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A CLEAN ENERGY AND JOBS PLAN FOR MAINE'S FUTURE

by Lisa Pohlmann and Nicole Witherbee, Ph.D.

We need a national solution to reduce carbon pollution and transition to a clean energy economy, and this year we have an opportunity to make it happen. Maine's Congressional delegates will play critical roles in the passage of federal energy policy that creates good clean energy jobs, reduces our dependence on foreign oil, and cuts carbon pollution that is warming the planet. It's clear that Americans want a new direction on energy policy and now is the time for our leaders to step up to help.

On June 26, the U.S. House of Representatives passed the American Clean Energy and Security Act (ACES), putting into play the most important environmental policy of a generation. Maine Representatives Michaud and Pingree both supported the bill, which caps carbon emissions, makes investments in renewable energy and energy efficiency that will create jobs, and protects consumers and industry from energy price increases that may result from the program. As we create incentives for polluters to find energy efficient ways of doing business and for researchers and investors to shift resources to cleaner sources of energy, we will create new industries and regain our competitive edge in the fast growing clean energy sector.

The Senate is now working on its own version of climate change legislation, which is slated for a vote this fall. Ideally, a compromise bill would be approved by both houses and signed by President Obama before the United Nations Framework Convention on Climate Change in Copenhagen this December. Over a decade ago in Kyoto, Japan, an international agreement on greenhouse gas emission reduction was developed, but previous U.S. administrations never sought to ratify U.S. participation in the protocol. We now appear poised to join the international community in a shared commitment to take action.

Maine has shown national leadership in addressing climate change. We passed the first statewide climate change law in 2003 and, through our strong renewable portfolio standard and other policies, we are working aggressively to increase wind power and other renewables.¹ In December of 2005, Maine helped launch the multi-state Regional Greenhouse Gas Initiative (RGGI) in an effort to curb carbon emissions. The first RGGI auctions (since September 2008) have produced over \$11 million for investments in energy efficiency



Natural Resources Council of Maine photo

Federal clean energy and climate change policy will be a win-win for Maine's economy and environment.

in Maine. We know federal clean energy and climate change policy will be a win-win for Maine's economy and environment because it's already happening at the state and regional level. Given Maine's experience and vulnerability to climate change, our Senators should lead the effort to pass a strong climate change bill.

Jumpstarting the Maine Economy

Maine's economy will gain a significant boost from the investments in renewable energy and energy efficiency that are made possible under the House bill. The American Clean Energy and Security Act creates investment funding through the sale of carbon allowances to polluting industries. This coupled with the funding available through the federal stimulus package would bring total clean energy investments in the U.S. to approximately \$150 billion per year, producing 1.7 million new jobs through public and private spending.² Maine could see a net increase of about \$600 million in investment revenue and 10,000 clean energy jobs. Adding 10,000 jobs to the Maine labor market would have brought the state's unemployment rate down from its actual level of 5.4% to 4.0% in 2008.³

The largest share of these investments will go toward energy efficiency, including funds for building retrofits, and the development of renewable energy sources such as wind, solar, biomass, and geothermal power. Maine already has a head start on the infrastructure to deploy these resources with 6,000 clean energy jobs in 2007 representing a 23% increase from 1998 to 2007.⁴ Through state investments in energy efficiency programs as well as significant private investments, we already employ over 2,500

workers in the energy efficiency sector alone, putting Maine among the top ten states in the nation for the number of workers in this sector.⁵ Since Maine has the oldest housing stock in the country and the highest dependence on oil for heating our buildings, household and business budgets would see significant relief if we were to reach the State's new goal of weatherizing all Maine homes and half of Maine businesses by

more jobs for people with college degrees or above, 3 times more jobs for people with some college, and 3.6 times more jobs for people with high school degrees or less.⁷

Mainers already have many of the skills needed to do these jobs. Consider this: constructing wind farms employs machinists and truck drivers, not just wind turbine specialists. Retrofitting building

climate change. A recent report⁸ from the University of Maine's Climate Change Institute noted that the rate of warming is increasing in all regions of Maine. We are seeing earlier snowmelt, peak river flows and ice-out on Maine lakes. Maine's climate will likely continue to warm 3-10 degrees Fahrenheit annually depending on emission scenarios.⁹ There could be a 2-14% increase in precipitation which would vary across locations, adversely affect both summer and winter tourism.

The sea is also warming with regional surface temperatures increasing almost 2° Fahrenheit since 1970. The warming of the ocean could increase and intensify hurricanes, which impact water quality, coastal infrastructure and wastewater management.

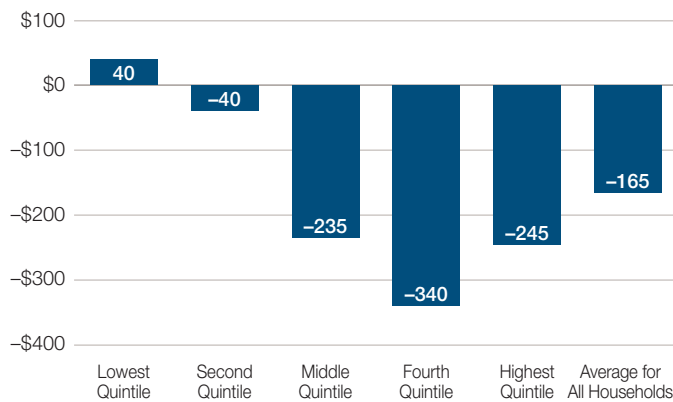
Fishermen are already noticing altered growth and migration patterns in the lobster fishery.¹⁰ The center of lobster fisheries is projected to continue shifting northward and the cod fishery on Georges Bank is likely to be diminished. There may be an influx of other commercially significant fish, but we may also see more toxic red tides, invasive species, pests, or diseases.¹¹

Forest harvesting would be impacted by longer mud seasons and shorter periods of hard freeze, affecting the susceptibility of forests to insects and disease, with resulting losses in production.¹²

Some traditional agricultural businesses will also be impacted as areas become unsuitable for growing popular varieties of apples, blueberries, and cranberries and maple sugaring becomes less available outside of the far north.¹³ In short, many fundamental aspects of Maine's natural resource-based economy will be at risk if carbon emissions remain unabated.

ACES Costs About A Postage Stamp a Day and Saves Low-Income Families Money

Distribution of the Financial Benefit/Loss for Households from ACES by Income Level in 2020



Source: Congressional Budget Office at: <http://www.cbo.gov/ftpdocs/103xx/doc10327/06-19-CapAndTradeCosts.pdf>

Notes:

- The income figures are 2010 levels based on 2006 distribution of income and expenditures.
- Households are ranked by adjusted household income. Each quintile contains an equal number of people.
- Households with negative income are excluded from the bottom quintile but included in the total.
- CBO estimates that the net annual economy-wide cost of ACES in 2020 would be \$175/household, or \$.48/day. In this distributional analysis, they do not allocate certain net costs incurred by governments and businesses because there is no clear basis for identifying which households would bear the costs or benefits from the value of those allowances. Thus, the average annual cost per household in this chart is slightly lower, at \$165/household.

2030. But we will need ongoing public and private investments to do so.

These investments in our transition away from fossil fuel consumption will net more jobs than continuing down the current path. Clean energy investments create 16.7 jobs for every \$1 million in spending while spending on fossil fuels generates only 5.3 jobs per \$1 million.⁶ Relative to spending on fossil fuels, clean-energy investments create 2.6 times

requires roofers, insulators, and building inspectors. The clean energy jobs plan that Congress is developing could provide a significant boost to our construction and manufacturing sectors, which have taken a big hit in the recession. It also provides funding for workforce development in these sectors.

Climate Change Impacts for Maine

Maine's economy relies heavily on our natural resources, making us particularly vulnerable to

Protecting Consumers

Climate change disproportionately impacts low- and moderate-income people who are less likely to have the resources they need to cope with changes in food and water supplies, flooding, and the decline of traditional industries. These households are also least likely to have the income to make investments in weatherization and are more vulnerable to any increase in energy costs. The American Clean Energy and Security Act addresses these concerns by providing the price signals that incentivize businesses and households to conserve energy, making investments in energy efficiency targeted specifically to low-income households, mitigating higher energy costs for low-income households that are passed along from industries operating under the carbon cap, and reducing carbon pollution substantially over time.

But even as energy costs increase over time, households are not overly burdened. The Congressional Budget Office estimates that if the policies that the net annual economy-wide cost of ACES in 2020 would average \$175 per household. That is \$15 per month or about the cost of a postage stamp a day.¹⁴ Households in the bottom quintile would actually come out ahead due to specific low-income relief with allowance revenues. (See Figure on page 2).

The Senate, however, could expand that relief to include funding a higher benefit within the Low Income Heating and Energy Assistance program, thereby reaching more low-income households.¹⁵ They could also scale back the large sums ACES gives to utility companies to provide benefits to businesses and use the funds instead to strengthen consumer relief for moderate- and middle-income households through a

mechanism such as a refundable tax credit, as well as for other environmental purposes.¹⁶

The CBO analysis also finds that the legislation fully complies with “pay-as-you-go” budgeting rules, meaning that there is no increase to the federal deficit. In fact, ACES actually produces a small amount of deficit reduction.¹⁷

Key Elements of the American Clean Energy and Security Act

ACES establishes a “cap-and-trade” program under which the EPA Administrator would annually distribute carbon pollution “allowances” to industries and government entities, with total the number of allowances declining each year, creating a declining “cap.” In this way, we would reduce carbon pollution 17 percent below 2005 levels by 2020 and 83% by 2050. Some of these allowances will be given away free and others may be sold at an auction; in either case, they can then be traded on a secondary market (this is the “trade” part of cap-and-trade).

By setting declining caps on emissions each year, the bill gradually drives up the cost of pollution and thereby creates incentives for private companies and public agencies to meet their economic objectives with lower emissions. Put simply, the system rewards cleaner energy sources and more efficient production and penalizes the most intensive polluters.

Many of the revenues from allowances that are sold will be used for a variety of public purposes, including energy efficiency, clean energy development, natural resource adaptation measures for current and future climate impacts, protection from energy price increases for low- and moderate-income households, and programs to stop deforestation.

In total, the energy efficiency provisions in ACES could reduce U.S. energy use by 5.4 quadrillion Btu's, which accounts for about 5 percent of projected U.S. energy use in 2020. Such savings are equivalent to more than the annual energy use of 47 of the 50 states. These savings will avoid about 345 million metric tons of carbon dioxide emissions in 2020, the equivalent of taking 57 million cars off the road for a year. By 2030, these energy efficiency savings grow to 12.3 quadrillion Btu's, accounting for about 12 percent of projected U.S. energy use that year.¹⁸

A Stronger Bill in the Senate

ACES is a critical step in the right direction, but more can be done in the Senate to strengthen the bill. The political process to create ACES led to many compromises on behalf of environmental and consumer interests—the Senate bill will necessarily include a different set of compromises but all attempts to create a weaker bill than ACES must be avoided. Here are some of the key principles for a strong climate bill:

1. Strong cap

The cap must be set to minimize the risk of significant climate change. The coverage of greenhouse gases and sources should be as universal as possible.

- The emissions reduction target should remain at 83% below current levels by 2050, and interim targets must be stringent enough to provide a reasonable path toward sustainable carbon pollution concentration levels.

- The cap must be effectively enforced, without excessive loopholes that undermine the price signals that will drive our economy toward a clean energy future.

- Priority should be given to on-site reductions; offset use should be strictly limited and only those passing rigorous standards would be authorized for compliance purposes. ACES allows for so many offsets that actual near-term reductions may be too small.

2. Prioritize energy efficiency

Energy efficiency investments should be the top priority for allocating allowance value.

- No less than 15% of allowance value should go toward energy efficiency, preferably through existing/expanded state-level efficiency programs.

- Greater investments in energy efficiency than were part of ACES could be achieved by requiring that at least one-third of allowances going to electricity utilities be used for energy efficiency.

3. Adopt other needed clean energy policies

Although a cap-and-trade program will be a crucial step, it will not be sufficient alone. For complete success in a global warming mitigation plan, any cap and trade program should be carried out in conjunction with the establishment of programs in four clean energy areas: a renewable electricity standard, an energy efficiency portfolio standard, new efficiency standards for buildings and vehicles, and aid for clean energy development in developing countries.

4. Create more clean energy jobs and build resiliency to climate change

Shave allocations from fossil fuel producers—especially coal plants and oil refineries—and redistribute to programs that deliver energy efficiency and renewable energy, create green jobs and train workers to fill

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them, and protect natural resources and vulnerable communities here and around the world. A strong cap and trade program will auction a large number of allowances to create revenue for public benefits and clean energy, instead of giving away allowances to the worst polluters.

5. Retain EPA authority to regulate all carbon emissions

EPA has authority under the Clean Air Act to regulate carbon emissions. This authority should be retained in relation to all industries, including coal and oil.

Protect low-income consumers

The program must protect low-income consumers from undue energy cost increases.

- There should be a direct allocation of at least 15% of allowances to low- and moderate-income households in the form of direct rebates through mechanisms that reach the maximum number of households needing relief, such as heating assistance and a refundable tax credit.

Foster economic competitiveness and growth

Climate legislation must allow the American economy to grow and reward companies that make low-carbon business investment.

- The measure should protect energy-intensive industries from undue competitive disadvantage, provided those policies also: reward emission reductions; drive innovation and investment in clean energy technologies; and are phased-out over time as strong international emission policies are adopted.

It is time for true leadership on climate change. We can embrace a clean energy economy that will create nearly 2 million green jobs and hold polluters accountable. We can reduce our dependence on foreign oil and thereby improve our national security. And we can protect the Maine environment for future generations. It is our responsibility to make our voices heard so that the right choice is made.

About the Authors

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