The Avogadro Group, LLC

Air Quality Consulting and Source Emissions Testing

GHGs

Emissions Trading Scenarios

"the ongoing series, what's coming up?"

Emissions Trading

Definition:

Tradable-permit system in which a greenhouse gases emitter (firm our country under obligation to limit its total air pollution emissions to a specified level) can buy/sell permission to emit a certain amount of emissions from/to other emitters (who are below/above their limit). The market price of these permits (called 'pollution credits') reflects the marginal cost of emission reduction and gives an emitter the incentive to install and manage a cost effective pollution control system as an income producing asset. Accumulating emissions reductions for trading is called 'banking.')

CRYSTAL CLEAR!! (NOT!)

- The definition you just read ends the crystal clear part of my presentation
- This "shades of gray" presentation on GHG's and emissions trading, comes from a source tester, not an emissions trader.
- By most indications, this "new carbon constrained world" is coming to your plant soon!
 - Still trying to hit a MOVING TARGET



• U.S. Environmental Protection Agency (EPA)

EPA Seeks Public Comment on Annual U.S. Greenhouse Gas Inventory

Contact: Roxanne Smith, 202-564-4355 / smith.roxanne@epa.gov

(Washington, D.C. – March 4, 2009) EPA is seeking public comment on the annual Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2007 draft report. This report will be open for public comment for 30 days after the Federal Register notice is published.

The draft report shows that overall **emissions during 2007 increased by 1.4 percent from the previous year.** This trend was due primarily to an increase in carbon dioxide emissions associated with fuel and electricity consumption. **The total U.S. greenhouse gas emissions were about 7,125 million metric tons of CO2 equivalent. Overall, emissions have grown by 17.1 percent from 1990 to 2007.**

The inventory tracks annual greenhouse gas emissions from 1990 to 2007 at the national level. The gases covered by this inventory include **carbon dioxide**, **methane**, **nitrous oxide**, **hydrofluorocarbons**, **perfluorocarbons**, **and sulfur hexafluoride**. The inventory also calculates carbon dioxide emissions that are removed from the atmosphere by "sinks," e.g., through the uptake of carbon by forests, vegetation, and soils.

This annual report is prepared by EPA in collaboration with experts from multiple federal agencies. After responding to public comments, the U.S. government will submit the final inventory report to the Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC). **The report will fulfill the annual requirement of the UNFCCC international treaty, ratified by the United States in 1992**, which sets an overall framework for intergovernmental efforts to tackle the challenge posed by climate change.

Information on the draft report and how to submit public comments: http://epa.gov/climatechange/emissions/usinventoryreport.html

🔁 CMNA 20090 306. pdf - Adobe Reader

File Edit View Document Tools Window H

🥰 🔶 👆 1 (1 of 7) 😑 🖲 138% 🗸

Carbon Market North America Point Carbon^T NEWS Vol 4 • Issue 9 • 6 March 2009

Global officials call on US to pass cap and trade

拱 🔂 Find

Global climate leaders descended upon Washington this week with strong calls for the US to pass cap-and-trade legislation to send a clear signal that the US is committed to curbing its greenhouse gas emissions.

"The development of a national capand-trade system is an important signal to the rest of the world of an ambitious commitment to tackling climate change," Danish Environment Minister Connie Hedegaard said at a Washington DC think tank.

"It opens the possibility of a global carbon

Carlos Pascual, the director of foreign policy at the Brookings Institute and a former US ambassador, warned that despite the enthusiasm behind the active American re-engagement in the international negotiations, the US may not have an easy time delivering what the world expects.

"Let's be realistic about where it stands and if it's not there (a cap-and-trade bill) – what's our fallback?" Pascual said.

Pascual noted that Washington lawmakers haven't even started getting into the debate about the nuts and bolts of a cap-and-trade

CONTENTS

2 RGGI prices and market commentary _ 7 X

- Science advisory group should oversee offsets: US lawmaker
- Developing world serious about climate change: experts
 - US GHG emissions rise 17% from 1990

_ @ X

ρ-

»

^

🔽 😽 🗙 Google

🚥 http://www.eponline.com/articles/70781

🚖 🏟

 $(\mathbf{G})(\mathbf{G})$

🚥 18 States Urge EPA to Act on Global Warming

on Global Warming Enviro		🚹 Home 🔹 🔝 Feeds (J) 🔹	🖷 🖶 Print 🔹 🔂 Page 👻 🎯 Tools 👻
Ecosystems Energy & Climate Change Industry Trends Land Water Special Features Sustainability Features > Columns > Biogs > Products > Resources Industry Directory Advertising / Services > About Us Columns Columns Products > Resources Industry Directory Advertising / Services > About Us Columnated Nutrient Analyzers pretreat, digest, & analyze samples automatically	News 18 States Urge EPA to Act on Global Warming February 17, 2009 On Feb. 5, Massachusetts Attorney General Martha Coakley lead an 18-state coalition, the Corporation Counsel for the City of New York, and the City Solicitor of Baltimore, urging U.S. Environmental Protection Administrator Lisa Jackson to act in response to the 2007 U.S. Supreme Court ruling in Massachusetts v. EPA. "On April 2, 2007, the Supreme Court established the EPA's responsibility to regulate greenhouse gases under the federal Clean Air Act. With the change in administrations, we are extremely hopeful that the EPA will finally start to do its job under the statute," Coakley said. "The second anniversary of the Court's ruling is now on the horizon, and we are today urging Administrator Jackson to issue as quickly as possible a determination that greenhouse gases are endangering public health and welfare." In Massachusetts v. EPA, the Supreme Court ruled that contrary to the agency's claim EPA has the authority to regulate greenhouse gases under the Clean Air Act. The court also held that the agency could not refuse to use that authority based on the agency's policy preferences. Instead, the EPA would have to decide, based on the science, whether it believed that greenhouse gas emissions were posing dangers to public health or welfare. If the agency determined that endangerment was occurring, the agency would have to start the	Commentary From Idealists to Apologists and Back Again? In university, we tackle big challenges with innovative solutions. Economic theory, stakeholder collaboration, moral reasoning, and assumptions win the day. So when we graduate, why shouldn't we be able to implement those solutions? Committed To Cleaner Air.	
Are you worried about the economy affecting your job and income in 2009?	process of setting emission standards for greenhouse gases. In late 2007, EPA officials sent a proposed endangerment determination to the White House as an e-mail attachment, but White House officials refused to open the document, and former EPA Administrator Stephen Johnson refused repeated requests to make the document public.	Environmental Systems, Inc.	
C Yes C No Vote/View Results	The following states signed on to the letter: Arizona, California, Connecticut, Delaware, Illinois, Iowa, Maine, Maryland, Massachusetts, Minnesota, New Jersey, New Mexico, New York, Oregon, Pennsylvania, Rhode Island, Vermont, and Washington. All of these states, together with the city of New York, and the Mayor and City Council for Baltimore, joined a petition last year seeking to compel EPA to act under the Supreme Court's ruling.		

6

 \square

v

🛛 🔊 http://www.pointcarbon.com/polopoly_fs/1.1066754!CMNA20090227.pdf

1 / 7 😑 📀 125% 🗸

PointCarbon[®] NEWS

Vol 4 • Issue 8 • 27 February 2009

Obama pressures Congress to draft carbon cap-and-trade law

US Congress came under fresh pressure this week to draft a carbon cap-and-trade bill after President Barack Obama sent two strong messages on capping emissions – one verbal and the other on paper.

😝 🔂 Find

On Tuesday night, Obama called on lawmakers to draft a carbon trade bill in his first speech before a joint session of Congress.

And on Thursday, the president rolled out his 100-plus page, \$3.55 trillion budget blueprint, which banks on around \$645 billion to be raised from the auction of greenhouse gas emission allowances between 2012 and 2020 in a mandatory emissions trading system.

"I ask this Congress to send me legislation that places a market-based cap on carbon pollution and drives the production of more renewable energy in America," Obama said in his nationally-televised address Tuesday. economic impacts of implementing caps on greenhouse gas emissions.

The budget outline shows that an economywide cap-and-trade system, which aims to cut greenhouse gas emissions 14 per cent below 2005 levels by 2020, and 83 per cent below 2005 levels by 2050, will be a major driver for funding a new "comprehensive approach" to transforming energy supply.

Starting in 2012, around \$79 billion will be raised from the auction of greenhouse gas emission allowances, the budget projects.

That would assume a carbon allowance price of upwards of \$13.70 per tonne, according to Point Carbon estimates.

Between 2012 and 2020, nearly \$645 billion could be raised from the sale of emission allowances, according to the budget.

That means that 80 per cent of the economy would face caps on their greenhouse gas output starting 2012 at

CONTENTS

2 RGGI prices and market commentary

🗸 🍫 🗙 Google

🟠 Home 🔹 🔊 Feeds (J) 🔹 🚔 Print 🔹 🔂 Page 🔹 🙆 Tools 🔹

_ 17 X

ρ.

- Congressman to introduce "cap-anddividend" bill
- 3 US EPA to 'turn the ship' on carbon regulations
- Western states debate upside of regional carbon trading
- 4 Failure "not an option" for Washington state climate bill: governor
- US GHG reporting inadequate for cap and trade: experts

In the prime time speech aimed at



March 4, 2009 Power Magazine O'Bama's 2010 Budget Calls for Carbon Cap-and-Trade....

Factoring in Proceeds from a Carbon Cap-and-Trade System

To fund investments in clean energy, the Obama administration proposed to enact a carbon cap-andtrade system, projecting that **proceeds from the 100% auction could total \$646 billion between 2012 and 2019.** It anticipates that this revenue could provide \$150 billion of clean energy funding by 2022—or \$15 billion over 10 years, starting in 2012. The balance would be returned to taxpayers.

- In the budget, the administration also laid down plans to develop an economy-wide greenhouse gas (GHG) reduction program, saying that it would work with key stakeholders and Congress to reduce U.S. emissions by about 14% below 2005 levels by 2020, and 83% by 2050.
- This "policy approach ... dramatically reduced acid rain at much lower costs than the traditional government regulations and mandates of the past," the budget said.
- Along with expanded support at the Energy Department for technologies that mitigate emissions, the budget also proposes new funds for a NASA space-based GHG monitoring system, and for the Interior Department to tackle the impact of climate change on public lands.
- It also asks for \$19 million to allow the Environmental Protection Agency (EPA) to work on a GHG emission inventory and to work with industry sectors to report emission data. In total under the budget, the EPA could receive \$10.5 billion—a 34% increase over the amount that will likely be enacted for 2009.
- The plan incited heated reactions from the power sector. Duke Energy CEO Jim Rogers, who supports a carbon cap, told <u>Bloomberg</u> that he was concerned that some of the money would not be used to promote clean energy. **He also said that consumers in the 25 states that rely on coal-fired generation could see up to a 40% increase in electric bills**, which would force them to "carry a heavy burden and then not get the money to help them solve the problem."



Jackson: Proposed Budget Shows 'EPA Is Back on the Job'

Environmental Protection March 4, 2009

The Obama administration on Feb. 26 proposed a budget of \$10.5 billion for the U.S. Environmental Protection Agency, the largest in the agency's 39-year history, according to an EPA press release.

The increase of \$3 billion from 2008 funding levels will further ensure the protection of public health and the environment for all Americans.

"The president's budget proposes critical resources to protect the American people and the places where they live, work, and play," said EPA Administrator Lisa P. Jackson. "We are no longer faced with the false choice of a strong economy or a clean environment. The president's budget shows that making critical and responsible investments in protecting the health and environment of all Americans will also lead to a more vibrant and stable economy. With these proposed resources, and the president's strong environmental agenda, it should be overwhelmingly clear that EPA is back on the job."

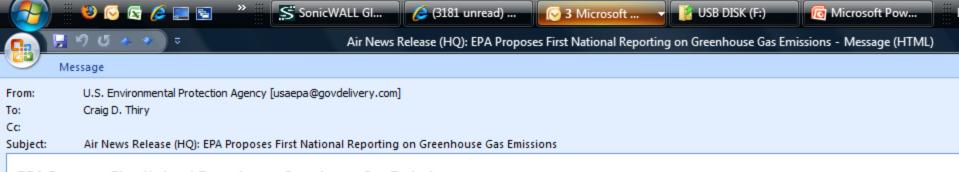
Last week, President Obama announced the American Recovery and Reinvestment Act of 2009, which includes \$7.22 billion for EPA-administered projects and programs to protect human health and the environment. Some key highlights of 2010 budget initiatives include:

• \$3.9 billion for the Clean Water State Revolving Fund and Drinking Water State Revolving Fund grants to support approximately 1,000 clean water projects and 700 drinking water projects -- this year's largest single investment. EPA will work with state and local partners to develop a sustainability policy, including management and pricing, conservation, security, and a plan for adequate long-term state and municipal funding for future capital needs.

• A new \$475 million, multi-agency Great Lakes Initiative to protect the world's largest fresh water resource. EPA will coordinate with federal partners, states, tribes, localities and other entities to invasive species, non-point source pollution, habitat restoration, contaminated sediment, and other critical issues.

• A \$19 million increase for the greenhouse gas emissions inventory and related activities that will provide data critical for implementing a comprehensive climate change bill. EPA's funding for climate change investments is the foundation for working with key stakeholders and Congress to develop an economy-wide cap-and-trade program to reduce greenhouse gas emissions approximately 83 percent below 2005 levels by 2050.

• Strengthening EPA's core research, enforcement, and regulatory capabilities. The budget request also proposes reinstating the Superfund excise taxes that expired, which would collect more than \$1 billion annually to fund the cleanup of the nation's most contaminated sites.



EPA Proposes First National Reporting on Greenhouse Gas Emissions

Administrator Jackson: " Our efforts to contront climate change must be guided by the best possible information."

Contact: Cathy Milbourn, 202-564-4355 / milbourn.cathy@epa.gov

(Washington, D.C. – March 10, 2009) The U.S. Environmental Protection Agency today proposed the first comprehensive national system for reporting emissio gases produced by major sources in the United States.

"Our efforts to confront climate change must be guided by the best possible information," said EPA Administrator Lisa P. Jackson. "Through this new reporting, w about the production of greenhouse gases. This is a critical step toward helping us better protect our health and environment – all without placing an onerous burc

In developing the reporting requirements, EPA considered the substantial amount of work already completed and underway in many states, regions and volunta

Greenhouse gases, like carbon dioxide, are produced by the burning of fossil fuels and through industrial and biological processes. Approximately 13,000 faci percent of greenhouse gases emitted in the United States, would be covered under the proposal.

The new reporting requirements would apply to suppliers of fossil fuel and industrial chemicals, manufacturers of motor vehicles and engines, as well as large emissions equal to or greater than a threshold of 25,000 metric tons per year. This threshold is roughly equivalent to the annual greenhouse gas emissions from majority of small businesses would not be required to report their emissions because their emissions fall well below the threshold.

The direct emission sources covered under the reporting requirement would include energy intensive sectors such as cement production, iron and steel product

The first annual report would be submitted to EPA in 2011 for the calendar year 2010, except for vehicle and engine manufacturers, which would begin reporting

EPA estimates that the expected cost to comply with the reporting requirements to the private sector would be \$160 million for the first year. In subsequent yea would be \$127 million.

EPA is developing this rule under the authority of the Clean Air Act. The proposed rule will be open for public comment for 60 days after publication in the Federating the comment period.

More information on the proposed rule: http://www.epa.gov/climatechange/emissions/ghgrulemaking.html

R049

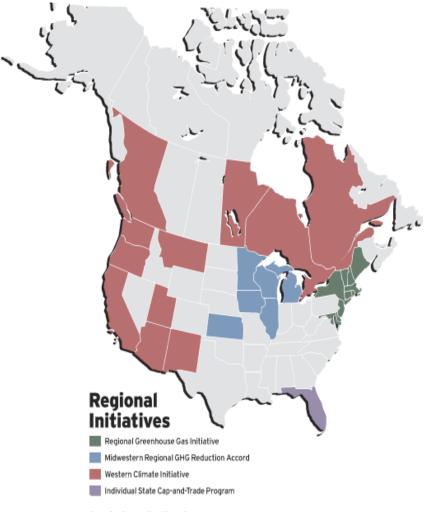
Note: If a link above doesn't work, please copy and paste the URL into a browser.

WRBA's old CO2 reduction plans are gone forever...



CO2 reduction through ingestion: Emission reduction credits not achieved due to increased methane emissions Bovine flatulence has received more funding!

http://www.governing.com/articles/0809capandtrade.gif



Source: Pew Center on Global Climate Change

TAG

🖼 Carbon Market News 26 February - Message (HTML)		
Elle Edit View Insert Format Tools Actions Help		
From: news@pointcarbon.com To: news@pointcarbon.com Cc: Subject: Carbon Market News 26 February	Sent: Thu 2/26/2009 4:38 PM	Invite to Pulse
Domestic policy		<u>^</u>
US market comment: RGGI trades sideways The RGGI benchmark 2009 contract traded flat this week after a 7 per cent rally last week. http://www.pointcarbon.com/news/1.1066021 Western states debate upside of regional carbon trading Observer states are unlikely to join the WCI before a federal emissions trading system begins. http://www.pointcarbon.com/news/1.1065986		
Obama budget sees allowances at \$13.70/t US President Barack Obama's budget is banking on carbon prices of nearly \$13.70 per tonne by 2012. http://www.pointcarbon.com/news/1.1065935		
Cap-and-trade to generate \$650bn: US budget The US budget estimates carbon allowance auctions could generate \$645.7 billion by 2020. http://www.pointcarbon.com/news/1.1065867		
Australian industry urges delay in emissions trading Australia should postpone its carbon trading scheme to 2012, the Australian Industry Group said. http://www.pointcarbon.com/news/1.1065292		
China's energy consumption growth slows in 2008 China's energy consumption grew 4 per cent year-on-year in 2008. http://www.pointcarbon.com/news/1.1065348		
Ageing forests deal Japan emissions blow Japan could emit up to 11 million tonnes CO2 more per year by 2020 as forest sink capacity drops. http://www.pointcarbon.com/news/1.1065247		
Corporate policy		

Western Climate Initiative (WCI) Who's in, who's out?

CARB working with WCI on the implementation of the Cap-and-Trade Program. 7 Governors and 4 Premiers collaborated in WCI to identify, evaluate and implement collective and cooperative ways to reduce GHG emissions in the region, focusing on a market-based cap-andtrade program

www.westernclimateinitiative.org

🕲 WCI: Western Climate Initiative - Mozilla Firefox	
Eile Edit View History Delicious Bookmarks Tools Help	0
Image: Trestern climate Anderse Image: Trestern climate Anderse Image: Trestern climate Anderse <th></th>	
Western Climate Initiative Image: State of the state of t	
WCI Meetings & Events WCI Partners WCI Documents Join our List Serve WCI Leadership Discondine Collification Economic Analysis Montana Public Involvement Join WCI Listserv Join WCI Listserv Ontario Submit Comments Wci Observers View Comments Wci Observers	
©2009 - Western Climate Initiative ALL RIGHTS RESERVED http://www.westernclimateinitiative.org/index.cfm	6 2 2





File Edit View History Delicious Bookmarks Tools Help

×

📔 WCI: Western Climate Initiative





WCI Meetings & Events	WCI Observers:
WCI Documents	UNITED STATES
WCI Leadership	Colorado
Economic Analysis	Idaho Kansas
Public Involvement	Nevada Wyoming
Join WCI Listserv	CANADA
Submit Comments	Saskatchewan
View Comments	MEXICO Baja California Chihuahua Coahuila Nuevo Leon Sonora

Tamaulipas

Home | Press Releases | Contact Us

WCI Partners Arizona British Columbia California Manitoba Montana New Mexico Ontario Oregon Quebec Utah Washington WCI Observers View all Observers

_ 8 X

*** ***

©2009 - Western Climate Initiative ALL RIGHTS RESERVED

Gentlemen, start your engines...

Elle Edit View Insert Format Iools Actions Help From: DEQ Online Subscriptions [ordeq@subscribersystem.com] Sent: Tue 2/3/2009 11:10 AM Image: Invite to Pulse
(🖙 Invite to Pulse
To: Craig D. Thiry Cc:
Subject: 2009 Greenhouse Gas Mandatory Reporting Reminder
Greetings:
On October 23, 2008, the Environmental Quality Commission approved new Greenhouse Gas (GHG) mandatory reporting rules. Oregon's reporting rules require sources to begin reporting their 2009 GHG emissions for annual GHG emissions greater than 2500 metric tons of carbon dioxide equivalent (CO2e) in 2010. This includes six GHGs that contribute to anthropogenic global warming; carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.
Sources over the reporting threshold must begin to monitor and record the relevant GHGs or throughputs for existing emission units and processes starting on January 1, 2009. This information will be submitted concurrently with Title V and Air Contaminant Discharge Permit (ACDP) annual reports. This includes sources who have always reported to DEQ as well as first time reporters. It is anticipated that little, if any, new testing or monitoring will be required for Title V or ACDP permittees for 2009 emissions reporting. To assist with reporting, more emission calculation training workshops will be held in the fall of 2009.
More information on these new requirements including assistance on determining applicability of a facility is available on the department's website http://www.deq.state.or.us/aq/climate/rulemaking.htm . If you are a permitted facility, assistance can be provided by your Air Quality permit contact person.
Thank you for your effort in making this program a success.
Jeffrey Stocum
Air Quality Technical Services Manager 811 SW Sixth Avenue, 11 th Floor
Portland, OR 97204
(503) 229-5506
To unsubscribe or edit your account dick here.
This e-mail was sent to you by the Oregon Department of Environmental Quality in partnership with GovDelivery · 811 SW 6th Avenue · Portland OR 97204 · 503-229-5696
This email was sent to you by the Oregon Department of Environmental Quality in partnessing with Govdenvely 1611 SW out Avenue - Portano OK 37204 - 005225-0050

We are off to the races...

🕲 Work starts on rules for report	ting greenhouse gas emissions in Washington State - Mozilla Firefox	🗖 🗖 🗖
<u>File E</u> dit <u>V</u> iew Hi <u>s</u> tory Delicious	Bookmarks Tools Help	() ()
WCI: Western Climate Initiative	🔟 🙀 Work starts on rules for reportin 🛛	•
DEPARTMENT OF ECOLOGY State of Washington	Topic Index Contact Us Search	

Ecology home > News > News Release

Department of Ecology News Release - August 5, 2008

08-213

Work starts on rules for reporting greenhouse gas emissions in Washington State

OLYMPIA - The Washington Department of Ecology (Ecology) is developing a system for the state's large sources of greenhouse gases to report their climate-changing emissions.

Under House Bill 2815, Gov. Chris Gregoire and the 2008 Legislature required the owners of large fleets of vehicles and large stationary sources of greenhouse gases to begin reporting their emissions in 2010. Lawmakers directed Ecology to adopt rules to develop and implement an emissions reporting system.

"Reporting is a key to understanding the amount of greenhouse gases released by Washington sources. With accurate, reliable data and our help, sources can identify the best ways to lower their emissions. We can't reduce what we don't track," said Stu Clark, Ecology's Air Quality Program manager.

The rules will apply to owners or operators of:

- A fleet of on-road motor vehicles that emits at least 2,500 metric tons of greenhouse gases a year in Washington. The state's largest motor vehicle fleets will meet this threshold. They include trucking and delivery fleets, rental car companies, large customer service fleets (such as phone, cable or power companies) and large government-agency fleets.
- A source or combination of sources that emits at least 10,000 metric tons of greenhouse gases a year in the state. Washington's largest factories and power facilities will meet this threshold. They include refineries, pulp and paper mills, cement kilns, some lumber mills, large food processors, and some entities that use fossil fuels to generate power, steam, heat or cooling.

Ecology is putting together a stakeholder group to review the proposed rule. Group members will represent private and government fleets; power producers; manufacturers; pulp, paper and lumber mills; the environmental community, and other affected entities. They will start meeting in mid- to late August and continue through January 2009.

Ecology expects to issue a draft rule for public comment in spring 2009 and hold public hearings. The final rule should be adopted in summer 2009. Documents related to the proposed rule will be posted at http://www.ecy.wa.gov/laws-rules/activity/wac173441.html.

For information, contact Nancy Pritchett with Ecology's Air Quality Program:

P.O. Box 47600 Olympia, WA 98504-7600 Phone (360) 407-6082 Fax (360) 407-7534 E-mail npri461@ecy.wa.gov

The U.S. Environmental Protection Agency (EPA) is expected to publish a draft greenhouse gas reporting rule in September 2008. Ecology will review EPA's draft rule language as work continues on the state rule.

18

2 ×

Done

Discussions to Increase Corporate Minimum Tax Begin - Message (HTML) File Edit Yiew Insert Format Tools Actions Help From: AOI Leading Issues [katiechristensen@aoi.org] Sent: Fri 2/27/2009 2:18 PM 🔄 Invite to Pulse To: Craig D. Thiry Cc: Subject: Discussions to Increase Corporate Minimum Tax Begin ~ 40 Leading Issues ASSOCIATED OREGON INDUSTRIES Volume 14 / Issue 6 / 2.27.09 TOP STORIES AOI Board & House Majority Leader Meet to Discuss Health Care Costs and Taxes - John Ledger Despite a demanding schedule in the Capitol, Mary Nolan, House Majority Leader (D- Portland) joined with the AOI Board in Salem, Thursday, February 26, 2009, to discuss issues important to the business community. House Committee Begins Corporate Minimum Tax Increase Discussion - John Marshall Referred to by House Revenue Committee Chair Phil Barnhart (D-Eugene) as the "beginning of the discussion" on increasing Oregon's \$10 corporate minimum tax. This week the committee heard two bills that do just that. Service Providers." In an unpredictable economy, you'll find AOI is the predictable While Regional Cap & Trade Retreats, Rumors Report a Hard CO2 Cap (with no Trading) May be ^{ADI}ESP the Next Proposal - John Ledger ED SERVICE PROVIDER A Cap Only system would simply mandate severe Tipping the balance sheet in your favor reductions. No state currently has a Cap Only system. New "Captive Audience" Legislation Subjects Employers to More Lawsuits - J.L. Wilson Newly-introduced SB 519 prohibits employers from taking adverse actions against employees who choose not to participate in mandatory employer-sponsored meetings regarding workplace unionization.

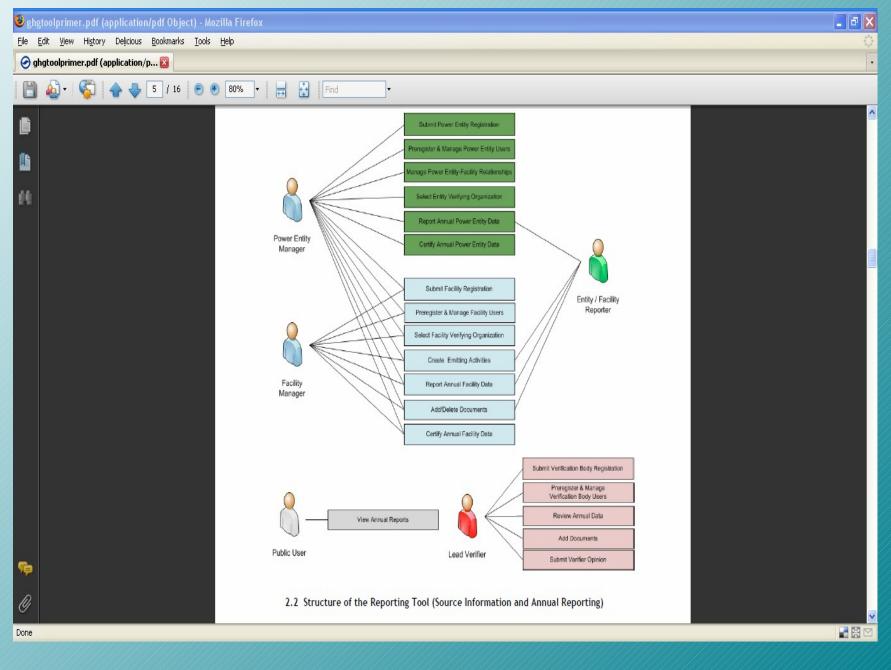
The Swami's crystal ball says... look at CA and Regional Greenhouse Gas Initiative

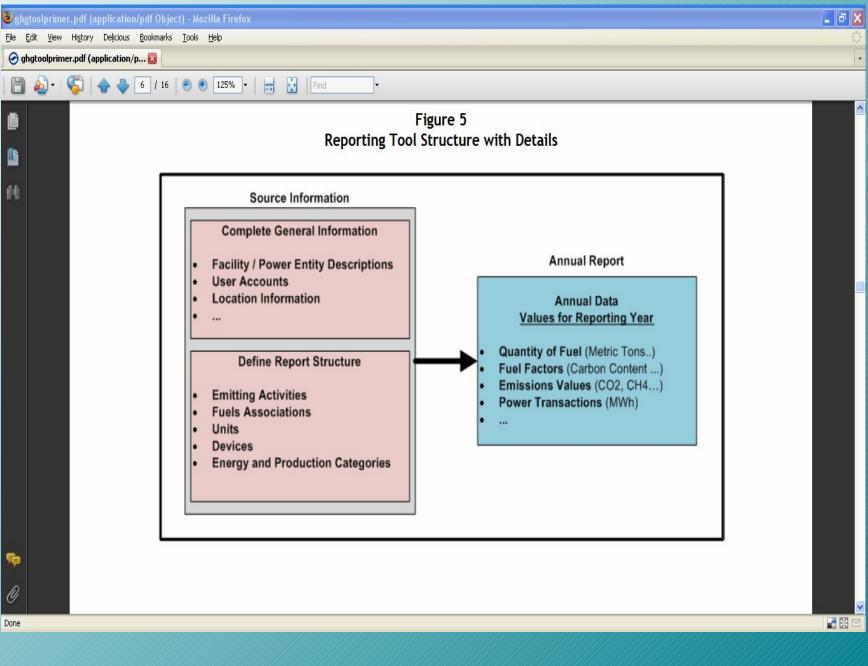
- AB 32 California Global Warming Solutions Act of 2006: A "first in the world" comprehensive program with regulatory and market mechanisms to achieve real, quantifiable, cost-effective reductions on greenhouse gases (GHG).
- AB 32 Scoping Plan: A key element of AB 32 is the Scoping Plan that lays out the proposed regulations to attain the emission reductions required under AB 32, including:
 - Energy efficiency programs
 - Statewide renewables mix of 33 percent
 - CAP AND TRADE program with Western Climate Initiative (WCI)
 - Transportation related GHG emissions
- AB 32 Mandatory Reporting Rule: Effective December 2—8, started January 1, 2009, sources must follow the mandatory reporting requirements

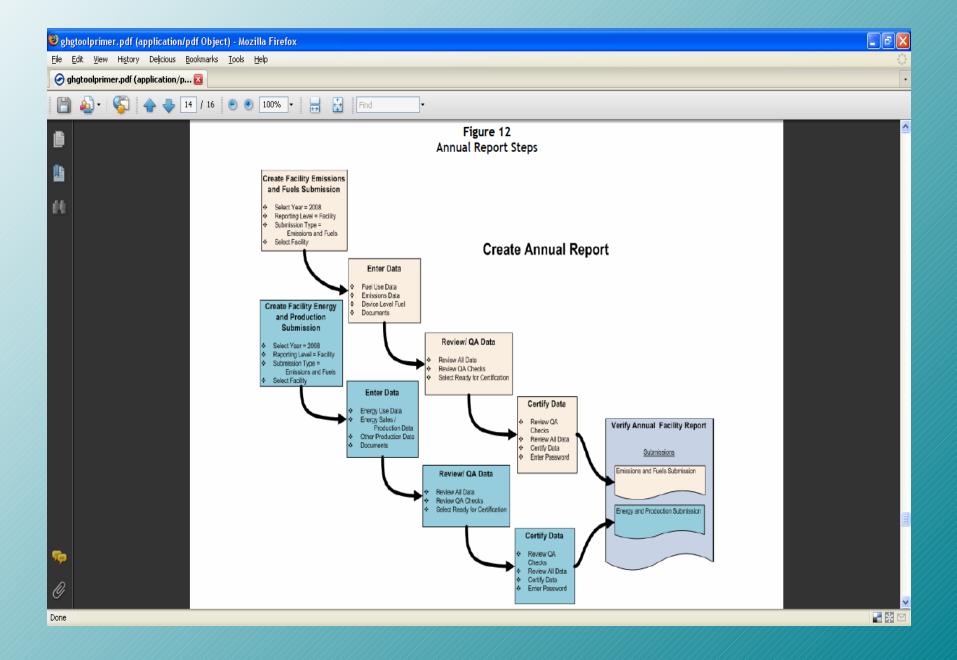
Details are emerging....

- March 17, 2009: Greenhouse Gas Mandatory Reporting: Training Webinar March 17th. Use of the GHG Reporting Tool by General Stationary Combustion Sources http://www.arb.ca.gov/cc/reporting/ghg-rep/ghg-rep.htm
- March 26, 2009: Greenhouse Gas Mandatory Reporting: Training Webinar March 26th. Use of the GHG Reporting Tool for Cement Plants http://www.arb.ca.gov/cc/reporting/ghg-rep/ghg-rep.htm
- March 26, 2009: Greenhouse Gas Mandatory Reporting: Training Webinar March 26th. Use of the GHG Reporting Tool for Retail Providers, Marketers, Asset Owning/Controlling Suppliers http://www.arb.ca.gov/cc/reporting/ghg-rep/ghg-rep.htm
- March 30, 2009: Greenhouse Gas Mandatory Reporting: Training Webinar March 30th. Use of the GHG Reporting Tool for Refineries, Hydrogen Plants, Oil and Gas Production Sources http://www.arb.ca.gov/cc/reporting/ghg-rep/ghg-rep.htm
- March 27, 2009: Greenhouse Gas Mandatory Reporting: Training Webinar March 27th. Use of the GHG Reporting Tool for Electricity Generating and Cogeneration Facilities http://www.arb.ca.gov/cc/reporting/ghg-rep/ghg-rep.htm









Targets moving... "low hanging fruit" is getting higher in the tree

💕 start 🕑 6 🕽 🕫 🖾 🗠 6 S	Windows Task Manager	5 Microsoft Office O • F:\aa my doc from do	Accounts - Windows I	2 Microsoft Office E	+ 🔞 iGoogle - Mozilla Firefox	/ 🖓 💪 < 😡	
newsrel ARB controls use of potent chemicals			Tout)				3/9/2009
Elle Edit View Insert Format Tools Actions	¥	arning - Message (Plan	Text)				
Extra line breaks in this message were removed.							
From: owner-newsrel@listserv.arb.ca.gov on behalf of ds To: post-newsrel@listserv.arb.ca.gov Cc: Subject: newsrel ARB controls use of potent chemicals tha					Sent: Thu 2/26/2009 1:22 PM	imvite to F	'ulse 🔻
New measure to reduce climate changing	g emissions. Release	09-14 FOR IMMEDIATE	RELEASE February 26	, 2009			~
Stanley Young 916-322-2990 www.arb.ca.gov							
ARB controls use of potent chemicals	that contribute to gl	obal warming					
SACRAMENTO The Air Resources Board and other industries that contribute				se out, potent chemi	icals used in the manuf:	acture of computer	chips
"These chemicals, though used in smal Mary Nichols. "We developed these re They are cost-efficient ways of fight	gulations in concert	with the industries	that use them.		7 to trap atmospheric h	eat," said ARB Chai	rman 🗏
A single pound of the greenhouse gase single pound of carbon dioxide. A pour carbon dioxide or driving 25,000 miles	nd of sulfur hexafluo	ride released into 1	the atmosphere has t			-	
The semiconductor regulation sets new chips and related operations. The re- approximately \$21 to prevent the equi- Approximately 85 operations, mostly be	gulation, which also : valent of a single to:	requires additional n of carbon dioxide	reporting and record from entering the a	1-keeping of the cor mosphere.	-		mputer
The second regulation directly regula and computer chip manufacture such as certain exempted applications) over so	magnesium casting an	d where it is used a	as a cover gas durin	g production. Design	ned to phase out the us	e of the gas (excep	t in
The regulations are part of a series will be in force starting in 2010. Bo workshops, and meetings with industry	th regulations were d	eveloped over the pa	ast year using a pub				
The regulations taken together are es	timated to prevent th	e equivalent of the	carbon dioxide emis:	sions from 56,000 ca	ars driven for a year i:	n 2020.	~

Regional Greenhouse Gas Initiative (RGGI)

 RGGI is the first mandatory, market-based effort in the United States to reduce greenhouse gas emissions. Ten Northeastern and Mid-Atlantic states will cap and then reduce CO2 emissions from the power sector 10% by 2018.

States will sell emission allowances through auctions and invest proceeds in consumer benefits: energy efficiency, renewable energy, and other clean energy technologies. RGGI will spur innovation in the clean energy economy and create green jobs in each state.

233 plants, mimics acid rain program from the 1990's



RGGI (continued)

- Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont
- The authority of the individual states is the basis for the RGGI CO2 Budget Trading Programs. Through independent rules and/or regulations (based on the "Model Rule") each state limits emissions of CO2 from electric power plants, creates CO2 allowances and establishes participation in CO2 allowance auctions. Regulated power plants will be able to use a CO2 allowance issued by any of the ten participating states to demonstrate compliance with an individual state program.
- In this manner, the ten individual state programs, in aggregate, will function as a single regional compliance market for CO2 emissions.

RGGI (continued)

How RGGI Cap-and-Trade Works

- To reduce emissions of greenhouse gases, the RGGI participating states are using a market-based cap-and-trade approach that includes:
- Establishing a multi-state CO2 emissions budget (cap) that will decrease gradually until it is 10 percent lower than at the start
- Requiring electric power generator to hold allowances covering their emissions of CO2
- Providing a market-based emissions auction and trading system where electric power generators can buy, sell and trade CO2 emissions allowances
- Using the proceeds of allowance auctions to support low-carbon-intensity solutions, including energy efficiency and clean renewable energy, such as solar and wind power
- Employing offsets (greenhouse gas emissions reduction or sequestration projects at sources beyond the electricity sector) to help companies meet their compliance obligations
- RGGI's phased approach means that reductions in the CO2 cap will initially be modest, providing predictable market signals and regulatory certainty. Electricity generators will be able to plan for and invest in lower-carbon alternatives and avoid dramatic electricity price impacts.



🛃 Start 🔞 💈 🖻 🔟 📓 🥥 🏈 🎽 🚊 Windows Ta 🔮 CT monthly 🎕 WRBA Emiss 📓 Microsoft Ex 🔞 3 Microsof 🔹 🥹 Regional Gr 🎸 2 Internet	🔹 🧷 🕄 🗘 🔕 🔲 🎯 🔎 4:49 PM
🕲 Regional Greenhouse Gas Initiative (RGGI) CO2 Budget Trading Program - Historical Emissions - Mozilla Firefox	- 7 🛛
<u>File E</u> dit <u>V</u> iew Hi <u>s</u> tory Delicious <u>B</u> ookmarks <u>T</u> ools <u>H</u> elp	
🗋 Regional Greenhouse Gas Initiati 🔯 📋 (Untitled) 🛛	•
	<u>^</u>

$\rm CO_2$ Data for RGGI Units as of Feb 10, 2009

<

			Three-Year A	werages				
	2008	Final Budget	2000-2002 Average	2001-2003 Average	2002-2004 Average	2003-2005 Average	2004-2006 Average	2005-2007 Average
3		10,695,036	10,932,948	10,029,175	9,691,578	10,185,759	10,684,681	10,706,214
		7,559,787	7,512,503	7,619,210	7,709,755	7,937,665	7,915,308	8,202,026
3		26,660,204	25,377,128	25,965,636	26,288,702	26,742,926	25,486,591	25,152,292
1		37,503,983	37,503,985	37,043,279	36,810,249	36,869,963	36,259,407	36,065,650
		5,948,902	4,819,380	5,605,724	5,497,276	5,098,126	4,383,625	3,830,711
		8,620,460	5,199,389	6,299,273	7,615,971	8,754,316	8,451,150	7,951,955
)		22,892,730	21,092,749	20,622,206	20,940,714	21,247,518	21,329,220	21,568,951
1		64,310,805	65,576,811	63,016,790	62,036,350	62,486,776	59,656,388	57,357,988
		2,659,239	2,665,240	2,568,372	2,714,035	2,526,773	2,512,250	2,826,283
		1,225,830	17,367	13,093	10,681	11,551	9,632	6,743
78		188,076,976	180,697,500	178,782,758	179,315,311	181,861,373	176,688,252	173,668,813

29

>

 $\overline{}$

N

Done

RGGI in the News

Sensible Climate Legislation Boston Globe

- Despite our wounded economy, President-elect Obama is determined to address the problem of climate change early in his first term. Congressional leaders seem anxious
 to accommodate him by enacting legislation to control greenhouse gas emissions. But many members of Congress...
- U.S. Venture Capitalists Optimistic on Carbon Market
 Reuters
- U.S. venture capitalists say they see a bright spot amid the international economic gloom: a potential trillion-dollar market in carbon spurred by new regulations and a growing awareness of climate change. The growth areas are less in traditional "green" businesses like solar panels and windmills and more in new infrastructure, such as a "smart" grid that would get alternative energy from where it's generated to where the customers are...
- RGGI Carbon Emissions Auction Raises \$107m
 Reuters
- Permits for the right to emit carbon dioxide from power plants in the U.S. Northeast sold for the clearing price of \$3.38 per ton in the second U.S. greenhouse gas
 emissions auction, states in the region said on Friday. The amount was 31 cents more than the first quarterly auction...
- Air-Pollution Market Debut Tests Cap-and-Trade Model (Update1)
 Bloomberg.com
- Ten Northeastern states will open the first U.S. market for trading greenhouse-gas permits this week, a \$1.1 billion pilot project whose success may serve as a nationwide model to stem global warming ...
- States Aim to Cut Gases by Making Polluters Pay New York Times
- Ten states from Maryland to Maine are about to undertake the nation's most serious effort yet to tackle climate change, putting limits on carbon dioxide emissions from utilities and making them pay for each ton of pollutants ...

Carbon Goes to Market

- Governing.com http://www.governing.com/
- The feds have been talking about cap-and-trade. The states are doing it. Late this month, 10 Northeastern states will conclude an auction like no other in American history. What's up for grabs is not art or property. It's carbon or more specifically, the right to emit carbon dioxide from a power plant. As anyone familiar with what's causing global warming knows, carbon has a cost. Soon, in Baltimore, Boston and Buffalo, carbon also will have a price ...
- Carbon Trading to Become a \$1 trillion market? Colorado Energy News - http://coloradoenergynews.com
- The New York Mercantile Ex-change, a subsidiary of Nymex Holdings Inc. of New York, and the Chicago Climate Exchange, owned by Climate Exchange PLC of London, both launched RGGI carbon futures contracts in August. ...
- New York Joins Carbon Trading Initiative Online Financial News - http://www.efinancialnews.com
- New York has approved state-wide regulations that will bring "cap-and-trade" controls to carbon dioxide emissions for power plants and will pave the way for a secondary market for trading emission allowances ...
- Want To Buy Some Pollution? New York Times - http://www.nytimes.com
- Later this year, Massachusetts and other Northeastern states will hold the nation's first auction of greenhouse gas emissions permits. Congress should take note: this market-based, technology-neutral auction is a model for how to encourage power generators to limit their emissions. And it could provide the foundation for a federal-state partnership to revolutionize energy use ...
- Making Carbon Markets, Two: The RGGI Bar
 - Wall Street Journal Online http://wsj.com/

Putting a price on emissions of greenhouse gases when no national market exists is more akin to a crapshoot. Some states are ready to roll the dice. Take the 10 states of the Regional Greenhouse Gas Initiative. RGGI, the first mandatory scheme to limit carbon emissions in the U.S. to become operational, announced today it will sell the first batch of emissions permits on Sept.10, formally launching the much-awaited program that many see as a possible template for future federal action ...

Carbon Market North America

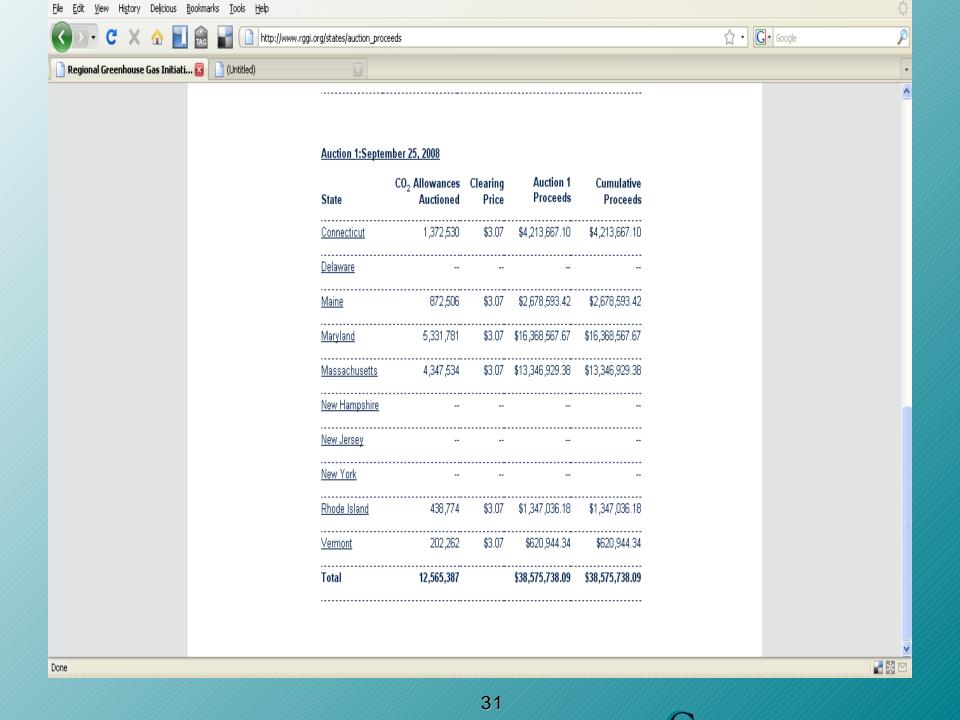
Point Carbon News - http://www.pointcarbon.com

Last week the Regional Greenhouse Gas Initiative (RGGI) fl ipped the switch to start its fi rst auction, marking the transition from fi ve years of planning among 10 northeastern and mid-Atlantic states to full implementation of RGGI's auction of carbon dioxide emission allowances. ..

Environmental Services Commissioner Tom Burack Talks with NH Public Radio

- New Hampshire Public Radio http://www.nhpr.org/
- Audio from Commissioner Burack's interview on New Hampshire Public Radio is available from the link above ...





🕲 Regional Greenhouse Gas Initiati	ive (RGGI) CO2 Budget Tradi	ing Program - Auction	Proceeds - Mozilla F	irefox					_ 2 ×
<u>File E</u> dit <u>V</u> iew Hi <u>s</u> tory Delicious E	<u>B</u> ookmarks <u>T</u> ools <u>H</u> elp								0 0 0 0 0
🔇 🔊 • C 🗙 🏠 📃	🔝 📑 🗋 http://www	.rggi.org/states/auction_pro	ceeds					☆ • Google	P
📄 Regional Greenhouse Gas Initiati.	🛛 📄 (Untitled)								•
	State Programs State Regulations Auction Proceeds Historical Emissions	Auction Proc The charts below contains cumulat Auction 2: Dece State Connecticut Delaware Maine Maryland Massachusetts New Hampshire New Jersey New York Rhode Island Vermont	show the proceeds from all mber 17, 2008 CO ₂ Allowances Auctioned 1,372,530 755,979 872,506 5,331,781 4,387,534 1,189,610 4,532,761 12,422,161	auctions he Clearing Price \$3.38 \$3.38 \$3.38 \$3.38 \$3.38 \$3.38 \$3.38 \$3.38 \$3.38 \$3.38	Auction 2 Proceeds \$4,639,151.40 \$2,555,209.02 \$2,949,070.28 \$18,021,419.78 \$14,829,864.92 \$4,020,881.80 \$15,320,732.18 \$41,986,904.18 \$41,986,904.18 \$1,483,056.12 \$683,645.56	Cumulative Proceeds \$8,852,818.50 \$2,555,209.02 \$5,627,663.70 \$34,389,987.45 \$28,176,794.30 \$4,020,881.80 \$15,320,732.18 \$41,986,904.18 \$41,986,904.18 \$41,304,589.90	Related Links Contact RGGI, Inc. Media Contacts by State Program Contacts by State		

Done

32

 $\overline{}$

***** ×



Done

🖲 Regional Greenhouse Gas Initiative (RGGI) CO2 Budget Trading Program - CO2 Auctions - Mozilla Firefox		
File Edit Yiew History Delicious Bookmarks Tools Help		$\langle \rangle$
C X 🟠 📃 🗟 F (http://www.rggi.org/co2-auctions	☆ · G	• Google 🔎
🗋 Regional Greenhouse Gas Initiati 🔯 📋 (Untitled) 🛛		•
Image: State Stat	Home Contact Mailing List	

 \frown

e <u>E</u> dit <u>V</u> iew Hi <u>s</u> tory Delicious <u>B</u> ookmarks <u>T</u> ools <u>H</u> elp			
] Regional Greenhouse Gas Initiati 😰 📄 (Untitled)			
	Offsets	Related Links	
	RGGI provides for compliance flexibility through the use of emissions offsets. The emissions offset provisions of the participating states' regulations allow for the award of CO ₂ offset allowances to projects outside the capped sector (the electric power generation sector) that reduce or sequester emissions of greenhouse gases.	Model Rule RGGI Program Overview (PDF)	
	CO ₂ offset allowances may be used to satisfy only a limited portion of a source's compliance obligation. Initially, the use of CO ₂ offset allowances is constrained to 3.3 percent of a power plant's total compliance obligation during a control period, though this may be expanded to 5 percent and 10 percent if certain CO ₂ allowance price thresholds are reached.		
	Detailed information on RGGI offsets and approved offset categories can be found in the the Model Rule.		
	Categories of Offsets		
	RGGI has developed prescriptive standards for specific project categories, to ensure that offsets are real, additional, verifiable, enforceable, and permanent. At this time, five project categories for $\rm CO_2$ offset allowances are eligible under the participating states' regulations.		
	Landfill methane capture and destruction		
	• Reduction in emissions of sulfur hexafluoride (SF6) in the electric power sector		
	 Sequestration of carbon due to afforestation; 		
	 Reduction or avoidance of CO2 emissions from natural gas, oil, or propane end-use combustion due to end-use energy efficiency in the building sector 		
	Avoided methane emissions from agricultural manure management operations		
	RGGI also allows for emissions credit retirements from a mandatory program outside the United States (e.g., Clean Development Mechanism CERs) to be used as an offset under limited circumstances.		
	Offset project data will be incorporated into the RGGI emissions and allowance tracking system. The RGGI participating states are developing model application and submittal materials and guidance documents for use in administering the offset component of RGGI. These materials are expected to be available in early 2009.		
e			2

 \square

RGGI carbon emissions auction raises \$107 million

NEW YORK, Dec 19 (Reuters) - Permits for the right to emit carbon dioxide from power plants in the U.S. Northeast sold for the clearing price of \$3.38 per ton in the second U.S. greenhouse gas emissions auction, states in the region said on Friday.

The amount was 31 cents more than the first quarterly auction held in September and raised nearly \$107 million for the 10 states which have formed a cap and trade market on the emissions called the Regional Greenhouse Gas Initiative.

- Pete Grannis, the chair of RGGI's board of directors, was confident that the program would serve as a model for politicians, including President-elect Barack Obama, who hope to regulate emissions of gases blamed for warming the planet.
- "We look forward to developing a partnership with the Obama Administration to create a strong federal climate action plan," he said in a release.
- The states will begin regulating carbon dioxide emissions from power plants in January. They hope to reduce emissions 10 percent in the region from 2015 through 2018. The next auction will take place in March.
- RGGI said 69 participants from the financial, energy and environmental sectors did the bidding in the auction, which was held on Wednesday.
- The states aim to invest the proceeds from the auctions in clean energy and energy efficiency projects. (Reporting by Timothy Gardner, editing by Jim Marshall)

*Floor price = \$1.86 ton, allowances can not sell below that level

How much CO2 is created by ...?

A recent comprehensive survey of industrial boilers by Oak Ridge National Laboratory found that boilers with an input capacity of 10/MMBtu/hr or greater correspond to 93 percent of total industrial boiler input capacity. Based on this data, ARB staff used a natural gas boiler input capacity of 10MMBtu/hr which equates to emissions of 4,660 MTCO2e/yr. (metric tons of CO2 equivalent per year)

http://www.eea-inc.com/natgas_reports/BoilersFinal.pdf

Sergeant Friday: Just the Facts

- Australia's Carbon Pollution Reduction Scheme (CPRS)
- Chicago Climate Exchange(CCFE) is listing offset credits issued by the California Climate Action Registry {voluntary}.

Just the facts...

- \$3.80 a ton in RGGI
- \$5.25 a ton in CCFE
- \$38.00 a ton in Europe
- How much is your carbon worth??
- RGGI and CCFE jumped ~ 10% on speculation be permitted in national program
- WCI is BOLDEST. 5 other GHGs. More than power plants, all major industries, transportation fuels, even private citizens?
- WCI = 20% of US economy and ~75% of Canada's!

Just the facts...

- RGGI most allowances auctioned
- Europe gave allowances, industry windfall
- The Copenhagen agreement is supposed to replace the Kyoto protocol, which did NOT require explicit reductions.

What else is coming down the tube?

- CAMR revisited
- CAIR revisited
- NSR/PSD Major modification ruling revisited
- NSR/PSD CO2 revisited
- EPA Budget increased
- Science backed decision making

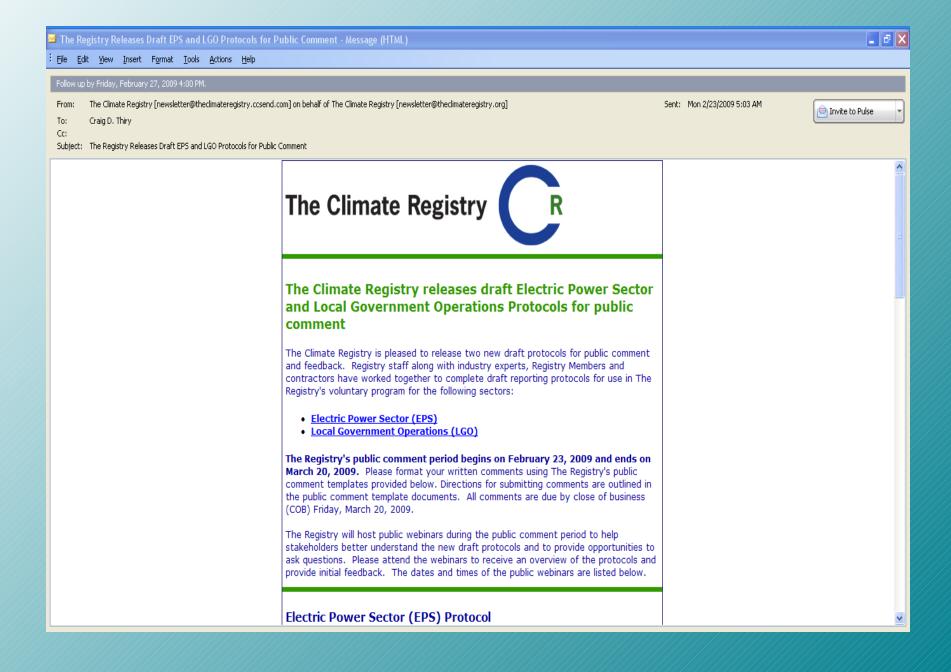
Back to the Future: EPA Renews New Source Review Enforcement

Martin Law Group, Env. News

• Clinton-era enforcement of the Clean Air Act ("CAA") returned last month, as the Justice Department filed a complaint against Westar Energy, Inc. for allegedly failing to install the best available control technology ("BACT") at one or more of its coal-fired power plants. The complaint, brought under the New Source Review ("NSR") provisions of the CAA, revives a line of NSR enforcement cases that date to an initiative the Clinton administration began in 1999.

Clean Air Act New Source Review

- The CAA sets forth requirements for the prevention of significant deterioration ("PSD") of air quality in areas that already meet EPA's national ambient air quality standards ("NAAQS"). Section 165(a) of the Act, among other things, prohibits the construction and operation of a "major emitting facility" in an attainment area without a PSD Permit. The CAA defines "construction" to include "modification." Modification generally means any physical change in, or change in the method of operation of, a stationary source that increases pollution emissions or results in new pollutants not previously emitted. In order to obtain a PSD permit, section 165(a) requires, in part, that the facility use best available control technology ("BACT") for each pollutant that the facility emits.
- http://www.martenlaw.com/news/?20090305-nsr-enforcement-renewed



A The Avogadro Group, LLC

GHGs, Emission Trading, in the (almost) annual series... What's coming down the tubes? Upcoming Rules and Regulations

Copies of a slide or the presentation? Bring me your business card &/or stop by the booth

www.avogadrogroup.com

Questions? (877) 602-1023 Craig.Thiry@avogadrogroup.com