



# cap and trade

By Troy Anderson

## Real Deal or Real Expensive?

**L**ooking two decades into the future – a time when global energy demand is expected to be 35 percent higher – Emil Jacobs says bio-fuel made from algae may help stop global warming. “We believe that bio-fuel produced by algae could be a meaningful part of the solution in the future to produce an economically viable, low net carbon emission transportation fuel,” the Vice President of Research and Development at the Irving, Texas-based ExxonMobil Corporation told people gathered recently at the “2010 World Future Energy Summit” in the United Arab Emirates.

“That is why we have embarked upon a \$600 million research and development program to develop advanced bio-fuels from photosynthetic algae that are compatible with today’s gasoline and diesel fuels. While significant work and years of research and development still must be completed, algae-based fuels could help meet the world’s growing demand for transportation fuel while reducing greenhouse gas emissions.”

As envisioned, Irving ExxonMobil spokesman Rob Young says the algae could grow on arid land with brackish water – eliminating the need for the use of land normally planted with corn and other crops. Algae have the potential to yield far greater volumes of bio-fuels per acre than other sources. An acre of algae could yield 2,000 gallons of bio-fuel, compared to an acre of corn at 250 gallons of bio-fuel. Also, algae consume carbon dioxide, helping combat climate change.



Amid algal growth tanks, ongoing research is conducted in creating new algae bio-fuels. An acre of algae could yield 2,000 gallons of bio-fuel, compared to an acre of corn at 250 gallons of bio-fuel.

## A Call for Legislation

The new algae bio-fuels program at ExxonMobil – part of the company's larger \$1.5 billion program to reduce greenhouse gases – comes as President Obama in his State of the Union speech called on Congress to pass comprehensive energy and climate change legislation this year. Obama said no area is “more ripe” for innovation than energy.

“And that means building a new generation of safe, clean nuclear power plants in this country,” Obama told the nation. “It means making tough decisions about opening new offshore areas for oil and gas development. It means continued investment in advanced bio-fuels and clean coal technologies. And, yes, it means passing a comprehensive energy and climate bill with incentives that will finally make clean energy the profitable kind of energy in America. I am grateful to the House for passing such a bill last year. And this year I'm eager to help advance the bipartisan effort in the Senate.”

Although Obama acknowledged that the proposed “cap and trade” legislation is controversial and that some people may disagree with the “overwhelming scientific evidence on

climate change,” the President argued the nation that leads the “clean energy economy” will lead the global economy.

If a cap-and-trade system is approved, the demand for carbon credits could grow into a \$2 to \$3 trillion market over the next decade, according to a report by the market analysis firm Point Carbon. The carbon market is already growing rapidly: trading volume in the first half of 2008 totaled \$59 billion, nearly as high as the \$63 billion in all of the prior year.

“There would be a dramatic increase in the market if the U.S. chooses to institute a cap-and-trade program,” says Point Carbon Senior Analyst Lisa Zelljadt. “That is already the case in Europe, and it would be the case in the U.S. as well.”

But the President's call on Congress to pass climate change legislation followed the election of Senator-elect Scott Brown (R-Mass.), who snatched the former seat of liberal icon Edward M. Kennedy, thereby eliminating Obama's super-majority in the Senate. This defeat – and growing fears among Democrats that Republicans will gain more seats in Congress this year – is the latest setback in the President's push to pass a cap-and-trade bill. But experts say that the fact of Obama's highlighting climate

change legislation in his address to the American public has increased the chances of an agreement being reached this year.

## A Clean Energy Act

The U.S. House of Representatives passed HR 2454 – the 1,480-page American Clean Energy and Security Act – last June by a slim margin of seven votes. The bill, sponsored by Representatives Henry Waxman (D-Calif.) and Ed Markey (D-Mass.), would cut carbon dioxide emissions 17 percent from 2005 levels by 2020. The “cap-and-trade” bill would require companies to meet increasing carbon dioxide caps by cutting emissions or buying allowances to release greenhouse gases.

The bill, if approved, would create an economic incentive to reduce carbon dioxide and other greenhouse gases. Most climate scientists believe these gases are changing the earth's climate – increasing sea levels and shifting weather patterns. Recently, NASA's Goddard Institute for Space Studies in New York City found 2009 was tied for the second-warmest year since modern record-keeping began in 1880. Although 2008 was the coolest year of the decade, due to strong cooling of the tropical Pacific Ocean, 2009 saw a return to near-record global high temperatures. The period between January 2000 and December 2009 was the warmest decade on record. During the last three decades, global temperatures have increased about a third of a degree. In total, average global temperatures have increased about 1.5 degrees Fahrenheit since 1880.

“If we do nothing, then we are going to see more drowning polar bears,” says Luke Metzger, director of Environment Texas. “Here in Texas, predictions are we'll see more severe and prolonged drought. We'll see increased flooding and heavy downpours. We'll lose more wildlife species. As our cities get hotter, there will be more heat-related deaths and our smog situation will get worse.”

However, skeptics of climate change cite e-mails hacked from the Climatic Research Unit of the University of East Anglia in Britain as evidence that the scientific data has been manipulated to make it appear that people are causing global warming. The scandal – known as

“Climategate” – erupted late last year after communications between dozens of climate change researchers revealed that some held bitter feelings toward rivals who argue that the link between people and climate change is uncertain.

Since the House bill passed, various members of the U.S. Senate have proposed similar “cap-and-trade” bills. One proposed by Senators John Kerry (D-Mass.), Joe Lieberman (I-Conn.), and Lindsey Graham (R- S.C.), includes a 17 percent emissions cut by 2020, cap-and-trade provisions, nuclear power incentives, and the expansion of offshore drilling.

Kathleen Hartness White, the Distinguished Senior Fellow-in-Residence and director of the Armstrong Center for Energy & the Environment at the Texas Public Policy Foundation in Austin, says months of debate on health care reform has exhausted the Senate’s political capital to move “another big costly and controversial bill.” While Washington, D.C. insiders believe the Senate is unlikely to put climate change legislation on the President’s desk before the 2010 elections, Hartness White says Washington has surprised many people in the last year with its boldness.

“We remain concerned about what we believe is misguided energy legislation that would have a depressing effect on the economy,” Hartness White says. “The Texas economy would be more harshly impacted than other states.”



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### **The Reaction in Texas**

As a national leader in the development of renewable energy sources, Texas is also the nation’s largest producer of oil and gas – accounting for about a quarter of U.S. production. In 2006, the state’s energy industry employed 375,000 people, who earned more than \$35 billion in wages. The Lone Star state has nearly a quarter of

total U.S. oil reserves, almost a third of the nation’s natural gas reserves and one of the most extensive petrochemical complexes in the world. Texas has the most wind generation capacity among states, and is the nation’s largest producer of bio-diesel.

At a time when America’s energy capital is creating innovative programs for reducing emissions without



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compromising its strong economy, Texas Governor Rick Perry says Obama's "job-killing" energy policies – including the U.S. Environmental Protection Agency's proposed revisions of national ozone limits – will lead to the loss of hundreds of thousands of Texas jobs.

Perry argues that the "cap-and-trade" bills would have a destructive impact on Texas' energy industry and would lead to "skyrocketing energy prices."

"Rather than examine what's working in Texas and follow our example, the current administration seems intent upon passing massive new energy taxes and draconian regulations, whether through EPA mandate or via equally ill-advised cap-and-trade legislation still pending in the Senate," Perry says. "This is the surest way to throw America's struggling economy completely off its feet and forever damage our ability to compete in the global marketplace."

As proposed, ACES – a bill that an attorney at the Sierra Club described as the "most complex piece of legislation in the history of our country" – would impose more than 1,000 new federal dictates through 21 federal agencies and require an 83 percent reduction of greenhouse gas levels by 2050.

The Congressional Budget Office's estimated federal cost of the bill in direct spending is \$822 billion, "another nearly trillion-dollar burden on American taxpayers," Hartnett White wrote in her report, "A Federal Leviathan: The American Clean Energy and Security Act of 2009." However, the CBO estimates the bill will generate \$846 billion in revenues for the government.

If the cap-and-trade legislation is approved, Peggy Venable, the Austin-based director of the free market grassroots group Americans for Prosperity, says it would constitute the largest tax increase in American history.

"We know this would drive up the cost of electricity and of gasoline for consumers," Venable says. "It would also really drive up the cost of doing business. And there would be tremendous job losses, which may be disproportionate in Texas because we have such a large energy sector. We estimate as many as 171,000 jobs could be lost by 2011."

### The Impact on Energy Prices

These growing concerns about the legislation follow last year's International Climate Change Summit in

Copenhagen, a conference that resulted in an interim agreement known as the Copenhagen Accord to reduce global warming pollution. The accord was accepted by 188 countries. Those nations were required to submit national action plans for emission reductions that are consistent with the agreement's goal of limiting global temperature increases from rising more than 3.6 degrees Fahrenheit over pre-industrial levels. As a result of the accord, more than 50 nations met the January 31 deadline for outlining plans to fight climate change. The countries, which account for more than two-thirds of world greenhouse gas emissions and are led by China and the U.S., mostly reiterated existing goals for curbing emissions.

At the San Antonio-based Valero Energy Company, spokesman Bill Day says that North America's largest, independent refining company helped organize a campaign and a Web site – [www.voicesforenergy.org](http://www.voicesforenergy.org) – to educate the public about the possible effects of a "cap-and-trade regime" on energy prices. The Web site notes that "hidden tax on commodities imposed by this legislation" would result in significant increases in the price of gasoline and other energy sources, and would cost the nation 1 million jobs.

"It would basically force energy companies in the U.S. to move to other countries and it would increase our reliance on imported gasoline because overseas refiners would not be subject to the same rules," Day says. "Even though climate change and global warming are global problems, this bill would not address anything globally."

Bill Hammond, president of the Texas Association of Business, an Austin-based organization representing more than 3,000 small and large Texas employers and 200 local chambers of commerce, describes the potential impact of climate change legislation as "apocalyptic."

"I think it will be disastrous for America in general and Texas in particular because we have such a concentration of manufacturers, refiners, and chemical plants," Hammond says. "We use and make a lot of electricity in Texas, and it will drive up the cost of electricity dramatically and make everything we buy and sell more expensive."

Ritchie Priddy, director of Marketing and Sustainability at Houston-based GDF SUEZ Energy North America, the nation's second-largest retail electricity provider, says he doesn't believe the

legislation would affect his company that much, because most of the electricity the company generates comes from natural gas, wind, and other energy sources. Priddy says he doubts the legislation will make it through Congress with the cap-and-trade provisions.

“The cap-and-trade is the most contentious issue,” Priddy says. “President Obama needs to get moderate Democrats to support this bill, and a lot of them are from coal-burning states. I would be real surprised if anything gets passed this year.”

Kyle Isakower, director of policy analysis at the American Petroleum Institute, a Washington, D.C.-based trade association representing the nation’s oil and gas industry, agrees that support seems to be dwindling for a cap-and-trade bill like the one the House passed last summer.

“But that doesn’t mean that there won’t be some legislation that can move this year that can impact climate change, whether it’s specifically climate-focused or some new way of addressing climate change other than a cap-and-trade bill, or whether it would be energy legislation that could have an ancillary climate impact,” Isakower says.

## Other Legislation in the Pipeline

One proposal that ExxonMobil supports is a revenue-neutral carbon tax that would be more transparent, achieve the same or greater emissions reductions at a lower cost, and would be more difficult to evade or manipulate than a cap-and-trade bill, Young says.

American Businesses for Clean Energy, a Concord, Mass.-based organization representing 2,000 companies – including Shell, Duke Energy, Dupont and Austin Energy – hasn’t endorsed any specific legislation, but it does support Congressional passage of clean energy and climate legislation to reduce greenhouse gases. The organization recently took an advertisement out in *The Wall Street Journal* to support bipartisan, national energy and climate legislation that increases national security and limits emissions while preserving and creating jobs.

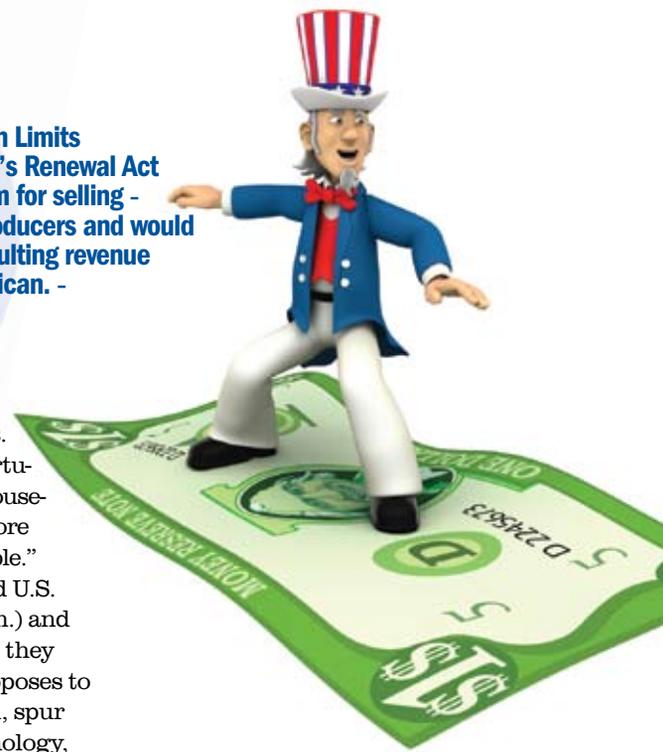
“I think there is an opportunity to make our economy more energy-efficient, and in the process of doing that, create new job opportunities,” says Christopher Van Atten, spokesman for the organization. “It would create opportunities for

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new technologies and innovations. It would also create business opportunities and opportunities to save households money by making homes more energy efficient – just as an example.”

ExxonMobil has commended U.S. Senators Maria Cantwell (D-Wash.) and Susan Collins (R-Maine) for a bill they introduced in December that proposes to reduce global warming pollution, spur job growth in clean energy technology, and return money directly to consumers. The Cantwell-Collins Carbon Limits and Energy for America’s Renewal Act would set up a mechanism for selling “carbon shares” to fuel producers and would return most of the resulting revenue in checks to every American. The legislation would achieve a reduction in greenhouse gas emissions of 20 percent by 2020 and 83 percent by 2050. By establishing a predictable price on the carbon associated with fossil fuels, the bill provides the business incentive needed to develop and deploy clean energy technology. If the bill is approved, the typical family of four would receive tax-free monthly checks from the government averaging \$1,100 per year.

“Energy is a \$6 trillion market opportunity, and green jobs can transform



the U.S. economy,” Cantwell says. “But we need a signal on carbon so that this can happen. This bill provides a simple approach to getting off of carbon and onto clean energy alternatives.”

Young says the bill includes “many positives,” such as the inclusion of a “true price collar” to reduce the inherent volatility of the cap-and-trade bill.

“We believe discussions of alternative, more transparent and sustainable approaches to climate change policy are positive, given the significant impact legislation will have on the U.S. economy,” Young says. **N**

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