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## Building on President Obama's Clean Energy Successes

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When President Barack Obama took office in January 2009, there was a long list of incomplete or ignored clean energy and public health measures from the George W. Bush administration. A month earlier, during President-elect Obama's transition, the Center for American Progress identified the "Top 10 Energy and Environment Priorities for the Obama Administration and the 111th Congress."<sup>1</sup> Earlier this year, we determined that the administration had accomplished nearly all of these goals despite facing the worst economy in nearly 80 years and strong opposition from Big Oil, coal, and other energy interests.<sup>2</sup>

The reduction of industrial carbon pollution responsible for climate change, however, is the biggest unfinished item from the president's first term. In December 2012 President Obama acknowledged this, telling *Time* magazine that his "primary focus is going to continue to be on the economy, on immigration, on climate change and energy."<sup>3</sup> The urgency to address climate change was reinforced with the release on January 11, 2013, of the draft National Climate Assessment, a comprehensive analysis of the effects of climate change in the United States.<sup>4</sup> This work, which includes the findings of hundreds of scientists, concluded that:

Climate change is already affecting the American people. Certain types of weather events have become more frequent and/or intense, including heat waves, heavy downpours, and, in some regions, floods and droughts... These changes are part of the pattern of global climate change, which is primarily driven by human activity.

Many of the top energy and environmental priorities for President Obama's second term, therefore, should reduce industrial carbon pollution by boosting investments in clean energy technologies, protect public health by reducing pollution from the largest emitters, and help communities cope with the increase in frequency and severity of extreme weather events linked to climate change.

Below are the top 10 energy and environmental priorities for President Obama's second term.

Top 10 energy and environment priorities for the president's second term	Requires congressional action?
Reduce carbon pollution by 17 percent below 2005 levels by 2020.	No
Reduce "short-lived climate pollutants" by adding the phase out of hydrofluorocarbons, or HFCs, to the Montreal Protocol for ozone-layer protection.	No
Finalize a new international climate protection treaty.	No; treaties require Senate ratification
Raise designated revenue to help communities become more resilient to climate- change-related extreme weather events.	Yes
Issue a new and more protective ozone smog health standard.	No
Limit the production of dirty tar sands oil by rejecting the Keystone XL pipeline.	No
Reduce pollution and oil use from vehicles.	Some
Use federal lands and waters, where appropriate, to support clean energy deployment.	No
Establish federal policies that increase demand for clean electricity.	Clean Energy Standard: yes; others: no
Reform the tax code to favor clean renewable energy and end Big Oil tax breaks.	Yes

Let's look at each of the above priorities in greater detail.

### Reduce carbon pollution by 17 percent below 2005 levels by 2020

In 2009 President Obama committed the United States to 2020 carbon-pollution levels "in the range of" a 17 percent reduction below 2005 levels.<sup>5</sup> The Energy Information Administration recently determined that the United States is halfway to this goal because carbon pollution has already been reduced by 9 percent below 2005 levels.<sup>6</sup> This is due to reductions of carbon pollution from motor vehicle emissions, lower demand for electricity, and a shift from coal to natural gas and renewable electricity generation. The Energy Information Administration, however, projects that carbon pollution from the energy sector will rise again beginning in 2017 without additional action because fossil-fuel-generated electricity will grow.<sup>7</sup>

The United States should continue to reduce its pollution by setting carbon-pollution standards for existing power plants, oil refineries, and other major industrial sources under the federal Clean Air Act. The Natural Resources Defense Council, for instance, proposed a carbon-pollution-reduction program for power plants that would cut their pollution by one-quarter. To accomplish this goal, the Environmental Protection Agency would do the following:

Set state-specific limits on carbon pollution that reflect the fact that some states depend heavily on high-carbon energy sources like coal-fired power plants, while others rely more on cleaner-burning natural gas and renewable resources like wind and solar. It would then give states a wide range of affordable ways to meet their goal. Our analysis shows that the most cost-effective way would be through energy efficiency.<sup>8</sup>

The Natural Resources Defense Council's proposal would reduce total carbon pollution by an additional 5 percent below 2005 levels by 2020, which would get the United States four-fifths of the way to the 17 percent reduction goal by 2020.<sup>9</sup>

A price on carbon pollution from major sources could complement such a pollutionreduction standard. A progressive carbon tax would put a price on carbon pollution and other greenhouse gases, creating an economic incentive to emit less.<sup>10</sup> The billions of dollars in revenue that is projected to be generated from the tax could be rebated to middleand lower-income households to offset higher energy prices. The remaining funds could boost investments in emerging clean energy technologies and/or reduce the federal deficit.

# Reduce 'short-lived climate pollutants' by including a phase out of hydrofluorocarbons in the Montreal Protocol

There are other more potent greenhouse gases that produce a greater increase in temperature even though they decompose much faster than carbon dioxide.<sup>11</sup> These greenhouse gases are called "short-lived climate forcers."<sup>12</sup> They include pollutants such as black carbon or soot, methane, and hydrofluorocarbons.

In February 2012 the State Department created the international Climate and Clean Air Coalition, an alliance of 25 nations committed to the worldwide phase-out of these potent greenhouse gases.<sup>13</sup> Efforts are now underway to curtail black carbon and methane.<sup>14</sup>

It is essential that we also phase out hydrofluorocarbons. They are a radically more powerful greenhouse gas than carbon dioxide, and their emissions levels are projected to double by 2020.<sup>15</sup> Eliminating hydrofluorocarbons would cut in half the gap between current global pledges to reduce climate pollutants by 2020, which is necessary if we hope to limit the increase in global temperature to 2 degrees Celsius.<sup>16</sup>

The most effective way to eradicate hydrofluorocarbons would be to include them in the Montreal Protocol. The Montreal Protocol is a 25-year-old international agreement negotiated in the 1980s under then-President Ronald Reagan that has cost-effectively phased out the use of chlorofluorocarbons, or CFCs, and other ozonelayer-depleting substances.<sup>17</sup> President Obama must promptly open negotiations to add hydrofluorocarbons to the protocol.

### Finalize an international climate protection treaty

Many opponents of U.S. carbon-pollution reductions argue that other nations must also cut their pollution to stave off the worst damages from climate change. They have a point: Even if the United States dramatically stems its own pollution, gains could be offset by increased carbon pollution from China, India, and other rapidly developing countries.

Fortunately, the 2011 U.N. Framework Convention on Climate Change in Durban, South Africa, agreed to begin the process of negotiating a new international climate treaty that must be completed by 2015.<sup>18</sup> Significantly, it is "applicable to all parties" to the U.N. Framework Convention on Climate Change, allowing for the first time that a global agreement must require pollution reductions from every nation, not just the developed ones.<sup>19</sup> The Obama administration should actively negotiate this agreement and persuade the public and Congress of the treaty's importance well before it is finalized.

# Raise dedicated revenue to help communities become more resilient to the impacts of global warming

The deadly superstorm Sandy was just one of 25 climate-related extreme weather events that caused at least \$1 billion in damages in the United States from 2011 to 2012.<sup>20</sup> The National Climate Assessment draft confirmed that such devastating storms, floods, droughts, heat waves, and wildfires will only worsen if no action to curb global warming is taken. The National Climate Assessment concluded that:

Climate change and its impacts threaten the well-being of urban residents in all regions of the U.S. Essential local and regional infrastructure systems such as water, energy supply, and transportation will increasingly be compromised by interrelated climate change impacts.<sup>21</sup>

The federal government must help communities protect themselves from the future surge of extreme weather events by employing both manmade defenses and natural systems. Infrastructure improvements must include "hardening" community shelters, water-treatment facilities, electricity transmission, roads, and other vital infrastructure. We must also move to protect wetlands that can buffer storm surges and sea-level rise and significantly reduce flooding.<sup>22</sup>

Clearly, cities will need assistance with these resilience efforts. The federal government should create a dedicated revenue stream for this essential purpose, which will save \$4 in damages for every \$1 spent on resilience.<sup>23</sup> CAP proposes that President Obama designate a blue-ribbon bipartisan panel to identify and recommend a reliable revenue stream for community resilience.<sup>24</sup> Panel members should include elected officials, business

people, first responders, and civic leaders from states that recently suffered from severe extreme weather events. After an opportunity for public comment on the panel's recommendations, President Obama and Congress should adopt them.

# Issue a new ozone smog health standard based on the latest recommendations from physicians and scientists

In September 2011 the Obama administration rejected a recommendation from the Environmental Protection Agency and its Clean Air Scientific Advisory Committee to strengthen the public-health standard for ozone smog to reflect the latest scientific and medical information.<sup>25</sup> The Environmental Protection Agency projected that the proposed standard would annually have saved up to 12,000 lives and prevented 21,000 hospitalizations.<sup>26</sup> Instead, the administration chose to maintain the weaker, less-protective standard issued by former President George W. Bush.

The Obama administration said that it rejected the proposed standard because "work is already underway to update a 2006 review of the science that will result in the reconsideration of the ozone standard in 2013."<sup>27</sup> It is incumbent upon the administration to propose an ozone standard in 2013 that is at least as protective as the earlier proposal.

# Limit the production of dirty tar sands oil by rejecting the Keystone XL pipeline

President Obama has already approved several unprecedented measures to reduce carbon pollution from vehicles.<sup>28</sup> This progress, however, could be undone by the approval of the Keystone XL pipeline.

The pipeline would ship carbon-intensive tar sands oil from Alberta, Canada, to the Gulf Coast. This oil produces between 8 percent and 37 percent more carbon pollution per barrel than conventional oil because tar sands oil requires prodigious amounts of energy to mine.<sup>29</sup> The ability to easily ship more oil sands to the United States would spark a more than twofold increase in tar sands oil production from 2012 to 2025.<sup>30</sup> Without the pipeline, there would be a much smaller increase in tar sands production by 2020, and it would remain static after that.<sup>31</sup>

We don't need tar sands oil for our energy security. In December 2012 the Energy Information Administration projected that, "Crude oil production … rises sharply over the next decade."<sup>32</sup> Under current energy policies, domestic oil production will grow by 2 million barrels per day between 2010 and 2020—a 36 percent increase.<sup>33</sup> This growing domestic oil production, combined with the improved vehicle fuel-efficiency standards to double fuel efficiency by 2025, means that foreign oil imports will fall by one-quarter between 2010 and 2020.<sup>34</sup> President Obama and future Secretary of State John Kerry should reject the permit for the Keystone XL pipeline.

### Reduce pollution and oil use from vehicles

We must further reduce smog from vehicles and fuels by adopting the Environmental Protection Agency's pending "Tier 3" rule by the end of 2013. The rule would further reduce automobile tailpipe emissions with improved technology that lowers the emission of smog-forming pollutants.<sup>35</sup>

Additionally, lowering the sulfur content in gasoline would achieve the pollution-reduction equivalent of eliminating 33 million passenger vehicles from the road.<sup>36</sup> The pending tailpipe and fuel standards could cost less than one penny per gallon of gasoline and only add approximately \$150 to the price of a new vehicle.<sup>37</sup> The Tier 3 rule is supported by automakers and states.<sup>38</sup>

An increase in the use of plug-in hybrid and all-electric vehicles would also dramatically reduce oil use and carbon pollution. These alternative vehicles are becoming more popular. *Motor Trend* reported, for instance, that the Chevrolet Volt, the first plug-in hybrid, "saw sales leap 206 percent ... to a respectable 23,461 cars in 2012."<sup>39</sup> A vital step to encourage the purchase of these low- or no-oil vehicles is the creation of public recharging infrastructure. Congress should enact President Obama's bipartisan "race to the top" proposal to assist interested communities with their plans to build electricvehicle-recharging capacity.<sup>40</sup>

President Obama should also work with Congress to increase investment in our public transit infrastructure. Millions of Americans are forced to use their cars because they lack access to affordable, convenient buses or subways. Yet the American Public Transportation Association reported that, "Transit reduces annual fuel use by the equivalent of 4.2 billion gallons of gasoline."<sup>41</sup> Every \$1 billion of investment in public transportation infrastructure supports 36,000 jobs in a variety of industries.<sup>42</sup>

Despite these overwhelming benefits, our public transportation infrastructure is woefully underfunded. A recent CAP report, titled "Meeting the Infrastructure Imperative: An Affordable Plan to Put Americans Back to Work Rebuilding Our Nation's Infrastructure," found that an additional investment of \$15.7 billion annually—a relatively small amount compared to the trillion-dollar federal budget—is needed to meet our most urgent public-transportation infrastructure needs.<sup>43</sup> This would increase oil savings and create jobs.

# Use appropriate federal lands and waters to support clean energy deployment

Federally owned real estate produces coal and natural gas used to generate electricity. Approximately 43 percent of all coal and 20 percent of all natural gas currently produced in the United States comes from public lands or waters.<sup>44</sup> Despite the tremendous potential of clean energy production on federal property, only 1 percent of the country's wind electricity and practically none of its solar power comes from public lands and waters.<sup>45</sup>

The Department of the Interior already met the president's goal of authorizing 10,000 megawatts of renewable energy on federally managed waters and lands.<sup>46</sup> The federal government should build on this success by implementing a "clean resources standard" for public lands and waters. This standard would require federal land and water management agencies to ensure that 35 percent of the electricity from resources on public lands is clean and renewable—from wind, solar, geothermal, biomass, and small hydropower. To meet this target by 2035, we should also reduce the coal mined from our public lands—much of which is subsidized by taxpayers and exported to China and other nations.<sup>47</sup>

When done responsibly, electricity generation is an appropriate use for many public places. It is important, however, that any energy deployment on public lands avoids sensitive areas, employs the most modern technology, and is in full compliance with environmental laws.

## Establish federal policies that increase demand for clean electricity

The sobering National Climate Assessment draft increases the urgency of shifting from carbon-pollution-spewing fossil fuels to clean, renewable electricity. Increasing demand for clean energy is essential to providing investors with more certainty about the return on their investment in emerging technologies. There are several policies that could accomplish this goal.

Thirty-one states and the District of Columbia require their utilities to generate a designated portion of their electricity from wind, solar, geothermal, and other renewable energy sources.<sup>48</sup> These programs have encouraged investments in clean power sources and helped to nearly double the nationwide generation of renewable electricity over the past four years.<sup>49</sup>

President Obama proposed a similar clean energy standard that would require utilities to produce 80 percent of their electricity from no- or low-carbon sources by 2035.<sup>50</sup> It is essential that a clean energy standard require at least 35 percent of the total electricity generation in 2035 to come from renewables and efficiency measures. This will provide certainty about the market demand for clean energy.<sup>51</sup>

In 2009, President Obama provided a boost to clean energy investments with an executive order requiring that federal agencies become more sustainable. Executive Order 13514 directs:

Federal agencies to reduce greenhouse gas pollution ... and leverage Federal purchasing power to support innovation and entrepreneurship in clean energy technologies.<sup>52</sup>

The order sets a goal for agencies to "use at least 5 percent electricity from renewable sources."<sup>53</sup> Some agencies have already met this target, including the Department of Energy and the General Services Administration.<sup>54</sup> The administration should require all federal agencies to achieve this measure by 2014. Federal agencies should meet a 10 percent renewable standard by 2017 and a 15 percent standard by 2020. This would notably increase demand for renewable electricity.

# Reform the tax code to favor clean, renewable energy and end Big Oil tax breaks

The Congressional Research Service estimates that fossil-fuel producers received \$156 billion from tax provisions over the past 34 years, compared to only \$58 billion for renewable electricity and efficiency companies.<sup>55</sup> The tax cuts on fossil fuels include special tax breaks for oil companies that date back to the Woodrow Wilson administration.

The special tax provisions that benefit the oil and gas industry are permanent, costing taxpayers nearly \$8 billion annually.<sup>56</sup> Meanwhile, the production tax credit for wind energy costs about \$1 billion per year, and it expires at the end of 2013.<sup>57</sup>

President Obama has repeatedly proposed eliminating tax breaks for Big Oil and gas companies, but Congress has refused to comply.<sup>58</sup> Any serious tax reform legislation must eliminate special tax breaks for these mature, highly profitable companies and extend programs that encourage renewable energy development; this would provide planning certainty for investors. Congress should also expand the investment tax credit currently available for solar energy projects to apply to offshore wind installations as well.

#### Conclusion

The deluge of climate-related extreme weather events over the past few years are harrowing warning sirens telling us that we must take comprehensive action to reduce carbon and other pollutants responsible for climate change. There is a flood of scientific evidence confirming that the climate is changing for the worse. On January 8, 2013, the National Oceanic and Atmospheric Administration confirmed that 2012 "was the warmest year in the 1895-2012 period of record" for the continental United States.<sup>59</sup> NASA climatologist Gavin Schmidt noted the following: "One more year of numbers isn't in itself significant. What matters is this decade is warmer than the last decade, and that decade was warmer than the decade before. The planet is warming. The reason it's warming is because we are pumping increasing amounts of carbon dioxide into the atmosphere."<sup>60</sup>

Beginning with his speech on election night, President Obama has repeated that he intends to tackle climate change in his second term. In his acceptance speech, he said, "We want our children to live in an America … that isn't threatened by the destructive power of a warming planet."<sup>61</sup> Implementing these energy and environmental priorities would reduce the carbon and other pollutants responsible for climate change. It would also protect public health by cutting other air pollutants and reducing oil use, and the latter would benefit the economy and energy security. Taken together, action on these priorities would create a legacy of which any president would be proud.

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