

# Energy Efficiency & Renewable Energy

## Take Center Stage in the Obama Era

The 2008 election of President Barack Obama and the expansion of Democratic majorities in both houses of Congress have ushered in an era of legislative and regulatory activity in the United States focused on renewable energy and energy efficiency. The American Recovery and Reinvestment Act (ARRA) and other federal actions in 2009 dramatically altered the national landscape for energy policy.

by Shelley Fidler,  
Shannon Angielski,  
Asha Venkataraman,  
and Henry Stern

The authors represent Van Ness Feldman, PC, a leading energy, climate, and natural resources law and policy firm. **Shelley Fidler** is a principal, **Shannon Angielski** is senior director of governmental issues, and **Asha Venkataraman** and **Henry Stern** are associates. E-mail: [snf@vnf.com](mailto:snf@vnf.com).

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Some of the biggest changes have yet to come, as Congress inches closer to passing comprehensive climate and energy legislation. Those companies that effectively navigate the dynamic, complex legal and regulatory landscape can capitalize on the wave of government support for what President Obama referred to during his campaign as the “New Energy Economy.” This article offers a bird’s eye view of the policy changes in 2009 that could redefine the national landscape for renewable energy and energy efficiency in the United States.

## **Legislative and Regulatory Developments in 2009**

### **Stimulating the Economy through Investment in Renewables and Efficiency**

In response to the global economic crisis, the 111th U.S. Congress enacted, and President Obama signed, ARRA on February 17, 2009. Among the expenditures designed to stimulate the economy, it provides the largest ever public investment in renewable energy and energy efficiency—totaling more than \$43 billion. The U.S. Department of Energy (DOE) has major responsibility (the U.S. Department of Defense, the General Services Administration, and the U.S. Environmental Protection Agency [EPA] also have some authority) for implementing the energy portions of ARRA with \$36.7 billion in funding for programs, including state weatherization assistance programs; loan guarantees for renewable energy, smart grid, and transmission projects; and grant funding for projects involving alternative fuel vehicles, transportation electrification, industrial efficiency, combined heat and power, and advanced battery manufacturing. Overall, DOE had awarded 59.1% of ARRA funds as of December 21, 2009, but only 5.1% have actually reached recipients, since DOE must typically negotiate terms of agreement prior to “spending” the money. Nevertheless, the Obama Administration continues to assert that it is on track to meet its goal of doubling renewable energy generation (to 55.6 GW nationwide) by 2012.

### **Major Climate and Energy Legislation Moving in Congress**

Democratic leaders in Congress are also using the party’s strengthened majority to advance comprehensive climate change and energy legislation. In June 2009, the U.S. House of Representatives

narrowly passed the most comprehensive piece of energy and environmental legislation in history—the American Clean Energy and Security Act of 2009 (Waxman–Markey). The bill would establish an economy-wide cap on greenhouse gas (GHG) emissions. By making it more expensive to emit carbon dioxide (CO<sub>2</sub>), the cap would increase the cost-effectiveness of investments in renewable energy and efficiency. If the Waxman–Markey bill becomes law, the U.S. Energy Information Administration estimates renewable electricity generation will increase more than 28% above its base case scenario by 2030, while electricity demand is projected to drop 29%.

The American Clean Energy Leadership Act of 2009—approved in June by the Senate Energy and Natural Resources Committee—contains many energy-related provisions included in Waxman–Markey, such as a combined renewable electricity and energy efficiency standard; national energy efficiency standards for buildings, homes, equipment, and appliances; financing mechanisms for manufacturers to adopt advanced energy efficient production technologies and processes; and reforms to make the electric transmission grid more efficient and less carbon intensive.

### **Federal Agency Actions to Promote Renewables and Energy Efficiency**

While Congress considers these bills, federal agencies are pushing ahead with their own agenda for promoting renewables and efficiency.

In 2008, after years of resisting GHG regulation under the U.S. Clean Air Act (CAA), EPA made a finding that GHG emissions from motor vehicles contribute to climate change, posing a danger to America’s public health and welfare. This finding allows EPA to promulgate emissions standards for “mobile sources” of GHGs, which could take effect as early as March 2010. Once motor vehicles become “subject to regulation” under these CO<sub>2</sub> regulations, a new set of regulations will be triggered, requiring stationary sources to utilize the “best available control technology” to reduce GHGs, which could take effect as early as May 2010.

The looming prospect of unilateral action by EPA to shape national climate policy has prompted some

companies to push for legislation that avoids the rigid command-and-control approach employed under the existing CAA. Comprehensive reform could potentially provide more flexible compliance mechanisms with stronger policies to promote renewables and efficiency, and ease the burden of transitioning to a low-carbon economy.

The Obama Administration is not just regulating the private sector; it is addressing its own energy usage as well. Executive Order 13514 ("Federal Leadership in Environmental, Energy, and Economic Performance") requires all federal agencies to establish baselines and targets for reducing GHGs, pursue renewable energy projects on agency property, decrease fossil fuel use through alternative fuels, and optimize vehicle usage.

The cumulative effect of these actions has fundamentally shifted how energy policy is viewed by government, industry, and the nation as a whole, and renewables and energy efficiency have emerged as favored solutions to defray the cost of future GHG regulation and stimulate economic recovery.

## The Road Ahead

Future action by the United States on climate change would grow the market for renewables and energy efficiency. Three interrelated processes will determine the extent of such action in the coming months—the Senate debate over companion legislation to the House-passed bill, EPA's efforts to regulate GHGs, and the Obama Administration's participation in the international negotiations to develop a legally binding climate change treaty.

Despite positive signals of increased accountability that emerged in the Copenhagen Accord, a legally binding treaty—which would require the President's signature and ratification by two-thirds of the Senate to take effect in the United States—remains elusive. The Copenhagen Accord, drafted by the United States, China, India, Brazil, and South Africa, and "noticed" by Parties to the United Nations Framework Convention on Climate Change (UNFCCC), was primarily a political agreement, an interim step toward a successor treaty to the Kyoto Protocol.

Under the Copenhagen Accord, developed nations must submit to the UNFCCC by January 30,

2010, their "individual or joint" commitments to "economy-wide" 2020 GHG emissions reduction targets. Developing nations must submit a list of "nationally appropriate mitigation actions" and allow "international measurement, reporting, and verification" of these actions. The Accord also requires developed countries to collectively fund \$10 billion per year in climate change adaptation and mitigation efforts in developing nations from 2010 until 2012. It lays the groundwork for future international negotiations, while signaling to the U.S. Senate that the major emerging economies are willing to be held accountable for implementing actions to mitigate climate change.

A few new approaches have already been proposed in the Senate, which, if passed, would then have to be reconciled with the House of Representatives-passed Waxman–Markey bill in a Senate/House Conference Committee in a single bill, which would then have to be approved by both chambers of Congress before being sent to President Obama for signature.

The leading Senate proposal thus far has been the Clean Energy Jobs and American Power Act (S. 1733), introduced by Sens. Kerry and Boxer. The Kerry–Boxer bill mirrors much of the design of the Waxman–Markey bill, but has failed to attract the support of key moderates in the Senate.

Sens. Cantwell and Collins introduced a competing "cap-and-dividend" bill—the Carbon Limits and Energy for America's Renewal Act (S. 2877)—which would overhaul the Waxman–Markey approach and could potentially attract votes from Senate moderates wary of creating a massive economy-wide emissions trading market. Under the Cantwell–Collins bill, only producers and importers of coal, natural gas, and oil would be subject to regulation, and these entities would be restricted to purchasing allowances at auction or trading among themselves. This cap-and-dividend bill aims to contain costs, not through offsets, but by imposing a ceiling and floor on the auction prices of allowances, and by plowing 75% of auction revenues back to U.S. taxpayers through a monthly dividend. However, this bill does not set enforceable national GHG reduction targets; instead, the President is given discretion to establish an initial



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quantity of allowances at an "approximate level... likely to be required by the economy of the United States" in 2012.

The prospects for a Senate compromise remain highly uncertain, though the seeds of a bipartisan compromise bill may have been planted in principles proposed by Sens. Kerry, Graham, and Lieberman to President Obama on December 10, 2009. They focus on reviving U.S. manufacturing through job creation and trade protection, expanding nuclear power and domestic oil and gas production, promoting "clean coal" technology and rigorously regulation of the carbon market.

As discussed above, the prospect of mandatory EPA GHG regulations will ratchet up pressure on Congress to act in 2010. However, EPA's efforts could be halted if Congress passed a law preempting its authority, if funding for EPA's climate regulations was suspended by Congress, or if a

court stayed the regulations pursuant to litigation against EPA.

The details of the final shape of U.S. climate action remain unclear, but a carbon-constrained future looks increasingly certain. Even without an economy-wide cap on GHGs, or the passage of a federal renewable electricity and efficiency standard, the U.S. Energy Information Administration still predicts that 41% of all new electricity between 2008 and 2035 will be from renewable energy (excluding hydropower), the majority of new transportation fuel demand will be met with biofuels, and energy efficiency will reduce overall energy consumption by 15% from where it would otherwise be. Other sectors of the U.S. economy may continue to struggle, but it appears that the future of renewable energy and energy efficiency is bright. **em**