



It's time for the United States to "Cap-and-Invest"

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FACET Commentary No. 11 – June 2008

From a fascinating U.S. presidential primary season, two candidates have now emerged who have said that they will make climate policy a priority of their administration. As welcome a change as having White House leadership will be, the U.S. Congress will continue to play a critical role in the United State's response to the climate crisis.

The new Democratic Congressional leadership has already made important contributions to this critical issue with the passage of the Energy Independence and Security Act in December 2007, which raised the fuel economy standards of our cars, trucks and SUVs for the first time in thirty years. That change alone is a significant step towards reducing the total greenhouse gas emissions that the United States needs to achieve. But this was just the start. Now Congress must prepare climate legislation that fully responds to the planetary threat we face and seizes the opportunity presented by the necessary transition to a low-carbon economy.

A bill matching science, technology, consumer, and market imperatives

Because of the need for further Congressional action, earlier this month I introduced the Investing in Climate Action and Protection Act – or "iCAP" Act – a bill to reduce global warming pollution to levels sufficient to avoid catastrophic climate change and to invest in America's transition to a secure and prosperous low-carbon future. The bill is science-based, technology driven, consumer focused and market fuelled. The iCAP Act is founded on three fundamental principles:

First, science solves problems. The scientific consensus is now unequivocal that global warming is happening, that manmade greenhouse gas emissions are largely responsible, and that we must reduce those emissions substantially over the coming decades if we are to avert a climate catastrophe. We have a moral obligation to listen to that scientific consensus and act upon it, by starting today to reduce global warming pollution to levels that will keep our planet safe for generations to come.

Second, investing solves problems. We must invest in the American economy and in American workers, and launch an energy technology renaissance that will rival the information technology revolution of the past decade. We all benefited from the

Industrial Age, and we have watched the dawn of the Information Age. Now, we must start the Clean Energy Age. This bill will provide a market-based push that will trigger an explosion of energy technology development that will give us the same “Wow” feeling that we get from our information technology – bringing robust economic growth while meeting our climate goals. By investing in clean energy at home and abroad, we will be investing in the future of our planet and its people.

Third, American leadership solves problems. We must ensure that America is the world leader in confronting our climate crisis, giving us the credibility and the technology to bring China, India, and the rest of the developing world under one large, climate-saving tent. In so doing, America will help protect vulnerable communities around the world from the dangers of global warming, including drought, famine, and flood – meeting our international responsibilities while gaining global good will and protecting our national security interests.

A cap, auction & trade program for reducing U.S. emissions by 85 percent

The iCAP bill implements these principles by establishing a “cap-and-invest” system, which caps pollution, requires polluters to buy 100 percent of the tradable pollution allowances at auction, and invests the auction proceeds in American consumers and in technologies and practices that save the climate while also saving costs. The bill establishes a cap-auction-and-trade program that covers 87 percent of U.S. greenhouse gas emissions. This program will begin to cut these emissions immediately and will reduce them to 85 percent below 2005 levels by 2050 – the U.S. contribution necessary to protect the global climate against dangerous warming.

The cap covers all the major sources of greenhouse gases. These include the approximately 10,000 power plants and large industrial facilities that produce the majority of global warming pollution – facilities that are already regulated for other pollutants. Other covered entities include companies that produce or import petroleum- or coal-based liquid or gaseous fuels, companies that produce fluorinated gases, and companies that distribute natural gas to consumers.

Learning from past U.S. regulation

The iCAP bill creates the market-based incentive to meet emissions targets by establishing a gradually declining budget of tradable pollution allowances each year from 2012 through 2050 and requiring polluters to submit allowances to EPA to cover their heat trapping emissions each year. The bill will auction virtually all of these allowances, instead of giving them away for free to polluters. This approach reflects what we have learned over the past two decades.

For many years, our environmental laws were based on performance standards. Every polluter was told how much or how little they could pollute. Everyone was given a standard and they all had to meet it. That approach can work for some pollutants, but it also can be very expensive.

In 1990, Congress came up with a novel approach to address the acid rain problem caused by sulfur dioxide and nitrogen oxide emissions. This idea, sometimes called “cap and trade,” embraces the notion that all reductions are helpful but that some parties can achieve those reductions for much less. So if one party can reduce pollution relatively cheaply, then another party that finds it more expensive can trade money for the extra pollution reduction achieved by the more efficient party.

Learning from the EU cap-and-trade experiences

The European Union adopted this approach in enacting their carbon dioxide emission reduction program, and we have learned some valuable lessons from their experience. One of the major lessons was not to give the pollution allowances away to polluters for free. Economic theory and the EU experience have shown that only by implementing full 100 percent auctions can we ensure that polluters do not receive windfall profits and that a level playing field is established for all energy sources.

Accordingly, the iCAP bill begins by auctioning 94 percent of the emission allowances from 2012 to 2019, and transitions to 100 percent auctions in 2020. Recognizing that some American industries – such as iron and steel, aluminum, cement, glass, and paper – face intense international trade competition, the bill provides transitional assistance to these industries. Under iCAP, U.S. manufacturers in these industries will receive six percent of emission allowances from 2012 to 2019 before they, too, have to bid at auction for allowances. But note that, in order to stay competitive, these industries will need to begin innovating on day one.

Establishing a fair, stable, and flexible carbon market

To reduce costs, the iCAP bill permits unlimited trading of emission allowances and banking of such allowances for future use. It also allows a regulated party to satisfy up to 15 percent of its yearly compliance obligation with emission allowances “borrowed” from future years, provided that such allowances are repaid with interest within five years. A regulated entity can meet up to 15 percent of its yearly obligations using approved domestic offset credits, based on greenhouse gas reductions achieved outside the cap based on rigorous standards. A regulated entity also may satisfy up to 15 percent of its yearly obligations using foreign allowances or offset credits that meet rigorous standards administered by EPA. The cap-auction-and-trade system established

by the bill will give rise to a vigorous new “carbon market,” characterized by trading in emission allowances, offset credits, as well as futures and options contracts and other derivatives. To ensure fairness and stability in this new market, the bill establishes a new Office of Carbon Market Oversight within the Federal Energy Regulatory Commission, which is charged with prevention of fraud or manipulation in the carbon market.

Accompanying measures for a low-carbon future

Alongside the cap-auction-and-trade system, the iCAP bill adopts mandatory performance standards for certain other sources like coal mines, landfills, wastewater treatments, and large animal feeding operations. It also provides financial incentives to farmers and forest managers to encourage them to adopt practices that will further reduce global warming emissions and sequester carbon – thus providing additional emissions coverage. Taken together with the cap, these measures will cover over 94 percent of U.S. greenhouse gas emissions – as much of the economy as is practicable to reach.

The bill also establishes measures to encourage the coal industry and utilities with coal-fired power plants to invest in new technology to adapt to the new low-carbon future. The International Energy Agency recently warned that, in the coal industry, “a huge amount of investment and unprecedented technological breakthroughs such as in carbon capture and storage” will be needed to meet the greenhouse gas reduction targets that scientists believe we must achieve by 2050.

Assisting industry and consumers

The iCAP bill will help us meet this challenge by requiring that any new plant use carbon capture and sequestration technology, and we give coal companies assistance to use the technology until 2020. To the extent that the coal industry, with plenty of support from the federal government, can make carbon capture and sequestration work, then it will be part of the energy portfolio in the future.

The iCAP bill’s cap-auction-and-trade system will generate a substantial amount of money. How should it be invested? The first investment is back into the pockets of working and middle class Americans. Under this bill, half of the proceeds from polluter auctions flow directly back to consumers in the form of refundable tax credits and rebates, protecting 80 percent of America’s families from increased energy costs while our economy transitions. In fact, over 60 percent of U.S. households – those earning under \$70,000 – will be fully compensated, while benefits will be extended up to those making \$110,000.

Substantial funds will go to job training for the hundreds of thousands of green collar jobs that our country will need filled, and adjustment assistance to any workers who need help transitioning from carbon-intensive industries to the new low-carbon economy.

Heavy investments in technology and adaptation

The iCAP bill also invests heavily in technologies that will drive that low-carbon economy. The best, brightest, and cheapest source of clean energy is efficiency. That is why the iCAP bill devotes tens of billions of dollars each year – in partnership with State and local governments – to making our homes, buildings, and transportation systems more efficient. In addition, the bill invests tens of billions more in research, development, and deployment of cutting-edge low-carbon energy technologies that will power America’s future – including renewable energy, carbon capture and sequestration, cellulosic ethanol, and advanced hybrid vehicles.

Unfortunately, even if we act now to avert catastrophic global warming, some climate change is already inevitable. The iCAP bill also devotes substantial funding to reducing vulnerability – both here in the United States and in the most vulnerable developing countries – to those impacts.

An unprecedented opportunity to change the course of the planet

Finally, the bill establishes policies to encourage all major emitters of global warming pollution to take action to combat climate change. The bill establishes an international forest protection fund to reduce emissions from deforestation in developing countries. It also gives major-emitting developing countries that take “comparable action” to reduce global warming pollution access to an international clean technology fund, to promote deployment of low-carbon energy technologies. Only countries that take comparable action – or those that are among the least developed countries or that have very low emissions – will be permitted to sell international offset credits into the U.S. market. Countries that fail to take comparable action by 2020 will have to buy special reserve allowances to cover the emissions generated by any covered primary goods – like iron and steel, aluminum, cement, glass, or paper – that they import into the United States.

Climate change represents the single greatest challenge now facing humanity, but it also presents an unprecedented opportunity. I introduced the iCAP Act to spur bold action now to avert a climate catastrophe, to enhance international security, and to unleash a green energy revolution that will bring prosperity and robust economic

growth to America and the world. I am confident that after this bill reaches its goal in 2050, historians will look back on the beginning of this new millennium and say that it was an era of technological development that in the course of a generation changed the course of the planet.

Representative Edward J. Markey (D-Massachusetts) is the Chairman of the U.S. House of Representatives Select Committee on Energy Independence and Global Warming and a senior member of the House Energy and Commerce Committee. More information on the iCAP Act can be found at www.house.gov/markey. Information on the work of the Select Committee can be found at www.globalwarming.house.gov.