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PCAP

PRESIDENTIAL CLIMATE ACTION PROJECT

Plan B: Near-Term Presidential Actions For Energy & Environmental Leadership

August 2010

EXECUTIVE SUMMARY

Even if you doubt the evidence (of climate change), providing incentives for energy efficiency and clean energy are the right thing to do for our future, because the nation that leads the clean-energy economy will be the nation that leads the global economy, and America must be that nation.

President Obama – State of the Union Address – Jan. 27, 2010

The most important long-term challenge facing the United States today is its transition to a clean energy economy. It also is one of the nation's biggest challenges. Today, 84% of America's total energy use comes from fossil fuels. But it is a challenge filled with opportunity. Deliberate progress toward greater energy efficiency and low-carbon renewable energy will make our industries more competitive, our economy more stable, our job creation more robust, and our nation more secure. If we expedite the transition, we will minimize our economy's impact on the environment and reduce the impacts of global climate change.

In 2009, the 111th Congress passed and President Obama signed the largest energy bill in American history – the American Recovery and Reinvestment Act. It included more than $80 billion of federal investments in energy efficiency and renewable energy resources. It was an important first step.

Congress has failed, however, to take the essential next step: Implementing an economy-wide cap on greenhouse gas emissions and putting a price on carbon. While the most prominent climate and energy bills considered so far by the 111th Congress would be game-changers in our economy, they fall far short of reducing U.S. emissions to the levels recommended by leading climate scientists for industrial economies – 25% to 40% below 1990 emissions by 2020.

As the international community attempts to deal with climate change and the other liabilities of fossil fuels, the global market for "green" technologies is becoming increasingly competitive. The New America Foundation estimates the United States ran an overall green trade deficit of nearly $9 billion in 2008 and a deficit of $6.4 billion in renewable energy technologies.[i] The White House Council of Economic Advisors has calculated the number of jobs that might be created if the United States tries harder to win the race. It projects that U.S. jobs related to the environment could grow 52% from 2000 to 2016 compared to only 14% for other occupations.

In January 2007, the Wirth Chair at the University of Colorado Denver launched the Presidential Climate Action Project (PCAP), a foundation-funded program to identify changes in federal policies and programs that would mitigate climate change and help facilitate the transition to clean energy.

In an effort to stimulate discussion about climate change and clean energy during the presidential campaign, PCAP provided suggestions to all of the candidates. In 2008, the project met with leaders of President-elect Obama's transition team and presented a report with nearly 200 proposals for presidential and congressional action.

PCAP's emphasis, however, was on policies the new President could implement without further action by Congress. PCAP commissioned the Center for Energy and Environmental Security at the University of Colorado's School of Law to identify the authorities past congresses had delegated to the Executive Branch.[ii] The Center reviewed 112 statutory delegations of authority and 370 executive orders related to the environment, going back to 1937. It concluded "there exists significant authority, without further action by Congress, for the President to take action by executive order to implement various aspects of climate change policy…A proactive administration with an understanding of the serious implications of climate change can make a significant impact immediately upon taking office."

Since taking office in January 2009, the Obama Administration has used these authorities to implement a substantial body of actions related to climate change and clean energy. They range from the Environmental Protection Agency's certification of greenhouse gases as a danger to public health and safety, which triggered regulation under the Clean Air Act, to the toughest requirements yet imposed on vehicle fuel efficiency, to an executive order that will increase the efficiency and reduce the carbon emissions of the federal government.

But substantial potential remains for executive action – and with the failure of the 111th Congress to pass legislation that puts a price on carbon, caps U.S. greenhouse gas emissions and establishes a national portfolio standard for renewable energy, proactive presidential leadership is more important than ever.

Consequently, PCAP plans to offer the Administration a fresh list of recommendations in January 2011, at the midpoint of President Obama's first term. In the near term, PCAP recommends that President Obama implement five ideas prior to the United Nations' 16th Conference of the Parties in Cancun:

- **Work with States, tribal governments, and local governments to create a national roadmap to the clean energy economy**
- **Declare a war on energy waste**
- **Begin reinventing national transportation policy**
- **Eliminate fossil energy subsidies under the Administration's control**
- **Establish ecosystem restoration as a climate action strategy**

1. CREATE A ROADMAP TO THE CLEAN ENERGY ECONOMY

In May 2010, the National Research Council concluded "an inclusive national policy framework is needed to ensure that all levels of government, the private sector, and millions of households and individuals are contributing to shared national goals" to limit the magnitude of climate change.[iii]

We need that, and more. We need a full partnership between federal, tribal, state and local governments to reduce greenhouse gas emissions, and a clear roadmap for America's transition to a clean energy economy. The roadmap should include:

- Specific goals, milestones and timetables for making the transition;
- Off-ramps for carbon-intensive energy and on-ramps for low-carbon resources;
- Procedures to better coordinate the powers of federal, state and local government;[iv]
- Recommendations on how federal programs and policies can better help states and local governments assert climate leadership;
- A uniform and credible method for scoring progress.

Why is an intergovernmental partnership important? The Clean Energy States Alliance notes that states and utilities have spent billions of dollars and acquired more than a decade of experience supporting energy efficiency and renewable energy (EE/RE) programs. The Alliance has documented how "State-level regulatory policies play an important role in enhancing the overall effectiveness of EE/RE programs."[v]

State and local governments have the authority to influence the top three drivers of energy consumption and greenhouse gas emissions – transportation, buildings and electric power generation. States regulate electric and gas utilities, guide transportation planning and establish energy codes for residential and commercial buildings. Localities enforce building codes and use zoning and other tools to influence urban development patterns, which in turn affect transportation energy use.

More than 30 states representing two-thirds of the nation's population have implemented or are developing their own climate action plans. A similar number have created renewable energy portfolio standards. Three regional cap-and-trade systems are underway or being developed. States have created their own appliance efficiency standards, vehicle efficiency standards and fuel standards, to name just a few policy innovations.[vi]

The state and local contribution to the energy economy can be substantial. In a process involving 16 states and more than 1,500 stakeholders, the Center for Climate Strategies has developed a portfolio of 23 key state policies that would influence 90% of U.S. greenhouse gas emissions. The Center's economic modeling indicates that if all 50 states adopted the portfolio, they would create 2.5 million new jobs, save consumers $5 billion in energy costs, boost GDP by $134 billion and reduce America's greenhouse gas emissions 27% below 1990 levels by 2020.[vii] Supported by intelligent national policies, the benefits would be even greater.[viii]

For these reasons, in its landmark analysis of potential energy savings in the United States, McKinsey & Co. concluded the United States needs to "formulate and launch at both national and regional levels an **integrated portfolio** of proven, piloted, and emerging approaches to unlock the full potential of energy efficiency (emphasis added)."[ix]

Barack Obama's Current Clean Energy Goals*

- Weatherize 1 million homes each year
- Increase vehicle efficiency 5% annually
- Within 10 years, save more oil than America imports from the Middle East and Venezuela
- Put 1 million plug-in hybrid vehicles on the road by 2015
- Ensure that 25% of electricity comes from renewable resources by 2025
- Reduce greenhouse gas emissions 17% by 2020 and 80% by 2050 (compared to 2005)
- Reduce electricity demand 15% below DOE's projected levels by 2020
- Increase the efficiency of new federal buildings by 40% and achieve net-zero-carbon performance in all new buildings by 2030
- Reduce the federal government's greenhouse gas emissions 28% by 2025, compared to 2008
- Reform transportation funding to reduce vehicle miles traveled
- Cut fossil energy subsidies by $30 billion over 10 years
- Reduce the carbon content of transportation fuels by 10% with a National Low-Carbon Fuel Standard

*As described in his campaign platform and subsequent statements.

RECOMMENDATIONS:

- Strengthen national energy and climate goals to meet or exceed the President's commitment in the Copenhagen Accord to hold global warming to no more than 2^0 Celsius above pre-industrial levels.[x]
- By Presidential Proclamation, elevate these goals to the status of national policy.
- Create a President's Council for a Clean Energy Economy consisting predominately of governors, tribal leaders, mayors, Cabinet Secretaries and private sector experts and direct it to develop the framework of a national economic transition plan.[xi]
- Seek new "energy transition partnerships" between state, local and federal agencies, and intergovernmental collaboration on mitigating and adapting to climate change.[xii] Except in cases where a uniform national policy is clearly in the national interest, defend state and local powers against preemption by Congress.
- To provide a more objective and transparent compass for energy investments, direct the Department of Energy to develop a peer-reviewed methodology to calculate the full, life-cycle net costs and benefits of current and proposed energy resources and technologies.[xiii]
- Direct the Department of Energy and the Environmental Protection Agency to accelerate their efforts to minimize the environmental, economic and social impacts of "bridge fuels" including natural gas and corn-based ethanol.[xiv]
- Direct federal agencies, where current law permits, to create new incentives in grant and loan programs to reward states that adopt progressive climate and energy policies.[xv]

2. DECLARE WAR ON WASTE

According to the United Nations, America is only the 22nd most energy efficient country among the major economies in the world[xvi], which means we spend more on energy than we need to because our lifestyle and our built environment are wasting too much excess energy. Since 1973, the average amount of electricity each of us uses has tripled. We can do better. An Obama Administration will strive to make America the most energy efficient country in the world.[xvii]

President Obama – State of the Union Address – Jan. 27, 2010

Whether it's called, a "War on Waste" or a "Race to the Top", the United States has much to gain from improving its energy efficiency. No reasonable American can argue that energy waste is good or that energy efficiency is a partisan issue. Indeed, energy efficiency should be a unifying national objective.

According to the American Council for an Energy Efficient Economy (ACEEE), the U.S. economy wastes 87% of the energy it consumes. Minimizing that waste should be a goal that involves every level of American society, from the individual consumer to communities, businesses and industries. Improvements in energy efficiency produce the equivalent of new tax-free income for families, new profits for business and an ongoing stimulus for the economy. They enhance national security by reducing our dependence on foreign oil and our unintentional funding of terrorist organizations.[xviii]

And because fossil energy costs will inevitably rise -- with or without national policy that prices carbon -- energy efficiency is an important strategy for insulating consumers and the economy from the price and supply volatility of finite resources.

The McKinsey analysis cited earlier estimates that with cost-effective energy efficiency measures, the United States could achieve net savings of $680 billion by 2020 while preventing 1.1 gigatons of greenhouse gas emissions annually and reducing energy consumption 23% below projected demand.[xix] To capture those benefits, the United States would have to undertake a coordinated economy-wide efficiency effort, investing $50 billion more than at present every year for 10 years. While that is four to five times the national efficiency investment in 2008, it equates to an achievable $163 annually per person.

"Energy efficiency offers a vast, low-cost energy resource for the U.S. economy," McKinsey concludes, "but only if the nation can craft a comprehensive and innovative approach to unlock it."[xx]

It is within America's capabilities and in our personal as well as national interest to become the most energy-efficient economy in the industrial world.

RECOMMENDATIONS:

- Launch a national campaign to make the United States the most energy-efficient industrial economy in the world by 2035. Call upon all sectors of the economy, and all Americans, to participate.[xxi]
- Direct the Department of Energy to recommend sector-by-sector efficiency targets, milestones and metrics necessary to achieve this goal. In addition, direct DOE to report on how the federal government's many energy efficiency programs – including research, development and commercialization programs across several federal agencies – should be coordinated to contribute to the 2035 goal.
- Direct the DOE and the Department of Defense to develop a coordinated strategy that mobilizes the military's capacity for technology innovation and its procurement of energy-related goods and services to accelerate energy efficiency gains in the U.S. economy.
- Direct the Departments of Energy, Transportation, Housing and Urban Development and Commerce, along with the Environmental Protection Agency, to create a one-stop shop for energy consumers to learn about the government's existing subsidies, incentives and technical assistance for energy efficiency.
- Direct the Energy Information Administration to report to the President and the public annually on the nation's progress.[xxii]
- Direct the Council on Environmental Quality and the Department of Energy to report to the President every six months on the federal government's progress on reducing energy intensity, increasing the use of renewable energy and reducing the use of fossil fuels, as required by Executive Order 13514.

3. REINVENT TRANSPORTATION POLICY

To its credit, the Obama Administration has taken decisive steps to update and reform national transportation policy. It is implementing a new efficiency standard for light vehicles and is developing efficiency standards for medium- and heavy-duty trucks. The stimulus packaged backed by the President contains a down payment on a national high-speed rail system. The Administration has created a White House Office of Urban Affairs and an interagency Sustainable Communities Initiative to help localities practice more sustainable development, including low-carbon mobility. The American Recovery and Restoration Act championed by President Obama contains billions of dollars for state energy programs and energy efficiency and conservation grants for communities.

Another historic opportunity is approaching for the President and Congress to help Americans increase their mobility options while cutting carbon and saving truckloads of money. Within the next year, Congress will vote on the Surface Transportation Reauthorization Bill.

Federal law currently offers greater incentives for states and localities to build roads than to develop mass transit and other low-carbon mobility options.[xxiii] The incentive structure should be reversed to favor public transportation, telecommuting, transit-oriented urban development and other efforts to reduce vehicle miles traveled.[xxiv]

RECOMMENDATIONS:

- Use the bully pulpit to build public support for reinventing national transportation policy, including strong incentives for public transportation, transit-efficient urban development, better accommodations for pedestrians and bicyclists, and reductions in vehicle miles traveled.[xxvi]
- Endorse the Housing and Transportation Affordability Index (www.htaindex.org) as a tool for consumers, developers and public officials to consider transportation costs when making housing and planning decisions.
- Begin the process of creating a National Low Carbon Fuel Standard that requires fuel refiners to reduce the life cycle greenhouse gas emissions of transportation fuels sold in the United States by 5% in five years and 10% in 10 years.[xxvii]
- Finalize rulemaking by the Environmental Protection Agency and the Department of Transportation to increase the efficiency of new vehicles by 5% annually.[xxviii]
- Direct the Council on Environmental Quality to issue regular reports to the President and the American people on federal agency progress in reducing petroleum use in the federal fleet.
- Assign the U.S. Department of Energy to participate in the Administration's Interagency Partnership for Sustainable Communities with EPA, HUD and DOT.[xxix] DOE's participation would give the Partnership expertise across the range of sustainable transportation options, from vehicle technology to fuels and to transit-oriented housing and urban development.

4. STOP SUBSIDIZING FOSSIL FUELS

President Obama has proposed the elimination of several federal subsidies for fossil fuels, saving $30 million over 10 years. He championed and won a commitment from G-20 nations to cut their fossil energy subsidies by about $300 billion annually.

However, federal subsidies for fossil energy in the United States totaled $72 billion in fiscal years 2002-2008, an average of more than $7 billion annually over that period according to the Environmental Law Institute[xxx]. The International Energy Agency estimates that fossil energy subsidies among G-20 nations amount to $550 billion annually.

There are many compelling reasons to phase out taxpayer subsidies for fossil energy industries. First, these are mature and lucrative industries; subsidizing them is classic corporate welfare. Second, the funds would be better spent on developing low-carbon fuels and technologies, or on reducing the federal deficit. Third, fossil energy subsidies promote carbon emissions, contradicting and undermining the President's commitment to reduce them. Fourth, ending subsidies helps put a more accurate price on carbon – a market mechanism supported by the President and many members of Congress but not yet established by law.

RECOMMENDATIONS:

- Push Congress and the G-20 to be more aggressive in phasing out fossil energy subsidies, including producer as well as consumer subsidies.
- Reduce or eliminate carbon subsidies under the Administration's control. For example, where current laws permit, the Administration should monitor lease and royalty rates charged in other countries and ensure that royalty fees and minimum bid requirements for fossil energy production on federal lands are in line with international rates; increase the cost-share required from industries for federally funded fossil energy research and development; and eliminate federal research that would likely be done by the industries without taxpayer support.
- Direct the Office of Management and Budget to increase transparency by creating a public inventory of federal subsidies for carbon-intensive energy resources, broadly defined to include grants and other direct transfers of funds, insurance subsidies, loans and loan guarantees, debt forgiveness, research and development expenditures, price supports, government purchasing preferences and tax expenditures including deductions, credits, refunds, exemptions, relief and accelerated depreciation.[xxxi]
- Ask Congress to authorize the creation of a "Carbon Subsidy Reduction Commission" that, in a process similar to the Base Closing Commission in the 1990s, identifies subsidies that are not critical to economic stability or national security, and develops an "all or nothing" list of subsidies to be eliminated upon the President's approval.

5. PUT ECOSYSTEMS AND PEOPLE BACK TO WORK

Human development worldwide has degraded or destroyed ecosystems and the beneficial services they provide. Many of those services provide significant value to the economy and to public health and welfare. Many are valuable to the nation's effort to mitigate and adapt to climate change. Examples include wetlands that help purify water and recharge aquifers; forests that help prevent flooding and sequester carbon; and vegetation-rich watersheds that reduce flooding by holding raindrops where they fall.

Over the past century, national policy has resulted in replacing natural systems that provided these services at no cost with engineered systems that are expensive to build and maintain. With a false sense of security created by flood control structures, many communities have continued building in natural floodplains only to see structures fail to perform as designed, or fail because of inadequate maintenance.[xxxii] A federal court has ruled, for example, that structural failure resulted in the flooding of New Orleans during Hurricane Katrina.

The Administration already has created plans and/or allocated funds for restoration projects in the Great Lakes, the Chesapeake Bay, California's Bay Delta and the Louisiana-Mississippi Gulf Coast.[xxxiii] Likely areas for additional demonstration projects are Central Appalachia[xxxiv], flood prone areas of the Midwest and Western forests being destroyed by intense fires and insect infestation.[xxxv]

Examples of Ecological Restoration

Napa River

The residents of Napa County, California, have suffered $542 million in property damages from flooding since 1970. In 1986, flooding destroyed 250 homes and killed three people. In 1998, voters approved a ½ cent increase in their sales tax to provide the local match for a "Living River" project that combines some structural flood control with restoration of natural flood prevention features. The project will restore more than 650 acres of tidal wetlands; reconnect the river to its historic floodplain; maintain its natural slope, meander and width; remove or lower dikes; and replace bridges that have been obstacles to the river's flow. County officials estimate the project will protect 2,700 homes, 350 businesses and more than 50 public properties from 100-year flood levels, saving $26 million yearly in flood losses.

Everglades

In southern and central Florida, the Everglades were once an enormous ecosystem of more than 3 million acres. A shallow sheet of water covered the region and nourished the saw grass and other wetland plants. In 1948, Congress authorized a drainage and development project that destroyed more than 50% of the original Everglades, decreased water quality and increased freshwater runoff into the ocean. In 2000, Congress authorized a Comprehensive Everglades Restoration Plan of more than 50 individual projects in 16 counties covering more than 18,000 square miles. The goal is to capture and use the freshwater that has been entering the ocean. Most of the water will be used to restore dying ecosystems, but some will benefit cities and farmers.

New Orleans

Bayou La Branche historically served as a barrier to variations in wave action in Lake Pontchartrain, filtered contaminants, and provided habitat for wildlife and fish. However, the site was pumped and levied in the early 1900s to allow the land to be used for agriculture. A hurricane broke the levee and filled the area with water too deep to allow vegetation to re-establish. In 1993 and 1994, 2.7 million cubic yards of sediment was added to Bayou La Branche, creating 305 acres of shallow water habitat.

RECOMMENDATIONS:

- Instruct the Interagency Climate Change Adaptation Task Force to assess the potential of ecosystem restoration in the report it will submit to the President in October 2010.
- Make clear to the Secretary of the Navy that long-term objectives in the Gulf Coast restoration plan should include the restoration of vital ecosystems that were degraded prior to the oil spill and would enhance the economy of the region while protecting Gulf Coast communities from the anticipated impacts of climate change.
- Direct the Environmental Protection Agency and the Departments of Energy and Transportation to develop guidelines for designs and materials that reduce carbon footprints and increase resilience as the nation repairs and modernizes its infrastructure. Further, direct the departments to recommend sustainable development principles that should be incorporated into existing guidance for federal infrastructure investments.[xxxvii]
- Use the military's substantial work on new installations as a test-bed for climate-resilient designs and materials in the built environment.[xxxviii]
- Direct the Department of Defense and the Council on Environmental Quality to assess the past performance and the potential role of the U.S. Army Corps of Engineers in nonstructural disaster prevention projects that involve ecosystem restoration.
- Direct the Council on Environmental Quality to report biennially on the state of the nation's ecosystems, including key environmental thresholds and stresses.[xxxix]
- Direct the Departments of Interior and Homeland Security to assess the feasibility of ecosystem restoration demonstration projects in Central Appalachia, Western forests and flood prone areas of the Midwest. The assessment should include potential ecological, public safety and economic benefits.
- Propose that the Corporation for National and Community Service (CNCS) expand the services offered by VISTA to train and assist localities in ecosystem restoration projects. Use the bully pulpit to encourage corporate donations for CNCS restoration work. In addition, direct agencies with natural resource management responsibilities to identify ecological restoration projects for volunteers utilizing the national Natural and Cultural Resources Volunteer Portal.[xxxx]
- Request that EPA involve states and localities in the National Ecosystem Services Partnership that is scheduled to begin in December 2010, and to develop guidelines for community involvement in restoration. The Administration should ensure that the Partnership is provided adequate resources to serve as an influential force in the nation's climate adaptation strategy.
- Issue a Presidential Memorandum that reinforces the duty of public officials to protect America's public trust assets including natural resources, ecosystems and environmental systems.[xxxxi]

NOTES

[i] The New America Foundation used data from the Organization of Economic Cooperation and Development (OECD) and the Asia-Pacific Economic Cooperation (APEC). The Foundation's conclusion: "If current trends continue, the green trade deficit can be expected to widen further as the administration's agenda increases demand but without sufficient measures to increase domestic production. If the deficit continues to grow, the United States will forego the creation of millions of high-wage, high-skill green manufacturing jobs and lose its potential to be a global producer as well as a consumer of green technologies." For more information, go to http://www.newamerica.net/files/Green_Trade_Balance.pdf

[ii] See the Center's two-volume analysis at http://www.climateactionproject.com/docs/CEES_PCAP_Report_Final_Feb_08.pdf and http://www.climateactionproject.com/docs/Executive_CEES_PCAP_II_Report_Jul_17.pdf.

[iii] "Strong Evidence on Climate Change Underscores Need for Actions to Reduce Emissions and Begin Adapting to Impacts," National Research Council news release, May 19, 2010.

[iv] The roadmap should include the role of the U.S. military, the nation's largest single energy consumer. That role includes technology innovation and the potential of its acquisitions process to stimulate markets for clean energy technologies. See "Powering America's Economy – Energy Innovation at the Crossroads of the National Security Challenge" by the Military Advisory Board of the Center for Naval Analysis at www.cng.org

[v] "Draft Report: State Support for Clean Energy Deployment: Lessons Learned for Future Federal Policy", Charles Kubert & Mark Sinclair, Clean Energy States Alliance, Summer 2010

[vi] For a more complete list of current state energy and climate policies, see an inventory by the Pew Center on Global Climate Change at http://www.pewclimate.org/what_s_being_done/in_the_states/state_action_maps.cfm

[vii] The job-creation benefits of the clean energy economy are already being experienced in most states. The Pew Center on the States reports that during 1998-2007, job growth in the clean energy economy outperformed overall job growth in 38 states and the District of Columbia. Pew concluded: "…these jobs are poised for even greater growth, driven by increasing consumer demand, venture capital infusions by investors eager to exploit new market opportunities, and state and federal policy initiatives." See http://www.pewcenteronthestates.org/report_detail.aspx?id=52872.

[viii] A new study by the World Resources Institute concludes that if federal agencies and 25 states with climate legislation take aggressive action using their existing policies and programs, U.S. greenhouse gas emissions could be cut 14% below 2005 levels by 2020, just short of President Obama's goal of 17%. That estimate does not include additional emission cuts that could be achieved with new federal policies that reduced vehicles miles traveled, managed agricultural lands and forests and increased the use of energy efficiency and renewable energy technologies. The Center for Climate Strategy analysis illustrates that substantial additional emission reductions that could be achieved with additional state policies and programs.

[ix] "Unlocking Energy Efficiency in the U.S. Economy", McKinsey Global Energy and Materials, July 2009.

[x] Many institutions and non-government organizations including PCAP have recommended more aggressive energy and emissions goals than the Obama Administration has embraced so far. Because climate impacts and science are progressing so rapidly, along with energy technologies, supplies and markets, the Administration is justified in periodically reviewing and adjusting national goals. And because peak oil and climate change are time-sensitive national security issues, national energy objectives should include "stretch goals" that continue pushing the envelope of new technologies and public policies.

[xi] The World Resources Institute and the Center for Strategic & International Studies issued "A Roadmap for a Secure, Low-Carbon Energy Economy" in January 2009. It offers useful recommendations on broad national

policies, but does not sufficiently address coordination with state and local governments. A useful model of a comprehensive roadmap is the "Low Carbon Transition Plan" by the British government.. http://centralcontent.fco.gov.uk/central-content/campaigns/act-on-copenhagen/resources/en/pdf/DECC-Low-Carbon-Transition-Plan

[xii] For example, the Western Governors' Association has called for a robust new partnership between state and federal agencies to coordinate climate adaptation activities. See "Climate Adaptation Priorities for the Western States: Scoping Report", June 2010. Go to http://www.westgov.org/index.php?option=com_wga&view=reports&Itemid=54

[xiii] The purpose of the methodology is to allow more intelligent and objective public policy and private investment by making transparent the full costs and benefits of energy options. Toward that end, PCAP contracted Earth Inc. in 2007 to create a user-friendly "full cost calculator". The beta version can be found at www.earthinc.net/pcap/index.php. Insofar as sufficient data exist, the methodology should be capable of estimating the net economic, environmental and energy characteristics of all forms of proposed energy resources and technologies, including but not limited to liquids from coal, oil and gas from shale, other forms of conventional and unconventional petroleum, high- and low-sulfur coal, nuclear power, solar thermal and electric technologies, wind energy, corn-based ethanol, cellulosic ethanol, liquid fuels from algae, other forms of biomass energy, geothermal energy, and so on. Environmental characteristics should include each resource's effects on fresh water supplies, ocean ecology, ecosystems and ecosystem services and greenhouse gas emissions. Where insufficient data exist to analyze important costs and benefits of these resources, the President and Congress should direct federal science programs to fill our knowledge gaps.

[xiv] For more information on the environmental impacts of natural gas production, see "Addressing the Environmental Risks from Shale Gas Development", Worldwatch Institute, July 2010, at http://pangea.stanford.edu/docs/addressing_the_environmental_risks_from%20shale_gas_development.pdf

[xv] One example of an existing federal program that might be modified to provide incentives for climate action is the State Energy Program established in the Energy Policy and Conservation Act of 1975. Its purpose is "to promote the conservation of energy and reduce the rate of growth of energy demand by authorizing the Secretary (of Energy) to establish procedures and guidelines for the development and implementation of specific State energy conservation programs and to provide federal financial and technical assistance to States in support of such programs." To qualify for grants under the program, states submit annual energy plans to the Secretary for approval. In recent years, some of these funds – called "special project grants" - have been awarded competitively. DOE should consider requiring each state energy plan to include anticipated or measured greenhouse gas reductions resulting from its energy programs. The Department should explore the use of its special project grants to reward states with the highest reductions in energy-related greenhouse gas emissions.

[xvi] According to the American Council for an Energy Efficient Economy, the U.S. economy is 13% efficient, compared to 20% for Japan and several European nations. As the economy tripled in size since 1970, 75% of the energy needed to fuel the growth came from energy efficiency rather than new energy resources. ACEEE concludes that although energy efficiency often is eclipsed by discussions of new energy production, it is likely to play a major role in meeting future energy needs and could provide half the greenhouse gas emissions cuts the nation needs by 2050 to meet the goal advocated by many climate scientists. See http://www.prnewswire.com/news-releases/americas-anemic-13-percent-economy--experts-warn-us-risks-long-term-growth-by-focusing-on-new-energy-at-expense-of-more-energy-efficiency-92328294.html.

[xvii] "Barack Obama and Joe Biden: New Energy for America", http://www.barackobama.com/pdf/factsheet_energy_speech_080308.pdf

[xviii] The Military Advisory Board of the Center for Naval Analysis has clearly defined the link between clean energy, climate change and national security in two important white papers. See www.cna.org.

[xix] McKinsey's estimates of investment and savings do not include transportation energy. Its estimates are based on cost-effective energy efficiency measures and some advances in technology.

[xx] A more inclusive goal is resource productivity – an important next step in reducing a wider range of resource inputs into a given amount of economic activity.

[xxi] PCAP commissioned ACEEE economist Skip Laitner to assess the plausibility of this goal. Laitner responded that based on Energy Information Agency projections of energy efficiency growth in other nations, the United States could become the world leader by increasing its rate of energy efficiency growth from 2.1% to 3.1% annually between 2010 and 2025, and continuing or accelerating that rate of improvement thereafter. "Over the course of the next 15 years, the U.S. will invest an average of $2.9 trillion per year (measured in constant 2008 dollars) to maintain our nation's energy supplies, roads, bridges, factories, offices, homes, schools, and hospitals," Laitner wrote. "By adding as little as 2% of that ongoing annual investment to pay for more energy productive technologies and infrastructure, we can increase the economy's overall productivity. More critically, we can generate those productivity increases in ways that achieve substantial but still cost-effective reductions in energy consumption and greenhouse gas (GHG) emissions...An investment-driven energy strategy would harness the productivity gains from semiconductor devices, information and communication technology (ICT) systems, new materials, and new tools and designs for use in our buildings, industrial processes, transportation and power generation systems as well as other structures in our economy. The devices, new materials, and new designs could boost the annual growth of our nation's energy efficiency from 2.1% per year to 3.1% per year over the period 2010 through 2025. The good news is that, on average, these investments would typically pay for themselves in about 4 years or less. The energy saving benefits would be nearly twice as large as the program and investment costs necessary to drive these productivity improvements. If achieved, this accelerated rate of energy efficiency improvement would likely put the U.S. at the forefront of the competitive economies of the world."

[xxii] Advocates for a clean energy economy have suggested that President Obama launch a national effort similar to the Apollo Program. But for America to reach the moon, citizens merely had to pay their taxes and watch the results on television. What's required is leadership comparable to President Franklin Roosevelt's in World War II, rallying all citizens and sectors to engage in the effort. Cutting energy waste is the logical and most cost-effective first step in making the transition to the clean energy economy.

[xxiii] EIA should issue these reports graphically on the World Wide Web, where citizens can follow the nation's progress. The result could be the "Prius effect", where visible, easily understood feedback seems to change behavior.

[xxiv] In contrast, the French government's new plan for transportation investment allocates 81% of the budget to public transit, while roads and airports receive only 5%. Spain's current $22 billion plan for transportation investment allocates 70% to high-speed rail compared to 30% for highways.
See http://blogs.worldwatch.org/greeneconomy/a-revolution-in-transport-priorities.

[xxv] Several states are employing more thoughtful urban design to reduce traffic congestion and vehicle miles traveled. For example, those goals are among the objectives of a Transportation and Climate Initiative announced in June 2010 by 11 states and the District of Columbia.

[xxvi] PCAP commissioned the Center for Neighborhood Technologies (CNT) to propose changes in national policy to reduce petroleum use and carbon emissions from the transportation sector. CNT's detailed recommendations can be found at http://www.climateactionproject.com/docs/cnt2007a.pdf.

[xxvii] Obama proposed this standard during his presidential campaign and in legislation he introduced as a U.S. Senator.

[xxviii] The Administration's new CAFE standards require light vehicles to achieve 35.5 miles per gallon by 2016. The fuel efficiency standards for medium- and heavy-duty trucks have not yet been defined, but will apply to model years 2014-2018.

[xxix] One partnership idea: DOE should explore using HUD's local offices and regional sustainability offices to help expedite the processing of stimulus funds related to sustainable energy.

[xxx] http://www.elistore.org/Data/products/d19_07.pdf

[xxxi] In 2007, the Government Accountability Office reported that royalty payments charged by the U.S. government were among the lowest in the world. Subsequent to its analysis, the Department of Interior raised royalty rates for production in the Gulf of Mexico. The GAO acknowledged that increased royalty payments could be partially offset by decreased production and tax revenues, but it concluded that higher royalty rates would produce a net increase in federal revenues. See http://www.gao.gov/new.items/d07676r.pdf. The Obama Administration's Department of Interior says it is reviewing federal lease and royalty rates.

[xxxii] The Environmental Law Institute has made a good start. See http://www.sourcewatch.org/index.php?title=Estimating_U.S._Government_Subsidies_to_Energy_Sources_2002-2008. For a broader critique of federal energy subsidies, see the CATO Institute analysis at http://www.downsizinggovernment.org/energy/subsidies.

[xxxiii] The American Society of Civil Engineers (ASCE) estimates there are more than 400 major federal dams and reservoirs in the United States, along with 500 miles of levees and dikes and hundreds of smaller flood control projects. It reports that $15 billion in new flood control structures are in the pipeline and tens of millions of dollars in critical maintenance remains unfunded. ASCE gave the nation's levee systems a D- in its latest report card on the nation's infrastructure. It estimates that to achieve an acceptable grade, levees will require $50 billion in additional investment over the next five years. FEMA estimates that 43% of the U.S. population lives in counties with levees. ASCE estimates that property owners behind levees have at least a 26% chance of experiencing a flood during the life of a 30-year mortgage. Despite flood control structures, flood damages amounted to more than $580 million in the Midwest during 2008, and nearly $16.5 billion in New Orleans as a result of Hurricane Katrina. The National Association of Floodplain Managers reports that the National Flood Insurance Program, which subsidizes insurance for floodplain residents, is $18.8 billion in debt. Meantime, extreme weather events in the U.S. are expected to increase as a result of climate change.

[xxxiv] See http://www.whitehouse.gov/issues/energy-and-environment

[xxxv] The Administration has issued a Gulf Coast restoration plan. See http://www.whitehouse.gov/administration/eop/ceq/initiatives/gulfcoast. In Central Appalachia (Virginia, West Virginia, Kentucky and Tennessee), mountain top removal coal mining has destroyed nearly 500 mountains. Mine wastes have degraded or destroyed some 2,000 streams and waterways and an estimated 570,000 hectares of forest are expected to be lost to mining by 2012. A federal law exempts mining companies from their obligation to restore mined lands to their "approximate original contour" if there is a plan to put the land to "equal or better economic use". But the Natural Resources Defense Council estimates that 90% of mountain top removal sites have not been converted to economic uses. (http://www.huffingtonpost.com/rob-perks/mountaintop-removal-recla_b_578706.html). The Administration is taking steps to tighten environmental regulation of the industry's practices, but federal, state and local efforts should go beyond stopping the damage to include repairing the ecological damage already done, where that is possible. Restoration efforts in the region should include the

remediation of coal slurry and ash. The Abandoned Mine Reclamation Fund should be used for full remediation of every abandoned mine site. The fund, scheduled to sunset in 2022, should be extended until all water, land and forest reclamation issues are resolved. The fund's formula should be modified so that money is provided only to states that have un-reclaimed mine lands. Other proposals on restoration in Central Appalachia are contained in the report titled "Economic Diversification in Central Appalachia: Ideas for a New Energy Economy" by the Central Appalachia Prosperity Project at http://www.natcapsolutions.org/CAPP/CAPP_Report_final.pdf.

[xxxvi] Since 1990, the largest infestation of bark beetles in recorded history has been underway in the West, killing millions of acres of pine trees. According to the Chief of the U.S. Forest Service, 17 million acres of pine forest across the Western U.S. are dead or dying due to bark beetles. In Colorado, government foresters predict the insects will kill all of the state's mature lodge pole pine forests. Forest fires appear to be increasing, with a total of 48.77 million acres of damage from 2000-2006 compared to 24.59 million acres in the seven years prior to this period. In "The State of the Nation's Ecosystems 2008", the Heinz Center reported a major increase in the acreage burned from forest fires from 1979-2006, with 9.8 million acres burned in 2006. The result is fire danger and a loss of ecosystem services that include carbon sequestration, flood control, erosion control and wildlife habitat.

[xxxvii] In a June 30, 2010, memorandum, President Obama instructed the Secretary of Navy to lead the development of a Gulf Coast Restoration Support Plan related to the British Petroleum oil spill.

[xxxviii] See Executive Order 12893 and EPA's green infrastructure strategy at http://www.epa.gov/npdes/pubs/gi_action_strategy.pdf.

[xxxix] As a result of the American Recovery and Reinvestment Act of 2009, the Department of Defense has more than $2 billion available for its military construction program including family housing, hospitals, child development centers and warrior transition facilities.

[xxxx] CEQ produced annual environmental quality reports from 1970 to 1997. They were discontinued as a result of the Federal Reports Elimination and Sunset Act of 1995. In December 1996 under then-Administrator Carol Browner, EPA produced a draft set of environmental goals for the United States ("Environmental Goals for America: With Milestones for 2005" at http://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=20013KML.txt) More recent examples of ecological threshold analysis include the 2008 "State of the Nation's Ecosystem" report by the Heinz Center (http://www.heinzctr.org/ecosystems/) and the Planetary Boundaries report issued earlier this year by the Stockholm Resilience Institute (http://www.nature.com/news/specials/planetaryboundaries/index.html).

[xxxxi] The Bush Administration created America's Natural and Cultural Resources Volunteer Portal in 2002. Several federal, state and local agencies use the portal to identify volunteer opportunities in natural resource projects for Americans ranging from military veterans to students. See http://www.serve.gov/

[xxxxii] According to EPA's Inspector General, 25 federal agencies have responsibilities related to environmental protection (Report No. 10-P-0140, June 8, 2010). The Massey coal mine disaster and BP oil spill in the Gulf appear to indicate that public officials charged with regulating the safety and environmental impacts of energy industries have not fulfilled that obligation.

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The Presidential Climate Action Project (PCAP) was founded in January 2007. Its mission is to identify the authority of the President of the United States to shape federal government policies that reduce U.S. greenhouse gas emissions at levels consistent with climate science, while laying the groundwork for a clean energy economy.

PCAP, a nonpartisan project funded by foundations and advised by a distinguished panel of experts, provided recommendations to all of the presidential candidates during the 2008 campaign and presented its first comprehensive "action plan" to the Obama Transition Team in November 2008. It now is developing new recommendations for presidential leadership in 2011-2012.

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