

## **Smog: Livestock emissions and infant death**

Smog Blog

By Mark Grossi, FresnoBee.com, Friday, Jan. 23, 2009

In the San Joaquin Valley, where more than 2.5 million dairy cows now congregate, residents may be interested in a new study connecting expanding livestock operations and infant death.

The study says that doubling livestock numbers on farms is linked to a 7.4% increase in infant mortality in the county where the farms are found. [A story describing](#) the study came out last Friday on the Web site of Science News, a magazine devoted to explaining science to the public.

The story says: "Economist Stacy Sneeringer of Wellesley College in Massachusetts examined birth and death records from the National Center for Health Statistics and the increase in "animal units" per county across the United States from 1982 to 1997.

"Ammonia, hydrogen sulfide and airborne particulate matter are all associated with livestock production, Sneeringer says. Exposure to the gases has been linked to respiratory distress in infants, while exposure in the womb has been linked to disorders that occur late in pregnancy or shortly after birth, and has also been linked to spontaneous abortions."

Now for the pedigree of the research. Sneeringer's study has been published in the respected American Journal of Agricultural Economics, which has been publishing such work since 1919. The researcher got her masters and doctorate at the University of California, Berkeley.

The reference is S. Sneeringer. 2009. Does Animal Feeding Operation Pollution Hurt Public Health? A National Longitudinal Study of Health Externalities Identified by Geographic Shifts in Livestock Production. American Journal of Agricultural Economics. 91:1. DOI: 10.1111/j.1467-8276.2008.01161.

Finally, a comment on the research from Peter Thorne, director of the Environmental Health Sciences Research Center at the University of Iowa in Iowa.

"This study is a very important contribution. This is an industry we really need -- it provides food and a lot of jobs -- the answer isn't for everyone to become vegetarians."

But, he adds, "I think we need a fundamental change in the way this industry is going. There's a very strong case that under the Clean Air Act the EPA should be looking seriously at the livestock industry."

## **Studies confirm ban on burning on bad-air days**

By Jane Kay, environment writer

S.F. Chronicle, Friday, January 23, 2009

Fifty years ago, Bay Area residents were furious when air-quality cops banned backyard burning of household trash and property owners had to haul it to a dump.

Three months ago, the regional regulators had to take the same kind of heat when they banned wood-burning in stoves and fireplaces during winter bad-air days in the region's nine counties.

But as state health officials Thursday reviewed new studies confirming that fine particles in smoke can cause heart and lung problems, the Bay Area air district reported that 95,000 people have signed up to receive no-burn alerts by phone or on the Internet, nearly double the number before the ban took effect in November.

The robust response has settled down since the ban began, when hundreds of people called daily with questions, insults, praise and one critic created a page on Facebook railing against Spare the Air days.

"The public backlash was strong in 1955 when people were required to haul trash to the municipal dump," said Lisa Fasano, spokeswoman for the Bay Area Air Quality Management District.

"But it didn't take long for the backyard burning to stop and for people to recognize what a difference it made in the air quality. It took a bit of a learning curve, and I suspect we may go through the same learning curve with wood smoke," Fasano said.

This winter, regulators have called eight winter Spare the Air days and sent 115 warning letters to households where illegal burning was verified by one of 70 inspectors.

Officials are set to send out informational packets to 500 households where illegal burning had been reported but not confirmed.

Despite the eight alerts, the air district on eight occasions exceeded the federal standard limiting fine particles - four on days when it called a halt to wood-burning and four when it hadn't called a halt.

The state Air Resources Board's research staff reviewed several new studies Thursday, including one that showed changes in lung function and airway inflammation among asthmatic children living in smoky areas of Seattle.

Researchers found that wood smoke may reduce the blood's ability to clot properly, and may increase substances in the body that lead to heart and lung inflammation. The researchers cautioned that people with pre-existing diseases face a particularly dangerous threat.

Wood smoke is a mixture of gases and particles, including carbon monoxide, nitrogen dioxide and hundreds of toxic compounds. Low-hanging winter fog tends to hold the particles close to the ground, causing violations as well as posing the greatest exposure to the public.

As much as 80 percent of airborne particulates can come from wood smoke in the winter and as much as 70 percent of chimney smoke can re-enter the house or a neighbor's residence, according to state documents.

Metropolitan Sacramento, Los Angeles and San Francisco and the San Joaquin Valley are four of the 35 air districts that adopted prohibitions on wood burning during bad-air days in winter. A dozen other districts have some restrictions.

## **Air district hears views on Hayward energy plant**

By Eric Kurhi, The Daily Review  
Contra Costa Times, Friday, January 23, 2009

HAYWARD — Air district officials heard concerns by the lungful Wednesday regarding a permit they are considering for the Russell City Energy Center, a 600-megawatt facility proposed for a site near the Hayward shoreline.

The permit was previously approved by the Bay Area Air Quality Management District, acting as a delegate of the federal Environmental Protection Agency. But because the air district did not follow federal guidelines regarding public notice of the permitting process, the permit was remanded in July after a lawsuit.

Before Wednesday's meeting, air district spokesman Daniel Smith said all speakers would be granted up to three minutes on any subject pertaining to the power plant, and about 40 people took up the offer.

There were speakers urging the project's approval, nearly all of whom represented organized labor.

"This will create jobs at a time of unprecedented losses and unemployment," said Barry Luboviski of the Alameda County building and construction trades council. "We do not take on building projects at any cost if we believe it is going to victimize the community. This project meets standards, has equity and integrity."

According to development applicant Calpine — a Texas-based company with Bay Area offices in San Jose and Pleasanton — construction would create up to 650 jobs at its peak, and the facility would require a staff of 25 when completed.

At the start of the meeting, most of the overcapacity crowd was there to support one union or another, but the bulk left after the initial display of solidarity.

On the other side were those concerned with the effects such a plant would have on the surrounding area, or the idea of creating a fossil-fuel-burning plant in an era of increasing environmental consciousness.

A main concern raised Wednesday was that the analysis is outdated because the plant was initially permitted in 2002.

"The inconvenient truth is that the air board issued the permit using old data when there is new science," Alameda County Supervisor Gail Steele said. "I compare it with secondhand smoke. It took years to determine that it's as dangerous as smoking."

Steele said breakthroughs are constantly happening in understanding the effects of pollutants on the environment and human health.

"We are on the threshold of incredible knowledge," she said. "It's important to stop this and do it right."

The meeting was mostly civil, but included some harsh words and heckles, as well as accusations of fraudulent fact sheets and propaganda.

A number of speakers said the district had no right to declare Spare the Air Days banning the use of wood-burning fireplaces when it is considering such a large power plant.

Others said the permit is already "a done deal."

"That's definitely not the case," Smith said. "We will review and respond to everything we hear, and then decide whether additional conditions must be implemented."

The EPA will review all received comments and the air district's responses before giving the go-ahead to issue the permit, Smith said. The permit essentially states that no significant additional air pollution will be created when the power plant goes online.

If the permit is approved, the decision can be appealed first to the EPA and then to federal courts. Opponents have said they will appeal an approval.

## **Green Groups Sue State Over Air Pollution**

David A. Fahrenthold

Washington Post, Friday, January 23, 2009

A coalition of environmental groups filed one lawsuit against the state of Maryland yesterday, and threatened another, saying the state had not done enough to limit air pollution from two power plants.

The Environmental Integrity Project, the Baltimore Harborkeeper and Clean Water Action filed suit against the Maryland Department of the Environment in state court yesterday about the

Wheelabrator incinerator in Baltimore -- which burns solid waste to produce electric power. The groups allege that the department missed a deadline to issue an air-pollution permit to the facility.

The Environmental Integrity Project and the Chesapeake Climate Action Network also wrote a letter to the department saying they intended to file suit over air pollution at the Chalk Point power plant in Prince George's County.

The groups said the plant appeared to have been burning "residual fuel oil" instead of natural gas, producing more dangerous emissions and violating their state permits.

Environment department officials said yesterday that they intended to issue a proposed permit for the Baltimore facility Jan. 30. They said they could not comment about the Chalk Point plant because it was the subject of an investigation with the Maryland attorney general's office.

A spokesman for Mirant did not respond to a request for comment.

## **Moran Vows to Oppose Coal-Fired Power Plant**

By Tim Craig, Staff Writer

Washington Post, Friday, January 23, 2009

RICHMOND, Jan. 23 -- Democratic gubernatorial candidate Brian Moran vowed Thursday to fight a proposal to build a coal-fired power plant in southern Virginia, breaking with political leaders who have tried to shore up the once-powerful mining industry.

In a news conference near the state Capitol, Moran said the proposed plant in Surry County would contribute to global warming, worsen air quality in Richmond and Hampton Roads, and contribute to nitrogen pollution in the Chesapeake Bay.

"The approval of this plant will occur under the watch of Virginia's next governor. I think it is important for Virginians to know where their governor stands on this issue," Moran said. "We should be investing and developing clean sources of energy. We need to harness the energy of wind and solar."

With dozens of coal mines in southwest Virginia, the industry has been a mainstay of the state's economy for generations. Moran said that as governor, he would be reluctant to support coal-fired power plants unless they were equipped with scrubbing technology that is better than what is now available.

Moran's announcement suggests that he intends to reach out aggressively to environmentalists. And it comes as he tries to retool his campaign in response to the entry into the race of Terry McAuliffe, a former Democratic National Committee chairman and a prolific fundraiser. State Sen. R. Creigh Deeds (Bath) is also running in the June 9 Democratic primary.

Last week, Moran's campaign finance report showed that he was spending money faster than he was raising it during the July 1 to Dec. 31 reporting period. Meanwhile, McAuliffe reported collecting nearly \$1 million.

Moran initially was viewed as the establishment Democratic candidate, picking up endorsements from an array of elected officials and business leaders. Now, Moran is positioning himself as an insurgent to appeal to the party's liberal flank.

In the past two weeks, Moran has also come out against drilling for oil off Virginia's coast, and he proposed a mandate that 25 percent of the state's energy needs be met with renewable resources by 2025.

"His campaign is starting to take on a definable shape. He spent the last week saying he's the greenest of them all," said longtime Virginia political analyst Robert D. Holsworth. "He is trying to position himself as the grass-roots, progressive alternative to the big-money status quo guy."

On Tuesday, Moran hired Joe Trippi as a top adviser. Trippi worked on the presidential campaigns of Howard Dean and John Edwards, harnessing the Internet to court liberal activists.

Democratic strategist Dave "Mudcat" Saunders said he considers the three-way Democratic contest in Virginia "anybody's race." He said there is "starting to be a big, big breath of animosity between the supporters" of the three candidates.

Moran's position on the Surry plant appears to run contrary to his stand on a coal-fired plant scheduled to be built in Wise County. As a member of the House in 2004, Moran voted to authorize the Wise project. Last year, when environmentalists tried unsuccessfully to derail the Wise plant, Moran was quoted on the blog Raising Kaine as supporting it, remarking that Virginia was the "Saudi Arabia of coal."

Some other leading Virginia Democrats -- including Gov. Timothy M. Kaine and U.S. Sens. James Webb and Mark R. Warner -- have said that although it's important to find cleaner ways of burning coal, the state should continue to support its coal industry.

Delacey Skinner, a McAuliffe spokeswoman, said McAuliffe, too, wants to invest in renewable energy sources. But Skinner added, "Before we go around shutting down coal plants and losing that economic development opportunity, we need to make sure we have a replacement."

Peter Jackson, a Deeds spokesman, said Deeds wants to keep "all options on the table" about future coal plants.

## **EPA board to review Navajo coal plant air permit**

By Felicia Fonseca, Associated Press Writer  
Contra Costa Times, Friday, January 23, 2009

FLAGSTAFF, Ariz.—A U.S. Environmental Protection Agency appeals board has agreed to review the approval of an air permit for a proposed coal-fired power plant on the Navajo Nation, but carbon dioxide emissions won't be part of that process.

The EPA issued an air permit for the Desert Rock power plant in July. The state of New Mexico and a group of conservationists sought a review, citing concerns over air quality, carbon dioxide emissions and violations of the Endangered Species Act.

The Environmental Appeals Board granted the review in an order filed Thursday. The board intends to hear oral arguments after allowing the parties to file additional briefs.

The only issue that won't be under review is whether limits on carbon dioxide emissions are required for the plant. The EPA's regional office in San Francisco withdrew the portion of the permit related to such emissions and opened up a revised statement for public comment.

Houston-based Sithe Global LLC., and the tribe's Dine Power Authority have partnered to build the \$3 billion, 1,500-megawatt power plant on the Navajo reservation south of Farmington, N.M. It's expected to generate \$52 million in revenue for the tribe each year and create 400 jobs.

Environmentalists have fought the project every step of the way, contending a third coal-fired power plant in the Four Corners region would further degrade air quality, harm the environment and impact human health.

New Mexico Attorney General Gary King and environmentalists heralded the board's decision to review the air permit as a step in the right direction that could signal a change in the oversight of power plants.

"Obviously we're pleased that the EAB considered some of our arguments to have relevance," King said. "We thought they did. We're certainly concerned about ozone in that region and some other hazardous pollutants as well."

Developers of Desert Rock had planned to begin construction on the plant in 2007, but the debate over curbing greenhouse gases and questions about the authority of federal regulators to limit carbon dioxide have slowed progress.

Carbon dioxide, the leading pollutant linked to global warming, is not a regulated pollutant. But a decision by the EPA's appeals board in a Utah case led to some uncertainty over whether it should be.

The board rejected a federal permit for the Bonanza plant in November, saying the EPA's Denver office failed to adequately support its decision to issue a permit without requiring controls on carbon dioxide.

Colleen McKaughan, a deputy air-division director for the EPA's San Francisco office, said that decision played into the San Francisco office's decision to prepare a new statement outlining the reasons the office does not place limits on carbon dioxide emissions. The public has until Feb. 23 to comment on that.

"A lot of people feel we should address carbon dioxide in the permit, but EPA's position has been that carbon dioxide is not a regulated pollutant," she said.

The Supreme Court has told the EPA it must decide on whether carbon dioxide endangers public health and welfare, and if it does, it must be regulated. McKaughan said that determination hasn't been made.

Carol Browner, the new energy and climate czar at the White House, has said she favors pursuing possible regulation of carbon dioxide through the Clean Air Act and has criticized the EPA under the Bush administration for not moving swiftly enough.

President Barack Obama has indicated he wants the EPA to comply with the Supreme Court ruling and possibly address the issue of climate change through a cap and trade system to limit carbon dioxide and other greenhouse gas emissions.

Desert Rock proponents contend the plant would be outfitted with state-of-the-art pollution controls.

Jeff Holmstead, lead attorney in the fight to build Desert Rock and a former assistant administrator for air at EPA, said developers would have been delighted if the appeals board declined to review the permit, but "I don't think anybody involved expected that was a realistic possibility.

"We think it would have been very hard for the EAB to ignore these issues," he said.

Holmstead said developers are encouraged that the review process is moving forward. The appeals board set a Feb. 13 deadline for New Mexico and conservationists to file briefs, and a March 6 deadline for the EPA and the developers to respond.

The appeals board said more than 900 pages of legal arguments have been filed in the case. It encouraged a 50-page limit on any future briefs and discouraged any duplication or reiteration of arguments.

## **Region's gas prices rise for 25th straight day**

Daily News Wire Services

L.A. Daily News, Friday, January 23, 2009

The average price of a gallon of self-serve unleaded regular gasoline rose in Los Angeles County today for the 25th consecutive day, increasing eight-tenths of a cent to \$2.07.

The average price is 6.4 cents more than last week and 30.2 cents more than a month ago, but \$1.125 less than at this time last year and \$2.556 less than the record high of \$4.626 set on June 21, according to figures from AAA and the Oil Price Information Service.

Today's rise was the 35th in 37 days.

The Orange County average price of a gallon of self-serve unleaded regular gasoline rose for the 25th consecutive day today and 36th time in 37 days.

The price increased 1.1 cents to \$2.063, 6.6 cents more than last week and 30.9 cents more than a month ago, but \$1.062 less than at this time last year and \$2.535 less than the record high of \$4.598 set on June 19.

The average prices have increased 34 to 38 cents in most portions of Southern California since hitting their lows nearly six weeks ago, according to Jeffrey Spring of the Automobile Club of Southern California.

"Southern California prices do normally rise at this time of year as refineries cut inventory, perform maintenance and prepare to produce the summer blend of gasoline that is required to improve the state's air quality," Spring said.

The national average price of a gallon of unleaded self-serve regular gasoline was unchanged today, remaining at \$1.85 -- 3.4 cents more than a week ago and 19.5 cents more than last month, but \$1.156 less than this time last year and \$2.264 less than the record high of \$4.114 set July 17.

California's gasoline prices are typically higher than the national average and among the highest in the nation because of taxes and a state law mandating a special blend of fuel to reduce polluting emissions.

### **Study: Cleaner air adds 5 months to US life span**

By ALICIA CHANG, AP Science Writer

In the S.F. Chronicle, Thursday, January 22, 2009

LOS ANGELES, (AP) -- Cleaner air over the past two decades has added nearly five months to average life expectancy in the United States, according to a federally funded study. Researchers said it is the first study to show that reducing air pollution translates into longer lives.

Between 1978 and 2001, Americans' average life span increased almost three years to 77, and as much as 4.8 months of that can be attributed to cleaner air, researchers from Brigham Young University and Harvard School of Public Health reported in Thursday's New England Journal of Medicine.

Some experts not connected with the study called the gain dramatic.

"It shows that our efforts as a country to control air pollution have been well worth the expense," said Dr. Joel Kaufman, a University of Washington expert on environmental health.

Scientists have long known that the grit in polluted air, or particulates, can lodge deep in the lungs and raise the risk of lung disease, heart attacks and strokes. The grit — made of dust, soot and various chemicals — comes from factories, power plants and diesel-powered vehicles.

In 1970, Congress passed a revised Clean Air Act that gave the Environmental Protection Agency the power to set and enforce national standards to protect people from particulate matter, carbon monoxide and other pollutants.

The law is widely credited with improving the nation's air quality through such things as catalytic converters on cars and scrubbers at new factories.

For the study, scientists used government data to track particulate pollution levels over two decades in 51 U.S. cities. They compared these changes to life expectancies calculated from death records and census data. They adjusted the results to take into account other things that might affect life expectancy, such as smoking habits, income, education and migration.

On average, particulate matter levels fell from 21 micrograms per cubic meter of air to 14 micrograms per cubic meter in the cities studied. At the same time, Americans lived an average 2.72 years longer.

"We saw that communities that had larger reductions in air pollution on average had larger increases in life expectancies," said the study's lead author, C. Arden Pope III, a Brigham Young epidemiologist.

Pittsburgh and Buffalo, N.Y., which made the most progress cleaning up their air, saw life spans increase by about 10 months. Los Angeles, Indianapolis and St. Louis were among the cities that saw gains in life expectancy of around five months.

The study was partly funded by the Centers for Disease Control and Prevention and EPA.

"This finding provides direct confirmation of the population health benefits of mitigating air pollution," Daniel Krewski, who does pollution research at the University of Ottawa in Canada, wrote in an accompanying editorial.

In a statement, the EPA said such studies provide critical information that can help the agency set standards on particulates. EPA data show that average particulate levels nationally have fallen 11 percent since 2000.

Last year, government researchers reported that U.S. life expectancy has surpassed 78 years for the first time. They attributed the increase to falling mortality rates for nine of the 15 leading causes of death, including heart disease, cancer, accidents and diabetes.

## **EPA likely to grant waiver to let California regulate auto emissions**

By Rob Hotakainen

Sacramento Bee and Modesto Bee, Friday, January 23, 2009

WASHINGTON – With a new occupant in the White House, California could soon start enforcing its landmark 2002 law requiring a sharp reduction in vehicle emissions.

State leaders and environmentalists are pressing for quick approval of a waiver that would let California and at least 13 other states impose tougher air-quality standards than allowed under federal law. The Bush administration rejected the request a year ago, but that could be reversed by President Barack Obama and his environmental team.

During the presidential campaign, Obama said he backed the California law. Last year, he co-sponsored a bill by Democratic Sen. Barbara Boxer of California to approve the waiver.

"If I'm confirmed, I will immediately revisit the waiver," Lisa Jackson, Obama's choice to head the Environmental Protection Agency, told Boxer at her confirmation hearing last week.

Boxer, the head of the Senate's environment committee, is expecting quick approval. She compared the EPA under Bush's leadership to Sleeping Beauty, saying the agency now "needs to be awakened from a deep and nightmarish sleep."

If the EPA grants the waiver, California and the other states will begin a program to reduce greenhouse gas emissions from passenger vehicles by 30 percent over the next seven years, according to Mary Nichols, chairman of the California Air Resources Board.

Nichols and Republican Gov. Arnold Schwarzenegger sent letters to the new administration on Wednesday, asking for permission to enforce the law. The governor said the decision to reject the waiver was "fundamentally flawed."



Critics said that granting the waiver would further hurt the economy.

Republican Rep. Tom McClintock of California said the governor "is asking the president to waive a federal law that currently protects California consumers from the governor's crusade to save the planet by destroying California's economy."

Auto manufacturers have long opposed the California law, which would require them to produce more fuel-efficient vehicles. And the Bush administration sided with them, saying that only the federal government can set fuel-efficiency standards.

Carmakers also contend that the law could increase their manufacturing costs, which then would be passed along to consumers. Environmentalists counter by saying consumers would save money in the long run because higher purchase costs would be offset by lower fuel costs.

The Association of International Automobile Manufacturers, a trade group representing Honda, Toyota and 12 other international manufacturers, objects to the law on the grounds that it would lead to "a patchwork of state laws" instead of one federal standard. Supporters say it's already under tremendous financial pressure, with car sales lagging, and can't afford to comply with new regulations.

Supporters of the waiver said the administration could act immediately, without holding any public hearings.

Derek Walker, California climate program director of the Environmental Defense Fund, said California's request was "unlawfully refused by the Bush administration" and should be reversed. He said it would be consistent with Obama's pledge "to make respect for the rule of law a touchstone of his presidency."

The Pew Environment Group said that Obama, "with the stroke of a pen," could take an early step toward reducing global warming and saving Americans money by approving the waiver.

"President Obama must use his executive authority to get America moving toward a safer, cleaner energy future," said Phyllis Cuttino, who directs the Pew Environment Group's U.S. Global Warming Campaign.

In a letter to Obama, Schwarzenegger said the federal government should support "the pioneering leadership" of California and other states that want to act on their own to reduce global warming.

"For four years, California and a growing number of farsighted states have sought to enforce a common-sense policy to reduce global-warming pollution from passenger vehicles, which are the source of 20 percent of our nation's greenhouse gas emissions," the governor wrote. "Regulation will not only reduce these emissions, but will also save drivers money and reduce our nation's dependence on imported oil."

McClintock, a freshman who joined Congress this month, said the governor was using "highly questionable junk science" to defend the law.

"The net effect of his request would add between \$1,000 and \$5,000 to the price of every car sold in California," McClintock said. "Automobile sales normally account for one-fifth of sales taxes paid in the once-Golden State and total sales tax receipts are already down \$1.5 billion over the last 12 months."

Meanwhile, he said, "The governor is also asking the president to bail out California from its growing budget deficit. Just another day in 'reality-challenged' Sacramento."

### **The Buzz: Freshman takes aim at emissions law**

Sacramento Bee, Friday, January 23, 2009

Freshman Assemblyman Dan Logue thinks big. The Linda Republican's first bill would repeal Assembly Bill 32, which helped cement Gov. Arnold Schwarzenegger's environmental legacy by requiring huge cuts in greenhouse gas emissions by 2020. Too costly and ineffective, Logue says, demonstrating a different way not to pollute: Tilt at windmills.

## **Climate change is killing Western forests, scientists say**

By Douglas Fischer, Daily Climate  
Tri-Valley Herald, Friday, January 23, 2009

The death rate of the most stable and resilient forests in western North America has doubled during the past few decades as the climate has warmed, according to new research to be published Friday.

The increased mortality suggests future landscapes will be thinner, sparser and far more susceptible to widespread diebacks.

The new data from a team of 11 scientists provide more evidence that climate change is having a broad and significant impact, independent of other human activities such as logging and development. And while the study focused on Western North America, scientists say the global temperature rise is likely affecting all the world's forests - from the Northern boreal to the Eastern hardwoods to the tropics - to some degree.

In North America, scientists say, the trend is clear: Western forests are becoming more susceptible to wildfire, disease and invaders such as bark beetles. Average tree size is shrinking; creatures dependent on large, old-growth trees will increasingly find themselves out of a home.

And as temperature and mortality climb, these forests will store less and less carbon - and could potentially flip from being carbon sinks to carbon sources, further speeding global warming.

"The important message here is that wherever we looked, mortality rates are increasing," said Nathan Stephenson, a scientist with the U.S. Geological Survey's Western Ecological Research Center in California and a co-author on the study, published in the journal *Science*.

"It's very likely that mortality rates will continue to rise."

The research tracked growth rates and tree mortality from 1955 to the present in 76 plots of old-growth forest across the West.

Tree death increased in every plot and every region, at every elevation, in trees of every size and every type, scientists said. And the change is happening fast, with estimated doubling periods ranging from 17 years in the Pacific Northwest to 29 years in the Rocky Mountains. The birth rate for new trees remained unchanged.

Temperature alone is driving this decline, researchers found. From the 1970s to 2006, temperatures increased 0.3 C to 0.4 C per decade across the region, drying out the snowpack, triggering an earlier spring melt and lengthening the summer dry season.

"We do see clear evidence that climate change is resulting in an increase in stand replacement," said Jerry Franklin, a professor of forest resources at the University of Washington and another co-author. "These are what we consider to be our most stable, most resilient stands."

The study's scale allowed researchers to discount other factors: Spreading disease has increasingly afflicted vast swathes of North America's pine and fir forests, but when scientists excluded afflicted patches, the remaining healthy stands saw the same increasing mortality rates.

Similarly, another blight for forest health, smog, could be discounted after researchers found the death rate for trees growing in the relatively pure air of Washington's Olympic Peninsula no different from those of trees growing in California's smog-afflicted Sierra Nevada.

The findings, researchers said, have broad implications for land managers and policy makers. For starters, Franklin said, it underscores the need to preserve the remaining stands of old growth forests throughout the West. Old growth stands are "extraordinary carbon stores," Franklin said, sequestering a large mass of carbon in very stable conditions.

Greenhouse gas emissions--to say nothing of habitat loss--associated with logging old growth cannot be mitigated by new growth, Franklin said.

"One lesson in it for me is ... we probably do not want to get into these forests and mess around. Because we aren't going to help. If anything, we could potentially mess it up," he said.

New regulations will likely be needed, to both help the forest and keep people safe, particularly as fire risk rises, said Thomas Veblen, a professor of geography at the University of Colorado and another co-author.

"This is further evidence that we're really seeing continental-scale effects of the warming," he said. "We have to start thinking outside the box in terms of how as a society we adapt to the change that's under way."

Land managers say they are getting that message.

In California the Nature Conservancy is calling for the establishment of large protected areas that permit species migration, promoting more resilient ecosystems and sponsoring legislation in Sacramento requiring wildlife corridors as condition for highway development, said Louis Blumberg, director of the organization's California climate change team.

"And we're doing science," he said. "We're trying to figure it out, too."

But it is likely this latest data, from one of the largest-ever surveys of North American forests, underestimates the true impact of climate change on forest health.

The researchers did not include any Western forest stands hit by massive trauma that is at least partially linked to climate, such as wildfires or the bark beetle epidemic.

British Columbia has lost 40 million acres of forest to the bark beetle; Colorado is approaching 2 million acres of dead forest; Wyoming just recently crested the 1-million-acre mark, said Mary Ann Chambers, spokeswoman for the U.S. Forest Service's Bark Beetle Incident Management Team for the Rocky Mountain region.

Last summer the Forest Service closed a quarter of its 120 campgrounds to remove dead trees, and more are dying: The beetle epidemic has recently crested the continental divide, jumping from the predominantly lodgepole pine forest on the Western Slope to a forest of mixed conifers to the east. "The research says if the beetle is in lodgepole, it pretty much stays in lodgepole," Chambers said. "But that isn't the case any more."

All this has an impact, said Kyle Patterson, a spokeswoman for the Rocky Mountain National Park, where a popular camping spot will be closed this spring so crews can essentially clear cut the dead trees.

"We held on for as long as we could," Patterson said. "There are a lot of people who have been going to that campground for years. They saw the (hills) getting redder and redder. They knew it was coming. It's still very hard to take." "The forest is changing," she added. "It's very upsetting to those of us who won't see it regenerate in our lifetimes."

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## **Study: Western forests dying at increasing rate**

By Jeff Barnard, Associated Press Writer

In the Modesto Bee and other papers, Friday, January 23, 2009

GRANTS PASS, Ore. — Trees in old growth forests across the West are dying at a small, but increasing rate that scientists conclude is probably caused by longer and hotter summers from a changing climate.

While not noticeable to someone walking through the forests, the death rate is doubling every 17 to 29 years, according to a 52-year study published in the Friday edition of the journal Science. The trend was apparent in trees of all ages, species, and locations.

"If current trends continue, forests will become sparser over time," said lead author Phillip J. van Mantgem of the U.S. Geological Survey's Western Ecological Research Center.

"Eventually this will lead to decreasing tree size," he said. "This is important because it indicates future forests might store less carbon than present."

Old growth forests, particularly those in the Northwest, store large amounts of carbon, making them a resource in combatting global warming, said Jerry Franklin, a professor of forest ecology at the University of Washington. But as trees die, they decompose and give off carbon dioxide, contributing to the amount of greenhouse gases. Young forests store very little carbon, and it takes hundreds of years to replace old growth, he said.

The researchers considered several other possible causes for the higher death rate - air pollution, overcrowding of young trees, the effects of logging, large trees falling on small ones, and a lack of forest fires, which keep forests healthy. But the data showed the trend affected trees young and old, in polluted and clean air, in crowded and sparse stands and at different elevations.

The likely cause, they concluded, was warmer average temperature across the West, about 1 degree over the study period, said co-author Nathan L. Stephenson, also of the USGS Western Ecological Research Center. That results in greater stress on the trees from lack of water, leaving them vulnerable to disease and insects.

Stephenson said the rising death rate could also produce a cascading decline in forests that leads to less habitat for fish and wildlife, an increased risk of wildfires, and a vulnerability to sudden forest die-offs.

"If it's a gradual process, we may be fine," said Mark E. Harmon, professor of forest ecology at Oregon State University. "If it is a real sudden process, it could be problematical."

Barbara Bond, a professor of forest physiology at Oregon State who was not involved in the study, said it would be wrong to definitively conclude that the rising tree mortality was caused by warmer temperatures.

"An enormous amount of additional work would have to be done before any rational scientist would draw some cause and effect," she said.

The geological survey paid for the study, which examined data between 1955 and 2007 in 76 research plots in British Columbia, Washington, Oregon, California, Idaho, Colorado and Arizona. The average age of the forests examined was about 450 years, with some as old as 1,000 years. Of the 59,736 trees counted, 11,095 died over the study period.

The death rate increase varied, with the highest in California's Sierras, from about 0.9 percent in 1980 and rising to about 1.3 percent.

## **West's trees dying faster as temperatures rise**

**A study of old-growth forests predicts that if the trend continues, it could alter not just the region's woodlands, but the quality of wildlife habitat and forests' ability to store carbon.**

By Bettina Boxall  
January 23, 2009

More trees are dying in the West's forests as the region warms, a trend that could ultimately spell widespread change for mountain landscapes from the Sierra Nevada to the Rockies.

Scientists who examined decades of tree mortality data from research plots around the West found the death rate had risen as average temperatures in the region increased by more than 1 degree Fahrenheit.

"Tree death rates have more than doubled over the last few decades in old-growth forests across the Western United States," said U.S. Geological Survey scientist Phillip van Mantgem, coauthor of a paper published in today's issue of the journal *Science* and released Thursday.

The researchers found rising death rates across a wide variety of forest types, at different elevations, in trees of all sizes and among major species, including pine, fir and hemlock.

"Wherever we looked, mortality rates are increasing," said Nathan Stephenson, a study coauthor and USGS research ecologist.

Tree death rates had risen the most rapidly in the U.S. Pacific Northwest and southern British Columbia, Canada, doubling in 17 years. But the highest mortality -- more than 1.5% a year -- showed up in California.

If temperatures continue to rise, as many climate models predict, "it's very likely that mortality rates will continue to rise," Stephenson said.

That could eventually alter not just the face of Western woodlands, but the quality of wildlife habitat and forests' ability to store carbon. Extensive tree die-back could lead to wholesale landscape changes, converting forests in borderline areas to grass and shrublands.

Described as the first large-scale analysis of mortality rates in temperate forests, the study examined data from tree stands at least 200 years old. But the authors said the same dynamics were probably at work in younger forests as well.

"If it's affecting the old-growth stands, it's likely to affect the young stands too," said coauthor Thomas Veblen, a University of Colorado geography professor.

Rising temperatures favor insects and pathogens that attack trees. Warming also reduces the winter snowpack and lengthens the summer dry season, placing trees under greater drought stress.

"One degree warmer may not seem like a lot, but the effects can be cumulative and put many more trees under stress, and cause a few more trees to die than used to," said study coauthor Mark Harmon, a forest ecology professor at Oregon State University. "Over long periods of time, that can change the whole composition of the forest."

The big, old trees in long-established stands are particularly good at storing carbon. If they yield to younger, smaller trees, carbon storage would decline. Moreover, the researchers found that in the research plots, the establishment of replacement trees was not keeping pace with mortality, suggesting that old forests could become thinner.

It is even possible, Van Mantgem said, that Western forests could eventually become "net sources of carbon dioxide in the atmosphere -- further speeding up the pace of global warming."

The research team of 11 federal and university scientists reviewed data from undisturbed forest areas in California, the Pacific Northwest and the interior West.

Rising mortality was evident across a spectrum of plots and tree types in all three regions, leading the team to rule out other possible causes of tree deaths such as air pollution or overgrown conditions.

The findings were in sync with other recent studies that have linked rising temperatures to increasing wildfire activity in the West and massive bark beetle outbreaks.

"That may be our biggest concern," Stephenson said. "Is the trend we're seeing a prelude to bigger, more abrupt changes to our forests?"

Veblen argued that "society needs to discuss policies that will help adapt to the changes that are well underway."

For example, he said it may be better to deal with the growing wildfire risk by limiting development in fire-prone areas than by stepping up firefighting or forest-thinning efforts.

Hugh Safford, a U.S. Forest Service regional ecologist in California not involved in the study, said the paper's linkage of tree death and warming seemed sound.

But he added that the picture was much gloomier in many of the West's forests, which are overgrown as a result of decades of fire suppression and are experiencing much higher mortality rates than those documented in the study.

If death rates are climbing in undisturbed old forest, Safford said, "that's extremely bad news" for areas where tree density is increasing.

"The ante is going up constantly, and when you add a highly dense stand and increasing fire and insect beetle issues, it's alarming."

[S.F. Chronicle editorial, Friday, Jan. 23, 2009:](#)

### **A clean-air choice for Obama**

Along with closing Guantanamo Bay prison, President Obama has a chance to follow through quickly on another promise that can send shockwaves. He should let California and 18 other states set tough limits on greenhouse gas emissions from vehicles.

The prior White House had eviscerated the clean-air cause by siding with Detroit, which opposed tailpipe controls as expensive. The Bush team ignored staff recommendations from the Environmental Protection Agency about pollution science and spiked California's request to exert state's rights and seek a waiver from federal rules.

The last few years were pretty much a clean sweep for the dirty-air crowd. But the results were so unpopular that nearly every major candidate in both parties pledged to reverse direction. No one was more emphatic than Obama, who co-sponsored a bill (written by California Democratic Sen. Barbara Boxer) to overturn an EPA ruling barring California from setting the emission rules. In case anyone missed the point: this nation is heading unmistakably in the direction of cleaner-burning cars and trucks.

That's why both Mary Nichols, chairwoman of the state Air Resources Board, and Gov. Arnold Schwarzenegger sent separate appeals to Washington this week. Their goal is to remind the new administration of California's desire for regulations cutting carbon dioxide emissions by 30 percent by 2016. The standards have a double whammy effect of also raising mileage, meaning both cleaner air and lower energy bills.

The rules are key for another reason. Some 17 other states, including the nation's biggest, are following Sacramento's lead, and the regulations cover at least half the nation's auto and pickup truck fleet.

The widespread support at the state level undercuts one of the major criticism by the Bush team and car makers: The changeover to cleaner cars will lead to a checkerboard of differing state rules on tailpipe pollution. With the biggest markets demanding cleaner cars, the Detroit and foreign brands are assured of a huge market.

The decision by Obama should come soon. Lisa Jackson, his pick to head the EPA, said she will examine California's request "very, very aggressively very soon" after her confirmation, a process that could mean new rules in place by May. Jackson's home state of New Jersey has embraced the California standards and is waiting alongside Sacramento for permission to enact them.

It can't come too soon. This state's long battle to clean the air and spur new auto technology has taken too long. Obama can remind the country - and the planet - of one of his bedrock promises to conserve energy, encourage new technology and reduce global warming.

Sign the waiver, Mr. President, and let ambitious states like California get to work.

[Letters to the Sacramento Bee, Friday, January 23, 2009:](#)

### **Homebound burned by ban**

The Sacramento County action to prohibit wood burning this winter may have been a good spare the air action and a profitable situation for the gas companies, but it is detrimental to people who are homebound, like retirees and the disabled. The gas companies make a huge profit from the homebound because they heat their homes for more hours each day. Fresh air is nice, but so is food and warmth.

*Andrew Barnard, Rio Linda*

### **How about fireplace permits?**

As of Sunday we have had seven consecutive "no burn days" in Sacramento County. We couldn't have a fire in our fireplace on Thanksgiving or the day after. My question is: Has this made a significant improvement in our pollution? I find it ironic that my friends in Roseville (one mile away) burn in an open fireplace every night.

A suggestion: Let people with fireplaces in the county apply for a use permit allowing them to burn when they want to up to a certain number of days. The permit should cost only what it would take to defer expenses. The advantage to the county would be to identify those with approved stoves and allow the residents to pick and chose when they could burn.

*Glenn Nichols, Orangevale*

[Note: The following clip in Spanish discusses Mexico unveils plans for the largest renewable energy plant in Latin America. It will be located in the state of Oaxaca and is projected that it will reduce annually over 600.000 tons of carbon dioxide. For more information on this or other Spanish clips, contact Claudia Encinas at \(559\) 230-5851.](#)

### **México inaugura el mayor parque eólico de Latinoamérica**

La Opinión, Friday, January 23, 2009

Juchitán de Zaragoza, México (EFE).- La empresa de energías renovables española Acciona y la cementera mexicana Cemex inauguraron hoy en el sur de México el plan Eurús, "el proyecto de energía eólica más grande de América Latina", informaron ambas compañías en un comunicado.

"Con 250 megawatios (MW) de potencia, producirá electricidad equivalente al consumo de una ciudad de 500.000 habitantes", señala la nota difundida hoy por ambas empresas.

Las instalaciones se extienden sobre un terreno de 2,500 hectáreas, localizado en el ejido de La Venta, en el Istmo de Tehuantepec, en el sureño estado mexicano de Oaxaca.

La planta, que será inaugurada hoy formalmente por el presidente de México, Felipe Calderón, contará con 167 aerogeneradores que servirán para producir generar el 25 por ciento de la electricidad que consume Cemex en este país.

Hasta el momento Eurús tiene ya una capacidad de generación en marcha de 37 megawatios que será ampliada en los próximos meses hasta alcanzar antes de que termine 2009 el total previsto.

Acciona, el socio español del proyecto, invirtió 550 millones de dólares (unos 427 millones de euros).

Dos aportaciones del proyecto de energías renovables Eurús son que permitirá reducir la emisión anual de unas 600.000 toneladas de dióxido de carbono (CO<sub>2</sub>), y que se han creado 850 empleos directos.

"Eurús será uno de los mayores parques eólicos del mundo y el segundo en reducción de emisiones registrado ante las Naciones Unidas al amparo del Protocolo de Kioto", agrega el comunicado.

Cemex es una empresa mexicana líder mundial en la industria de la construcción mientras que la multinacional española Acciona es una de las más importantes del mundo en el sector de la energía renovable.

Esta última ha instalado hasta el momento más de 6 mil megawatios eólicos en 208 parques de 14 países y fabrica aerogeneradores de tecnología propia.

[Note: The following clip in Spanish discusses "bonus markets" for carbon dioxide, an international concept of which it will reward industries that reduce their emissions and penalizes those that increase their emissions.](#)

## **Los mercados de bonos de CO<sub>2</sub>**

### **Las "bolsas del medioambiente"**

Rafael Cores

Univision.com, Friday, January 23, 2009

MIAMI - La emisión de gases de efecto invernadero a la atmósfera es la causa principal del calentamiento global, según dice la mayoría de científicos y pocos ya se atreven a discutir. Por tanto, se volvió patente en los últimos años que la humanidad en conjunto necesita recortar el volumen de esas emisiones para continuar teniendo un planeta habitable.

Un mercado con un propósito

Algunos países, como los integrantes de la Unión Europea, aprobaron legislaciones que obligan a las empresas –principalmente a aquéllas que generan energía o a las grandes fábricas- a reducir sus emisiones.

Otros muchos, entre los que no está Estados Unidos, se comprometieron con el protocolo de Kyoto a controlar sus emisiones de gases contaminantes por debajo de un tope.



Para lograr esos objetivos se creó, entre otras medidas, el concepto de "bonos de carbono", un sistema internacional por el que se premia a las empresas que reducen sus emisiones y se penaliza a aquéllas que las incrementan.

Básicamente, un bono de carbono es el derecho a enviar a la atmósfera una tonelada de CO<sub>2</sub> (dióxido de carbono). Así por ejemplo, si al final del año una compañía eléctrica a la que las autoridades de su país le han puesto un límite de emisión de 100,000 toneladas de CO<sub>2</sub> anuales se pasa y emite 10,000 más, tendrá que presentar bonos de carbono equivalentes a ese exceso. Esos bonos los puede comprar u obtener a través de proyectos certificados como reductores de emisiones.

"El mercado de bonos permite a las empresas reducir sus emisiones de la forma más barata posible", explica Graham Cooper, presidente de las publicaciones Environmental Finance, especializadas en temas medioambientales.

### Tres tipos de bonos principales

No todos los bonos son iguales. Las diferencias radican en las leyes que los exigen.

La Unión Europea regula las emisiones de sus países miembros, por lo que ha creado un sistema de bonos propio. A raíz del protocolo de Kyoto surgieron otros bonos: los que son aceptados por los países firmantes para cumplir sus objetivos. El tercer tipo de bonos se creó como alternativa en los países no firmantes en Kyoto, como Estados Unidos, donde algunas empresas reducen sus emisiones de forma voluntaria, sin la necesidad de una ley que les obligue.

Las exigencias de cada tipo de bono son diferentes. Lo que para Kyoto significa atajar la emisión de una tonelada de gases puede que no cumpla los estándares de la Unión Europea, más exigentes. Por sus partes, los bonos voluntarios no están regulados por ningún país u organización internacional, lo que genera muchas dudas sobre la credibilidad de muchos de ellos.

Todos estos bonos se compran y se venden. Pero cada uno de los tres tipos tiene un precio diferente. La idea fundamental detrás del mercado de bonos es que sea más rentable para las empresas emitir menos gases, lo que en consecuencia las llevará a sistemas de producción más eficiente y al lanzamiento de proyectos verdes que califiquen para conseguir bonos.

### Europa marca la pauta

En el caso de la Unión Europea se le impuso a cada país un tope anual de emisiones según el número de toneladas de CO<sub>2</sub> que cada territorio había enviado a la atmósfera durante los años anteriores. A su vez, cada uno de los miembros de la unión "repartió" ese tope entre las grandes empresas emisoras de gases a la atmósfera –plantas de energía, grandes fábricas, etc–.

De este modo, las empresas comienzan cada año con un número de bonos otorgados –gratis– por la propia Unión Europea, es decir, con el permiso para emitir hasta un límite. Si una empresa no alcanza ese límite, le quedarán bonos sin utilizar que, si lo desea, puede vender a otra empresa europea que haya superado su límite.

Para regular ese mercado de bonos se creó el Esquema de Mercado Europeo de Emisiones de Gases de Efecto de Invernadero (European Union Greenhouse Gas Emissions Trading Scheme, EU ETS), que controla los European Union Allowances (EUAs), el nombre oficial de los bonos de CO<sub>2</sub> válidos en la Unión Europea.

Hasta ahora las empresas europeas reciben gratis esos bonos para poder contaminar. Pero en el futuro se espera que tengan que pagar por ellos, quizá acudiendo a una subasta con el resto de compañías.

### Los bonos CDM de Kyoto

Los países firmantes del protocolo de Kyoto se comprometieron en 1997 a reducir en un 5 por ciento -respecto a 1990- las emisiones de seis tipos de gases causantes del calentamiento global: el propio dióxido de carbono (CO<sub>2</sub>), metano (CH<sub>4</sub>), óxido nitroso (N<sub>2</sub>O), hidrofluorocarbonos (HFC), perfluorocarbonos (PFC) y hexafluoruro de azufre (SF<sub>6</sub>).

El objetivo se debe cumplir para 2012. Es decir, si en 1990 se emitía 100, para el final de 2012 se deberá emitir 95. Con la salvedad de que no todos los países tienen que reducir sus emisiones igual: cada uno tiene asignada su cuota de reducción para lograr ese recorte de 5 por ciento entre todos. En el reparto, los países industrializados tienen un compromiso mayor de recorte de emisiones que aquéllos en vías de desarrollo.

Para lograr ese objetivo se creó un sistema controlado por entidades de Naciones Unidas, el Clean Development Mechanism (Mecanismo de Desarrollo Limpio), que permite a gobiernos y empresas de los países industrializados a desarrollar proyectos de reducción de emisiones en países en vías de desarrollo.

Esos proyectos generan Reducciones Certificadas de Emisiones: los bonos CER (por sus siglas en inglés). Al obtenerse gracias a proyectos en países en vías de desarrollo, las empresas logran reducir sus emisiones a un precio menor que si lo tuvieran que hacer en sus países y, además, exportan tecnología limpia.

Estos bonos CER también se compran y se venden, aunque a un precio algo inferior a los de la Unión Europea. Además, su futuro es incierto a partir de 2012, cuando expira el protocolo de Kyoto.

### Las V.E.R. y el CO<sub>2</sub> en Estados Unidos

Estados Unidos firmó el protocolo de Kyoto pero nunca lo ratificó. En 2001 el gobierno de Bush se retiró del protocolo argumentando que es ineficiente e injusto al involucrar sólo a los países industrializados y excluir de las restricciones a algunos de los grandes emisores, como China e India.

Pero eso no quiere decir que en Estados Unidos no haya empresas comprometidas con reducir sus emisiones. Para ese "mercado" se crearon las Reducciones Voluntarias de Emisiones (VER, por sus siglas en inglés), bonos no regulados, sin requerimiento legal, que también se compran y venden, pero a un precio y volumen muy inferior a los anteriores y sin que exista un mercado estable aún.

### El futuro del CO<sub>2</sub> en EU

Pero esa situación puede cambiar con la llegada de Obama a la presidencia, durante la cual se espera una ley para la reducción de emisiones.

Cuando la ley se apruebe, lo más probable es que se instaure un sistema parecido al de la Unión Europea, con unos bonos de carbonos regulados, explica Wiley Barbour, fundador de American Carbon Registry, una organización sin ánimo de lucro que registra bonos de carbono voluntarios.

Barbour asegura que aunque la legislación se mueva rápido en el Congreso, pasarán al menos cuatro o cinco años hasta que la Agencia de Protección del Medioambiente (EPA) redacte los detalles de la norma y sea efectiva.

Mientras tanto, su organización trabaja con aquellas empresas que quieren estar preparadas de antemano. Por ello sólo registran proyectos de reducción de emisiones bajo un seguimiento estricto que, cuando llegue la ley, espera sean canjeables por los bonos regulados.

"La legislación tratará de no penalizar a las compañías que están intentando hacer bien las cosas ahora", argumenta Barbour, miembro del Grupo Intergubernamental sobre el Cambio Climático que fue premiado con el Nobel de la Paz en el 2007.

### Un mercado en expansión

Los "registros de carbono" como el de Barbour son fundamentales en el engranaje de este mercado: certifican cuánto bonos tiene una empresa o un proyecto que genera energía limpia o que evita que se envíen gases de efectos invernadero a la atmósfera. Aportan credibilidad al producto, al bono, que se transmite del vendedor al comprador. Además, toman nota de la transacción y llevan el registro durante toda la vida de un bono de carbono.

"El registro es fundamental porque prueba que existen esos bonos de carbono", explica Helen Robinson, directora del registro TZ1, con sedes en Londres, Nueva York, San Francisco, Beijing y Auckland.

Algunos registros también ponen en contacto a compradores y vendedores de bonos.

En 2008, el American Carbon Registry facilitó la venta de 3 millones de toneladas de CO2 en bonos, de las cuales 1.4 millones fueron "retiradas" por sus compradores, es decir, utilizadas para argumentar que esas empresas dejaron una huella menor de emisiones.

Pero donde de verdad se mueve –y se hace– dinero es en los mercados de carbono más regulados, como los de la Unión Europea. El más importante es el BlueNext de París, una "bolsa del medioambiente" propiedad del NYSE (New York Stock Exchange) y el Caisse des Dépôt, banco del estado francés, que acapara más del 90 por ciento de los intercambios de bonos de la Unión Europea (EUAs).

Entre los 85 miembros de BlueNext se encuentran grandes empresas eléctricas, brokers, y grandes bancos como Citigroup, JP Morgan o Morgan Stanley, explica Philippe Chauvancy, director de ventas de BlueNext.

En BlueNext también confían en que Estados Unidos regule sus emisiones a corto plazo, por lo que ya están abriendo una sucursal en Nueva York para seguir bien posicionados en un mercado que movió 180 mil millones de euros en 2008 (\$230 mil millones), el doble que un año antes.

Algunos inversores de riesgo también han visto la oportunidad y están comprando bonos en registros como el de Barbour por unos \$5 la tonelada, con la esperanza de que su valor se multiplique en caso de que la nueva ley los acepte como bonos legítimos en el futuro.

Pero, además del beneficio económico para algunos y los empleos que puede generar esta economía verde, ¿ayuda realmente a proteger el medio ambiente?

Para Barbour, la idea de poner un precio a emitir CO2 ayuda a que las empresas reduzcan sus emisiones. La legislación establece objetivos y reglas, pero crea el mercado para dejar abierto el camino hasta ese objetivo. El mercado le da a las compañías la libertad para decidir cómo y cuándo llegar a su objetivo en reducciones de la forma más eficiente y económica, explica.

Chauvancy coincide en la idea y cita un estudio del MIT (Massachusetts Institute of Technology) que argumenta que en los tres primeros años de funcionamiento de los mercados estos generaron una reducción de emisiones de CO2 de 100 millones de toneladas.