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Climate change 2011: A status report on US policy

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Abstract

A growing partisan divide in Congress stalled almost all new federal climate policy in 2011. The divide frustrated efforts to pass a cap-and-trade carbon permitting system, spawned a battle between the US Environmental Protection Agency (EPA) and Congress, pushed most substantive climate change policy down to the municipal level and hindered US ability to effectively negotiate an international climate agreement. Amid the federal partisan wrangling, US cities have enacted far-sighted climate policy initiatives, and the growing cost of fossil fuels has stimulated investment in renewable energy, edging the country closer to commercially viable alternatives to fossil fuels. These trends could help provide an alternate route to climate mitigation, even without international treaties or national legislation. But the inevitable shift from fossil fuels to renewable energy sources would be greatly hastened by federal action to tax carbon dioxide emissions and use the revenue generated to support alternative energy technologies. That action is extremely unlikely to occur unless climate change comes to be seen in the United States as a practical, rather than ideological, issue.

Keywords

cap and trade, carbon dioxide regulation, cities and climate change, climate change in 2011, climate change partisanship, greenhouse gases, US climate policy

Throughout 2011, the growing partisan divide in Congress stalled new federal climate policy, and it is likely that this will continue to affect US efforts on climate change for the coming year, at least. The overarching reality of this divide has frustrated all efforts to pass a cap-and-trade carbon emissions permitting system; spawned a running battle between the US Environmental Protection Agency, which is in the process of implementing regulations on the emission of greenhouse gases, and Congress, where Republicans and some oil-, gas-, and

coal-state Democrats have tried to block these efforts; pushed most substantive climate change policy action down to the municipal level; and hindered US ability to effectively negotiate an international climate agreement, essentially turning UN conferences into educational tools rather than policy-making venues.

Despite (or perhaps because of) the partisan divide, during the past year US cities have led the way in terms of taking significant action aimed at mitigating and adapting to climate change. And even as partisan disagreement has

kept federal climate change policy at a standstill, alternatives to fossil fuels— particularly solar energy—have become increasingly cost-effective in the United States and around the globe. On a worldwide basis, the transition from fossil to alternative fuels is inevitable. In the United States, the question is whether partisan disagreement on climate change will keep the federal government from providing the support for research that will allow the United States to be a leader in that transition.

A growing partisan divide on climate

It is impossible to deny or ignore the growing partisan divide that has profoundly influenced the US climate debate, making it more polarized even as climate science has become more definitive. Last year, a Gallup poll found that in 2010, only 30 percent of self-identified Republicans believed the effects of global warming were already beginning, a drop from almost 50 percent in 2007. The percentage of convinced Democrats, however, remained at 70 percent or higher during the same period, according to Gallup. A Pew Research Center poll in October 2010 found similar results highlighting the partisan divide, reporting a 40 percentage point difference between Republicans and Democrats believing evidence that the Earth is warming (Marshall, 2010).

The division remains even after factoring in education. A 2011 study found that, among Democrats and liberals, levels of education had a strong correlation with not only a belief in climate

science, but with individual concern about global warming; however, that same study found the opposite effect in the case of Republicans and conservatives (Hoffman, 2011). This persistent gap suggests that climate change has become an ideological issue—much like gun control, taxes, or regulation—that defines what it means to be a Republican or Democrat (Nisbet, 2009). The US divide over climate change involves more than just an understanding of climate science.

Republican aversion to climate policy is best evidenced by the party's 2012 presidential candidates. Many of the Republican candidates are climate change deniers, and though some have acknowledged the validity of the issue in the past, they have retreated from these positions for fear of alienating conservative primary voters. Jon Huntsman, a moderate Republican, is the only GOP candidate to have supported emissions regulations; he even pushed for carbon dioxide cap-and-trade legislation while he was governor of Utah. Huntsman has since backed away from that support, however, claiming now that "this isn't the moment" for a cap-and-trade market. Former Massachusetts Governor Mitt Romney, who is often criticized for flip-flopping, also backed away from previous statements supporting coal regulation and clean-technology investment. He now supports additional use of oil and coal as well as reduced environmental regulation, placing these as key factors in his economic proposal (Romney, 2011). The rest of the candidates consistently question the validity of climate science and cite economic concerns as the reason they are against regulation of carbon emissions.

Issues behind the great divide

The fossil fuel industry has caused much of the political division on climate change through aggressive action to promote skepticism among the public; the industry, typically through conservative think tanks, has funded opposing scientific opinions, economic reports, and public relations campaigns. For example, in 2005 Chris Mooney of *Mother Jones* found 40 ExxonMobil-funded organizations that either sought to undermine mainstream scientific findings on climate change or maintained affiliations with a small group of skeptic scientists (Mooney, 2005). Furthermore, some climate scientists may have contributed to the political divide by moving past their knowledge of climate change to predict socioeconomic impacts and propose policy solutions that go beyond the scope of climate data and models. This combination of science, policy, and advocacy can undermine non-expert confidence in climate science.

But it seems climate skeptics are concerned about the validity of climate change mostly because of its implications for regulation of business. The effort to regulate greenhouse gases would eventually entail some level of government regulation of many aspects of daily life, from the cars Americans drive to the electricity that powers their homes and businesses. Those who are wary of big government dislike this potential intrusion.

Critics of climate regulation argue that it will pose an impossible burden on businesses and stifle a weak economy through higher energy prices. At least in the Republican Party, political dialogue throughout 2011 was dominated by the message that government wastes

money and takes on duties that should be left to the private sector. Emboldened by electoral gains in 2010, conservatives and Tea Partiers continue to emphasize that government is the problem and an unregulated free market is the solution.

Republican fears that climate change regulation would have an enormous negative effect on the US economy appear to be based on faulty assumptions. Past environmental regulation in the United States has been shown to provide a net economic advantage, with benefits vastly outweighing costs. According to the Office of Management and Budget's draft annual *Report to Congress on Benefits and Costs of Federal Regulations*, from October 1, 2000 to September 30, 2010, the estimated annual benefits from environmental regulation were between \$132 and \$655 billion. The costs during that same period were estimated at \$44 to \$62 billion (US Office of Management and Budget, 2011). EPA regulation of carbon dioxide emissions and the mere possibility of climate legislation have already spurred innovation and investment in a wide variety of clean technologies. Firms across all industries are also developing ways to use fewer resources, pollute less, and increase efficiency.

Because of their ideological approach to the climate change issue, however, Republicans tend to emphasize the cost of regulations associated with the shift to renewable energy and downplay or simply ignore possible positive impacts of the shift to alternatives.

The road ahead for federal climate policy

The Obama administration and congressional Democrats are unlikely to press a

climate confrontation with Republicans in 2012, given the current unemployment situation. The Democrats do not want to be seen as the party forcing additional regulation on business during a slack economy. Moreover, congressional Democrats are very unlikely to risk a vote for climate legislation, potentially angering conservatives and industry leaders in their districts, because such a bill has no chance of passing without Republican support, which will not materialize during this presidential election year.

In 2011, Republicans succeeded in the climate change debate primarily by questioning climate science and opposing the idea of regulation as a solution. How climate change, specifically, and regulation, more broadly, are framed during the 2012 campaign will influence subsequent climate policy as much as who wins and who loses the election. If the primary campaign and general election continue to address climate change as a partisan issue that deals with the evils of regulation and the fallibility of science, it is highly unlikely that legislation on carbon dioxide emissions will pass Congress in the ensuing several years. And other political realities suggest the US government is unlikely to move soon to control greenhouse gas emissions in any comprehensive way.

By its very nature, the climate problem is a tough political issue to bring to the policy agenda. The causes of the climate problem are everywhere; they can't be located, like a point source of pollution or a toxic waste dump can. The impacts of climate change are largely in the future, and they cannot be seen or smelled. The US political system, based as it is on places as well as people, will pay more attention to impacts on a specific location

than those that are general—or, in the case of climate change, global.

Although not often discussed in domestic politics, the winner-take-all nature of congressional elections also tends to work against action on issues where consensus has not been reached. In legislative systems with proportional representation, a “green” party might get 10 percent of the votes nationally, 10 percent of elected representatives, and some ability to work in a coalition to move its favored issues. In the United States, a party that gets 20 percent of the votes in every congressional district sends no one to Washington.

For all of these reasons, even though some elected leaders would like to regulate greenhouse gases through comprehensive federal legislation, none was introduced in 2011, and none is likely to be passed in the near future. Despite the absence of new legislation, the courts have decided that the existing Clean Air Act requires the EPA to regulate greenhouse gases.

EPA regulation of greenhouse gases

In October 1999, a coalition of 19 non-profit organizations petitioned the EPA to regulate greenhouse gases emitted by new motor vehicles under the Clean Air Act. The environmental groups claimed that these gases contribute to climate change, endangering public health and welfare, and, therefore, ought to be regulated as air pollutants.

During the George W. Bush administration, the EPA rejected the view that the Clean Air Act required the EPA to address climate change, and a group of 13 environmental organizations and 15 states, territories, and municipalities

filed legal challenges (Environmental Defense Fund, 2011). In 2007, in its landmark decision *Massachusetts v. EPA*, the US Supreme Court found that the EPA has the authority—and, in fact, *the obligation*—to regulate greenhouse gases and instructed the agency to ascertain whether greenhouse gas emissions endanger public health and welfare.

In December 2009, the EPA formally declared that carbon dioxide and five other greenhouse gases are indeed pollutants that threaten public health and welfare. Under the Obama administration, the agency moved ahead with regulation, despite harsh criticism from conservatives in Congress. In May 2010, the agency issued the nation's first regulations for greenhouse gases: rules for passenger vehicles, which required fuel economy of 35.5 miles per gallon to be phased in by 2016 (Environmental Defense Fund, 2011). The EPA also released a “tailoring” rule, the first regulation of greenhouse gases emitted from large stationary sources, primarily coal-fired power plants, refineries, and large factories. Later last year, the EPA released its fuel economy standards for medium- and heavy-duty trucks, also to be phased in over a number of years (Environmental Defense Fund, 2011).

Congressional backlash

Despite the Supreme Court ruling, the EPA has been consistently attacked for attempting to regulate greenhouse gases. Conservative efforts to impede the EPA's policy have included litigation, legislation, and funding restrictions. By January 2010, 16 lawsuits had been filed challenging the agency's finding that greenhouse gases endangered the public. The petitioners included states, Republican members of

Congress, industry trade organizations, and the US Chamber of Commerce.

Members of Congress have also tried—but failed—to legislate a halt to the agency's efforts. In 2009, Sen. Lisa Murkowski, Republican of Alaska, introduced a resolution that sought to nullify the endangerment finding. Despite wide Republican support and the votes of six Democrats, the bill was defeated. In September 2010, Sen. Jay Rockefeller, Democrat of West Virginia, introduced a bill that sought to delay the regulation of stationary sources of greenhouse gases. It did not pass the Senate and, according to Rockefeller, was designed as more of a “message bill” than anything else (Samuelsohn, 2011). In April 2011, the Senate voted down the Energy Tax Prevention Act of 2011, which would have repealed the scientific finding that greenhouse gases endanger public health and safety. In the House, the attempts have been similar—and similarly unsuccessful.

To slow EPA efforts to develop climate rules, members of Congress have also attempted to cut the agency's funding and block its efforts to regulate emissions from cement manufacturing operations and industrial boilers and incinerators. These bills have not passed the House, would likely never reach the floor of the Senate, and would probably be vetoed by President Obama. Such efforts are likely to continue in 2012, however, as Republicans use Congress not so much to legislate as to criticize the EPA with symbolic proposals.

Setbacks for EPA climate regulation

In September 2011, the EPA inspector general released a report questioning the methods used to reach its endangerment finding, contending the agency did

not allow sufficient peer-review for a document of its significance. The report did not evaluate the quality of the EPA's findings, only the processes used (Yehle and Chemnick, 2011). The report questioned whether the supporting technical documents for the finding could be considered a "highly influential scientific assessment," which would require additional peer-review. The EPA maintains that because it did not cover new scientific material, the endangerment finding did not require such an assessment (Eilperin, 2011).

The report has been seized by Republicans as yet another reason to stop EPA regulation. Sen. James Inhofe, Republican of Oklahoma, perhaps the most outspoken congressional critic of climate change policy, claimed the report "confirms that the endangerment finding, the very foundation of President Obama's job-destroying regulatory agenda, was rushed, biased, and flawed... It calls the scientific integrity of EPA's decision-making process into question and undermines the credibility of the endangerment finding" (Yehle and Chemnick, 2011). Inhofe called for Senate hearings on the issue, a call that House oversight committee chairman Rep. Darrell Issa, Republican of California, echoed.

Meanwhile, the EPA announced, also in September, that it would not meet its deadline for issuing rules governing greenhouse gas emissions from power plants and other major sources, marking the second delay of the rules; as of November 2011, a new schedule had yet to be announced.

Finally, in what will surely be seen as a significant blow to EPA regulation, President Obama, appearing to bend to Republican pressure, reversed plans to

tighten EPA smog rules and ordered the agency to deliver a new proposal in 2013. Although the rules do not deal specifically with greenhouse gases, the decision represents a win for Republicans opposed broadly to EPA regulation. If the EPA cannot strengthen smog rules, which are far less contentious than greenhouse gas regulations, how will it succeed in pressing forward on its climate change agenda?

Cities: The front line of attack against climate change

With the federal government mired in ideological warfare, US cities have begun to establish climate action plans and, in some cases, have created targets and timetables for greenhouse gas reductions—feats that most nations have been unable to accomplish. In 2007, for the first time in history, a majority of the world's population lived in cities, and the United Nations has estimated that urban populations will almost double by 2050 (Rosenzweig et al., 2010). Furthermore, cities consume between 60 and 80 percent of energy production worldwide and account for roughly two-thirds of global carbon dioxide emissions (Kamal-Chaoui and Robert, 2009).

Keenly aware of their cities' vulnerability to climate change, municipal-level officials are taking matters into their own hands, identifying the major local sources of greenhouse gas emissions and energy inefficiencies, and developing innovative strategies to address them. Cities are especially vulnerable to climate change: Reductions in precipitation can have serious impacts on water supplies, while sea-level rise, flooding, and increased storm surges can heavily damage local infrastructure.

City governments in the United States have direct authority, independent of the federal government, for decisions on public transportation systems, the built environment, renewable energy, and energy efficiency measures, and the sustainability of service delivery (Kamal-Chaoui and Robert, 2009). And cities are able to create localized solutions. For example, more than two-thirds of New York City's energy use takes place in buildings, compared with a national average of less than one-third, and approximately 75 percent of the city's carbon emissions come from energy use in buildings (PlaNYC, 2007). For that reason, PlaNYC, New York City's long-term sustainability strategy, focuses on energy efficiency in buildings, rather than automobile or industrial efficiency. In 2009, New York enacted ambitious building energy efficiency legislation that covers 22,000 buildings, representing approximately 45 percent of New York's greenhouse gas emissions (PlaNYC, 2010).

There are reasons that city governments can often take greater risks than the federal government. For one, cities tend to be free from the heightened political polarization seen at the federal level. Local policies typically do not draw the news media frenzy that can contribute to the partisan bickering that stifles progress in Washington. As New York Mayor Fiorello LaGuardia once famously said, "There is no Democratic or Republican way of cleaning the streets."

Success of city-led action

Locally led climate action is, of course, not a panacea. A 2009 study found that among US cities with climate action

plans, only 25 percent enumerate specific local impacts and identify adaptive actions (Bassett and Shandas, 2010). A 2011 study by the design consulting firm Arup and C40, a global coalition of cities tackling climate change, found that although members had allocated funding for adaptation measures, just slightly more than half of responding cities had an adaptation plan.

Still, data collected by C40 indicate that member cities—representing 297 million people and generating 18 percent of global GDP and 10 percent of global carbon emissions—have taken 4,734 actions to tackle climate change; another 1,500 actions are in process (Arup, 2011). All that action has produced real results.

For example, in 2005, New York City was responsible for the annual emission of 58.3 million metric tons of carbon dioxide equivalent—roughly 1 percent of the total US carbon emissions (PlaNYC, 2007). In December 2006, Mayor Bloomberg introduced PlaNYC, calling for a 30 percent reduction in greenhouse gases by 2030 and focusing on sprawl reduction, clean power generation, energy efficiency in buildings, and sustainable transportation (PlaNYC, 2007). According to the plan's 2011 update, the city is on track to achieve that goal, having reduced greenhouse gas emissions by 13 percent from 2005 levels (PlaNYC, 2011). The city has also developed the first official Gotham-specific climate change projections, which are being used to identify more than 100 types of infrastructure that could be impacted by climate change and to develop strategies that will increase the climate resilience of the city (PlaNYC, 2010).

Meanwhile, cities have also begun implementing systems for measurement

of carbon emissions, one of the more difficult issues debated during international negotiations. In 2010, the Clinton Climate Initiative and C40 partnered with the Carbon Disclosure Project to establish a common reporting scheme to track and compare city emissions and reduction efforts.

Technology-driven solutions

Although cities are significant stakeholders in the climate change policy debate, in the United States the federal government alone has the resources to invest in the basic research and development needed to drive innovation and technology breakthroughs in solar energy, battery technologies, and other key components of an alternative energy future.

The recent financial crisis diminished private-sector investment in renewable energy. In 2008, public and private investment in renewable energy exceeded investment in fossil fuels. Growing at incredible rates of more than 50 percent in 2006 and 2007, investment in 2008 totaled \$173 billion globally—a more than fourfold increase from 2004 (UNEP, 2010). But in the first quarter of 2009, investment in renewable energy fell by more than 50 percent compared with the year before, the lowest quarterly investment in three years (UNEP, 2009). Capital availability, already low for renewable energy in general, can turn into true capital scarcity during a recession. To compensate, global public-sector investment increased substantially, as governments began to draw on domestic stimulus programs totaling approximately \$188 billion globally for renewable energy and clean technology (UNEP, 2010).

These public-sector funds, however, are now extinguished and a new US stimulus plan appears highly unlikely. Given the huge subsidies that emerging-market governments like China give their solar energy industries—the Chinese government allocated \$30 billion in loans to the top five Chinese solar energy companies in 2010 alone (Lacey, 2011)—the US government needs to find a way to continue investment in the alternative energy sector if it is to compete globally.

In 2010, as technology developed, solar power became cheaper; the wholesale price of solar panels in fact fell from \$3.30 per watt of capacity in 2008 to \$1.20 in 2011, primarily due to Chinese manufacturing (Bradsher, 2011). Alternative energy sources will become relatively less expensive and gain market share to the extent that fossil fuel prices are made to reflect their full costs—including pollution, ecosystem damage, health hazards, and other externalities. But the health of the alternative energy sector *and* the US economy also depends on the lowering of the absolute price of renewables. If the goal is to reduce the proportion of gross domestic product spent on energy—and it should be—the federal government can accelerate absolute price reductions by funding basic research and development for renewable energy, energy transmission, energy efficiency, and energy storage.

The United States has a long history of funding basic research that is later adopted by private companies, leading to substantial social benefit and economic growth. A tax on fossil fuels seems the most efficient way to generate the funds for alternative energy research that hastens the day when renewable energy is less expensive

than fossil fuels. It is in the United States' economic and foreign policy self-interest for that day to begin sooner rather than later. But the same partisan divide that has stalled any comprehensive approach to greenhouse gas regulation also makes federal support for renewables uncertain in the coming year. Given the Republican Party's stance against tax increases and the science of climate change, tax hikes on fossil fuels seem especially problematic, at least in the short term.

The transition from fossil fuels to renewables will happen eventually; it is inevitable. Fossil fuels are by definition finite, and renewable fuels are not. The questions that remain involve how quickly this transition will take place and whether anyone will be left behind. Ultimately, the planet will benefit regardless of whether Chinese or US companies are investing in and manufacturing solar technology. In fact, as the economy globalizes, it is increasingly less important to know where a company originated and more important to understand where it is headed.

The US role in international negotiation

International discussions have great value; however, they need to be placed in context and seen for what they are. In the climate change arena, they have been successful as education tools, increasing awareness and bringing new items to the agenda. International climate conferences garner intense media attention. This interest peaked in 2009 at Copenhagen as President Obama joined the negotiation table but has since diminished, with far less interest

domestically in the conferences at Cancun and the Durban meetings. And if these conferences serve as great climate change teaching moments, they have been less successful as venues for policy making. There have certainly been accomplishments, but nations are still at odds over fundamental issues, such as the point at which developing countries should be required to meet emission reductions.

The United States has been heavily criticized for its approach to these international negotiations. Given the inability of Congress to craft and pass domestic climate legislation, however, a US decision to sign onto a binding international agreement remains a distant dream. The partisan standoff that prevents meaningful climate and energy policy at the national level will continue to hinder US negotiators' ability to influence international negotiations and to join future agreements. In the short term, the real, substantive action in climate policy and management will involve regulation at the national and, increasingly, local levels as well as advances in technology.

The year ahead

In the United States, the growing partisan divide over climate change and the near-continuous assault on federal regulation restricted the country's ability to effectively respond to global warming in 2011. Fortunately, US cities are filling the gap with far-sighted climate policy. Additionally, the growing cost of fossil fuels has stimulated investment in renewable energy, edging the country closer to commercially viable alternatives to fossil fuels. These trends, if continued, can help provide an alternate

route to climate mitigation, even without international treaties or national legislation. The shift from fossil fuels to renewable energy sources would of course be greatly hastened by federal action to tax carbon dioxide emissions and use the revenue generated to support solar, wind, and other alternative energy technologies. That action is extremely unlikely to occur unless climate change comes to be seen as a practical, rather than ideological, issue.

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