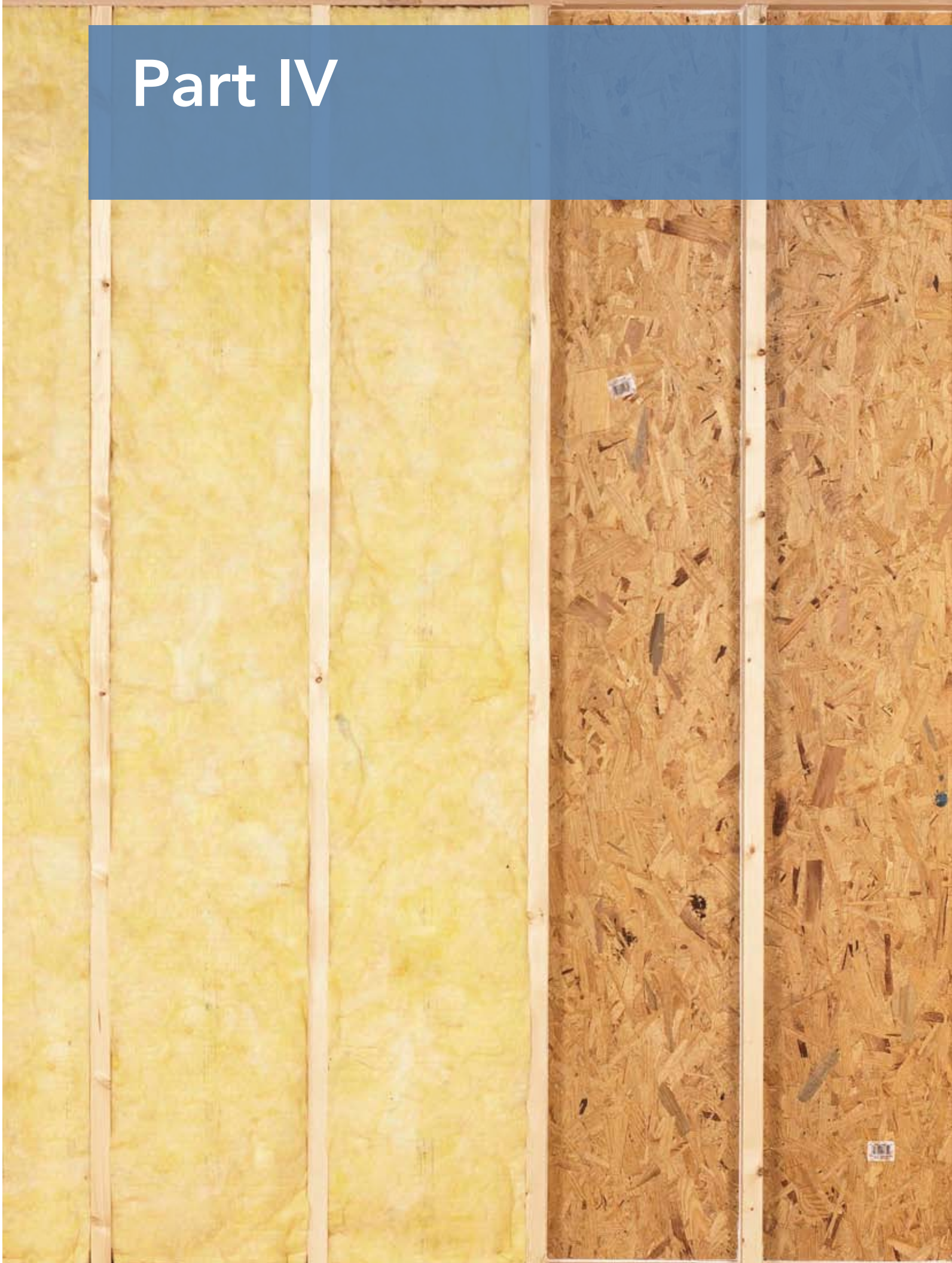
Congress must move quickly to pass a package of policies, to speed the deployment of existing clean energy technologies and energy efficiency. The policies should result in a balanced and integrated program designed to be comprehensive, consistent and complementary and to focus on a strategy rather than individual programs. Such a strategy requires the coordination of legislation and regulation, incentives and investments, partnerships, workforce and supplier training incentives and technology and information standards.

This suite of policies should also provide accurate cost-based price signals to:

- Promote wise use of energy and reduce energy use at peak times;
- Avoid programs that would encourage inefficient use of production of energy;
- Provide for workforce training; and
- Encourage additional distributed generation of the right size and in the right location with operating profiles to have real and positive impacts on the grid and on customer cost.

In addition, the policies should recognize and reward accomplishments of individual states, consumers and entities within those states. Examples of such accomplishments include the reduction of greenhouse gas emissions, increased renewable energy generation and enhanced use of energy efficiency measures through programs, equipment and installation and through building and appliance codes.

# Part IV





# Recommendations to Increase Energy Efficiency

Greater use of both supply-side and demand-side energy efficiency plays a substantial role in the reduction of greenhouse gas emissions. In addition to the benefits to the environment, increasing our nation's energy efficiency would benefit American households and the economy, while also enhancing U.S. energy security.

Increased energy efficiency measures in buildings, industry, transportation, and energy production could avoid more than 40% of the expected increase in greenhouse gas emissions in the United States by 2030, much of it at negative costs. Improving energy efficiency in buildings and appliances, for example, represents the most cost effective cluster of greenhouse gas emissions abatement potential.<sup>5</sup>

Addressing the multiple challenges to deployment of energy efficiency, however, is complex and requires a diverse set of measures, such as coordinated market transformation initiatives, use of a variety of private sector service providers, procurement policies, workforce training, incentives and investments, technology and information standards, and utility programs.

The Council has been supportive of a coalition effort known as the “TAG” — Taxes and Appropriations Group — which has developed recommendations on energy efficiency investments for inclusion in an economic recovery bill. The Council has also been supportive of other coalition efforts to develop recommendations to incorporate energy efficiency in climate change legislation.

In addition to the work of these energy efficiency coalitions, the Council offers the following broad package of options for improving energy efficiency that are complementary and seek to address different barriers. The Council's views on the suite of proposals necessary to best accelerate energy efficiency will continue to evolve as Congress considers economic recovery, energy and federal climate change legislation.

## 1. Expand Effective, Existing Deployment Mechanisms and Energy Efficiency Programs

Legislation should provide expanded resources to existing, working mechanisms that deploy energy efficiency. This is particularly important for projects and efforts targeting smaller entities. Examples of effective administrative mechanisms include the New York State Energy Research and Development Authority, Energy Efficiency Vermont, the California Energy Commission, and utilities and other third party actions. These entities have considerable experience reaching out to smaller customers and use a variety of methods for evaluating and assuring program impacts. The Council also believes that the federal weatherization programs, the Environmental Protection Agency's Home Performance with Energy Star, and the Building America Program should be expanded, among others.

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<sup>5</sup> Please see the McKinsey & Company report, *Reducing U.S. Greenhouse Gas Emissions: How Much at What Cost*, December 2007



## 2. Adopt Policies that Will Increase the Efficiency of New and Existing Buildings

Homes and other buildings consume almost half of America's energy. Therefore, they must play a significant role in any successful effort to improve energy efficiency and reduce greenhouse gas emissions. To encourage energy efficiency in buildings, the Council supports the following:

- a) **Advanced Building Energy Savings Targets.** Congress should establish energy-savings targets for buildings and encourage states to adopt energy efficiency programs in the forms of codes, standards and incentives to achieve these targets and most importantly, to ensure that these targets are met. The objective should be savings of 30% by 2010 and 50% by 2020 and should be accompanied by building owner incentives to support the investments needed to achieve these targets in individual buildings.
- b) **State green building grants.** Congress should authorize \$1 billion per year for grants to states to implement building energy codes, promote "beyond code" green new buildings and retrofits. Allocation should be made to states based on demonstrated energy savings, and meeting code provisions should be a prerequisite for receiving grants.
- c) **Building labeling.** Congress should establish a national model for building labeling programs and encourage states, counties and local governments to implement their programs in accordance with the model. Such a program would require all buildings to have publicly accessible certificates showing the building's energy efficiency potential compared to a reference building, the individual building's performance among similar buildings as determined by a national benchmarking tool, and the location and type of transit services within walking distance of the building. Congress should also increase funding for the Department of Energy's Builder Challenge program, which has created the Energy Smart Homes Scale. This approach may provide a valuable model for labeling commercial buildings.
- d) **Utility bill disclosure.** Sellers of existing homes should be required to disclose utility bills during the time of sale. The purchaser of an existing home should be required to upgrade the energy efficiency of the home within one year through a federal loan program.
- e) **Zero Energy Building Program.** Congress should authorize a zero energy building program (Building America) similar to the Commercial Building Initiative in the Energy Independence and Security Act of 2007. This should also include an authorization for Net-Zero Energy Homes.
- f) **Green building requirement for super-size mortgage deduction.** Require that large new homes be built to LEED Platinum green building criteria in order to be eligible for mortgage deduction on income taxes.
- g) **Create a state Energy Efficiency Bid (EEB) program for the industrial, commercial and institutional building sectors.** Under the EEB, a state administrator would issue requests for proposals for energy efficiency and distributed generation projects in targeted commercial, industrial and institutional segments. Qualified participants compete for energy efficiency incentives. All project awards would be performance-based and project savings would be measured and verified by the performing entity allowing independent verification.

Aggregation of projects should be permitted to lower costs and aggregation of smaller projects should be encouraged. Multi-state activity should be permitted to lower cost, increase volume and maximize project and program scale.

- h) **Whole home retrofit and loan program.** To reduce the economic burden of rising fuel bills and to create jobs, Congress should establish an emergency rebate and loan program to fund cost effective energy efficiency improvements in residential buildings, helping to reduce energy costs in participating homes by 10% to 30% or more. The program would provide a rebate (or reduced interest loan) to homeowners (or any party obtaining an owner's consent) to undertake an efficiency retrofit of an existing home. The rebate would be performance based, rewarding higher levels of energy efficiency improvement with higher rebates under a good (10% savings), better (20% savings) and best (30% savings or more) model. The program would also include support for the training of contractors and home energy auditors/raters who would help implement the program. The program would be administered by the states, with half of the resources allocated to those states that have used up their initial funding to reward states with the most effective programs.
- i) **Increased Investment in Energy Efficiency Upgrades to Schools and Other Public Buildings.** Congress should support additional investments in energy audits (performance contracts), as well as comprehensive upgrades to a building's heating, cooling, ventilation, hot water envelope, and interior lighting systems, and to its controls. Additional worker training is critical for energy efficiency audits.
- j) **Maximum Use of Combined Heat and Power (CHP) to meet the electrical, heating and cooling demands of commercial and industrial buildings and complexes.** Optimizing the energy efficiency of buildings and building clusters should encourage localized power generation where waste heat is recovered to provide both heating and cooling. The substantial efficiency gains associated with such installations can reduce the greenhouse gas emissions by 50% or more.

### 3. Establish Stricter Efficiency Standards and Labeling Requirements for Appliances and Provide Incentives to Deploy Cutting-Edge Efficient Appliances

Appliances and equipment account for more than half of current carbon dioxide emissions from the buildings sector, yet there is considerable room for cost-effective efficiency improvements that will reduce emission from these sources. Performance-based federal equipment and appliance standards are in place today (e.g. the lighting standards in the December 2007 Energy Independence and Security Act). However, stronger incentives are needed to encourage development and deployment of more efficient appliances, including:

- a) **Appliance standards.** Congress should clarify the Department of Energy's authority to set multiple performance standards for a product. When conducting economic analyses for proposed appliance standards, the Department of Energy should be directed to consider the impact of total carbon emissions and the impact of the energy savings

on energy prices, and to set standards at the highest levels within the range of economic uncertainty. The Council outlines a number of recommendations related to appliance standards for inclusion in the 2009 Economic Recovery legislation currently being developed by Congress and the Obama Administration, including: additional incentives for supermarkets and other food purveyors to install efficient stationary refrigeration; a manufacturer's tax credit for efficient residential heating, ventilating and air-conditioning (HVAC) and furnaces; a reduction of the depreciation time for efficient commercial HVAC equipment.

- b) **Standards and building codes.** Allow higher criteria for equipment in new construction where appropriate.
- c) **Television test procedure and/or standard.** Address growing energy use for televisions by adopting new test procedures and directing new standards.

## 4. Establish New Utility Initiatives to Encourage Investments in Energy Efficiency

- a) **Energy Efficiency Resource Standard (EERS).** Congress should adopt a national target requiring utilities to achieve energy savings increases through efficiency programs, combined heat and power (CHP), distribution efficiency, or purchase of such savings from others. Utilities should be required to financially reward those end-users whose on-site energy efficiency, CHP, or renewable energy projects helped the utility meet these requirements.

An Energy Efficiency Resource Standard could reduce greenhouse gas emissions as well as energy demand. For example, a 10% electricity savings standard and a 5% natural gas standard could reduce carbon dioxide emissions by 217 million tons by 2020. According to a 2007 analysis by the American Council for an Energy Efficient Economy, if combined with a cap-and-trade policy, these standards could reduce wholesale electricity prices by 0.7 cents per kilowatt hour as compared to prices under the cap-and-trade policy alone.<sup>6</sup>

- b) **Decoupling.** Decoupling is a measure designed to increase energy efficiency by breaking the link between utilities' sales and profits, thereby creating an incentive for utilities to sell less energy and focus on energy efficiency. Decoupling aligns shareholder and customer interests to provide for more economically and environmentally efficient resource decisions. While decoupling is a key component of a comprehensive energy efficiency program, it is not sufficient on its own and should be linked to the following:
  1. Appropriate and detailed rate design that provides transparency;
  2. Financial incentives for the deployment of energy efficient technologies; and
  3. Verifiable measurements of energy use reductions.

Utilities can be a great tool for deploying energy efficiency or demand response measures. Therefore other approaches to efficiency, such as formula rates, should be considered in the utility sector.

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<sup>6</sup> <http://www.aceee.org/energy/national/RESanalysis11-1.pdf>

## 5. Establish Financial Incentives to Transform Markets and Encourage Investments in Energy Efficiency

- a) **Energy efficiency tax incentives.** Congress should enact long-term extensions of the tax credit for energy gas and electric efficient heating and cooling equipment, the tax credit for energy efficient new homes, and the tax credit for purchase of heavy-duty hybrid vehicles. A new tax credit for efficiency upgrades to existing homes should also be established that is based on the amount of energy saved. Certain policy changes should be made to the energy efficiency tax incentives that will increase their effectiveness.
- b) **Revolving loan funds.** Congress should authorize loans for energy efficiency improvements in homes and in state and local government buildings.
- c) **Energy efficiency cafeteria plan.** The tax code should be amended to allow employees to use pre-tax income, and to borrow against payments through the end of the year, for prescribed energy-efficient home improvements, equipment, and vehicles, starting with items eligible for existing tax credits.
- d) **Energy conservation tax credit.** Congress should create a new tax credit for affordable rental housing that encourages energy conservation investments in existing buildings—whether or not a property is undergoing substantial rehabilitation—that sets energy performance standards designed specifically for those existing buildings. The credit would be set at 30%, equal to the tax credit for alternative energy investment, which would level the playing field.
- e) **Hydrogen infrastructure and fueling tax credit.** The current fueling infrastructure tax credit is not sufficient to stimulate hydrogen fuel markets and should be expanded along the lines of S. 2129, HR 805, and HR 5746.
- f) **Super-Efficient Equipment and Appliances Deployment Program (SEAD).** Congress should provide incentives to retailers who successfully market best-in-class equipment and appliances under a newly-established Super-Efficient Equipment and Appliances Deployment (SEAD) program.
- g) **Create a National Energy Efficiency Marketplace.** Such an action will lead to the formation of competitive, market-based incentives needed to maximize private sector investments in energy efficiency. Congress should create a state administered national market for energy efficiency that provides a strong incentive to private sector entities to invest in energy efficiency and reduce greenhouse gas emissions. The objective of the National Energy Efficiency Marketplace should be to make efficiency a valued asset that building owners and other entities will seek to maximize in the most economically efficient manner.

An Energy Efficiency Resource Standard could reduce greenhouse gas emissions as well as energy demand. For example, a 10% electricity savings standard and a 5% natural gas standard could reduce carbon dioxide emissions by 217 million tons by 2020.



## 6. Increase Industrial Energy Efficiency

- a) **Industrial energy efficient technology deployment.** Congress should authorize and appropriate at least \$160 million per year for industrial energy efficient technology development and deployment under the Industrial Technology Program at the Department of Energy. At least \$60 million of those funds should be focused on combined heat and power (CHP) and distributed generation for industrial and all building applications. Funding of \$16 million should also be included to expand the “Save Energy Now” campaign. In addition, significant energy efficiency gains and emission reductions in industrial furnaces through advanced combustion processes, such as oxy-fuel technology and others, should be supported through the Industrial Technology Program or equivalent programs.
- b) **Waste Energy Recovery Incentive Grant Program.** Congress should provide full funding (\$200 million) for the Waste-Energy-Recovery Incentive Grant Program authorized in the Energy Independence and Security Act. That provision provides “\$10 per megawatt hour of documented electricity produced from recoverable waste energy (or by prevention of waste energy in the case of a new facility) by the project during the first three calendar years of production.”
- c) **New, clean domestic manufacturing capacity.** Congress should provide a tax credit for the entire cost of the investment for companies that invest in new domestic manufacturing capacity for clean energy technology — or that procures any clean energy system or energy savings device that is made by an American manufacturer.

## 7. Making the Federal Government More Energy Efficient

The federal government is the largest user of energy and the largest owner of buildings in the world. When the energy consumed by state and local government facilities is also considered, the potential opportunity for significant energy efficiency improvements is even greater.

- a) **Accelerated, aggregated and leveraged federal procurement of energy efficiency and renewable energy.** The Council encourages Congress to provide \$1.2 billion in the economic recovery bill for federal agencies for energy efficiency improvements and installation of clean distributed energy in federal buildings, including military installations. Federal agencies need funds for comprehensive energy efficiency improvements, and the Council encourages them to use those funds to leverage additional improvements via private sector options. The Council recommends that funds be provided on a first-come, first-served basis and be available for 18 months and that administration be at the Federal Energy Management Program (FEMP) of the Department of Energy.
- b) **Energy Savings Performance Contracting:** Congress should expand the definition of “Energy Savings Performance Contracting” to ensure that power generation, renewable energy, and new buildings are included.
- c) **Department of Treasury backed loans for energy savings performance contracts:** Congress should approve loans for federal agencies, backed by the Department of the Treasury, which will reduce financing rates of comprehensive energy efficiency projects in federal buildings.

- d) **Congress should enact a measure directing FEMP to clear the Energy Savings Performance Contract (ESPC) pipeline immediately.** Such action would result in the implementation of \$2.2 billion in major energy efficiency projects that are currently in the ESPC pipeline. In 2006, FEMP did a “blitz” that pushed more than \$400 million of projects into implementation in 6 to 9 months. Congress should consider funding a 25% match from the Department of the Treasury for projects that are implemented in the next 12 months.
- e) **Add alternative energy financing to the Office of Management and Budget energy scorecard;**
- f) **Support creation of an office in the White House that focuses on energy use throughout the federal government.** The office, as proposed by the Center for American Progress, could help with the implementation of various “green jobs” and clean energy related stimulus activities.

## **8. Fund Research, Development and Demonstration of Advanced Energy Technologies, Including Energy Efficiency Technologies and Practices.**

- a) **Double the funding for the Department of Energy’s Energy Efficiency and Renewable Energy Office and the Office of Electric Delivery and Energy Reliability over a 5-year period.**
- b) **Overall doubling of federal support of clean energy research and development (R&D), specifically programs such as the Advanced Research Projects Agency—Energy (ARPA-E) in the Department of Energy.** The ARPA-E or a new federal structure should receive increased funding to provide grants for research, development, and demonstration of advanced energy technologies. ARPA-E should be free to try out a variety of programs subject to careful evaluation and oversight. Funding for the critical development of new technologies should be restricted to programs that promise to reduce greenhouse gas emissions.

Additional R&D funding can be found from revenues achieved through a reduction in energy supply subsidies.

# Part V



# Recommendations to Accelerate Deployment of Existing Clean Energy Technologies

Clean energy technologies are ready today to lead the U.S. economic recovery. The fast-growing renewable energy sector can add millions of new jobs and billions of private investment dollars to the U.S. economy. Congress and the Obama Administration need to take action to ensure that the past growth in these sectors continues especially in the current economic environment.

In addition to the positive economic impact of the renewable energy industry, the right policies to promote aggressive, near-term, and immediate deployment of existing technologies, can move the nation closer to achieving its greenhouse gas emission reduction goals while also reducing dependence on foreign energy resources.

Congress should recognize that the demands of meeting our nation's energy needs will not only require the deployment of existing clean energy technologies, but also the careful consideration of how these technologies are defined for purposes of the tax code and any renewable portfolio standard. Specifically, Congress should take an expanded view of how renewable energy resources are currently defined. These definitions should be modified so as to include verified renewable technology applications where energy displacement can be physically metered, such as solar hot water heating and solar light pipe technology. These technologies bring about electrical energy savings by using direct solar energy without conversion losses.

The following policies are needed to promote aggressive deployment of existing renewable energy technologies:

## **1. Adjust the Recently-Enacted Renewable Energy Tax Credits So the Incentives Work as Intended in the Current Economic Environment**

In October 2008 Congress extended renewable energy tax incentives for solar, wind, and hydroelectric power, as well as for fuel cells, combined heat and power, ground-coupled heat pumps, small wind, and energy efficient improvements to existing homes, new homes, commercial buildings, and energy efficient appliances. In the past, these tax policies have been an effective tool to encourage investments in renewable energy technology; however, they have been too intermittent, and too short-lived, to spur sufficient investment. Furthermore, the renewable energy industry has been devastated by the recent national credit crisis. The falling profitability of other institutions that have been partners in these renewable energy projects has rendered the tax credits meaningless because the credits themselves have no value when companies have no profit against which to redeem the credit. Congress should immediately make adjustments to the tax credits so that the incentives work as originally intended, especially in this current economic environment.

With the proper adjustments, the renewable energy tax credits could have a significant and immediate impact on the U.S. economy. For example, according to a study by Navigant Consulting, Inc., the recently enacted eight-year tax



# Clean Technology Deployment

incentives for investments in solar could result in 1.2 million employment opportunities, including 440,000 permanent jobs through 2016.<sup>7</sup> However, without these adjustments to the tax credits, these jobs may never be realized.

A number of other studies have demonstrated the positive economic impact that would result in increased investments in renewable energy. For example:

- a) According to a 2006 report by the RAND Corporation and the University of Tennessee moving to an energy supply that is 25% renewable, with significant contributions of biomass, would create over 5 million new jobs by 2025.<sup>8</sup>
- b) The Department of Energy recently predicted that a significant investment in wind power leading to the generation of 20% of US electricity would yield over 6.2 million jobs by 2030.<sup>9</sup>
- c) A May 2008 report from the American Council for an Energy-Efficient Economy (ACEEE) shows that currently, over 1.6 million US jobs are supported by energy efficiency related investments.<sup>10</sup>

These studies clearly show the significant impact renewable energy investments could have on the U.S. economy if Congress makes immediate adjustments in the tax credits.

In addition, Congress should approve a multiple year extension of the renewable energy production tax credit (PTC) and additional funding for the Clean Renewable Energy Bonds (CREBs) program. Congress should also consider expanding the definition of eligible fuels that receive a tax credit to include renewable bio-gas.

## 2. Establish an Aggressive National Renewable Electricity Standard

Congress should enact a national renewable electricity (portfolio) standard to ensure that a growing percentage of electricity consumed in the United States is derived from renewable energy sources. A renewable electricity standard would enhance the diversity of the nation's energy supply and would help the United States regain global leadership in technology development.

When Congress considered a Renewable Electricity Standard in 2007,<sup>11</sup> there were claims that retail electricity prices might increase dramatically. At that time, the Union of Concerned Scientists (UCS) completed a report that identified effects on consumer electricity prices and found that in all 50 states electricity rates were likely to fall, often

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7 <http://seia.org/galleries/pdf/Navigant%20Consulting%20Report%209.15.08.pdf>

8 Michael Toman, James Griffin, Robert J. Lempert, *Impacts on U.S. Energy Expenditures and Greenhouse Gas Emissions of Increasing Renewable Energy Use* [http://www.rand.org/pubs/technical\\_reports/TR384-1/](http://www.rand.org/pubs/technical_reports/TR384-1/)

9 20% Wind Energy by 2030: Increasing Wind Energy's Contribution to U.S. Electricity Supply, U.S. Department of Energy, May 2008. Available online at <http://www.eere.energy.gov/windandhydro/pdfs/41869.pdf>

10 Karen Ehrhardt-Martinez and John A. "Skip" Laitner, *The Size of the U.S. Energy Efficiency Market: Generating a More Complete Picture*, American Council for an Energy Efficient Economy, May 2008, <http://www.aceee.org/pubs/e083.htm>

11 A renewable electricity standard was considered as part of the Energy Independence and Security Act of 2007. That provision would have required utilities to obtain 11% of their power from renewable energy resources by 2020 and achieve a further 4% reduction from improvements in energy efficiency.

# Clean Technology Deployment

significantly.<sup>12</sup> UCS concluded that the deployment of clean energy technology under that legislation would yield \$13 billion to \$18.1 billion in savings in lower electricity and natural gas bills by 2020 (growing to \$27.7 billion to \$31.8 billion by 2030). This would result from a diverse supply of energy decreasing demand on finite natural gas resources and lowering the prices for those resources.

Another study, conducted by the American Council for an Energy-Efficient Economy (ACEEE) found that a renewable electricity standard of 15% renewable energy by 2015 when coupled with a cap-and-trade policy resulted in a reduction of 1.5% in retail electricity rates by 2025.<sup>13</sup>

### 3. Support Installation of Back up Power Devices from Clean Energy Sources

Congress should establish and fund incentives for back up power devices, material handling equipment and other support equipment that are generated with renewable energy or hydrogen based fuel cells. The rapid growth in electricity demand, coupled with the lack of investment in transmission infrastructure and power generation, has led to an increasing concern about the reliability of the electrical grid, resulting in an increased need for back up power equipment. If the installation of back up power devices is not addressed comprehensively and wisely, there could be a very negative impact on greenhouse gas emissions.

New transmission capacity, along with complementary Federal Energy Regulatory Commission policies, can transfer this clean domestic energy to populated areas where there is unmet energy demand.

### 4. Improve and Expand the Transmission Grid and Support Smart Grid Development

Public and private investment in a more sustainable energy infrastructure can expand the role that clean energy technologies play in meeting domestic energy demand. Such infrastructure includes additional transmission capacity to move large scale solar and wind electric generation to demand areas and smart grid distribution technologies to facilitate demand reduction and demand response, connection of renewables, and coordination of exportable surplus supply-side energy efficiency, such as combined heat and power. Construction of this new infrastructure would immediately create new jobs while increasing the deployment potential for clean energy technologies – further increasing domestic employment.

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<sup>12</sup> *Cashing in on Clean Energy: A National Renewable Energy Standard Will Benefit the Economy and the Environment*, Union of Concerned Scientists, October 2007 Update, [http://www.ucsusa.org/assets/documents/clean\\_energy/Cashing-In-National-15.pdf](http://www.ucsusa.org/assets/documents/clean_energy/Cashing-In-National-15.pdf)

<sup>13</sup> *Assessment of the Renewable Electricity Standard and Expanded Clean Energy Scenarios*, American Council for an Economic Efficient Economy, December, 2007, <http://aceee.org/pubs/e079PPT.pdf>,

# Clean Technology Deployment

There are areas of the United States where abundant solar and wind resources, combined with available land, can create a surplus of electricity for that location. New transmission capacity, along with complementary Federal Energy Regulatory Commission policies, can transfer this domestic energy to populated areas where there is unmet energy demand.

Congress should facilitate the transition to a smarter, more efficient transmission and distribution grid to allow a broad portfolio of technologies that are cleaner, more reliable and more agile. An improved and expanded transmission grid would enable access to a wider range of distributed and dispersed resources, including renewable and demand response. A broader range of energy resources would improve electric power quality, substantially lower surges, sags and transients; increase power reliability; allow users and feeder line options for virtually uninterruptible power; overcome transmission and distribution blockages (power augmentation at substations); and level out peaks, thus lowering energy costs. In addition, Congress should further encourage the use of time-based electricity pricing or “smart metering” technologies to save consumers billions of dollars in avoided electricity costs and significantly reduce greenhouse gas emissions through avoided electricity use.

## **5. Establish a National Standard for Net Metering**

Net metering is a distributed energy incentive that allows customers to sell back to a utility, and receive credit, for at least a portion of the electricity they generate from renewable sources. Nearly forty states, plus the District of Columbia, feature some kind of net metering program. However, the amount of electricity that can be sold back varies from state to state. Congress should establish a single national standard for net metering to provide consistency across the country. National net metering standards should be put in place for all clean distributed generation technologies.

## **6. Establish a National Interconnection Standard**

Interconnection standards dictate the administrative process and technical specifications a homeowner or installer must follow to install renewable energy and connect to the local utility’s distribution system. These standards vary by state, and in some cases they vary from utility to utility. The need for an installer to know and follow many sets of rules and regulations increases the cost to consumers and inhibits the use of renewable technologies. Congress should set a national policy for the interconnection of distributed generation, including renewable technologies, to the electric grid. The policy should ensure that the costs for interconnection are reasonable and take load size into account.

## **7. Enact Policies for the Deployment of Renewable Bio-Gas Technologies**

Renewable gas can be produced from renewable sources including landfills, wastewater treatment plants, animal manure, forest residues, and agricultural wastes. Producing renewable gas and using it at the site of production or distributing it through the country’s existing natural gas infrastructure is one of the most efficient ways to utilize these renewable resources. Congress should enact policies that provide for the deployment of emerging renewable bio-gas technologies.

# Clean Technology Deployment

For example, Congress should enact a tax credit to promote the production of renewable gas processed from qualified energy feedstock in anaerobic digesters, or through other biological, thermal or chemical processes.

Congress should also provide financial incentives to spur investment and to assist farmers and other investors who build new renewable bio-gas production facilities. This effort could be in the form of investment tax credits, low interest loans or grants.

## **8. Federal Procurement of Renewable Energy and Increased Use of Renewable Energy in Federal Facilities**

The President should issue an Executive Order expanding federal procurement of renewable energy generation to meet the government's substantial energy supply needs. The Council recommends:

- An additional \$3 billion in funding for acquisition of renewable energy in Federal facilities. This funding should be combined with comprehensive energy projects to leverage the most renewable assets, priority should be given to projects that bring additional dollars, administered on a first come first serve basis, and allow for aggregation of small scale renewables across government facilities. The Federal Energy Management Program should administer this effort.
- Establish a Federal Renewable Energy Program Account (FREPA) to provide incremental dollars for the renewable energy components and longer-term efficiency measures of alternatively financed projects. Renewable energy measures are more expensive than the energy conservation measures usually undertaken in an Energy Savings Performance Contract. Oftentimes, these renewable energy measures increase the length of a bundled project to longer than the 25 years allowable by law.

## **9. Financing Options for New Renewable Project Development**

Congress should authorize and invest \$30 billion in 2009 for financing options that support new project development and installations for all renewable energy technologies as part of the Obama Administration's commitment to invest \$150 billion over the next ten years in clean energy technologies.

If the government quickly implements these policies, growth in the creation and use of renewable energy will help turn around the U.S. economy and create millions of new jobs while at the same time addressing pressing energy security concerns and greenhouse gas emissions reduction goals.



# Part VI



# The Role of Natural Gas in Clean Technology Deployment

As a lower carbon emitting fossil fuel, natural gas will play a major role in the transition to a carbon-constrained economy. Currently natural gas accounts for 23% of the United States' total energy consumption and is a clean, efficient source of energy for residential, commercial and industrial applications. Natural gas is highly efficient with approximately 90% of the natural gas produced is delivered to customers as useful energy. Other advantages to natural gas include its relative abundance, reliability, and ability to respond quickly to changes in electricity demand.

Natural gas also generates approximately 20% of all U.S. electricity. U.S. demand for natural gas has grown nearly 70% over the last ten years, and North American sources of natural gas meet 96% of all American consumption demand.

Natural gas is produced in over 20 states. Natural gas production in the United States is up 3% over the last year and new unconventional supplies like shale gas formations are providing new sources of the fuel. The overall cost of producing electricity from natural gas is low because of its higher efficiency, productivity and lower capital costs.

Natural gas will also fuel many of the advanced clean technologies that will be deployed over the next ten years. These technologies include distributed generation, combined heat and power, fuel cells, natural gas vehicles and new efficient commercial and industrial technologies. The Council encourages Congress to provide for responsible development of domestic natural gas resources as part of the strategy to meet energy demand growth reliably, efficiently, and responsibly. In addition, Congress and the Obama Administration should evaluate both electric and natural gas based appliances and end use technologies on a full fuel cycle to be sure to capture carbon emissions reductions.

Policies should encourage the efficient use of natural gas resources, such as direct usage, domestic feedstock, and supplemental generation, to balance intermittent renewable generation and high efficiency electric generation. Such policies will also minimize greenhouse gas emissions and lower price pressures on domestic natural gas resources.

## The Role of Carbon Capture and Storage in Clean Technology Deployment

More efficient and much cleaner technologies for power generation from fossil fuels are required for a truly successful transition to a lower carbon emitting economy in the United States. Carbon dioxide capture and storage technologies (CCS) will be essential to significantly reduce carbon dioxide emissions in the atmosphere. Ultra-low emitting fossil fuel power plants that are equipped with pollution control and CCS are an important solution to provide increasing power demands in a sustainable way.<sup>1</sup>

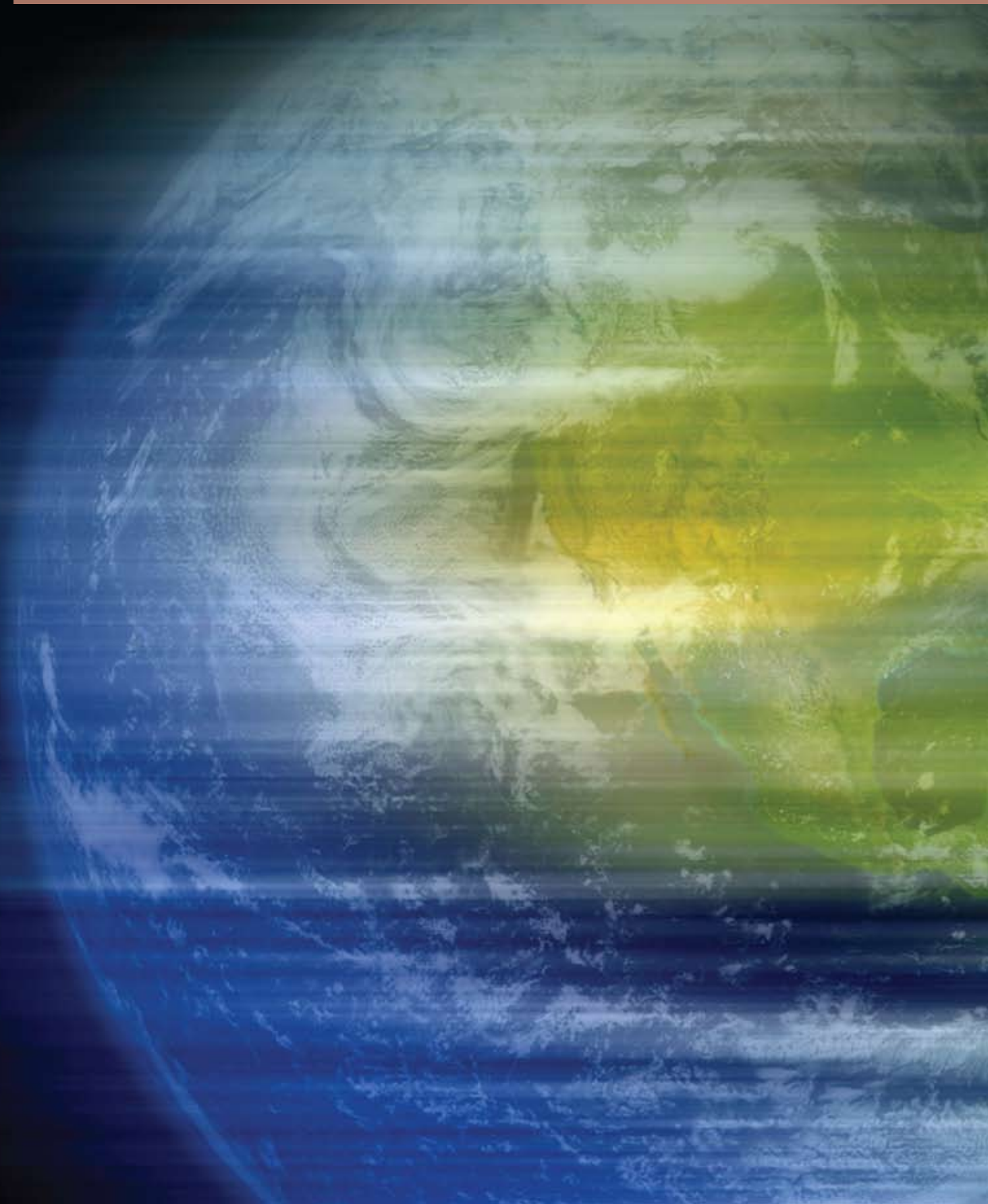
Key policy points for emerging clean coal technology include a comprehensive strategy, inclusion of retrofits, and appropriate project scale. The Massachusetts Institute of Technology<sup>2</sup> and others have found that there are currently three promising pathways for carbon capture and sequestration - IGCC, oxy-fuel, and post combustion. The current government practice could be improved by providing a systematic and scientific approach to cover the leading technologies within each pathway, so that actual performance and economic data can be used by both the government and utilities needing to implement technology change.

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<sup>1</sup> See IEA publication Energy Technology Perspective (ETP) 2008

<sup>2</sup> *The Future of Coal: An Interdisciplinary MIT Study*. The Massachusetts Institute of Technology, March 2007.

# Part VII



# Blueprint for the Reduction of Greenhouse Gas Emissions

As part of the transition to a new, clean energy economy, Congress should enact climate change legislation that will send predictable mid-term and long-term signals to capital markets about the price of carbon, which will direct new investments in low and zero-carbon emitting generation and technologies.

A national, market-based and economy-wide climate change program should:

1. Establish near-term and long-term targets to signal the marketplace and drive capital investments in existing technology and innovation;
2. Establish linkages with domestic and international greenhouse gas emissions reduction programs and markets;
3. Allocate allowances and/or auction proceeds to promote clean energy and energy efficiency investments that reduce greenhouse gas emissions and lower consumer costs;
4. Incorporate a robust offset program to achieve meaningful environmental results in a cost-effective manner and spur innovation in new technologies and services.

## **1. Establish near-term and long-term targets to signal the marketplace and drive capital investments in existing technology and innovation.**

The Council believes a federal greenhouse gas emission reduction program should provide consistent and long-term market signals for clean energy deployment and energy efficiency. To tackle the challenge of global climate change, all technologies at our disposal will be required over a long time horizon. However, in the near-term, the existing suite of clean energy technologies is the most viable, cost-effective solution for achieving greenhouse gas emission reductions between now and the year 2020. The immediate deployment of existing clean energy technologies — such as renewable energy and energy efficiency — will reduce greenhouse gas emissions and help mitigate consumer impacts.

## **2. Establish linkages with domestic and international greenhouse gas emissions reduction programs and markets.**

From an industry perspective, it is essential to have regulatory certainty and consistency. Therefore, the Council supports linking a federal greenhouse gas program with other compatible regional, and international cap-and-trade programs. Such linkages will encourage the free flow of offsets among such programs to ensure lowest-cost compliance and increase global market liquidity.

The immediate deployment of existing clean energy technologies — such as renewable energy and energy efficiency — will reduce greenhouse gas emissions and help mitigate consumer impacts.



# Blueprint for Greenhouse Gas Emission Reduction

## 3. Allocate allowances and/or auction proceeds to reduce consumer costs and to clean energy and energy efficiency investments.

The Council recommends that Congress design a climate change program that directs allowance value through free allowance distribution, set-aside pools and auction proceeds, toward increasing the deployment and investment in existing clean energy technologies, and energy efficiency. Legislation should be designed to do the following:

- a) **Distribute any free allowances on an output-basis.** The Council believes that any free allowances distributed under federal climate change legislation should be allocated by using a fuel neutral, updating output-based methodology.

An output-based approach focuses on carbon-energy efficiency and promotes clean generation — including renewable energy — since distribution is based on the amount of useful energy generated, not on the amount of fuel used or a facility's historic emissions.

An output-based policy would send a clear signal to the marketplace that lower carbon emitting energy options have direct, clear, consistent and bankable value.

- b) **Provide allowances for clean and renewable energy and energy efficiency.** If climate change legislation distributes allowances other than on an output-basis, at a minimum, allowances should be allocated to clean and renewable energy generators and for energy efficiency. More specifically:
- Clean and renewable energy generators should also be able to qualify for “new entrant” allowance set-asides.
  - Allowance value for renewable energy and energy efficiency could be used to fund programs such as those outlined in this document and in the Council's *January 2009 Economic Recovery Legislation Recommendations* in order to promote aggressive deployment of existing technologies.
  - Allocate allowance value to manufacturers of clean energy products.
  - Aggregation of smaller clean energy technologies, such as fuel cells, photovoltaic, wind, and other small energy efficient, low carbon distributed systems, to allow the smaller scale projects to qualify for allowances under a renewable energy allowance pool or auction proceeds.
- c) **Allowances should be directed to purchasers in the voluntary renewable energy market to continue to encourage the reduction of greenhouse gas emissions that fall outside of federal mandates.** Voluntary renewable power markets are growing rapidly in many regions of the country and have been important in the development of new renewable energy facilities. A key driver for these markets is the ability of entities to purchase carbon reduction credits, which can help reduce a company's greenhouse gas footprint. Voluntary renewable energy markets include:

# Blueprint for Greenhouse Gas Emission Reduction

1. Renewable energy sold directly to customers in restructured electricity markets and sold to consumers through utility green pricing programs, and
2. Renewable energy certificates (RECs) sold to retail customers in both restructured and monopoly markets, and/or RECS that are translated into pounds of carbon dioxide equivalents and sold in voluntary carbon markets.

Transactions in the voluntary renewable energy market operate without government subsidies, so the environmental benefit or reduction of greenhouse gases that this market achieves is in addition to any benefit that government legislation and action produces. Voluntary markets are expected to be a larger driver for new renewable energy additions and voluntary carbon reductions in the future.

Federal legislation should direct allowance value to the voluntary renewable market to preserve the ability of purchasers of voluntary renewable energy to make green market claims and contribute to the reduction of greenhouse gas emissions. This direction can be achieved through either an output-based allocation that includes renewable energy generators, or through a renewable energy allowance set-aside.

## **4. Include a Robust Offset Component to a Federal Greenhouse Gas Emission Reduction Program**

The ability for entities to generate and purchase offset allowances is an essential feature of a market-based approach to reducing greenhouse gas emissions. Under a compliance offset program, covered entities are permitted to help meet their obligation to reduce emissions by purchasing offset allowances generated from projects or activities that fall outside the scope of an emissions cap. This flexibility provides covered entities with the ability to achieve needed emission reductions at the lowest cost.

While entities covered under the emissions cap should undertake internal emission reduction activities, such as deploying renewable energy and energy efficiency, to the greatest extent possible, offset purchases are an important complementary tool to help covered entities manage compliance costs, widen the scope of environmental benefits and lower economic costs for energy consumers.

In addition, an offset program promotes the deployment of existing clean energy technologies that reduce emissions, and facilitates additional and positive environmental, social, and economic benefits.

As with other aspects of market-based initiatives to address climate change, the details and structure of a federal compliance offset program will play a critical role in determining successful program implementation, and in ensuring the environmental integrity of offset allowances. Real and additional offsets must be the standard in order to guarantee program integrity and achievement of desired emission reduction levels. Independent, third-party monitoring and verification requirements are also necessary to ensure that real emission reductions are delivered. The Council offers the following specific recommendations on offsets policy:

# Blueprint for Greenhouse Gas Emission Reduction

- a) **The flexibility for covered entities to use offset allowances to meet compliance obligations should be maximized.** A robust offset program provides incentives for deployment of greenhouse gas emission reduction projects and activities outside capped sectors, expanding the reach of the program and minimizing overall compliance costs for the economy as a whole. The cost benefit of a robust offset program is supported by a recent analysis by the Environmental Protection Agency.
- b) **A federal market-based approach to addressing climate change should be linked to other domestic and international market-based programs that incorporate an offset program, provided they are deemed to be of high-quality and environmental integrity.** Addressing climate change is a global challenge and therefore emission reduction activities both within and outside the United States boundaries are equally valuable and environmentally beneficial.
- c) **Verified, high-quality international offset allowances should be eligible for recognition within an offset program, regardless of the location in which they are generated.** Covered entities should be able to use international offset allowances or credits, such as the Certified Emission Reductions (CERs) generated under the Clean Development Mechanism (CDM) of the Kyoto Protocol, toward their greenhouse gas emission reduction compliance requirement.  
  
CER credits are generated in developing countries that do not have mandatory tonnage caps on greenhouse gas emissions; they are widely recognized as high-quality offset credits that represent real, additional, verifiable and permanent emission reductions and which also help to promote sustainable economic and environmental development in countries throughout the world.  
  
Having access to CER credits generated under CDM will play a significant role in reducing domestic compliance costs. While allowing the use of CERs for compliance purposes should not be construed as a substitute for engaging developing countries in emission reduction commitments, such an effort will continue to build the market for emission reductions throughout the world. This action will serve as a bridge to engage developing countries and encourage them to make future greenhouse gas emission reduction commitments. In addition, many projects developed under the CDM employ technologies and equipment manufactured in the United States, which provides a valuable international market for U.S. companies, while also facilitating the transfer and deployment of clean technologies around the world.
- d) **Approved, verifiable offset allowance purchases made prior to enactment of federal climate change legislation should be eligible for early action credit.** Early action credit would send clear market signals to encourage development of projects that reduce greenhouse gas emissions. It would also provide an incentive for covered entities to reduce emissions as soon as possible, even before implementation of a mandatory program.
- e) **Approved offset projects should be eligible to generate offset allowances for a guaranteed crediting period.** Already existing guidelines, such as in the CDM of the Kyoto Protocol maintain a workable approach in which offset projects are allowed to generate credits for a defined multi-year period. Similar crediting approaches have been adopted under the Regional Greenhouse Gas Initiative and the California Climate Action Registry.

# Blueprint for Greenhouse Gas Emission Reduction

- f) **Review and approval of an offset project's additionality and emissions baseline should occur only once per crediting period.** To foster development of offset projects, investors must have the confidence that approved projects will be eligible to generate offset allowances for a multi-year period and that an additionality determination made at the time of approval remain valid for that period. While an offset project should be monitored annually over the course of a crediting period by an independent, third-party verifier to ensure that the project meets required standards of performance, the assessment of additionality and determination of an emissions baseline should only occur once per crediting period — at the time a project is assessed for approval.
- g) **Covered facilities should be eligible to generate offset allowances from the implementation of projects or activities that reduce emissions from uncovered sources.** Without the ability for covered entities to generate offset allowances from uncovered sources, emissions — such as fugitive emissions from natural gas pipelines — will go unmitigated. In addition, by allowing covered entities to generate offset allowances from uncovered sources, the market will benefit from the learning experience associated with such project and technology implementation, which may help to make it more feasible to include such sources of emissions in covered facilities' emissions inventories at a later date.
- h) **Congress should promote market certainty by immediately authorizing the development of the rules, oversight, and accounting mechanisms of a federal compliance greenhouse gas offset program.** Developing the rules, accounting and oversight mechanisms of an offset program that could be incorporated into a federal climate change regime is not contingent upon passing cap-and-trade legislation. The United States could get a significant head-start on reducing greenhouse gas emissions from sectors outside of a future cap by initiating a formal process to design the structure and rules of an offset program.

The United States could get a significant head-start on reducing greenhouse gas emissions from sectors outside of a future cap by initiating a formal process to design the structure and rules of an offset program.

Since offset projects can take years to design and develop, covered entities and consumers will benefit if the federal government can begin establishing the rules, oversight and accounting mechanisms of an offset program, even in advance of federal climate change legislation. The federal government can learn and build upon significant work accomplished to date internationally under the CDM and the federal Environmental Protection Agency's Climate Leaders Program and from regional and state programs such as the Regional Greenhouse Gas Initiative, the Western Climate Initiative, and the California Climate Action Registry.



# Blueprint for Greenhouse Gas Emission Reduction

Regulatory uncertainty is one of the largest obstacles to new investments in low-carbon and clean energy technology projects. Companies want to develop new offset projects, but are deterred by uncertainty with respect to the types of projects and methodologies that will be recognized under a future federal compliance program. Companies that expect to be regulated under a future climate change program want to begin to support offset project development by purchasing offset allowances, but want the assurance that their purchases made today will be recognized in some manner under a future federal program.

## Conclusion

Clean energy and energy efficiency technologies can lead the U.S. economic recovery, provide energy security and reduce greenhouse gas emissions. The Council is prepared to leverage its experience in clean energy technologies, and energy efficiency to work with Congress and the new Administration to develop sound policies, that when coupled with an investment in research, development, and existing clean energy technology deployment will help the United States emerge as a global leader in the new green economy and create millions of new green jobs.

For further information, or to discuss these recommendations, please contact the Council's offices at 202-785-0507 or at [bcse@bcse.org](mailto:bcse@bcse.org). Please reference the Council's *January 2009 Economic Recovery Legislation Recommendations* for additional details.



Moving the Nation Towards  
a Clean Energy Economy



