## BROOKINGS

QUALITY. INDEPENDENCE. IMPACT.

To: President-Elect Obama

From: William Antholis and Charles Ebinger

Date: November 11, 2008

Re: Building a Secure Energy Future

## The Situation

Building a secure energy future—including heading off catastrophic climate change—was a top campaign priority, second only to meeting the ongoing global economic crisis. Successfully addressing both issues simultaneously will require determination, bipartisan leadership and political courage.

Despite competing priorities, we recommend that energy be a cornerstone of your first term, and that you push for domestic energy legislation before moving forward aggressively with global diplomacy. Your inaugural address can lay out this agenda, and introduce the "Energy Security and Climate Protection Act of 2009" to expand on your campaign proposals in low-cost, high-impact ways. This approach would address two separate but complementary challenges:

- First, in the medium term, the legislation will expand on your pledges to stimulate investment in alternative energy sources and energy infrastructure, by also emphasizing energy-efficient transportation systems, particularly through a federal-state partnership.
- Second, over time, it will expand on your proposals to slash greenhouse gas emissions, by also launching a global diplomatic energy security campaign and revamping our domestic energy policy institutions.

To accomplish all of this, you will need to invest significant political capital, but this surely is a battle worth fighting.

## Your Stance, and Further Recommendations

Your support for reducing greenhouse gas emissions by 80 percent by 2050—and for a cap-and-trade system—set the stage for a new approach to climate change and energy security. Now a more detailed work plan is needed.

**Medium-term: Slash Oil Dependence and "Green" our Infrastructure in a Decade.** Short-term energy markets are impossible to predict or control. Indeed, the recent energy price roller-coaster has dramatically shifted the terrain of policy debates. Members of Congress will pressure you to keep energy prices low and will question whether we can afford investments in new technologies at a time of economic belt-tightening.

We recommend that you argue that we cannot depend on price declines or be held hostage to price volatility. Reliance on a single commodity for 70 percent of our transportation remains an economic and geopolitical risk that will only get worse when economic growth resumes. Reducing oil dependence will take time. And broader investment in green infrastructure should support this goal. For at least the next 20 years the vast proportion of our transportation fleet will remain dependent on petroleum-based fuels. But we must start now.

Renewable energy and conservation: As you proposed in the campaign, switching our transportation fleet to renewable liquid fuels and linking our cars to the electricity grid transfers energy costs to more reliable and predictably priced sources. However, because the start-up costs are high, it has been hard to know whether alternatives can compete with oil. Your policies can begin to eliminate this uncertainty. As you laid out in the campaign, the nation can switch half of the auto fleet to plug-in hybrid electric vehicles by 2025, cutting oil consumption by one-third and carbon emissions dramatically. We also can eliminate the carbon footprint further by switching to cellulosic bio-fuels (such as ethanol made from products other than corn).

Conservation also is critical, and you should follow through on your campaign pledge to double automobiles' fuel efficiency. You can go further by promoting similar conservation in trucks and airplanes and emphasizing mass transit and commercial rail.

Federal-state partnership on energy infrastructure and standards: Your campaign pledges to ramp up energy efficiency and expand renewable energy can be best accomplished if you launch a new partnership with state governments, which spend half of all infrastructure funds, most notably on public transportation and smart-growth infrastructure. The variation in state policies—and their climate footprints—is extraordinary. For example, states set standards on air and water pollution, which should be harmonized so that industry does not confront 50 different standards.

The federal government also should provide funding and work with states to meet your campaign pledge to set standards for a "smart electric grid." Likewise, coordination with the states is necessary to establish a national renewable portfolio standard (requiring utilities to use renewable energy sources to provide a specified minimum, such as 10 or 20 percent, of all electricity they deliver), as well as to set limits on offshore oil and gas drilling to protect the environment.

**Long-term: Comprehensive Transformation of our Carbon Economy.** Cutting CO<sub>2</sub> emissions by 80 percent by 2050 requires establishing a "price signal," which will allow industries to plan and will encourage markets to develop in a way that eliminates or captures emissions as efficiently as possible. This system must have several components:

■ <u>Domestic cap-and-trade; invest in coal and nuclear.</u> We recommend you implement <u>an economy-wide cap-and-trade program</u>, as you pledged in your campaign. Each year the government will either allocate emissions rights or auction them, and companies will buy and sell rights among themselves. Annual emission allowances will decrease over time—eventually cutting total emissions by 80 percent—with responsibilities shared among oil refineries, power plants and energy-intensive industries.

You have supported auctioning permits, as opposed to allocating them, as more efficient and less subject to political distortions. To control inadvertent stringency or laxity in the cap, you also should consider supporting the "banking" and "borrowing" of emissions permits.

Last summer cap-and-trade legislation failed in the Senate, with many Democrats from both coal-producing and coal-dependent states opposed. The coming recession will hit those states particularly hard, making these key votes even tougher to obtain. You can clear this political hurdle in <a href="https://doi.org/10.108/j.com/recession-number-10.108/j.com/recession-

- First, explicitly commit to use a portion of the auction revenue to pay for your medium-term alternative energy investments.
- Second, launch a 20-year R&D initiative to prove that carbon capture and storage technologies are viable and can be provided at reasonable cost. Coal is abundant, indispensable and—if carbon emissions continue unabated—devastating for the earth's climate. More than half of our electricity comes from coal, and over 200 years' worth of coal reserves lie within our borders.
- Third, we recommend that you work domestically and internationally to license and build the next generation of nuclear reactors. Industry should develop a plan of action to raise

the contribution of atomic power to 35 percent by 2050. Industry and regulators together must guarantee public safety on nuclear waste storage, and your diplomacy is needed to ensure that expansion of civilian nuclear power is both environmentally safe and strategically secure.

■ International: global energy diplomacy built on domestic action. Once domestic legislation is passed—but not before then—you will be in a position to negotiate a General Agreement to Reduce Emissions (GARE). Replacing the Kyoto Protocol with a "general agreement" will take advantage of lessons learned in successful trade negotiations. For example, the process must start with domestic U.S. action and then ratchet upwards, in sync with other nations. It would be particularly helpful if Congress grants you "Climate Protection Authority" – also patterned on "Trade Promotion Authority." Once so empowered, you and your negotiators can work with other nations to align mutual ambitions in cutting carbon emissions and establishing a system to trade emissions permits across borders.

The GARE will avoid another major drawback of a "treaty protocol": it does not need a two-thirds majority in the Senate, a minefield where countless treaties go to die. It requires only simple majorities in both houses.

Ask Congress for a resolution supporting a broader energy security diplomatic campaign that addresses a range of energy security issues. This would include convening of a <u>special "E8" summit</u>, bringing together the top eight energy consumers and contributors to the climate crisis: the United States, European Union, China, Russia, India, Japan, Brazil and South Korea.

This campaign should put a special emphasis on an <u>international collaborative effort to address coal</u>, which has the potential to transform the climate debate worldwide. This should include making good on the U.S. promise to contribute to the new Clean Technology Fund at the World Bank – an effort spearheaded by Secretary Paulson, and which likely would be well received in the developing world. A new coal-fired electricity facility is added in China every week, and the economies of India, Pakistan, Indonesia, South Africa and Poland depend on coal. The United States must both lead and cooperate.

One-on-one energy diplomacy will be vital with China and India, in particular. Neither bears any responsibility under Kyoto, and both are reluctant to take on new obligations. They must come to see their own interest in building a more reliable and environmentally sustainable energy future. Both also must become critical partners in confronting nuclear renegades, such as Iran and North Korea.

Even with dramatic oil-price declines, powerful oil-rich nations (such as Russia and Saudi Arabia), as well as hostile regimes (such as Venezuela and Iran), must be central in your thinking about the broader energy security challenge. The <u>fall in oil revenue</u> will pose major problems for the stability of the entire group of oil-rich states, even if it does not affect their outward taunts and behavior. It is in our country's interest and theirs to begin to work toward ensuring "stability of oil demand" in exchange for "stability of oil supply."

 Reorganizing Government. A new era in energy policy will require a thorough going overhaul of our governing institutions.

At the White House, a new National Energy and Climate Council, patterned on either the successful National Security Council or National Economic Council models, will dramatically signal the urgency of these issues. This will require a redesign of the 10 energy-related Cabinet agencies and corresponding committees of Congress.

Specifically, the Department of Energy (DOE), Department of the Interior and Environmental Protection Agency will need to be redesigned to:

- advance the clean energy investments you have proposed
- reorder policy priorities towards energy efficiency, and

develop less intensively carbon-based fuels and end-use technologies. In particular, you will also have to determine whether DOE, EPA, Treasury, or a new SEC-type agency should establish and operate the domestic emissions trading system. Given the oversight shortcomings that contributed to the recent financial crisis, any new market must be well regulated.