



Security
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PCAP

PRESIDENTIAL CLIMATE ACTION PROJECT

Building an Advanced Energy Economy



October 2012

Dedicated to the memory of Ray Anderson, Steve Schneider, Paul Epstein and Russell Train, four who devoted their extraordinary careers to making the world safer, healthier and more sustainable.

"The dogmas of the quiet past are inadequate to the stormy present. The occasion is piled high with difficulty and we must rise with the occasion. As our case is new, so we must think anew and act anew. We must disenthrall ourselves, and then we shall save our country."

— Abraham Lincoln in an 1862 address to Congress

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Finally, thanks to the incredibly dedicated and helpful students whose research assistance contributed so much to this report: Eryn Elder, Lenore Francis Silberman, and Andrew Aultman, all interns at Natural Capitalism Solutions.

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FOREWORD

In the summer of 2007 a small group of us ably guided by Bill Becker launched the President's Climate Action Plan. We aimed to provide a blueprint for a farsighted climate policy in the first 100 days of the next administration, whether Republican or Democratic. We worked in the awareness that global warming is the defining issue of our generation, and that time for effective action is very short. We believed that the issue transcends the worn out divisions between conservatives and liberals and requires a unified national response. We also knew that climate changes were larger and coming faster than previously thought, even a few years ago. And we still believed that the federal government would respond to clear dangers based on irrefutable scientific data and clear logic.

The basics of an effective response to global warming are well understood. It is predicated on policies that rapidly reorient the country (and the world) from fossil fuels to efficiency and renewable energy. Because climate change is connected to virtually every other issue on the public agenda, policies that lower carbon emissions have a high positive multiplier effect. Energy efficiency could save U.S. consumers and businesses \$400-500 billion each year. The transition to renewable energy would create new businesses and hundreds of thousands of new jobs, eliminate our dependence on unstable regions, improve our balance of payments, clean the air, improve public health, protect the land and waters, and head off the worst effects of climate change in coming decades. The logic, data, science, and economics presented in the first PCAP report in 2008 were unimpeachable. One Washington insider described it as the "gold standard" for climate policy. So, what happened?

Politics happened; the shortsighted, ideologically driven, fossil-fuel funded politics of Washington gridlock happened. *Citizens United* happened. And the rest, as they say, is history. The U.S. still has no *de jure* climate policy. Its *de facto* national policy is still to heavily subsidize 19th century fuels—oil, gas, and coal—while underfunding 21st century technologies and mostly ignoring energy efficiency—the cheapest, fastest, and smartest option available. Our official policy is a roadmap to disaster.

A closer look, however, tells a rather different story. Without much fanfare, federal agencies like the General Services Administration have been improving the energy efficiency of their vast number of buildings. Responding to even limited and intermittent federal incentives, U.S. renewable energy industries earned more than \$50 billion in 2011, growing at nearly 12% annually since 2007. Army bases are being redesigned as zero-waste facilities. The U.S. Navy and Air Force are successfully experimenting with bio-fuels. Beyond the federal government nearly 700 colleges and universities have made the pledge to become climate neutral. Businesses, large and small, are moving toward efficiency and renewable energy because it makes financial sense, because their customers want it, and because it is the right thing to do. Architects, engineers, manufacturers, urban planners, mayors, investors, and transportation experts are responding with alacrity and creativity to build resilient communities and regions. Hindsight someday will show these changes as the leading edge of a tectonic shift in perceptions, values, technologies, and economics moving us toward a smarter future powered by sunlight and ingenuity. But as philosopher Jerry Reed once noted, we have a long way to go and a short time to get there.

The document that follows, PCAP-2012, is the fifth in the series of presidential climate action plans PCAP has produced since 2008. It is aimed to assess our progress since 2009, clarify and promote sensible policy options necessary to accelerate change, and embolden our still-too-timid leaders to lead with audacity. The risks of failure are beyond the power of words to say. But we still have time to choose.

David Orr
Oberlin College

EXECUTIVE SUMMARY

This report offers 10 recommendations on how the next President of the United States can assert his leadership on global climate change and on building a clean energy economy.

This is not intended to be a comprehensive action plan. Over the past 5 years, PCAP has produced hundreds of ideas on how our presidents can use their executive authorities to make progress on these two goals, with or without the cooperation of Congress. PCAP 2012 is meant only to offer a few examples of how executive power might be exerted over the next four years.

As we have noted in previous reports, some of our past presidents have made full use of their executive authorities, even to the point of pushing the boundary of those powers, to deal with critical points in America's history. We have come to another critical point now as our dependence on fossil fuels and our emissions of greenhouse gases have become threats to our national and personal security. Worse, as we have been warned, the irreversible threats of unmitigated climate change will affect our country and our children for hundreds of years to come.

These 10 ideas are offered with our encouragement that the next president also push the boundaries of executive power if necessary to help the United States transition to a secure and sustainable 21st century economy. In brief, we recommend that the president:

- 1. COMPLETE THE JOB OF PRICING CARBON.** Issue clear criteria for pricing, trading or capping carbon and work with Congress to produce a bill that complies. Make clear that in the meantime, EPA will continue and expand its regulation of greenhouse gas emissions.
- 2. REFORM FEDERAL FISCAL POLICY FOR AN ADVANCED ENERGY ECONOMY.** Revive the National Commission on Fiscal Policy and Reform to recommend modernization of the tax code, federal programs, regulations, disbursements and revenues to support a low-carbon rather than a carbon-intensive U.S. economy.
- 3. MAKE AMERICA FIRST IN ENERGY PRODUCTIVITY.** Challenge all sectors of the economy to make the United States the most energy-efficient industrial economy in the world. Lead with substantial improvements in the energy efficiency of the federal government and mobilize federal programs to support the campaign.
- 4. DEVELOP A NATIONAL ROADMAP TO AN ADVANCED ENERGY ECONOMY.** Work with governors, mayors, industry, economists and expert organizations to create a roadmap to an advanced energy economy, including clear goals, milestones and performance measures.
- 5. MAKE SUSTAINABLE DEVELOPMENT A NATIONAL SECURITY IMPERATIVE.** Codify a central role for sustainable development in national security strategy. Tell the American people that every household and community can make the nation more secure by reducing its use of fossil fuels, becoming more resilient, and helping to reduce and adapt to the impacts of global climate change.
- 6. INCREASE AMERICA'S MOBILITY OPTIONS.** Inform Congress that the 2014 transportation reauthorization bill must be designed to reduce America's use of petroleum and increase mobility options for the American people, including elderly, young, disabled, minority and low-income people who cannot operate or afford automobiles.
- 7. EMPOWER STATE AND LOCAL LEADERSHIP ON ENERGY AND CLIMATE.** State and local energy policies are already having a significant impact on U.S. carbon emissions. Champion ample funding and authorities for states and cities to establish sustain and expand their clean energy and climate programs.

8. INTENSIFY CARBON DIPLOMACY. Negotiate additional bilateral and multi-lateral agreements for collaborative research, development and deployment of clean energy technologies. Make the U.S. a leader in carrying out commitments under the Durban Platform and push for rapid reduction in greenhouse gas emissions that are possible with the the phase-down of HFCs.

9. DEVELOP GENUINE PROGRESS INDICATORS. Adopt metrics on public health, education, food security, housing availability, civic engagement and other quality-of-life factors not measured by GDP. Report America's progress every two years in the State of the Union address.

10. HELP THE AMERICAN PEOPLE ENVISION AN ADVANCED ENERGY ECONOMY. Communicate directly with the American people to explain the urgency and to build support for the transition to a 21st century energy economy. Use social media and state-of-the-art visual communications to help people share their ideas and better understand what clean energy will mean to their communities and lives.

INTRODUCTION

This report presents proposals for Congress and the Executive Branch to improve the energy and climate security of the United States. Like its four predecessors, it emphasizes programs and policies the next President of the United States can implement using his current executive authorities—in other words, with little or no further action by Congress.

For our purposes, we will use the term “advanced energy economy” to describe a society featuring “...energy sources, technologies, and services that are affordable, clean, and secure over the long-term. This could mean electric and plug-in hybrid cars, lightweight composites for airplane bodies, natural gas fueled trucks, high-performance buildings, more efficient industrial processes, and the latest wind, solar, and nuclear technologies, as they use energy more productively, diversify energy sources, and reduce health and environmental costs.”¹

We have tried to remain consistent with the operating principles and assumptions we have used since PCAP began in 2007, namely:

- Energy and climate security are not partisan issues.
- Solutions must serve the public interest rather than special interests when the two diverge.
- The United States lacks a clear vision and roadmap to the advanced energy economy. We also lack a coherent long-term national energy policy. These deficiencies result in waste, duplication and less than optimal investment in energy efficiency and renewable energy, as well as gaps and contradictions in public laws and programs.
- Government policy today, including U.S. fiscal policy, is attempting to maintain an unsustainable status quo – the sources of energy and patterns of energy consumption we have used for the past 200 years. We have the tools to create an advanced energy economy – exciting new technologies that will sustain prosperity indefinitely. But first we must change the policies that have been created and are controlled by powerful special interests that have “rigged the game” in their favor.
- Given the growing urgency of problems such as global climate change and the irreversibility of many of its impacts, incremental change is not sufficient to secure the health of our economy and the safety of our communities. Our objective must be economic transformation rather than economic recovery.
- Transformative changes in national policy are not likely to come from our labyrinthine legislative process. States and localities are the nation’s leading policy laboratories for energy and climate security today.

We have also tried to remain consistent with strategies we have recommended for the President and the Administration since PCAP began. Among them:

- Use full-cost accounting to improve the efficiency of our markets, with the price of products more accurately reflecting their true costs to society.
- Require that our communities, citizens, elected officials and industries be responsible for their actions. For example, polluters rather than taxpayers must pay the costs of pollution.
- Reduce government regulation by helping the economy reach a level of resource efficiency that prevents pollution.
- Empower state and local governments to excel as the nation’s policy laboratories in regard to pollution prevention, resource efficiency, advanced manufacturing, and other critical objectives for an advanced energy economy.

PCAP-2012 differs from its predecessors in two important respects, however. First, we have given more attention here to overarching and systemic changes that we believe are necessary to generate good long-term jobs, to recapture and sustain America’s technological and moral leadership in the global community, and to achieve the symbiotic benefits of robust economy and a healthy environment. These broader objectives are each followed by more specific actions the next President can take to achieve them.

Second, we have tried in the past to avoid recommending the appointment of commissions and task forces, too often used by political leaders to “kick the can down the road” on tough issues. We do recommend some use of presidentially appointed groups here, however, because of the need to build broad stakeholder involvement and support, and because some of what we propose moves into unfamiliar territory that should be better understood before we embark.

Finally, it is important to acknowledge that the President has relatively limited powers compared to the Legislative Branch. Nevertheless, when the need was great, past presidents have shown that their powers are sufficient to produce historic changes in the course of national and world affairs. There is ample precedent for aggressive use of executive powers by past presidents who believed that as the only elected official chosen by all the people (along with the Vice President), they had a special obligation to protect the public welfare when Congress failed to do so.²

As the 2012 election approaches, the majority of Americans acknowledge that global climate change is underway and the numbers are trending upward (Figure 1). The next President should nurture and build upon this foundation for action.

All of us of course -- not just the President -- face the challenge once again to prove that a democratic society and a market economy – and particularly the people of the United States -- have the strength and ingenuity to meet the most difficult of challenges, including truly transformative change. Where we once helped the world prevail over communism and fascism, and broke the bonds of discrimination against women and minorities, we must now create and demonstrate to other nations a path to genuine prosperity that protects and conserves vital natural systems and ensures the well being of species. Including ours.

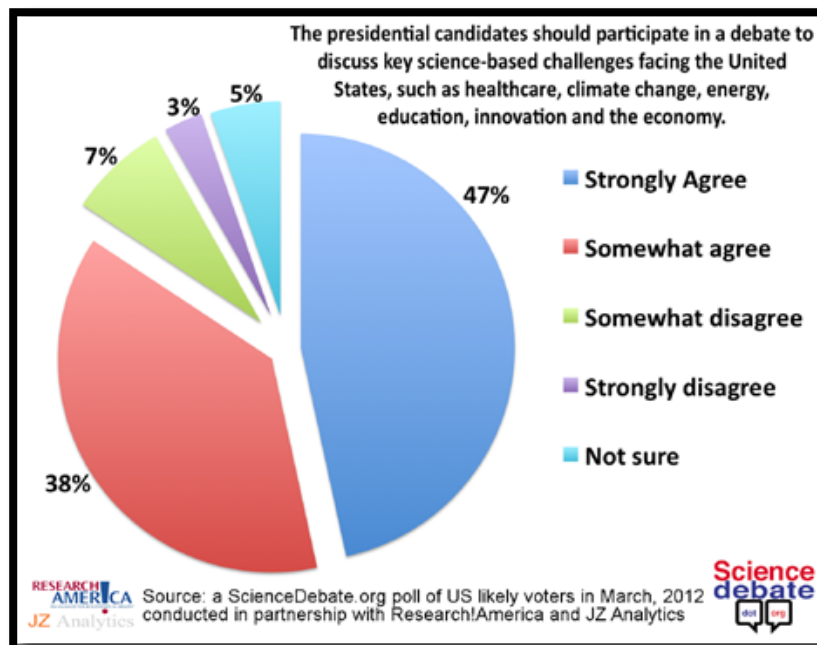


Figure 1: A March poll by ScienceDebate.org found that 85% of likely American voters want the presidential candidates to address climate change and other prominent science issues in the pre-election debates.

1. MANAGE AMERICA'S CLIMATE RISKS

Since the stinging defeat of climate legislation in Congress in 2009, the conventional wisdom has been that any significant action on global climate change in the United States would not be possible in the current political environment.

That appears not to be the case. The growing number of [extreme weather events](#) in the United States, with both direct and indirect impacts on the American people, appears to be persuading more Americans that climate change is not only real, but already underway (Figure 2).

Whether or not policy makers in Washington acknowledge the findings of climate science, the **risk** that we face the destructive impacts of climate change is undeniable. It is the job of scientists to debate climate science; it is the responsibility of policy makers to help society manage the risks. The best risk-management strategies are to prevent the risk from growing larger and to protect ourselves from risks that cannot be avoided. In the context of climate change, prevention involves dramatic reductions in the use of carbon-rich fuels, and adaptation involves steps to make our communities and infrastructure more resilient.

In 2011, the sustainable development think tank Third Generation Environmentalism (E3G) issued "[Degrees of Risk](#)", a report that defines a risk management strategy for climate security. The report has been widely circulated in the U.S. intelligence and defense communities.

"Risk management considers variables both known and unknown, analyzes threats and vulnerabilities, and puts strategies in place to manage risk," E3G explained. "It is a methodology the national security community has long used when decisions must be made, but information about threats is incomplete, and the future is uncertain...In managing conventional security risks both policy makers and the general public accept that uncertainty is no excuse for inaction. Indeed, it is hard to imagine a politician trying to argue that counter-terrorism measures were unnecessary because the threat of attack was uncertain. However, precisely this argument is often used by opponents of action on climate change to argue against even small measures to mitigate the threat, or build resilience to impacts."

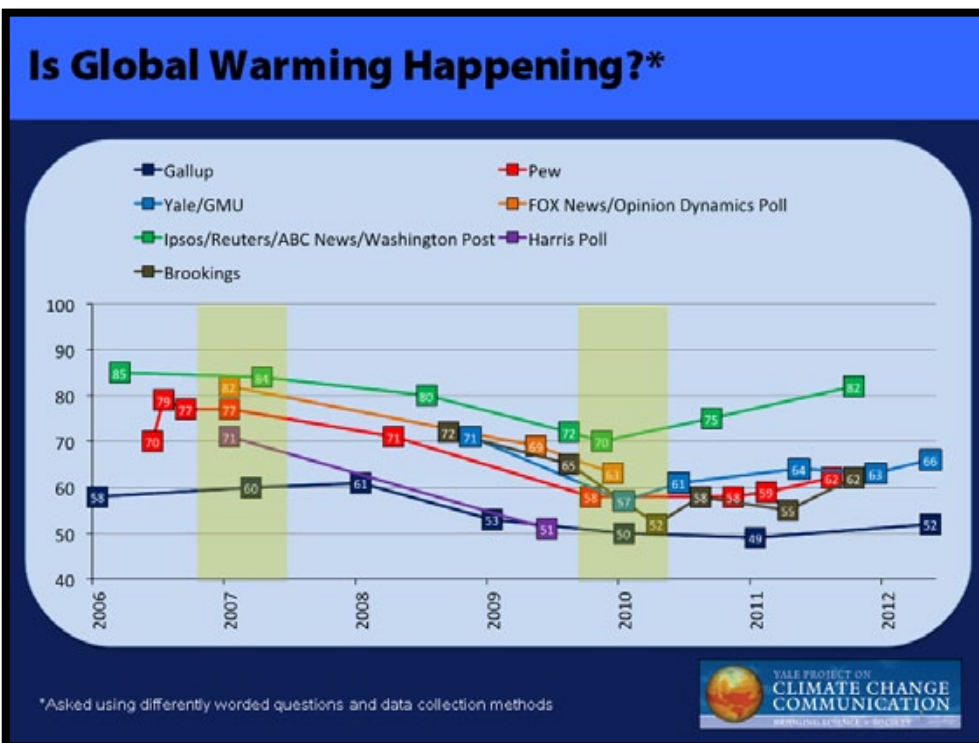


Figure 2: Recent polling shows that after reaching a low in 2010, most Americans now acknowledge that global climate change is real and already underway. (Source: Yale Project on Climate Change Communication)

There is substantial common ground on the climate issue between Republicans and Democrats, and liberals and conservatives, although many have yet to recognize or acknowledge it.

First, climate change mitigation and adaptation can be considered a co-benefit of many other national goals on which there is bipartisan agreement, including greater energy independence, disaster preparedness, improving the nation's energy efficiency, creating new jobs, reducing the energy trade deficit, helping households and governments reduce their energy costs, improving public health with fewer air emissions, and preventing the export of U.S. dollars to terrorist organizations.

Second, strong support for addressing climate change is appearing in places traditionally considered high priorities by conservatives. For the past several years, America's top military and intelligence officials have openly warned that the nation's dependence on fossil energy and the risk of climate change are undermining national security. The Department of Defense and the military services have become America's biggest advocates for the transition to energy efficiency and renewable energy because those technologies save lives and help increase the military's ability to carry out its mission. DoD – the world's biggest energy consumer – plans to obtain 25% of its energy from renewables by 2025.

Third, there appears to be a growing number of Republicans who acknowledge climate risks and who believe solutions can be consistent with conservative values and priorities. One of them, former U.S. Rep. Bob Inglis of South Carolina, created the [Energy and Enterprise Initiative](#) that he describes as “a campaign to unleash the power of free enterprise to deliver the fuels of the future.”

Making markets work better by fixing price distortions, holding energy producers accountable for pollution, and practicing “reasonable risk avoidance” are among the themes the Initiative is putting forward.

“We don't subscribe to apocalyptic visions of climate change,” Inglis writes on his web site. “We do believe, however, that the best science available indicates that America faces substantial risks in a changing climate. We believe that conservative energy policy should mitigate those risks...Tax the bad, quit taxing the good, and let the free-enterprise system deliver the fuels of the future.”

PCAP RECOMMENDS THAT THE NEXT PRESIDENT:

- As one of the first priorities in office, address the American people and Congress to explain that the time has come to acknowledge and confront global climate change. Create a coalition of the willing in Congress to develop and pass legislation that produces a market mechanism to reduce carbon emissions. Establish clear criteria for a carbon pricing, capping or trading regime. For example, it should be fair and equitable; it should not result in windfall profits for any sector; a significant portion of any revenues should be shared with consumers; it must be adequate to meet the President's greenhouse gas reduction targets; it should be predictable and consistent so that the economy can adjust; polluters should pay and all sectors should play; it should provide market signals that reflect the social and environmental costs of carbon; it should be fair to future generations; it should enhance U.S. credibility and influence in international climate negotiations; and it should authorize the Administration to make minor adjustments to carbon prices or caps to ensure their effectiveness in meeting greenhouse gas reduction goals without requiring additional legislation.³
- Create a senior-level position in the Executive Office of the President and empower the CEQ to coordinate, oversee and drive effective implementation of U.S. climate policy nationally and internationally.
- Direct his chief science advisor to convene America's top climate scientists and risk-management experts for a White House briefing on the latest climate science, chaired by the President and open to the media.

- Make clear that unless and until an acceptable market mechanism is in place, the Administration will continue using its authorities and tools to make significant and timely cuts in greenhouse gas emissions. The President should encourage the Environmental Protection Agency to expedite the process of regulating greenhouse gas emissions and should extend the regulation to existing as well as new or substantially upgraded coal-fired power plants.⁴
- Prevent backsliding on the [initiatives](#) the federal government has implemented since 2009.
- Strongly support the Department of Defense’s plan to improve its ability to perform its mission by achieving or exceeding its “25 by 25” renewable energy objective.
- Continue making federal agencies the model of responsible carbon management with the full implementation of [Executive Order 13514](#).
- Issue an Executive Order that emphasizes the responsibility of federal officials to protect public resources for present and future generations (Appendix 2). The Executive Order should cite the Public Trust Doctrine.⁵ In addition, the President should send an Executive Communication to Congress, proposing legislation to more clearly establish the responsibility of federal as well as state and local officials to protect the commons, including the atmosphere.

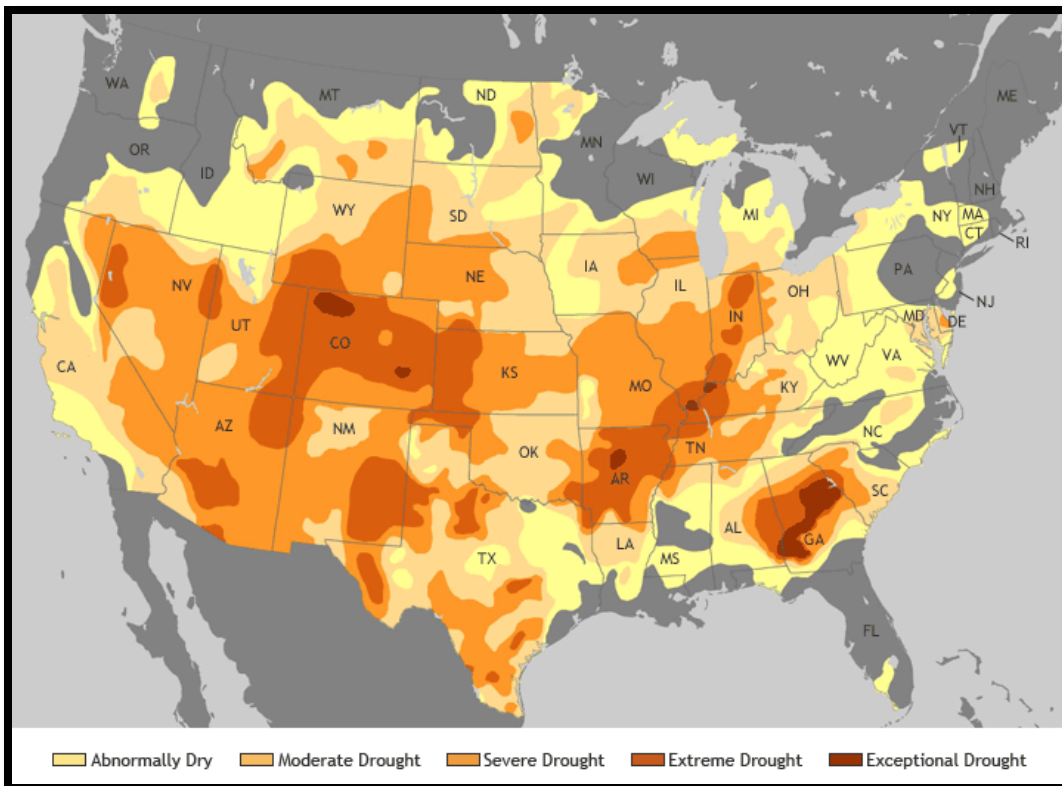


Figure 3: Severe drought was one of many extreme weather events in the United States that correspond closely with the predicted impacts of global climate change. It also is an example of how these impacts have multiple effects, in this case endangering the livelihood of farmers and the businesses that rely upon them and eventually causing an increase the price of food for American consumers.

2. REFORM FEDERAL FISCAL POLICY

The United States' current fiscal policy was created by and for the old carbon economy.⁶ It is outdated and no longer aligned with the needs of the contemporary world. It too often serves dominant special interests rather than the public interest. Rather than indicating how the government underwrites economic activity and helps build the nation's future, it is a hodgepodge of unrelated items, many of them open for ridicule.

There are 2,238 federal assistance programs. They are often redundant. They often reward behaviors that make us weaker and under-invest in behaviors that make us stronger.

In regard to energy policy, federal incentives are heavily tilted to fuels that cannot be competitive in a low-carbon world, even though we are moving into a post-carbon global economy. While federal support for fossil fuels, particularly coal and oil, has helped us achieve a quality of life unprecedented in history, the social and environmental costs of those industries now threaten the society they helped create. And despite the fact that U.S. oil consumption is now regarded as a threat to national security, our national policy is to provide states with more funding for roads and vehicular infrastructure than for other cleaner and more efficient forms of mobility (see Recommendation 6).

Fixing these anomalies requires more than tweaking the tax code and making slight adjustments to federal programs. It requires comprehensive reforms that rebuild fiscal policy from the ground up.

Confessions Of A Moocher

In the Sept. 17, 2012, issue of TIME Magazine, Michael Grumwald illustrated how all Americans lead lives subsidized by the government. He identified the many federal subsidies that help him and most other people get through the day. Here are excerpts:

The U.S. did not even spend \$1 billion in 1912; it will spend \$3.8 trillion in 2012 on everything from Missing Alzheimer's Disease Patient Assistance (\$593,842) to Snow Survey and Water Supply Forecasting (\$9,409,400), and from mortgage insurance for manufactured homes (\$64,724,187) to ironworker training on Indian reservations.

There will be an additional \$1.3 trillion in tax expenditures, federal benefits (like the deductions for my 401(k) and my nanny's salary) that are basically identical to those normal spending programs except that they happen to be provided through the tax code...Some federal largesse – tax breaks for NASCAR racetracks (\$40 million) and subsidies for rum distilleries (\$172 million) and rural airports (\$200 million) – is just silly ...

When I asked analysts at the antigovernment Cato Institute and the liberal Center on Policy and Budget Priorities what was the most wasteful government spending, they all gave the same answer: farm subsidies. A coalition of taxpayer activists and green groups recently proposed axing \$700 billion worth of environmentally destructive federal largesse, from fossil fuel subsidies to sprawl roads to pork-barrel water projects that drain wetlands. There is broad agreement among eggheads that tax perks for yachts, corporate jets and mortgage interest on mansion ought to go as well.

But it's hard to see the finger-in-the-wind political world following the wonk world's lead. The costliest spending programs affect the military and the elderly. And the costliest tax expenditures affect families like mine. We're the kind of moochers who vote."

Members of both political parties today acknowledge the need to reform the federal income tax to make it simpler and more equitable. In February 2010, President Obama issued an executive order to create the National Commission on Fiscal Responsibility and Reform, but its mandate was to recommend how we might balance the federal budget rather than how we might reform fiscal policy to build the foundation of a sustainable economy.

PCAP RECOMMENDS THAT THE NEXT PRESIDENT:

- Revive the National Commission on Fiscal Policy and Reform and appoint members with the expertise to identify federal assistance that is outdated, counterproductive, duplicative and unnecessary, or that retards America's transition to an advanced energy economy.
- Instruct the Commission to begin by reviewing the inventory of carbon subsidies in the tax code soon to be released by the National Academy of Sciences, and to identify carbon subsidies the Commission believes are no longer in the best interests of the nation.⁷
- Further instruct the Commission to carefully consider [recent recommendations](#) by the American Council for an Energy Efficient Economy on tax-code changes that would encourage cost-effective energy efficiency investments.
- Propose to Congress that the Commission's recommendations for changes in the tax code be handled with the same process used in the past to close unneeded military bases (known as BRAC 2005). Under this process, the Commission would produce an "all or nothing" proposal for modifications in the tax code and submit its recommendations to the President. The President would either approve the package in its entirety or send it back to the Commission for further work. If the President approved the package, it would take effect in 45 legislative days unless Congress passed a joint resolution to block it.
- Instruct the Commission to follow de-carbonization of the tax code with recommendations on reforming other elements of fiscal policy to protect America's freshwater supplies and other natural capital, to avoid crossing [critical environmental thresholds](#) and to preserve and restore critical ecosystem services such as soil fertility, carbon sequestration, water quality, ocean health, and ecosystems that help protect the American people from natural disasters.
- Direct the Departments of Energy and Treasury to assess whether the phased repeal of all direct and indirect fossil energy subsidies would necessarily result in increased costs for consumers.⁸
- Build a mandate from the American people for Congress to repeal at least \$4 billion annually in oil subsidies.
- Issue an Executive Communication to Congress proposing that all federal financial support to fossil energy industries be phased out within five years, except for basic research and those subsidies deemed necessary for national economic and national security.
- Issue a Presidential Memorandum on eliminating unnecessary subsidies of fossil fuels in current federal programs (Appendix 3).

MAKE FEDERAL INCENTIVES MORE RELIABLE

The President should urge Congress to make the federal government a more reliable partner in the market penetration of renewable energy technologies.

By appropriating its support for advanced energy industries in short-term bursts, Congress has created boom-bust cycles in investment in renewable energy technologies. For example, the Production Tax Credit for wind energy has expired three times since 2000, and it is scheduled to expire again at the end of 2012.

According to the American Wind Energy Association, the wind industry directly or indirectly employed 75,000 full-time workers at the end of 2011. Eight of the 10 wind turbine manufacturers with the largest share of the U.S. market last year had one or more manufacturing plants in the U.S. However, the U.S. Department of Energy [reports](#) that:

Though domestic manufacturing capabilities have grown, uncertain prospects after 2012 – due primarily to the scheduled expiration of federal incentives – are pressing the wind industry’s domestic supply chain as margins drop and concerns about manufacturing overcapacity deepen, potentially setting the stage for significant layoffs.

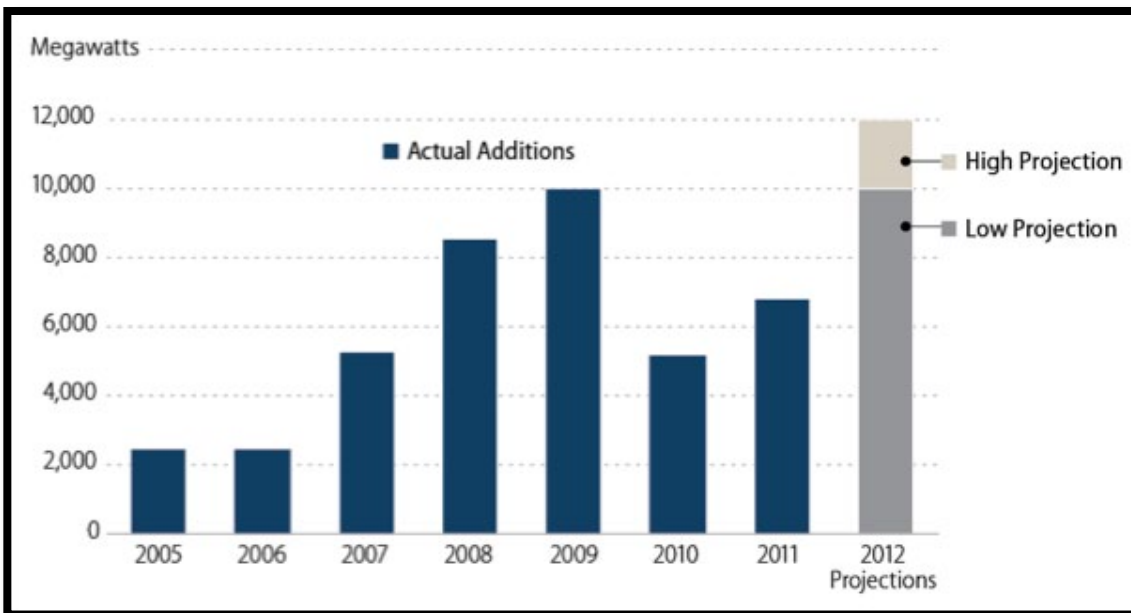


Figure 4: Annual U.S. Wind Power Capacity Additions (2005-2012). (Source: American Wind Energy Association & Bloomberg New Energy Finance.)

The Brookings Institute [reports](#) that 63 of 92 federal clean energy finance policies are scheduled to expire by the end of 2014 unless Congress acts to sustain them. This will cause a 75% decline in federal financial support for clean energy sectors compared to 2009. Brookings calls 2012 an “inflection point”, with support for advanced energy and low-carbon technologies scheduled to drop by half compared to 2011, unless Congress acts. “After a decade of fast growth and strong progress on technology and flattening price curves, clean tech players are wondering what’s next,” Brookings concludes.

PCAP urges the next President and Congress to implement the following reforms, based on Brookings’ recommendations:

- Extend the most productive clean energy subsidies for longer periods to create greater stability for investors, manufacturers and workers. Among the options is an extension in which renewable energy subsidies gradually decline until they are terminated in 2025. Another option is a “dynamic phase-out” that adjusts subsidies according to market conditions until the expiration date.⁹

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- Create a subsidy down-ramp, with federal support gradually declining between now and 2025 to encourage early investment and to make clear that advanced energy industries are expected to be competitive without subsidies by the end of the period.
 - Continue investing in research and development for continuous improvement of 21st century energy technologies.
 - Be more discriminating in which technologies should receive public support. Give highest priority to technologies and resources that meet the tests of “additionality” and “net positives” – in other words, technologies that produce significant multiple benefits and have a positive cost-benefit ratio calculated on the basis of full-cost accounting.

Toward a Free Energy Market

PCAP supports a “free energy market” in which virtually all energy technologies and industries compete on the basis of full life-cycle costs, without taxpayer subsidies. We recommend that subsidies for fossil energy be repealed as rapidly as possible, while extending renewable energy subsidies on a declining scale until 2025.

How do we justify subsidizing clean energy technologies but not fossil energy? The obvious reason is that the fossil industries are well established and financed and should no longer need corporate welfare.

The federal government has a tradition of supporting *emerging* energy industries. Fossil fuels have benefitted from taxpayer subsidies for a century. Nuclear energy has been subsidized since its inception. But as the Brookings Institute notes, “Clean energy sectors are still emerging and maturing and must compete against well-entrenched fossil energy sources with over a century of incremental improvements, federal subsidization, and established infrastructure and regulatory environments behind them.”

A second reason for ending fossil energy subsidies quickly also is clear: It is not in the national interest to support energy resources responsible for greenhouse gas emissions, mercury pollution, poor air quality, oil wars, the energy trade deficit, recessions triggered by spikes in the price of oil, and the environmental impacts of extraction.

3. MAKE THE U.S. FIRST IN RESOURCE PRODUCTIVITY

The United States consumes more energy than any other nation today, but only 14% of it is converted to useful work. In other words, 86% of the energy we consume is wasted, much of it emitted into the environment as pollution. By one estimate, the United States economy produces 1.2 pounds of wasted resources for every \$1 of income.¹⁰

The U.S. economy cannot remain robust and competitive at such a poor level of resource productivity. We should anticipate that the rapidly increasing world population and its pressures on natural resources will trigger a worldwide resource productivity revolution and a race to the top of resource efficiency. This is a race the United States should enter and win.

The American Council for an Energy Efficient Economy (ACEEE) [recommends major investments](#) in U.S. energy efficiency in the years ahead. By mid-century, ACEEE reports, the nation can cut its energy consumption by 60% below current business-as-usual projections, create nearly 2 million net jobs and save energy consumers \$400 billion annually (the equivalent of \$2,600 per household each year). Those savings would mean higher profits for businesses and the equivalent of new tax-free disposable income for American families.

These efficiency improvements should be Job No. 1 in building an advanced energy economy, laying the foundation for more economical use of new supply-side energy technologies such as solar and wind power.

“The U.S. would prosper more if investments in new energy were not crowding out needed investments in energy efficiency,” according to Skip Laitner, a senior fellow at ACEEE. “Large-scale energy efficiency advances are by far the smartest investment for America.”

Those who chafe at government regulation and spending will appreciate another benefit of energy efficiency: Greater efficiency leads to less pollution, which means less need for federal regulation and less federal spending to address the damages to the environment and public health caused by energy-related pollution.

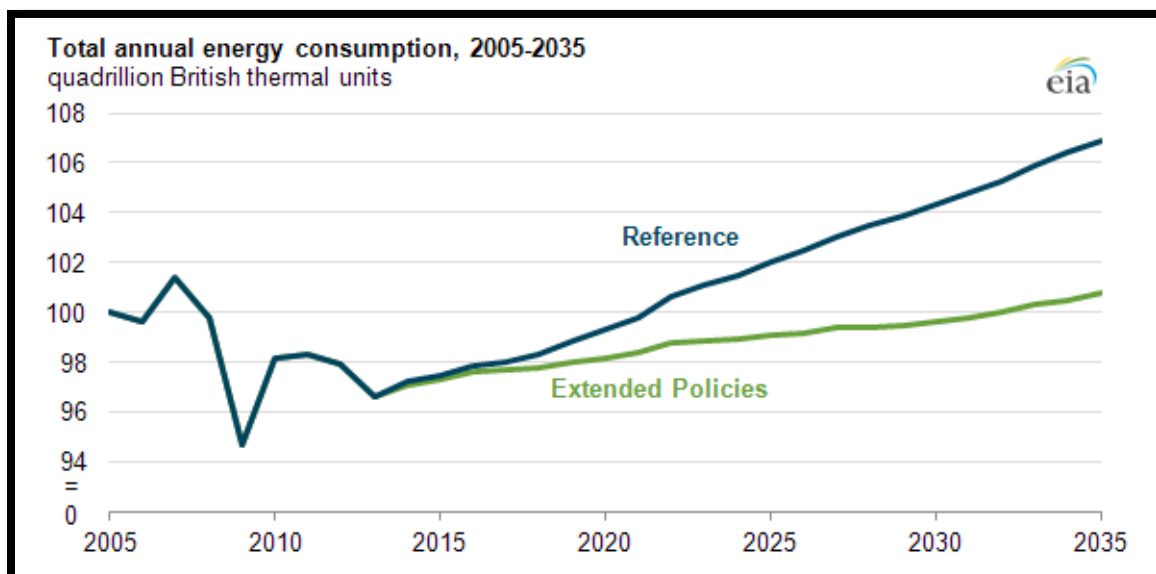


Figure 5: The Energy Information Administration predicts that national energy consumption would drop nearly 6% and greenhouse gas emissions would decrease by 8% if current federal incentives were extended beyond the expiration dates in current law. The American Council for an Energy Efficient Economy estimates that a more ambitious energy efficiency drive could cut U.S. consumption nearly 60% by 2050.

PCAP RECOMMENDS THAT THE NEXT PRESIDENT:

- In his first State of the Union address and in a Presidential Proclamation (Appendix 4), issue an economy-wide challenge to make America the most resource-efficient industrial economy in the world by mid-century. Declare energy efficiency to be America's "first fuel". Announce that by 2050, with the help of all sectors of the economy, the United States will cut its energy consumption 60% below current projections and convert 70% of energy consumption to useful work.
- Direct the Energy Information Administration to report annually on America's progress toward those goals.
- Review the progress of federal agencies in implementing [Executive Order 13514](#) on federal leadership in environmental, energy and economic performance. Amend the order to increase government's role in national energy efficiency, including measures to expedite new appliance efficiency standards, to develop a net-zero-energy model building code, and to require that all agencies use energy saving performance contracts. In addition, direct the General Services Administration and the U.S. Department of Defense to use their purchasing power to leverage substantial efficiency improvements in their supply chains.
- Press aggressively for Congress to establish a [national clean electricity standard](#) or a renewable energy portfolio standard to expedite the nation's transition to cleaner, more advanced and more sustainable resources.
- Champion the restoration of and additional funding for the Energy Information Administration's efforts to collect and assess state data on energy efficiency and renewable energy.
- Urge the Securities and Exchange Commission to continuously improve the response rate and quality of climate change impact assessments reported annually by publicly traded companies.¹¹
- Direct federal agencies to include carbon impact assessments and estimates of related social costs in their annual budget submissions to the Office of Management and Budget, in establishing appliance efficiency standards and in assessing the impact of other programs related to reducing greenhouse gas emissions.

4. DEVELOP A ROADMAP TO THE ADVANCED ENERGY ECONOMY

Previous PCAP action plans recommended that the Administration lead the development of a roadmap to the advanced energy economy, clearly defining goals, timetables, milestones and metrics. That job has not yet been done.

Creating such a roadmap is consistent with the requirements of current law and the recent recommendations of the President's Council of Advisors on Science and Technology (PCAST).

Current law requires the President to submit a National Energy Policy Plan to Congress every two years.¹² The statute says the plan should look forward in increments of five and 10 years to describe the energy production, consumption and conservation needed to “meet the general welfare of the people of the United States and the commercial and industrial life of the Nation, paying particular attention to the needs for full employment, price stability, energy security, economic growth, environmental protection, nuclear non-proliferation, special regional needs and the efficient utilization of public and private resources.” The statute further requires that the plan identify the strategies, policies, legislation and resources needed to meet its objectives, including executive actions by the Administration, tax incentives, and so on.

PCAST, chaired by the President's principal science advisor and made up of science and technology experts from academia, industry and other sectors, has proposed that the Administration create a [Quadrennial Energy Review](#) with a multi-year roadmap that identifies executive actions and legislation to transform the U.S. energy system within one to two decades — “a transformation that is necessary for reasons of economic competitiveness, environmental stewardship, and national security”.

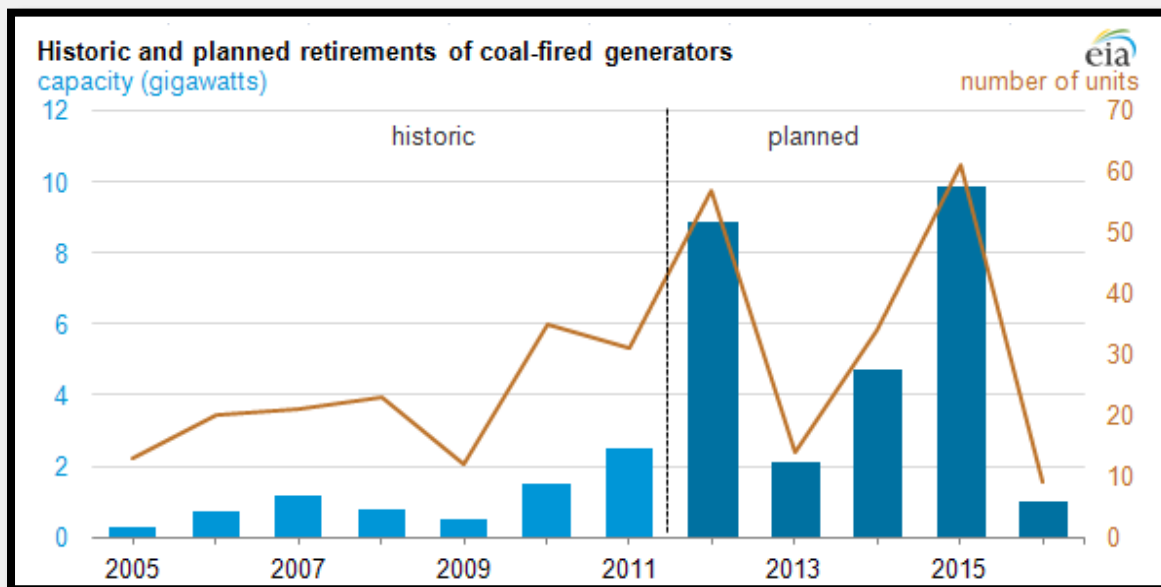
The National Research Council also has weighed in on the need for an inclusive national policy framework to ensure that all levels of government and the private sector are contributing to shared national goals to limit the magnitude of climate change.

Why do we need a roadmap? The transition to an advanced and clean energy economy cannot be done by trial and error. Nor can it evolve incrementally if we want to manage the risks of irreversible climate change. A well conceived and broadly supported transition plan would help guide investment, research, legislation and inter-governmental collaboration to accelerate progress toward specific goals for reducing greenhouse gas emissions, creating new jobs, facilitating new investment, increasing America's energy security and independence, and so on. Clear performance measures and regular reports would allow the public, the Congress and the Executive Branch to monitor progress.

In its 2010 and 2011 action plans, PCAP proposed that the President respond to these recommendations by creating a Presidential Council for a Clean Energy Economy. We suggested that the Council be modeled on the Clinton Administration's President's Council on Sustainable Development – a six-year exercise that involved representatives from industry, state and local government, non-government organizations, and other sectors.

Since our 2011 report, the Obama Administration has taken a first step, issuing a “[Roadmap for a Secure Energy Future](#)” that catalogues existing programs and progress to date; lists the president's longer-term energy goals; details policies to increase domestic use of “clean fuels”; and proposes to boost the efficiency of buildings, government and industry.

The Obama Administration's roadmap is just a beginning, however. It does not define the fiscal reforms necessary to achieve the Administration's goals; explain how the different policy and funding proposals interrelate; indicate how to better coordinate the related programs and policies imbedded across the federal government; or create or assign an agency within the Administration to oversee the roadmap's implementation.



Natural Gas: America's Transition Fuel

On the supply side of the United States' energy mix, natural gas is widely accepted as the nation's designated transition fuel to an advanced energy economy. It is the least polluting of fossil fuels and the United States has abundant supplies.

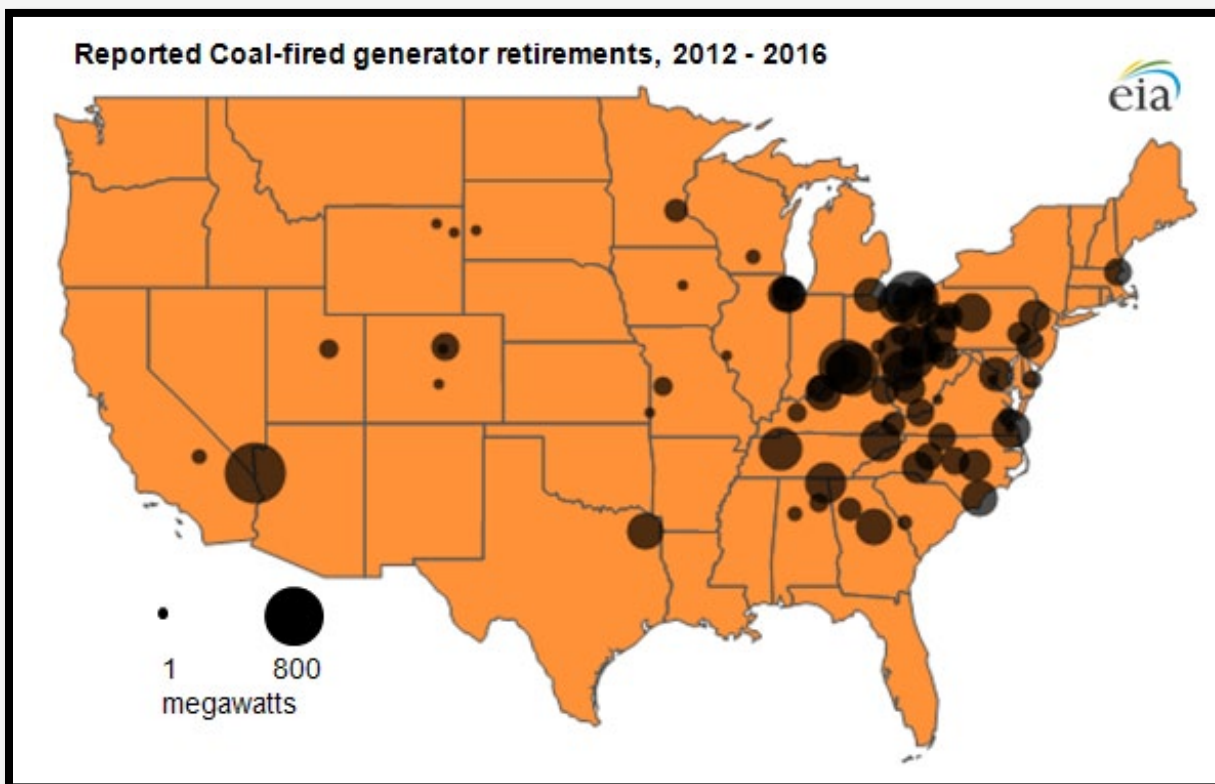
The transition already has begun. There are three times as many shale gas wells in the United States today as there were in 2005. During the first six months of 2012, 165 power generators went on line, only one of them fueled by coal. Natural gas and renewable fuels including solar energy and landfill gas are providing 90% of this new capacity. In 2012, the United States is expected to experience the largest withdrawal from coal-fired power in history.

However, the "gas rush" produces troubling environmental and health impacts. Current extraction practices create produced water that may be briny and metal-laden. The industry's use of undisclosed fracking agents to release gas from rock formations is raising concerns about groundwater contamination.

Another problem is methane leakage. The Environmental Protection Agency estimates that more than 2% of the natural gas we extract is released into the atmosphere because of leaks or uncontrolled venting in the production process. Because methane is a greenhouse gas, the leaks reduce the benefit of natural gas as a relatively low-carbon substitute for coal and oil. In a study commissioned by the Environmental Defense Fund (EDF), researchers concluded that gas-fired power plants are better than the most efficient coal plans only when gas leakage the well to the power plant is limited to 3.2% or less.

PCAP endorses several reforms proposed by EDF to mitigate the downsides of natural gas production: Every state where gas is produced should require public disclosure of the agents used in fracking; producers should be required to comply with strict standards on the construction and operation of their wells to reduce leakage; and states should implement strong regulations on how the industry handles its wastes.

PCAP recommends that the next President continue the work begun by the Obama Administration to coordinate federal agency responsibilities related to natural gas production, and that he direct EPA to monitor the effectiveness of state-level regulation of the industry. Further, we recommend that the Administration share research and mitigation measures developed in the United States with the international community, where similar concerns have been raised about natural gas production.



Figures 6-7: Coal plant owners and operators report they plan to retire 175 coal-fired generators over the next four years. That amounts to 8.5% of U.S. coal-fired capacity in 2011. The rate of retirement will be four times greater than it was during the preceding 5 years. (Source: [Energy Information Administration](#))

PCAP RECOMMENDS THAT THE PRESIDENT:

- Issue an executive order that clearly defines the Administration's energy goals (Appendices 5-6).
- Create the Presidential Council for an Advanced Energy Economy (Appendix 7), require the Council to complete its work by the end of fiscal year 2015, and direct the Departments of Energy, Labor, Homeland Security and Commerce, along with EPA and the Small Business Administration, to support and staff the exercise. The Council on Environmental Quality in the White House would be the Advanced Energy Council's executive secretariat.
- Staff up the CEQ or appoint a strong "energy and climate czar" in the White House to help push the Council and its recommendations forward. Appoint someone from the National Security Council to lead the Executive Office of the President on international engagement.
- Appoint members to include mayors; governors; tribal leaders; representatives of relevant NGOs; leaders in the fossil, renewable energy and energy efficiency industries; and experts in economics, climate change, energy policy and domestic and national security.
- Charge the Advanced Energy Council to do the following:
 - Recommend how to better coordinate the policies and programs of all levels of government in the U.S.¹³ and how to better empower states and localities to lead the national effort to mitigate and adapt to global warming. (In some cases, state and local empowerment may mean additional resources; in other cases, empowerment will mean removing federal barriers to state and local action.)
 - Define off-ramps for carbon-intensive resources and on-ramps for low-carbon replacements, along with the policies to make the transition.
 - Seek broad involvement in and support for its recommendations from both political parties; fossil and renewable energy industries; consumer organizations; state, local and tribal governments; and other key stakeholders.
 - Recommend a duration for government clean energy incentives, based on a realistic assessment of the time needed to unleash investments and for emerging industries to take hold in the economy.
 - Avoid making the success of the roadmap dependent upon technologies that are unproven and not yet available for widespread market penetration. For example, carbon capture and sequestration has significant technical and legal hurdles to cross before it becomes feasible, as do many of the proposed geo-engineering technologies.
 - Based on full life-cycle analysis of their environmental, social and economic costs, identify those sources of energy that should no longer be considered part of the nation's current or future energy mix.¹⁴
 - Define the requirements for a "just transition" that addresses the legitimate concerns of major stakeholders, including low-income families, the business community, local governments, fossil-dependent regions and energy industries. For example, the roadmap should recommend ways to use the existing infrastructure and investments of the oil and coal industries in advanced manufacturing, thereby preserving their value.
- Based on the Advanced Energy Council's recommendations and subject to the President's approval, direct the White House Council on Environmental Quality to coordinate implementation of the roadmap across federal agencies. CEQ should identify crosscutting benefits and co-benefits in the roadmap, avoid unnecessary duplication of agency responsibilities, and ensure that the roadmap serves the economy, the environment and the nation's energy needs.

What is Climate Justice?

What do we mean when we refer to a “just transition” to an advanced energy economy, or to “climate justice”? The following explanation is excerpted from an essay published by EcoAmerica:

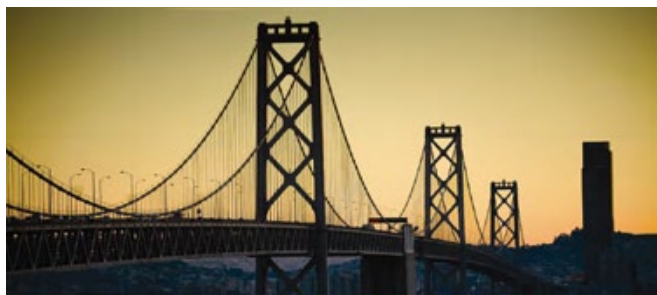
*The concept of environmental justice emerged in the United States in the 1980s to confront the inequitable distributions of environmental burdens on the disenfranchised and those lacking the power and resources’ to object to their unfair burden. Environmental justice is the fair treatment and meaningful involvement of all people with respect to the development, implementation and enforcement of environmental laws, regulations and policies. **Climate justice** focuses this concept on efforts to dissolve and alleviate the unequal burdens created by climate change.*

Climate change may become the most significant social injustice humanity has experienced...If we seek to make climate a national priority, we need to recognize climate as a social justice issue and engage and support organizations that champion social justice as a priority.

5. RECOGNIZE SUSTAINABLE DEVELOPMENT AS VITAL TO NATIONAL AND HOMELAND SECURITY

Thought leaders in the U.S. military and intelligence communities have come to two important conclusions regarding energy and climate security in the 21st century.

First, America's dependence on fossil fuels and the escalating risks of global climate change are "threat multipliers" that undermine America's security, threaten international stability and put additional strain on our military budgets and armed forces.



Quadrennial Homeland Security Review Report:

A Strategic Framework for a Secure Homeland

February 2010



Homeland Security

Second, containing foreign threats is no longer a sufficient security strategy. Sustainable development has become a security imperative at home and abroad.¹⁵ In other words, efforts that strengthen the fabric of American society make us more resilient against threats ranging from oil shocks to terrorism. Efforts to improve the lives of people in the world's least stable regions will help prevent conflict and humanitarian crises elsewhere – events in which the U.S. military is often called upon to respond.

We cannot in good conscience continue to job out our national security to our men and women in uniform so that we at home can continue living unsustainable lifestyles. Each American community and household can contribute to national security by reducing its use of gasoline and other petroleum products. We can contribute to domestic security by preparing for natural disasters, economic volatility and the risks associated with climate change including record heat waves, intense rain and snow events, drought and wildfires. The 21st century version of civil defense includes the restoration of ecosystems that reduce local vulnerability to these risks. Further, the more we take

action in our households and communities, the less we will rely on government and taxpayer funds to help us mitigate, adapt to and recover from these impacts.

PCAP RECOMMENDS THAT THE PRESIDENT:

- In a televised address, make clear to the American people that security is a shared responsibility and that local resilience, and local efforts to reduce the threat of climate change, increase our security and are acts of good citizenship.
- Issue a National Security Directive to the Departments of Defense, State, Energy and Homeland Security, and to the Environmental Protection Agency, instructing them to:
 - » Redefine domestic security and defense to include not only the resilience of the electrical grid (part of Homeland Security's current focus), but also the resilience of other energy supplies, critical industries, ecosystem services and "natural capital". The Directive should establish that America's domestic security assets include advanced clean energy industries, disaster preparedness, conservation and protection of fresh water resources, the restoration and maintenance of soil fertility, America's ability to provide food and other critical resources to its citizens, and technologies that increase local self-sufficiency.

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- » Define “next generation security technologies” to include emerging energy efficiency and renewable energy systems.
 - » Continue updating information about the national and domestic security threats of global climate change and fossil energy consumption.
 - » Quantify and report to the President and to OMB the domestic and international security benefits of the nation’s clean energy and environmental protection programs.
 - » Incorporate the principles and practice of sustainable development in foreign assistance and national security programs.
- Direct the White House Counsel to review the President’s powers in times of emergency and the use of Title III of the [Defense Production Act](#) when the Administration determines that climate change has reached crisis levels.¹⁶
 - Direct the Federal Emergency Management Administration to reestablish Project Impact, the Clinton-era program that helped communities create local partnerships on disaster preparedness.
 - Direct the Departments of Energy and Defense to analyze the market implications of DoD’s goal to obtain at least 25% of its energy from renewable resources by 2025.¹⁷ This analysis should include whether DoD’s goal is sufficient to spur private investment in these technologies and to achieve economies of manufacturing scale that reduce the price of renewable energy for civilian use.
 - Negotiate Executive Agreements with America’s allies to establish their commitments to replace a significant percentage of their military fossil energy consumption with renewable energy resources. The goal of these agreements would be exchange information and know-how with allies to improve military effectiveness with renewable energy technologies, while expanding the global market for clean energy technologies.

6. INCREASE AMERICA'S MOBILITY OPTIONS

Transportation is responsible for 28% of all energy and 70% of the petroleum consumed in the United States. More than 80% of that energy is consumed in highway vehicle travel. Transportation is fueled mostly by petroleum, the source of 42% of U.S. greenhouse gas emissions.

On the positive side, net U.S. oil imports have declined by 33% over the past six years due to the economic recession, spikes in oil prices and other factors.¹⁸ Imported oil now provides 45% of our domestic consumption, down from 60% in 2005. The Obama Administration has instituted historic vehicle efficiency standards that will raise the fleet-wide vehicle average to 54.5 miles per gallon by 2025. The new standards are expected to cut carbon pollution by nearly 6 billion metric tons and U.S. oil consumption by more than 3 million barrels a day by 2030.

Another positive: The rate of increase in the nation's vehicle miles traveled (VMT) flattened after 2005. VMT per capita has declined during the same period, while mass transit use has broken records (Figures 8-9).

Despite the economic recession, nearly 76% of workers drove alone to their jobs in personal vehicles in 2010. But 24% did not, opting instead to carpool, take public transit, walk, bike or work at home.¹⁹ The [American Public Transportation Association](#) reports that public transportation ridership rose 5% in the first quarter of 2012 compared to the same period in 2011. It was the fifth consecutive quarter in which public transit ridership increased.

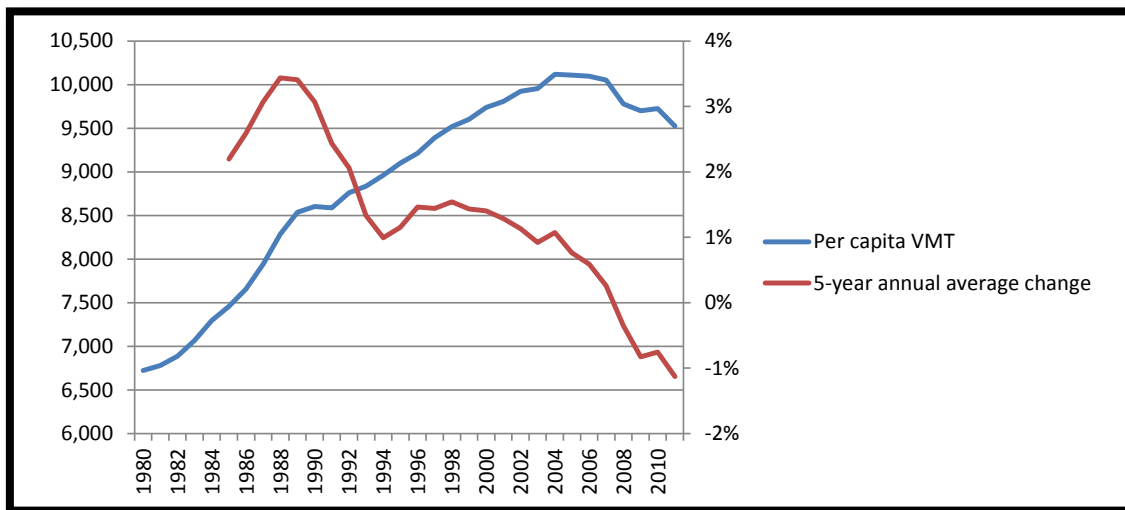
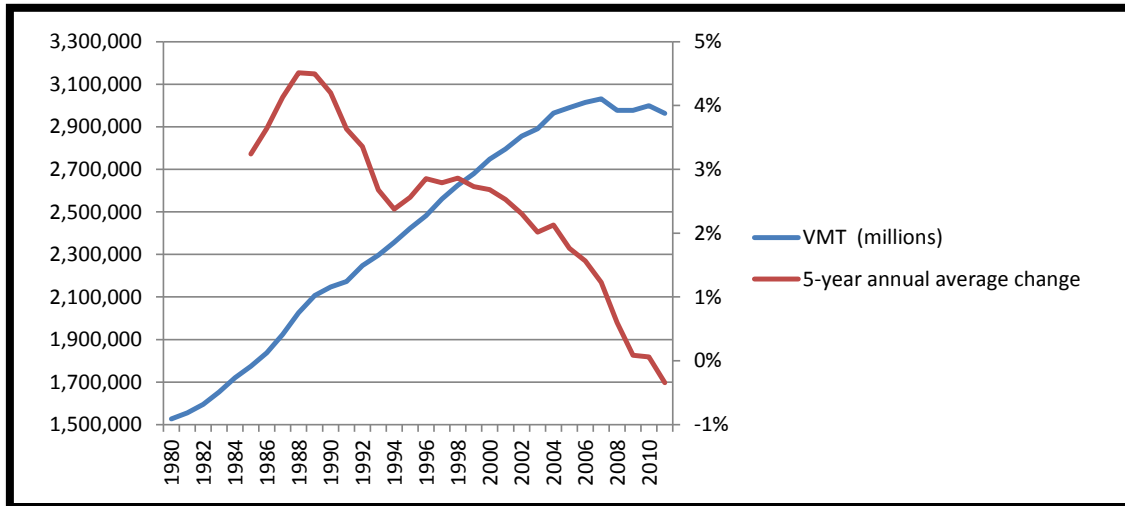
At the personal level, however, mobility remains a concern for many American households. Households earning \$20,000 to \$50,000 per year now spend more than half their income on housing and transportation expenditures driven in part by the high cost of owning and operating passenger vehicles in cities where cars are necessary to access work, worship, education, shopping, government services and cultural opportunities.²⁰

Household transportation costs have been rising faster than income. From 2000-2009, median household income rose 22% and housing costs rose 37%, while transportation expenditures rose 39%. In a growing number of regions, housing costs are dropping and transportation costs keep increasing faster than income.²¹

Cities designed to move vehicles rather than people and goods are especially disadvantageous to minority populations. Twenty percent of African Americans, 14% of Latin Americans and 13% of Asian Americans do not own personal vehicles. And in the least location-efficient parts of the United States, transportation can cost as much or more than housing.²²

Despite the high social, environmental and personal costs of our dependence on personal vehicles, current national transportation policy provides more incentives for localities to build roads and other vehicular infrastructure than to invest in public transportation, riding-sharing programs, hiking and biking trails and other forms of mobility.

In the absence of sufficient federal support for accelerated investment in mass transportation and other non-vehicular mobility options that are less expensive for families and more energy efficient for the nation, localities are increasingly voting to tax themselves to take advantage of federal policies and private partnerships that can help them finance a more sustainable future. While the average time to complete a major highway or transit line can typically run 10-15 years, some localities completed a major transit project in as little as three – for example, Portland, Oregon's light rail connector to PDX International Airport.



Figures 8-9: Despite an improving economy, travel by motor vehicles declined significantly in 2011, continuing a long-term downward trend. Total vehicle miles traveled in the United States (top graph) declined 1.2% from 2010, reaching the lowest level since 2003. Per capita VMT declined six out of the past seven years, dropping 2.1% from 2010 levels (bottom graph). (Source: the [State Smart Transportation Initiative](#).)

The next President will have an opportunity to lead on these issues when the nation’s transportation program comes up for reauthorization in 2014. PCAP recommends that he communicate to Congress that he will consider vetoing any transportation reauthorization bill that does not do the following:

- Gives equal treatment to mass transit systems, location-efficient urban development, pedestrian and biking facilities, electric vehicle infrastructure and other forms of shared or public transportation.
- Reinstates the “fix it first” rule in transportation funding. That policy, eliminated by Congress for the National Highway System in the 2012 transportation authorization (MAP-21), discouraged sprawl by giving higher priority to fixing existing roads and infrastructure than to building new roads.
- Requires that federal funding for roads, bridges and other infrastructure use resilient materials and designs to reduce their vulnerability to damages from extreme temperatures, natural disasters and other weather-related hazards.²³

In addition, we recommend that the President issue an Executive Order that:

- Directs the Secretary of Transportation to expedite rule making so that new requirements for federal funding in MAP-21 can be used immediately as performance and accountability measures for revenue shared under federal transportation programs. These include measures such as State of Good Repair, Safety, System Reliability, Environmental Sustainability and Infrastructure Condition.
- Directs the Secretary of Transportation to fully utilize the extensive flexibility that MAP-21 and its predecessor statutes, ISTEA, TEA-21 and SAFETEA-LU, give to states, Metropolitan Planning Organizations and project sponsors to shift funds between highway and transit investments.
- Stresses the importance of accelerating the availability of credit assistance under the “America Fast Forward” provision of MAP 21. Title II of the Act increases annual authorization for this purpose from \$122 million to \$750 million in fiscal year 2013, and to \$1 billion in fiscal year 2014.²⁴
- Directs the Council on Environmental Quality to lead an interagency assessment²⁵ of the current and projected impacts of global climate change on the nation’s transportation infrastructure, and to estimate the implications of climate adaptation measures on transportation funding. CEQ should include an inventory of current city, state and federal efforts to increase the resilience of the U.S. transportation system in light of anticipated climate impacts. The executive order should direct CEQ to complete the assessment by the end of calendar year 2013.

7. EMPOWER STATES AND LOCALITIES

PCAP recommends that the President make state and local empowerment a theme of his Administration. That means greater flexibility and resources for states and localities to meet the challenges of global climate change and the transition to an advanced energy economy.

Among those challenges is the ability of states and localities to prevent, respond to and recover from the array of weather-related disasters we have seen in recent years, including floods, record precipitation, drought, heat, wildfires, and more intense hurricanes.



Figure 10: In June 2012 alone, nearly 3,300 heat records were set in the United States.

This increasingly extreme weather is coming at the same time that much of the nation's disaster prevention infrastructure is aging. The American Society of Civil Engineers (ASCE) estimates there are more than [85,000 dams](#) in the United States; their average age is 51 years. More than 4,000 have been judged deficient, including more than 1,800 considered high-hazard structures.²⁶ Only 11% of the nation's dams are owned or regulated by the federal government; the rest must be maintained, repaired and rehabilitated by others, typically local governments. But the condition of the nation's dams suggests that local governments have not been keeping up. The ASCE gave America's dams a grade of D.

Levees got an even worse grade (a D-). There are more than [100,000 miles of levees](#) in the United States, more than 85% of them locally owned. Today, 4 of every 10 Americans live in locations ostensibly protected by levees. Many levees were built originally to protect sparsely populated rural areas and farms. Over the decades, people have moved into those areas. The result is that many populated areas are "protected" by levees built to insufficient standards. The ASCE estimates that more than \$100 billion is needed to repair these structures.

In 2009, the Association of State Dam Safety Officials estimated that \$50 billion is needed over 5 years to repair these structures, and another \$12 billion should be spent over 10 years to eliminate the backlog of deficient dams.

The human dimension of extreme weather is equally troubling. As Oxfam notes,

at the same time that fiscal pressures are putting more strain on budgets, the [country] is likely to face substantially increasing demands on its humanitarian response systems as a result of climate change.²⁷

Meantime, state and local governments are demonstrating significant leadership²⁸ on mitigating greenhouse gas emissions with policies ranging from building codes and appliance efficiency standards to energy efficiency portfolio standards and Public Benefit Funds. Some 220 million Americans now live in states that have adopted some form of renewable energy portfolio standards.

Recent research by the Center for Climate Strategies (CCS) indicates that subnational and national policies on energy efficiency, renewable energy, transportation improvements, natural resource conservation, and other sustainable development priorities are making a significant contribution to the United States' efforts to cut greenhouse gas emissions. U.S. Department of Energy data from the *Annual Energy Outlook* and other sources shows that the baseline projection of 2020 U.S. carbon dioxide emissions fell 23% in total tons from 2005 to 2011, and 70% in comparison to 1990 emission levels, dramatically narrowing the gap between projected future emissions and national goals. In addition, CCS analysis shows that 55-75% of these downward shifts through year 2020 can be attributed to specific, sector-based policy actions instituted at the state and federal levels, and 25% or less to changes in the economy.²⁹

Further, the CCS analysis estimates that 25 new policies adopted by localities, states and the federal government would allow the United States to meet its emission reduction goals and:

- Increase employment by 1.17 million net new full-time jobs by 2020;
- Grow GDP by \$88 billion in 2020 and cumulatively by \$1.09 trillion (in net present value) between now and 2030;
- Provide a net societal savings of more than \$1.27 trillion between now and 2030;
- Reduce US oil imports by 87 million barrels in 2020 and cumulatively by 3.9 billion barrels between now and 2030;
- Increase U.S. fuel diversity, reduce summer peak demand for electricity, generate direct societal cost savings and reduce U.S. energy intensity (energy use per unit GDP);
- Reduce GHG emissions by about 420 million metric tons of CO² equivalent in 2020, and cumulatively by about 12.7 billion metric tons of CO² equivalent between now and 2030.

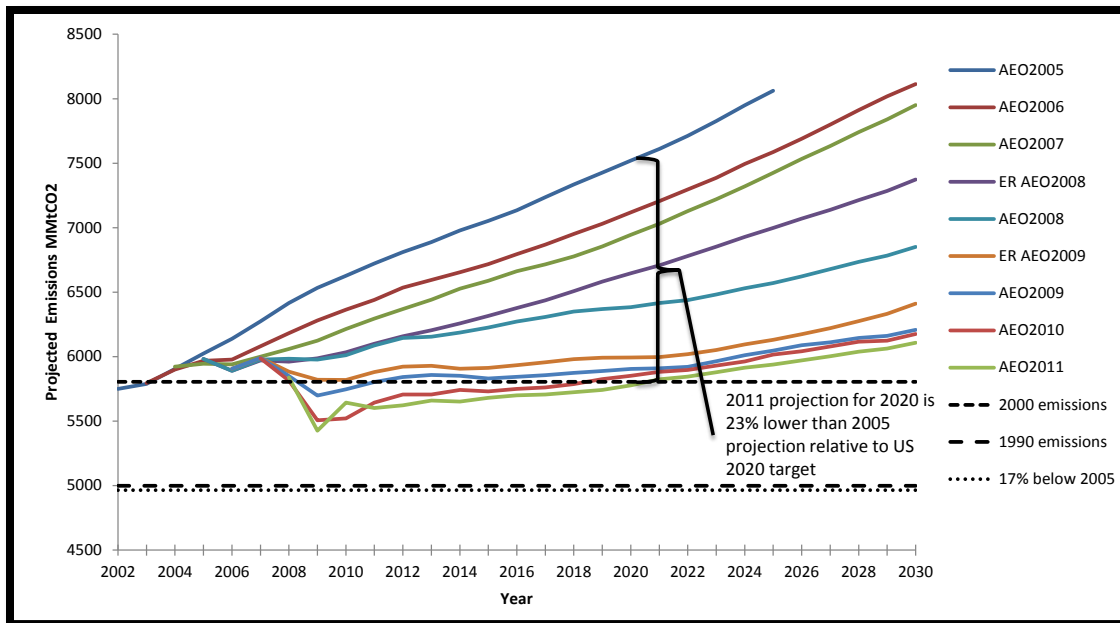


Figure 11: Decomposition of US Emissions Baseline Changes (Source: Center for Climate Strategies)

Since our first PCAP report, the American Recovery and Reinvestment Act appropriated funds to the meet the goals of the Energy Independence and Security Act (EISA). The Act included the one-time support for the Environmental and Energy Conservation Block Grant program, which provided funds to all local governments large enough to qualify as entitlement communities under HUD’s Community Development Block Grant definition. As a result, more than 2,000 communities analyzed their area energy uses and the emissions consequences of those uses, developed baselines for energy use and emissions, and in effect performed an energy audit and developed a plan for improvement. Hundreds of these communities have created new local executive authority vested in sustainability programs, the results of which have been sufficiently encouraging to make these programs permanent.

The continuing economic crisis has made it imperative that such initiatives have a double-bottom-line attribute, simultaneously addressing sustainable environment and durable prosperity.

According to the Center for Neighborhood Technologies, 70% of America’s GDP derives from personal consumption expenditures, most of them for housing, transportation, and infrastructure services such as electricity, thermal comfort, and security from increasingly volatile weather. With that amount of economic activity attributed to communities and metropolitan regions, federal climate protection policies and implementation strategies should be spatially focused.

PCAP RECOMMENDS THAT THE PRESIDENT:

- Call on states and localities to assert their role as America's policy laboratories in the nation's transition to clean and sustainable energy.³⁰
- Reissue [Executive Order 12893](#) (Principles for Federal Infrastructure Investment) and add language emphasizing the need for innovation in mobility infrastructure and finance at the local and state levels. (A good set of principles for such enhancement is included in [The Economic Impacts of Infrastructure Investments](#), issued by Treasury and the Council of Economic Advisors in 2012.)
- Complete the work started by the Office of Management and Budget during President Obama's first term to coordinate efforts between federal agencies to provide credit assistance when it is being considered to support economic development in local areas
- Issue an Executive Order that redefines economic progress to include not only short-term job creation as an outcome measure from federally enabled investments, but also salutary effects on the cost of living and the cost of business; local value creation and value capture; and the benefits of supporting "agglomeration" or regional business relationships that result from more resource-efficient and better-connected supply and demand relationships. In addition, direct that preference be given to performance-based competitive programs that measure carbon-reducing initiatives, whether they are organized around revenue sharing or public-private partnerships.
- Champion significantly increased funding for programs such as the Environmental and Energy Efficiency Block Grant Program; and regional and "green" workforce initiatives; the State Energy Conservation Program; the Weatherization Assistance Program; and the interagency Partnership for Sustainable Communities, along with greater local discretion in the investment of federal transportation funds.
- Increase funding for the Technical Assistant Program at the U.S. Department of Energy's national laboratories, where communities and states can obtain short-term technical assistance on energy efficiency and renewable energy applications from the National Renewable Energy Laboratory, Lawrence Berkeley National Laboratory, Oak Ridge National Laboratory and the Pacific Northwest National Laboratory.
- Monitor and accelerate compliance with [Executive Order 13514](#), which directs federal agencies to help "strengthen the vitality and livability of the communities in which Federal facilities are located". Strongly support the Department of Defense's objective to achieve net-zero energy, water and waste performance at its U.S. facilities and encourage the Department to collaborate with military base communities to help them meet their energy, water and waste reduction goals.
- Issue an Executive Order directing federal agencies to give greatest possible discretion to state and local authorities in the implementation of federal programs and the allocation of federal funds, consistent with national goals for resource efficiency and greenhouse gas reductions.
- Direct the Department of Energy to work with the National Association of State Energy Officials and the Environmental Council of States to provide technical assistance and training to state and local officials on the use of its analytic tools related to energy efficiency, renewable energy, greenhouse gas emissions and the social costs of carbon.³¹

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- Propose to Congress that the State Energy Program be funded at \$3 billion over five years³² to increase the quality of state energy plans in the following areas:
 - Energy assurance (the stability of energy supplies);
 - Improvement of building codes and enforcement;
 - Public private partnerships in the commercial building sector;
 - Long-term transportation programs;
 - The development of advanced manufacturing in their regions; and
 - Innovative energy efficiency programs that contribute to the national effort to make the United States the most resource efficient industrial economy.
 - Improve national data collection and reporting on energy, transportation, and other GHG emitting activities to create a place-based dataset that will allow localities to measure and reduce emissions.
 - Encourage the EPA Administrator to go forward on “111D” regulations that give states the flexibility to use cap and trade, carbon taxes and other market-based mechanisms to reduce emissions.
 - Support state implementation of clean energy standards, renewable energy portfolio standards and other policies designed to expedite the development of advanced clean-energy industries and jobs.
 - Direct National Laboratories to submit budget proposals that increase the capacity of their state and local assistance programs.³³

8. INTENSIFY CARBON DIPLOMACY

With the lack of substantial international progress on reducing global greenhouse gas emissions, it is especially important for the United States to sustain and enter into new bilateral and [multi-lateral agreements](#), and to double down on the central multi-lateral agreement, the UN Framework Convention on Climate Change, to promote the development and use of energy efficiency, renewable energy and other low-carbon technologies and policies.

Climate diplomacy must begin at home: PCAP recommends that the President continue communicating directly with the American people and to Congress to underscore the importance of these agreements, including their benefits for the United States. Those benefits include the collaborative development of new energy technologies, the expansion of clean energy markets, the reduction of global greenhouse gas emissions and other pollutants, and the effort to improve international stability by providing access to clean energy for the estimated 1.5 billion people who lack reliable electric power.



Figure 12: International delegates meet at COP-17, the 2011 climate change conference in Durban, South Africa. (UN Photo)

FURTHER, PCAP URGES THE PRESIDENT TO:

- Vigorously defend the United States' share of financial support to the United Nations, to the ongoing work of the Intergovernmental Panel on Climate Change, and to other international initiatives to protect the health of oceans, the diversity of species, the security of food supplies, the availability of fresh water, the health of soils, the sharing and dissemination of environmentally benign and advantageous technologies, and global efforts to avoid crossing critical ecological thresholds.³⁴
- Push the G-20 to fulfill its commitment to eliminate fossil energy subsidies and to extend that commitment to producer as well as consumer subsidies.

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- Propose to the G-20 that fossil energy subsidies necessary to provide low-income households with access to power or fuel be means-tested to prevent the subsidies from being used by consumers who don't need them.
 - Support the efforts of academia, policy experts, and non-government organizations to assess the ability of existing international institutions to facilitate global solutions to global problems, and to propose new organizational structures that can more effectively deal with pressing global issues.³⁵
 - Put forward an ambitious proposal in accordance with the [Durban Platform](#), in which the international community has agreed to negotiate a binding greenhouse gas reduction treaty by 2015 that for the first time includes the major developing economies.
 - Establish the United States as a global leader in climate diplomacy and make the development and dissemination of low-carbon technologies a high priority in its bilateral and multi-lateral agreements.
 - Continue pressing for an international agreement to phase down HFCs. The United States has joined with Mexico and Canada to propose that the Montreal Protocol be amended to phase down the consumption and production of HFCs. HFCs are a chemical widely used as a substitute for ozone-depleting substances in refrigeration and air conditioning. While HFCs do not harm the Earth's ozone layer, they are the fastest growing of the greenhouse gases responsible for climate change. The amendment has been opposed by China, Brazil and India, which argue that HFCs should be dealt with as part of international climate negotiations rather than the Montreal Protocol. However, the glacial progress of climate negotiations means the HFCs might not be phased down for a long time, if ever, missing an opportunity to expedite the reduction of a major greenhouse gas.
 - Reduce the use of HFCs in the United States. Urge the EPA to use its authority under the Clean Air Act to phase down the use of HFCs in the United States and to replace them with alternatives that protect the ozone layer without contributing to greenhouse gas emissions.

9. MEASURE AND REPORT GENUINE PROGRESS

The Gross Domestic Product (GDP) is an important measure of economic activity in the United States, but it is an inadequate yardstick for measuring America's progress in other areas, including our quality of life. Several states and nations have developed and tested alternative yardsticks, often called Genuine Progress Indicators (GPI), to measure social, environmental and economic well being.

For example, [Utah](#) used GPI to measure its progress between 1990 and 2007, and issued a report to its residents in 2011. [Maryland](#) developed a GPI that used 26 different indicators to measure the "environmental and social costs of what we buy, the quality of life impacts of how we live, (and) the significant contributions of our natural systems." An example at larger scale is the [Better Life Index](#) used by Organization for Economic Development and Cooperation (OECD) in its annual ranking of nations. Its index measures income, jobs, environment, civic engagement, health, life satisfaction, safety and work-life balance.

The Paucity of GDP

In 1968, Robert F. Kennedy ran for president at a time the American people were, in his words, "deep in a malaise of spirit", where poverty and racial tensions were evident and where the young felt "disengagement and despair". Here is an excerpt from his widely quoted [speech](#) on March 18, 1968, at the University of Kansas:

We as a people are strong enough, we are brave enough to be told the truth of where we stand. This country needs honesty and candor in its political life and from the President of the United States...And I want all of us, young and old, to have a chance to build a better country and change the direction of the United States of America...

And this is one of the great tasks of leadership for us, as individuals and citizens this year. But even if we act to erase material poverty, there is another greater task, it is to confront the poverty of satisfaction - purpose and dignity - that afflicts us all. Too much and for too long, we seemed to have surrendered personal excellence and community values in the mere accumulation of material things. Our Gross National Product, now, is over \$800 billion dollars a year, but that Gross National Product - if we judge the United States of America by that - that Gross National Product counts air pollution and cigarette advertising, and ambulances to clear our highways of carnage. It counts special locks for our doors and the jails for the people who break them. It counts the destruction of the redwood and the loss of our natural wonder in chaotic sprawl. It counts napalm and counts nuclear warheads and armored cars for the police to fight the riots in our cities. It counts Whitman's rifle and Speck's knife, and the television programs which glorify violence in order to sell toys to our children. Yet the gross national product does not allow for the health of our children, the quality of their education or the joy of their play. It does not include the beauty of our poetry or the strength of our marriages, the intelligence of our public debate or the integrity of our public officials. It measures neither our wit nor our courage, neither our wisdom nor our learning, neither our compassion nor our devotion to our country, it measures everything in short, except that which makes life worthwhile. And it can tell us everything about America except why we are proud that we are Americans.

PCAP RECOMMENDS THAT THE PRESIDENT:

- Direct the Council on Environmental Quality (CEQ) to complete its long-running work on national sustainability indicators, including factors such as public health, education, income disparity, job creation and quality of life
- Direct CEQ to use these factors to provide a report to the President every two years before the State of the Union address.
- Include the report in his annual State of the Union address to Congress and the American people.

10. ENVISION THE FUTURE WE WANT

In the combat that so often characterizes policy-making, talking about vision seems insubstantial and inconsequential. But as environmental educator Donella Meadows wrote in 1994:

*Vision is the most vital step in the policy process. If we don't know where we want to go, it makes little difference that we make great progress. Yet vision is not only missing almost entirely from policy discussions; it is missing from our whole culture. We talk about our fears, frustrations, and doubts endlessly, but we talk only rarely and with embarrassment about our dreams.*³⁶

One of the highest priorities for the next President will be to help the American people move beyond the ideological polarities and fear-based politics that dominate political discourse in the United States today. Two tools will be helpful in that task: vision and visualization.

VISION is a clear, usually verbal articulation of what life in the United States would be like in 2030, for example, if the President's economic, environmental and social objectives all were met. In recent events such as the UN Conference on Sustainable Development (Rio+20) and speeches President Obama and Gov. Romney gave at their conventions, analysts have taken to counting words as clues to vision. (See Figures 13 & 14)

Such data do not help the American people understand in street-level detail what the goal would mean to them, or their families, or communities. In effect, asking voters to rally around an 80% clean energy goal is asking them to buy a future, sight unseen.

That's where **VISUALIZATION** comes in.

Research shows that 93% of our communication is nonverbal; that people process visual information 60,000 times faster than text; and that presentations using visuals are 43% more likely to persuade the audience to take an action.³⁷

PCAP is not suggesting that President Obama or Gov. Romney become America's first power-point president. We are suggesting that one of the most important functions of the next Administration will be to increase the power of the bully pulpit with cutting-edge visual communications technologies that help bridge the gap between science and policy, and between science and the American people.

The need for visualization goes beyond building domestic support for a President's policies. Visual technologies are an effective way to show the world new and more sustainable models of urban and economic development.³⁸

One of the best demonstrations of the power of visual communication was General Motors' Futurama Pavilion at the 1939 New York World's Fair. GM commissioned designer [Norman Bel Geddes](#) to build the exhibit. Millions of visitors were given rides through models of a society of expressways, automobiles and suburbs – what Geddes called the “free-flowing movement of people and goods across our nation (that) is a requirement of modern living and prosperity”.

GM's vision of a car-centered society appears to have laid the groundwork of public support for urban designs and transportation infrastructure that still dominate public policy in the United States. The American model has become the global gold standard of progress and is being replicated in developing economies around the world, along with the problems of air pollution, carbon emissions, congestion, the costs of owning and operating automobiles, and the de facto discrimination against those who are too old, too young or too poor to own automobiles. The world needs a new model.



Figures 15-16: Is a picture worth a thousand words? Compare the impact of the word clouds to these visuals by Arnold Imaging in Kansas City. The company used computer animation to show the residents of Kansas City how it might look if they invested in light rail, solar electricity and green roofs. (Source: [Arnold Imaging](#))

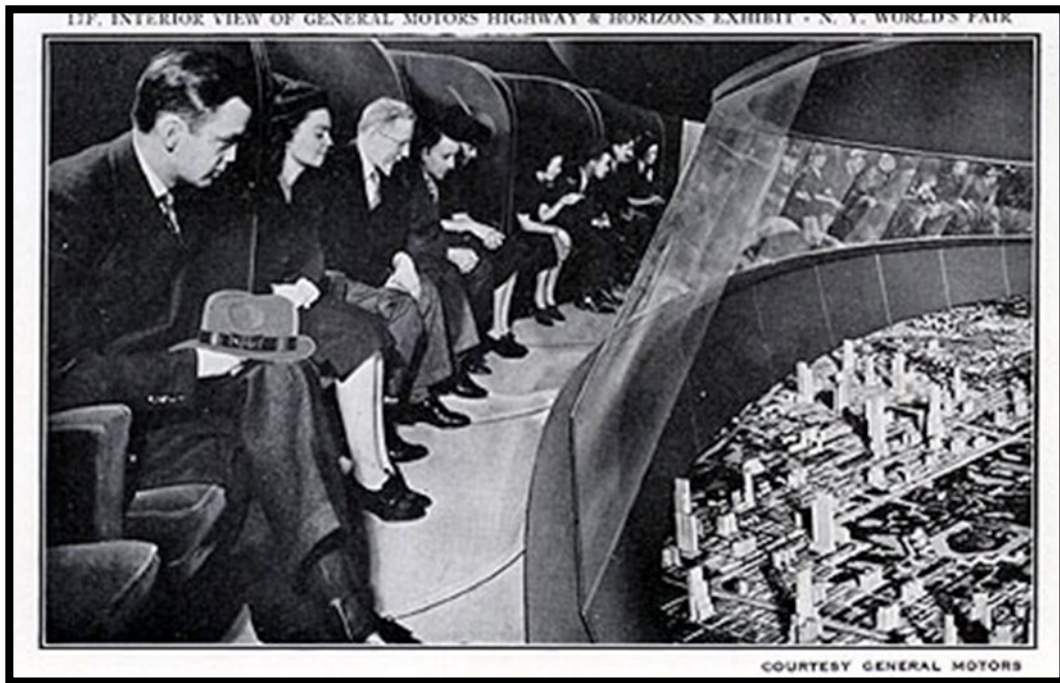


Figure 17: GM's [Futurama Pavilion](#)

PCAP RECOMMENDS THAT THE PRESIDENT:

- Magnify the power of the bully pulpit with state-of-the-art visual communication technologies to rally public support for an advanced energy economy.
- Direct the Partnership for Sustainable Communities – a collaboration between the Environmental Protection Agency, the Department of Transportation and the Department of Housing and Urban Development – to increase the capacity of U.S. communities to use visualization technologies in building local consensus for sustainable development.
- Facilitate a public-private partnership in which private philanthropies provide funds to create an immersive and interactive exhibit of life in an advanced, sustainable, post-carbon world (Figure 18). The exhibit would circulate through museums and science centers nationwide before finding a permanent home at the Smithsonian. An electronic version would be made available on the Internet to allow for greater viewership. The interactive feature of the exhibit would allow visitors to offer their feedback and ideas about the future they want.

THE EXHIBIT SHOULD:

- Be realistic, showing how communities might deal with known environmental problems such as climate change;
- Illustrate how the different parts of community – buildings, transportation, water and energy systems -- will interact to achieve greater economic, environmental and social benefits;
- Show greater community resilience and self-sufficiency, including distributed energy production, local food production, recycling and reuse and other features of a sustainable community;
- Be culturally sensitive, showing how sustainable development principles can be applied in different cultures and economies.

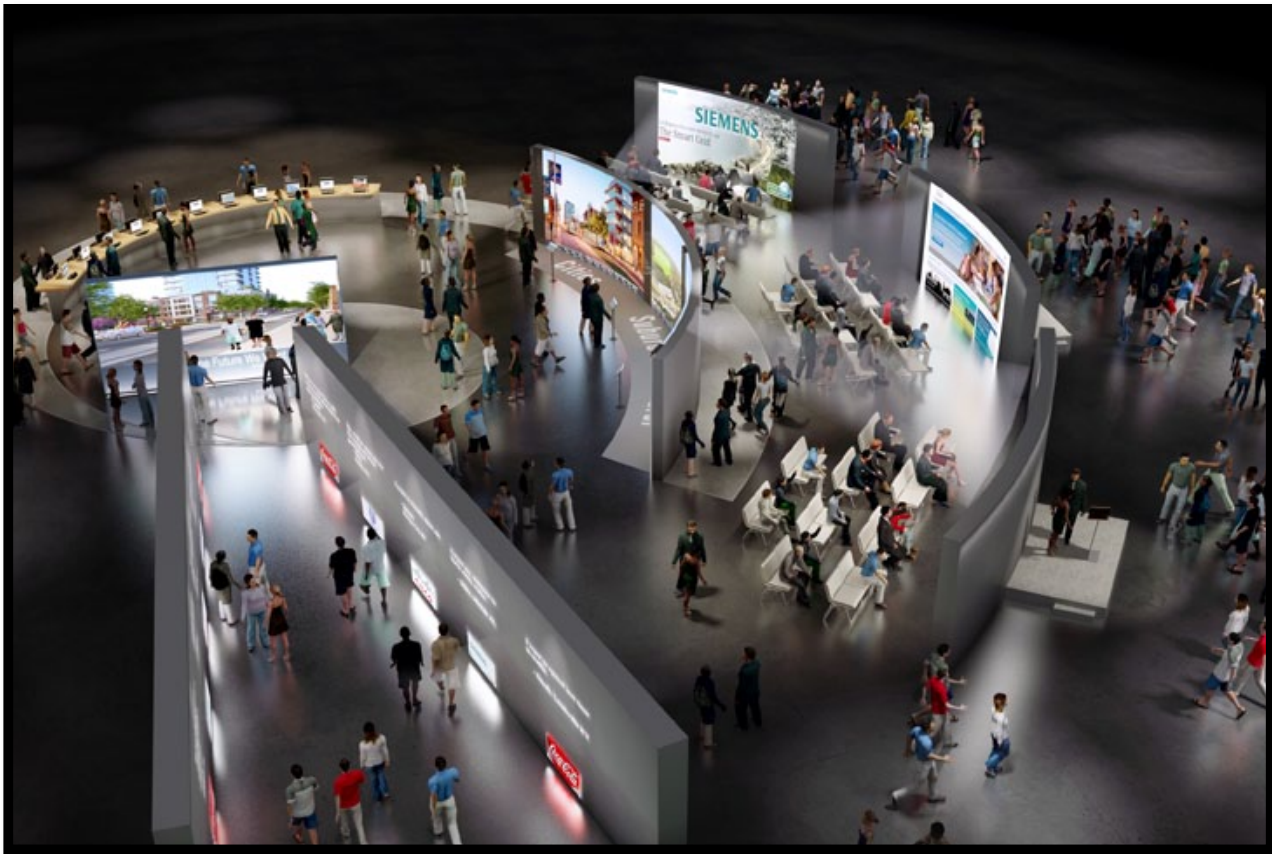


Figure 18: One concept of a traveling exhibit depicting “the future we want”. (Source: Arnold Imaging)

CONCLUSION

This fifth publication from the Presidential Climate Action Project offers a variety of recommendations for the next President of the United States to act on behalf of the nation's energy and climate security. Some involve the bully pulpit; some involve work with Congress; and many involve unilateral action by the Administration. More fundamentally, we suggest that whoever wins the White House this year should lead the nation through an historic change of direction from a carbon-based to a relatively carbon-free economy.

Our premise since the inception of PCAP has been that our presidents have the authority and the obligation to make significant progress on critical and difficult issues, even when Congress is uncooperative, deadlocked or dysfunctional. Especially on issues so important to our future – issues such as energy and climate security -- the balance of power between the Executive and Legislative branches of government should be used to correct omissions as well as excesses in public service.

We have noted that the President and Vice-President are the only public officials elected by all of the American people. That is a special relationship. We encourage the next President to speak frankly and directly to us, to start a constructive national conversation about the futures we want, and to build our broad support for achieving greater energy and climate security.

We encourage the President to listen to public opinion, certainly, but also to inform it by presenting the American people with the honest facts about the challenges we must meet head-on at this important moment in history. To paraphrase what others have written, we are experiencing a Pearl Harbor moment in slow motion with global climate change. Now we need a Churchill moment – a president who leads us to a courageous and clear-eyed confrontation with the historic challenges of our time, and who demonstrates a firm resolve to bestow upon our children and grandchildren a nation that is prosperous and secure.

END NOTES

- ¹ This description comes from the [Association for Experiential Education](#).
- ² See [PCAP's legal analysis](#) of presidential powers and how they have been used in the past.
- ³ For other criteria, see the [Wingspread Principles](#) on the U.S. Response to Global Warming.
- ⁴ EPA has created [an interactive map](#) that identifies greenhouse gas emissions from “large facilities” around the country.
- ⁵ The Doctrine is one of the oldest concepts in American law, established the responsibility of “the sovereign” to hold public resources in trust for the use of all people. The Doctrine has been applied traditionally to water resources. A non-profit organization representing youth has filed lawsuits in several states and U.S. District Court arguing the atmosphere should also be protected under the Doctrine. In July 2012, a District Court judge in Texas agreed in regard to the responsibilities of that state’s officials. But on May 31, 2012, the U.S. District Court in the District of Columbia ruled that the Doctrine applies to states rather than the federal government and that the Environmental Protect Agency already has the authority to regulate greenhouse gas emissions.
- ⁶ For purposes of this action plan, “fiscal policy” is the use of federal government revenues or expenditures that have the effect of influencing the economy.
- ⁷ The Academy has announced it will publish its inventory in the fall of 2012, but it appears the analysis won’t be released until later this year or early next year. It will identify and quantify tax provisions that substantially increase or decrease the nation’s GHG emissions, either directly or indirectly. The Academy will recommend principles and criteria for tax policies in the future, but will not recommend specific changes in current policy.
- ⁸ In a similar analysis in 2008, the Congressional Research Service concluded that legislation to roll back \$17 billion in tax breaks for domestic oil and gas industries and to impose a 25% windfall tax on oil companies would not have significant impacts on consumer prices.
- ⁹ For an explanation of policy options for the Production Tax Credit, see the Congressional Research Service’s [June 2012](#) analysis.
- ¹⁰ Email communication with Skip Laitner, chief economist at the American Council for an Energy Efficient Economy.
- ¹¹ The SEC issued guidance on Jan. 27, 2010, on how publicly traded companies should disclose risks to their investors due to climate change. An analysis by the Congressional Research Service (R42544, May 24, 2012) cited evaluations of the guidance by investors, financial professionals and the American Bar Association. In aggregate, the evaluation suggests that while climate reporting has improved especially among greenhouse-gas intensive industries, it a) often fails to satisfy the legitimate expectations of investors, b) featured generic weather risk factors, c) often was seen as a speculative exercise driven by guidelines rather than recognized standards. In addition, companies believed there were few penalties for non-disclosure, SEC’s level of enforcement was negligible, and there was a “small amount of interest from the financial community or other constituencies”. The analyses found that about 1.8% of the 75,000 disclosure forms filed with the SEC prior to its 2009 guidance mentioned climate change or greenhouse gases. The percentage rose to 2.8% immediately during the first quarter of 2010, but fell back to 1.6% by the third quarter of the year.
- ¹² Department of Energy Organization Act of 1977, Section 801, now 42USC 7321.
- ¹³ According to the National Association of State Energy Officials, 39 U.S. states now have energy plans of one form or another.
- ¹⁴ Many of this year’s political candidates have taken the position that America’s energy choices should include “all of the above”. While diversity in our energy supplies is beneficial, some prospective fuels should not be encouraged or supported by the federal government because their life-cycle impacts are too high. Among them are liquid fuels from coal and petroleum from shale. Both create unsustainable demands on water resources and create more carbon emissions than conventional petroleum.
- ¹⁵ The national security threats associated with fossil energy and climate change are acknowledged in several defense and intelligence reports in recent years. Examples include the reports of the Military Advisory Board of the [Center for Naval Analysis](#), the latest Quadrennial Defense Review and the National Intelligence Assessment on the security impacts of global climate change. For the role that sustainable development policies should play in national security, see the [National Strategic Narrative](#) published in 2011 by the Wilson Center and written by two senior strategic advisors to the Chairman of the Joint Chiefs of Staff.
- ¹⁶ The Act was created at the beginning of the Korean War to ensure that America’s industrial resources were adequate to meet the nation’s security needs. Today, those needs include climate mitigation and adaptation. The Act gives the Presi-

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- dent the authority to “provide or guarantee loans to industry in order to expedite deliveries or expand discovery and production of essential materials (and to) purchase industrial items or technologies for installation in government or private industrial facilities.”
- ¹⁷ DoD has concluded that the transition from fossil to renewable energy will improve the security of military installations, increase the safety of our troops, lower military fuel costs and enhance the armed forces’ ability to succeed in their mission. From the standpoint of the civilian economy, the question is whether the military’s commitment to renewable energy produces a sufficiently large and sustained market to encourage private investment in plant and equipment, and to achieve economies of manufacturing scale that lower the price of these technologies for all consumers. In theory, the result would be faster and deeper global market penetration of clean and sustainable energy, thereby reducing international resource competition and helping stabilize the economies of developing nations, including those in the world’s more volatile regions. In short, the objective of the military’s transition to renewable energy is not greener wars, but fewer wars.
- ¹⁸ [“U.S. Oil Imports and Exports”](#), Congressional Research Service, April 4, 2012
- ¹⁹ Bureau of the Census, American Community Survey
- ²⁰ "A Heavy Load: The Combined Burden of Housing and Transportation Expenditures on Working Households", National Housing Conference and Center for Neighborhood Technology, 2006. Update to be released October 1, 2012
- ²¹ See the [Center for Neighborhood Technology’s analysis](#) of the high cost of transportation in 900 regions of the United States.
- ²² See data posted at <http://htaindex.org>; The Housing + Transportation Affordability Index provides data for most metropolitan and micropolitan areas of the U.S., measured at the Census Block Group level, 180,000 places in all.
- ²³ A good point of departure for this requirement is FEMA’s Disaster Resistant Communities Initiative from the Clinton Administration.
- ²⁴ This is consistent with “The Economic Impact of Infrastructure Investment,” released by the Department of Treasury and the Council of Economic Advisors in 2010 and updated in 2012; the President’s Executive Order on Reducing Regulatory Barriers to Accelerating Infrastructure Investment, March 2012; and Executive Order 12893, Principles for Federal Infrastructure Investment.
- ²⁵ Agencies with responsibilities related to climate impacts on transportation systems and infrastructure include the U.S. Department of Transportation, the Environmental Protection Agency, the National Oceanic and Atmospheric Administration, the Department of Defense and the President’s Climate Change Adaptation Task Force.
- ²⁶ These estimates vary widely among organizations concerned with dam safety. American Rivers, for example, has estimated that more than 10,000 dams are classified as “high-hazard” and more than 1,300 have been judged unsafe.
- ²⁷ Oxfam and Center for Naval Analysis. [An Ounce of Prevention: Preparing for the Impact of a Changing Climate on US Humanitarian and Disaster Response](#) [online] (2011).
- ²⁸ See EPA’s [state-by-state analysis](#) of the projected impacts of existing state energy efficiency and renewable energy policies. Also see EPA’s [maps](#) identifying state energy policies.
- ²⁹ “The CCS Security and Investment Project”, June 21, 2012, p. 2
- ³⁰ In July 2012, the Department of Energy’s National Renewable Laboratory issued an [assessment](#) of America’s technical potential for renewable energy generation. The assessment shows that every state has renewable resources that can be used to generate power.
- ³¹ DOE sponsors OpenEI, a “knowledge sharing online community dedicated to connecting people with the latest energy information and data.” The site allows users to access a variety of energy-related applications, data, resource maps and analytic tools.
- ³² Thirty-nine states have developed energy plans of varying quality. PCAP urges the President to seek a five-year appropriation that gives predictability and consistency to state efforts, thereby improving chances for private investment.
- ³³ Examples of these programs include the National Renewable Energy Laboratories direct technical assistance for state and local governments and Indian Tribes; the Technical Assistance Program at Idaho National Laboratory; and Sandia National Laboratories Tribal Energy Program.

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- ³⁴ An international panel of scientists convened by the Stockholm Resilience Center identified 9 “[planetary boundaries](#)”, including three the panel concluded we have already crossed.
- ³⁵ For example, the [Aspen Institute](#) has concluded that “the current global regulatory bodies and enforcement mechanisms are sorely inadequate to address the environmental challenges of the 21st century. Major innovation and reforms to international environmental governance structures are necessary in order to overcome these challenges.”
- ³⁶ “Envisioning a Sustainable World”, Donella Meadows, Adjunct Professor of Environmental Studies, Dartmouth College, October 1994
- ³⁷ These findings are documented in a variety of research papers, provided to PCAP by the global communications firm Ogilvy & Mather.
- ³⁸ The author and Jonathan Arnold, whose work is featured here, were partners in developing [The Future We Want](#), a joint enterprise with the United Nations to host a global conversation about what people around the world wanted their lives and communities to be like in 2030. The project used – and invited others to submit -- videos, architectural drawings, computer animations and other visual tools to depict what life would like in a more sustainable world.

APPENDIX 1

SAMPLE IMPLEMENTATION DOCUMENTS

The Presidential Climate Action Project has drafted the executive documents in the following appendices, each designed to implement one of the recommendations in PCAP-2012. The drafts have been reviewed by the Center for Energy and Environmental Security (CEES) at the University of Colorado-Boulder School of Law to verify that they are well grounded in statute and do not contradict previous executive actions.

For a detailed analysis of the Administration's executive authorities related to energy and climate policy, see the documents PCAP commissioned from CEES at:

http://www.climateactionproject.com/docs/Executive_CEES_PCAP_II_Report_Jul_17.pdf

http://www.climateactionproject.com/docs/CEES_PCAP_Report_Final_Feb_08.pdf

POTENTIALLY CONTRAVENING DOCUMENTS:

CEES has determined that there are no apparent conflicts between existing presidential documents from the Carter administration to the mid-point of the Obama Administration in 2010 and the documents presented here. However, the following are citations of existing documents that bear some relation to the texts here and are perhaps worth analyzing, along with additional statutes and documents produced since 2010.

DOCUMENT 1

- EO 13514 (2009) & EO 13423 (2007): set energy efficiency goals for federal agencies
- EO 12873 (1993): sets environmental goals for federal agencies
- EO 12003 (1977): sets specific vehicle standards (i.e. goals to improve vehicle MPG)
- EO 11514 (1970): calls for federal agencies to set environmental goals; creation of Council on Environmental Quality

DOCUMENT 2

- EO 13212/13302 (2001): creation of an inter-agency task force

DOCUMENT 4

- EO 13149 (2000): "Greening the Government Through Federal Fleet and Transportation Efficiency"
- Presidential Memorandum Regarding Fuel Efficiency Standards (May 21, 2010)

DOCUMENT 5

- President Obama's 2011 federal budget that calls for the elimination of unnecessary fossil fuel subsidies:
http://www.whitehouse.gov/omb/factsheet_key_clean_energy/

APPENDIX 2

STEWARDSHIP OF PUBLIC TRUST ASSETS

PRESIDENTIAL MEMORANDUM

MEMORANDUM FOR THE HEADS OF EXECUTIVE DEPARTMENTS AND AGENCIES

SUBJECT: Responsibilities of Federal Officials to Protect Public Trust Assets

As established by Executive Order 11514, it is the responsibility of the federal government to “provide leadership in protecting and enhancing the quality of the Nation’s environment to sustain and enrich human life.” Toward this end, EO 11514 directs federal agencies to “initiate measures needed to direct their policies, plans and programs so as to meet national environmental goals.”

In its role as trustee of public trust assets, Congress has recognized this responsibility in numerous statutes. For example, in the National Environmental Policy Act of 1969 (the “1969 Act”) (42 USC 4321), Congress declares it is national policy to “encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation. . .”

In the 1969 Act, Congress declared “[I]t is the continuing responsibility of the Federal Government to use all practicable means, consistent with other essential considerations of national policy, to improve and coordinate Federal plans, functions, programs, and resources to the end that the Nation may . . . fulfill the responsibilities of each generation as trustee of the environment for succeeding generations . . .”

The United Nations Framework Convention on Climate Change (UNFCCC), to which the United States is a Party, declares: “The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities.”

Today, 30 years after the issuance of EO 11514, the United States is approaching critical ecological thresholds in several areas, including the availability of fresh water supplies, alteration of ocean chemistry, and emissions of greenhouse gases into the atmosphere.

In affirmation and furtherance of the policies cited above, I hereby direct the following:

SECTION 1. DUTY OF PUBLIC OFFICIALS TO PROTECT AMERICA'S NATURAL ASSETS.

Officials of the Federal Government are vested with fiduciary duties over natural assets held in public trust and belonging to the people, including, but not limited to, forests, oceans, water resources, and the atmosphere.

SEC. 2. ADMINISTRATIVE ACTIONS.

The heads of all executive departments and agencies shall, in consultation with the Office of Personnel Management, review and if necessary modify the position descriptions and performance standards of public employees to clearly establish their responsibilities to protect America’s ecological, environmental, and natural resource trust assets.

SEC. 3. GENERAL PROVISIONS.

- a. Nothing in this memorandum shall be construed to impair or otherwise affect:
 - 1. authority granted by law or Executive Order to any agency, or the head thereof; or
 - 2. functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.
- b. This memorandum shall be implemented consistent with applicable law, contracts and collective bargaining agreements, and is subject to the availability of appropriations.
- c. This memorandum is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person

SEC. 4. PUBLICATION.

The Director of the Office of Personnel Management is hereby authorized and directed to publish this memorandum in the Federal Register.

DRAFT

APPENDIX 3

FOSSIL ENERGY SUBSIDY REFORM

PRESIDENTIAL MEMORANDUM

MEMORANDUM FOR THE HEADS OF EXECUTIVE DEPARTMENTS AND AGENCIES

SUBJECT: Eliminating Unnecessary Subsidies of Fossil Fuels

It is the policy of this Administration to ensure that America has ample supplies of clean energy that are produced and consumed in environmentally responsible ways. This policy is supported by numerous acts of Congress (e.g., 42 U.S.C. 7401; 33 U.S.C 1251; 42 U.S.C 1451; 16 U.S.C. 1531; 42 U.S.C. 6201; 42 U.S.C. 8252; 42 U.S.C. 4321).

It is also the policy of this Administration to ensure that taxpayer funds are managed responsibly. In the energy sector, responsible management requires that priority for federally funded research and development be given to emerging technologies and industries deemed in the public interest—in other words, technologies that help the nation make the transition to a clean and competitive energy economy but are not sufficiently mature or financed to conduct the research without outside assistance.

This prioritization is especially important if we are to maintain robust research and development of energy technologies vital to national security and economic stability, while reducing the federal budget deficit and removing subsidies that distort market signals by hiding the true price of carbon-intensive energy resources and technologies.

It also is the policy of this Administration to provide the greatest practical transparency to public energy subsidies, broadly defined.

SECTION 1. MANAGEMENT OF FEDERALLY SUBSIDIZED ENERGY RESEARCH.

(a) The Office of Management and Budget (OMB) and the General Accounting Office (GAO) have recommended that the Department of Energy improve its screening of potential research and development for the oil and natural gas industries to ensure that taxpayers are not supporting research that would have been undertaken by these industries without government support (GAO-09-186 Research and Development). This principle should be applied to all mature energy industries, including the coal and nuclear industries.

(b) When collaborative research with these energy sectors is deemed necessary, non-duplicative, and in the public interest, proper management of federal resources requires that the industries, which ultimately benefit from the results of research and development, provide most of the costs. Executive departments and agencies involved in fossil and nuclear energy research should seek the highest contributions that current law permits from the fossil and nuclear energy industries.

(c) In 2007, the GAO concluded: “Based on results of a number of studies, the U.S. federal government receives one of the lowest government takes [i.e., royalty and lease payments] in the world.” (GAO-07-676R Oil and Gas Royalties).

SEC. 2. ADMINISTRATIVE ACTIONS.

(a) Not later than 90 days from the date of this memorandum, the heads of all executive departments and agencies shall report the following information to the Office of Management and Budget:

1. Subsidies they provide and/or administer to the oil, coal, natural gas, and nuclear energy industries, including but not limited to 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.
2. Which of the subsidies and subsidy levels are determined by Congress, and which are established by the agency or department.

(b) Not later than 90 days from the date of this memorandum, agencies engaged in research and development activities

with and for the coal, oil, natural gas, and nuclear energy industries shall report the following information to the Office of Management and Budget:

1. Current procedures for ensuring that federally sponsored research and development does not duplicate or replace research that would have been undertaken by an energy industry without public support;
2. Cost-sharing practices in research conducted for or in partnership with these private energy industries, including cost-sharing mandated by Congress and cost-sharing at the agency's discretion;
3. Recommendations for improving cost-sharing requirements prescribed by current law or regulation, with the objective of ensuring that federal research and development funds are reserved for emerging energy technologies that contribute to the nation's need for low-carbon, affordable, reliable, and environmentally sound energy resources.

(c) Not later than 90 days from the date of this memorandum, the Department of Interior shall submit the following information to the Office of Management and Budget:

1. Current lease and royalty rates charged by the Department to the oil and gas industries;
2. How each of these rates compares with international norms;
3. An assessment of the anticipated impact on oil and gas production if U.S. royalty and lease rates were comparable to international norms.

(d) Not later than 180 days from date of this memorandum, the Office of Management and Budget shall submit recommendations to the President on the following:

1. Revisions to current administrative procedures and policies that implement the objectives described in this memorandum.
2. Revisions to statutory requirements regarding federal subsidies for the oil, coal, gas, and nuclear industries to more effectively support the policies and objectives stated in this memorandum.

(e) Not later than 12 months from the date of this memorandum, the Office of Management and Budget shall complete and make available to the public an inventory of federal subsidies for all energy resources, technologies, and industries.

SEC. 3. GENERAL PROVISIONS.

(a) Nothing in this memorandum shall be construed to impair or otherwise affect:

1. authority granted by law or Executive Order to any agency, or the head thereof; or
2. functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This memorandum shall be implemented consistent with applicable law, contracts, and collective bargaining agreements, and is subject to the availability of appropriations.

(c) This memorandum is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

SEC. 4. PUBLICATION.

The Director of the Office of Management and Budget is hereby authorized and directed to publish this memorandum in the Federal Register.

APPENDIX 4

NATIONAL ENERGY EFFICIENCY CHALLENGE

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

A PROCLAMATION

1. Pursuant to 42 U.S.C. 7321, the President must periodically establish energy production, utilization, and conservation objectives necessary to satisfy the projected energy needs of the United States and to meet the requirements of the general welfare of the people of the United States and the commercial and industrial life of the Nation, paying particular attention to full employment, price stability, energy security, economic growth, environmental protection, nuclear non-proliferation, special regional needs, and the efficient utilization of public and private resources.
2. Pursuant to 42 U.S.C. 13382(a), the President's National Energy Policy Plan must include specific targets for increasing energy efficiency and reducing national oil consumption, as well as the stabilization and eventual reduction in the generation of greenhouse gases.
3. Numerous credible studies indicate that relative to other industrialized nations the United States has one of the least energy efficient economies.
4. Energy efficiency improvements can substantially reduce our Nation's greenhouse gas emissions, thereby helping to prevent the worst consequences of climate change.
5. By investing in cost-effective energy efficiency improvements, we can make our Nation's economy more robust while also substantially reducing the amount of energy we consume.
6. The United States has the ability to become the global leader in energy efficiency, as measured by energy consumption per dollar of Gross Domestic Product.
7. The economy-wide goal of the United States shall be to reduce energy consumption 60% below current projections by 2050 and to convert at least 70% of the nation's energy consumption to useful work.
8. Achieving that goal is in the national interest, as well as in the interest of national security, economic stability, and the health and welfare of the American people.
9. NOW, THEREFORE, I, (insert name), President of the United States of America, by virtue of the authority vested in me by the Constitution and the laws of the United States, do proclaim that it shall be the goal of the United States to become the most energy-efficient industrial economy in the world by 2050.
10. IN WITNESS WHEREOF, I have hereunto set my hand this (date), in the year of our Lord two thousand ten, and of the Independence of the United States of America the two hundred and thirty-fifth.

(signed)

APPENDIX 5

ESTABLISHING ENERGY EFFICIENCY GOALS

PRESIDENTIAL MEMORANDUM

MEMORANDUM FOR THE SECRETARY OF ENERGY

SUBJECT: Improving the Resource Efficiency and Productivity of the U.S. Economy

It is the objective of this Administration to put America on the path to a clean energy economy. Improving the nation's economic productivity through resource efficiency is essential to achieving that objective. Energy efficiency in particular is one of the most cost-effective and readily available means by which the United States can create new industries and jobs, reduce its dependence on imported energy resources, cut greenhouse gas emissions and other dangerous air pollutants, and insulate the American people from the volatility of fossil energy supplies and prices.

By Presidential Proclamation dated (enter date) and pursuant to 42 U.S.C. 7321, I have established the goal of making the United States the most energy efficient industrial economy in the world not later than 2050.

SECTION 1. REPORTING.

I request that you provide recommendations to me on the following topics within 180 days of the date of this memorandum:

- (a) Indicators by which the nation's energy efficiency should be measured so as to provide the most accurate assessment of the economy's resource efficiency;
- (b) Proposed goals, metrics, and milestones for energy efficiency improvements in each of the following products and sectors, such that the United States will achieve the goal of becoming the most energy-efficient industrial economy not later than 2035, based on credible current projections of the resource efficiency improvements of other industrial nations:
 - (i) appliances and equipment;
 - (ii) residential and commercial buildings;
 - (iii) residential energy use;
 - (iv) transportation;
 - (v) industry;
 - (vi) utilities; and
 - (vii) other key energy-consuming sectors relevant to this goal;
- (c) How to improve coordination and eliminate unnecessary duplication among existing federal programs to assist these sectors in achieving the goals and milestones recommended in Section 1(b);
- (d) Key barriers to energy efficiency improvements in each of the products and sectors identified in Section 1(b) and recommendations on federal incentives, policies, and programs to overcome them;
- (e) How to improve public access to federal information, technical assistance, research and development, technology commercialization, tools, programs, and incentives that promote the nation's resource efficiency.

SEC. 2. INTERAGENCY COLLABORATION.

All federal agencies with responsibilities related directly or indirectly to the nation's resource efficiency are directed to assist the Secretary of Energy as necessary to carry out the purpose of this memorandum.

SEC. 3. GENERAL PROVISIONS.

(a) This memorandum shall be implemented consistent with applicable law, including international trade obligations, and subject to the availability of appropriations.

(b) This memorandum is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

(c) Nothing in this memorandum shall be construed to impair or otherwise affect:

(i) authority granted by law to a department, agency, or the head thereof; or

(ii) functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

SEC. 4. PUBLICATION.

You are authorized and directed to publish this memorandum in the Federal Register.

DRAFT

APPENDIX 6

NATIONAL ENERGY & CLIMATE GOALS

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

A PROCLAMATION

1. In Section 1103(b) of the Global Climate Protection Act of 1987 (the “1987 Act”)(15 U.S.C. 2901), the Congress has declared the President, through the Environmental Protection Agency, to be responsible for developing and proposing a coordinated national policy on global climate change.
2. In 15 U.S.C. 2901(1), the National Climate Program Act, the Congress finds that climate change affects food production, energy use, water resources and other factors vital to national security and human welfare.
3. In Section 1102(4) of the 1987 Act (15 U.S.C. 2901), Congress finds that necessary actions must be identified and implemented in time to protect the climate.
4. Pursuant to 42 U.S.C. 7321, the President must periodically prepare a National Energy Policy Plan that considers and establishes energy production, utilization and conservation objectives necessary to satisfy the projected energy needs of the United States and to meet the requirements of the general welfare of the people of the United States and the commercial and industrial life of the Nation, paying particular attention to the needs for full employment, price stability, energy security, economic growth, environmental protection, nuclear non-proliferation, special regional needs and the efficient utilization of public and private resources.
5. As a result of 42 U.S.C. 13382(a), the National Energy Policy Plan must include specific targets for increasing energy efficiency, increasing energy derived from renewable resources and reducing national oil consumption, as well as the stabilization and eventual reduction in the generation of greenhouse gases.
6. Pursuant to the United Nations Framework Convention on Climate Change, ratified by the United States Senate, the United States is committed to stabilizing greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.

NOW, THEREFORE, I, (insert name) President of the United States of America, by virtue of the authority vested in me by the Constitution and the laws of the United States, do proclaim that it shall be the goal of the United States to:

1. Reduce economy-wide greenhouse gas emissions at least 17% by 2020 and at least 80% by 2050, compared to 2005.
2. Reduce the greenhouse gas emissions of the federal government at least 28% by 2020, compared to 2008.
3. Reduce economy-wide consumption of petroleum by at least the amount currently imported from the Middle East and Venezuela, toward the long-term goal of achieving independence from imported oil.
4. Obtain 25% of the nation’s electric power from renewable resources by 2025.
5. Create more than 1 million new jobs in renewable energy and energy efficiency related industries by 2020.
6. Reduce electricity demand at least 15% from the Department of Energy’s projected levels by 2020.
7. Reduce vehicle miles traveled 20% by 2020 and 50% by 2050, with no reduction in the mobility of the American people.
8. Increase fuel economy standards for the nation’s vehicle fleet by 4% annually.
9. Ensure that new buildings achieve net-zero energy and net-zero carbon performance by 2030.
10. Weatherize the homes of 1 million low-income families each year.
11. Reduce the carbon content of the nation’s transportation fuels by at least 10% by 2020.

Further, it will be the goal of the United States government to empower and work in close partnership with States, local governments and civil society to achieve these objectives.

IN WITNESS WHEREOF, I have hereunto set my hand this (date) in the year of our Lord two thousand ten, and of the Independence of the United States of America the two hundred and thirty-fifth.

DRAFT

APPENDIX 7

CREATING A COUNCIL FOR AN ADVANCED ENERGY ECONOMY

EXECUTIVE ORDER

PRESIDENT'S COUNCIL FOR AN ADVANCED ENERGY ECONOMY

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

Section 1. *Policy.* To ensure the general welfare of the American people and the health of the nation's economy and environment, the United States must make a timely transition from a carbon intensive to a clean energy economy.

Establishing effective public policies to facilitate this transition requires collaboration between all levels of government—federal, state and local. State and local governments have substantial existing authority to help the United States achieve this goal. States regulate energy utilities, engage in transportation planning and establish energy standards for buildings. Localities administer building codes and land use regulations that influence urban development and transportation energy use.

States have used these authorities to institute climate action plans, greenhouse gas emissions targets, renewable energy portfolio standards, vehicle emissions standards, incentives to reduce vehicle miles traveled, net metering programs, public benefit funds, appliance efficiency standards, energy codes for residential and commercial buildings and a variety of other clean energy policies and programs. More than 800 cities have committed to achieving greenhouse gas reductions comparable to those established in the Kyoto Protocol.

Numerous credible economic analyses show that a deliberate shift to a clean energy economy will create substantial numbers of new jobs and industries while improving the nation's economic vitality, stabilizing essential energy supplies and mitigating the threat of global climate change. In addition, this shift will reduce other environmental damages from fossil fuels and insulate American workers and families from the volatility of fossil energy prices.

The United States Congress has recognized the vital link between America's economic productivity, energy resources, national security and the welfare of the American people. In 42 U.S.C. § 5801(a) for example:

The Congress hereby declares that the general welfare and the common defense and security require effective action to develop, and increase the efficiency and reliability of use of, all energy sources to meet the needs of present and future generations, to increase the productivity of the national economy and strengthen its position in regard to international trade, to make the Nation self-sufficient in energy, to advance the goals of restoring, protecting, and enhancing environmental quality, and to assure public health and safety.

In pursuit of these goals, the United States would benefit from a national economic transition plan that identifies how to improve the coordination of federal, state and local government authorities and identifies how federal policies and programs can better support leadership at all levels of government and civil society.

SEC. 2. ESTABLISHMENT. There is established the Presidential Council for an Advanced Energy Economy.

SEC. 3. MEMBERSHIP.

(a) The Council shall be composed of not more than 24 members who shall be appointed by the President. The members shall include:

- (i) at least four State Governors selected with input from Governors and Governors' associations;
- (ii) at least four Mayors selected with input from Mayors and Mayors' associations;
- (iii) the Secretary of Energy;

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- (iv) the Secretary of Transportation;
 - (v) the Secretary of Housing and Urban Development;
 - (vi) the Secretary of Labor;
 - (vii) the Administrator of the U.S. Small Business Administration;
 - (viii) the Administrator of the U.S. Environmental Protection Agency;
 - (ix) the Chair of the Council on Environmental Quality;
 - (x) the White House Director of Urban Affairs ; and
 - (xi) additional members with experience in or representing the energy, economic, finance and sustainable development communities, nongovernment organizations, or any other areas of expertise determined by the President to be of value to the Council in carrying out its duties.

(b) *Designation of Co-Chairs.* The President shall designate from among the Council members two members to serve as Co-Chairs. One Co-Chair will be a Governor; the second Co-Chair will be a Mayor. The Co-Chairs shall convene and preside at meetings of the Council, determine its agenda, and direct its work.

(c) A member of the Council may designate, to perform the functions of the member, a full-time officer or employee of that member's agency or office.

SEC. 4. FUNCTIONS. The Council shall:

(a) Develop recommendations to improve coordination of federal, state and local government authorities related to the transition to a clean energy economy, including the following:

- (i) The use of energy efficiency, renewable energy and other clean energy resources and technologies;
- (ii) The creation of stable and sustained markets for clean energy technologies to increase industry investment in plant and equipment and economies of manufacturing scale; and
- (iii) Increased public and private investment in the resources, technologies and infrastructure necessary for economic transition.

(b) Develop recommendations on how federal policies and programs can be improved to encourage and enhance the leadership of states and localities in the transition to a clean energy economy, including the elimination of barriers to energy efficiency and renewable energy technologies;

(c) Recommend how best to coordinate existing administrative authorities and programs and identify areas where additional administrative authority may be necessary;

(d) Convene within 90 days of the date of this order; and

(e) Report periodically to the President through the Secretary of Energy and submit its findings to the President not later than 12 months after the Council is first convened.

(f) Complete its work and provide a final report to the President by the end of federal fiscal year 2015.

SEC. 5. ADMINISTRATION.

(a) This order shall be implemented consistent with applicable and subject to the availability of appropriations.

(b) Members of the Council shall serve without any additional compensation for their work on the Council, but shall be allowed travel expenses, including per diem in lieu of subsistence, to the extent permitted by law for persons serving intermittently in the Government service (5 U.S.C. 5701-5707).

(c) Insofar as the Federal Advisory Committee Act as amended (5 U.S.C. App 2)(the “Act”) may apply to the Council, any functions of the President under that Act, except for those in Section 6 of the Act, shall be performed by the Secretary of Energy in accordance with guidelines issued by the Administrator of General Services.

(d) The heads of executive departments and agencies, to the extent permitted by law, shall provide the Council such information and cooperation as it may require for purposes of carrying out its mission.

(e) To the extent permitted by law and subject to the availability of appropriations, the White House Council on Environmental Quality (CEQ) shall provide the Council with funding, administrative services, facilities, staff and other support as necessary for the Council to complete its functions within the time period specified in this order. This support shall include teleconferencing and other facilities required by the Council to conduct its work with a minimum of greenhouse gas emissions.

(f) In carrying out its mission, the Council shall be informed by, and shall strive to avoid duplicating, the analyses and investigations undertaken by other governmental, nongovernmental, and independent entities.

(g) The Council shall have a staff, headed by an Executive Director.

SEC. 6. GENERAL PROVISIONS.

(a) Nothing in this order shall be construed to impair or otherwise affect the authority granted by law to a department or agency, or the head thereof, or functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

SEC. 7. TERMINATION. The Commission shall terminate within 60 days of the submission of its findings to the President, which shall occur not later than 24 months after the Council is first convened.



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 is a nonpartisan project funded by foundations and advised by a distinguished panel of experts.

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PCAP

PRESIDENTIAL CLIMATE ACTION PROJECT