

Climate Change and Renewable Energy Technology In the Obama Administration

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The United States has lost prestige and leadership capability worldwide on environmental issues because it is the only influential country that has not participated in the climate change regime or committed to reduce greenhouse gas emissions. Today, Europe is heading up actions around this issue, largely due to its having acted jointly as the European Union, thereby increasing its weight globally.

Barack Obama's United States is very interested in changing this state of affairs. The new president's plan seeks to recover his country's prestige, give confidence to the world and regain

leadership in matters of climate change, energy and technology. "If we are to be a leader in the 21st century global economy, then we must lead the world in clean energy technology."¹ Obama is betting on clean energy technology in the short and medium terms to save the United States from the crisis and position it in world competition.

THE TECHNOLOGICAL CHALLENGE

Europe, for its part, having taken on commitments to reduce emissions, has put in place a series of incentives in the last decade to develop clean energy, like wind, solar and nuclear

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energy. This is responsible for the fact that, today, companies based in the European Union report higher investment levels in new technology and innovation in alternate energy sources than their U.S. counterparts; this sets red lights blinking in the United States in terms of technology competition.

This is the sad state of affairs that the Obama administration has recognized, making it the first U.S. administration in history that has actually presented the problem of climate change as a challenge that will stimulate the development of renewable energy technology. It will be a long-term plan that must nonetheless be implemented immediately because estimates say that fossil fuels will only last about another 40 years. The plan consists of reducing the country's profound dependence on coal, gas and oil by investing enormous amounts in researching and developing the alternative technologies that can be created domestically.

THE PROMISES

As a candidate, Obama announced an ambitious project to deal with climate change. The goal was to reduce greenhouse gas emissions by about 80 percent by the year 2050. He promised to invest the amazing sum of US\$150 billion over 10 years in research on advanced technologies. After he became president, he proposed that Congress double the science and technology budget because, as he warned, the United States is losing the global technology race, particularly with regard to renewable energy.

Along these same lines, he hopes to create five million jobs in the technology sector, a large number of which would be "green jobs," so that in four years, 10 percent of energy would come from alternative sources, and by 2025, 25 percent. In an attempt to reduce dependency on countries and regions in conflict, over the next 10 years, the idea is to save more oil than is currently imported from the Middle East and Venezuela. These measures would not only foster the development of clean technologies and benefit the environment, but would also lessen the risk of serious clashes with other countries that could eventually lead to war.

In addition, the plan would put in place a series of regulations that would reduce the consumption of dirty energy in public buildings, government installations and schools, as well as curtail energy waste through efficient practices. Among other things, this would include generating 25 percent of electricity from other sources, like sunlight and the wind.

To do this, an efficient, obligatory mechanism must be introduced that will punish anyone who increases greenhouse gas emissions and rewards those willing to reduce them. The essence of a system of this kind is known as "cap and trade," and consists of establishing a greenhouse gas emission ceiling for corporations and setting quotas for companies in the most polluting sectors. So, firms that by nature generate emission levels higher than established limits will be forced to buy permits (or what are called allowances) on the market. In other words, the idea is to establish a federal carbon-emissions market.

This mechanism is similar to the one the European Union set up in 2005, which has probably been the main factor that has effectively stimulated the development of new technologies. California and an increasing number of regions throughout the United States have implemented systems of this type in recent years. However, on a federal level, high polluting but politically influential sectors have prevented legislation of this type from being made mandatory

THE FACTS

To attain his ambitious objectives, Obama has created a high-level group of energy, climate and technology advisors. It includes the U.S. secretary of energy; the renowned Nobel Prize winner Steven Chu, one of the most prestigious scientists in the field of climate change; Carol Browner, with broad environmental experience, who was named the president's assistant for energy and climate change, a new position created specifically because of the issue's importance; and climate change expert Dr. John Holdren, named the president's assistant for science and technology and the head of the Office of Science and Technology Policy. This is a post that Republican administrations tend to underestimate; it

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operates under the aegis of the executive branch and functions as a coordinating office.

The appointment of a real authority on the subject, Todd D. Stern, as “climate change czar” underlines how important the issue is to the new administration, even on a foreign policy level.

Another positive sign is that the 2009 budget for energy already includes the implementation of a cap-and-trade system by 2012. Given that this is quite complex, there has to be a series of preparatory measures that have already been included in the budget. This mechanism is expected to reduce carbon dioxide emissions 14 percent by 2020 and 83 percent by 2050. The recently passed budget earmarks US\$39 billion for research into clean energy technologies, a substantial increase.

April 17 of this year was a memorable day in the history of climate change: the U.S. Environmental Protection Agency took the first step toward building a legal system to regulate climate change in the United States by declaring that greenhouse gases are serious pollutants that “endanger public health and welfare.”² If this measure, currently under consultation for two months, is approved, the question of climate change will be officially recognized, with a legal framework that will inaugurate a new era.

This will lead to a series of measures to limit atmospheric pollution linked to climate change; they may be administrative or legislative changes as the Obama administration prefers, according to the results of the consultation. The next step would be to go to Congress to create the cap-and-trade system.

Undoubtedly, the key to effective regulation of climate change is precisely putting in place a U.S. cap-and-trade system. The bill has already been written by Democratic Congressmen Henry A. Waxman (Calif.) and Edward J. Markey (Mass.). Today, it is the subject of lively debate among legislators. The idea is to convince at least 60 of the 100 senators and turn it into law this year.

It is a very complex proposal, but its basic tenet is that by 2012, the government would be able to impose national limits (caps) on greenhouse gas emissions and begin trading pol-

luting permits (allowances) so some polluters will be able to purchase allowances to pay for their emissions either from the government itself or from other corporations. Despite the lack of Republican support at the beginning of the process, the bill's proponents are optimistic about getting the votes they need.

Another important advance in the same direction is the president's recent proposal to create an Biofuels Interagency Working Group. This is good news despite there being quite a bit of controversy about the environmental impact of some biofuels. The new presidential directive specifically supports the use of new generation biofuels like the ones based on cellulose, diesel made from biomass, advanced technologies and other completely new varieties. This measure even seeks to generate technologies that can extract some of the gases emitted from the atmosphere.

Despite being the world leader in biofuel production, the United States has been severely criticized both for offering high subsidies and for using rather old-fashioned traditional technologies that create various problems. For example, in years past, the high subsidy for ethanol production made from corn contributed to increasing the price of corn and creating a scarcity of this basic grain on the world market. International bodies warned at that time that if foodstuff-based biofuel production continued to increase, it could cause widespread starvation worldwide.

If the measures the Obama administration has proposed are put into effect first in the United States, the government would be in a position to take on international commitments and propose a system, treaty or regime to lessen the effects of climate change globally. With this, it would avoid having to attend the global negotiations on climate change at the end of this year in Copenhagen. **NM**

NOTES

¹ “President Obama Announces Steps to Support Sustainable Energy Options,” The White House, May 5, 2009, available at http://www.whitehouse.gov/the_press_office/President-Obama-Announces-Steps-to-Support-Sustainable-Energy-Options/.

² See <http://yosemite.epa.gov/opa/admpress.nsf/0/OEF7DF675805295D8525759B00566924>. [Editor's Note.]