

- FACTSHEET -

Debunking the Myths of Cap-and-Trade

1. An auction is not the silver bullet that will fix pollution trading
2. It's not really a market when...
3. Money can't buy everything
4. Windfall profits to the worst polluters ...
5. The SO₂ Acid Rain program—not a good model for carbon regulation after all
6. Cap-and-trade will stifle the development of renewable energy
7. Doing something dysfunctional is not better than doing nothing at all
8. Keep the cap—Ditch the trade
9. Effective alternatives to achieve actual and significant emissions reductions exist

1. An Auction is Not the Silver Bullet That Will Fix Pollution Trading

In the present debate over which system to adopt to address global warming some advocates of a cap-and-trade program dismiss the reality of the failures of the European Union Emissions Trading Scheme (EU ETS) in achieving actual emissions reductions as an “experiment,” under which Phase-I was never meant to achieve significant reductions. Rather, they are convinced that with complex economic models, enough tinkering and theory that the U.S. will somehow get it right.

One such theory is that the use of an auction, where polluters have to initially pay for the permits, will fix pollution trading. Such a mechanism may avoid the perverse result of

awarding free profits to the worst polluters, as was the case under the EU ETS and its “grandfathering” method of allocation. However, the question of whether to auction permits is a distraction from the numerous failures inherent in pollution trading schemes,¹ and significant political interests may thwart the actual implementation of an auction.

Although an auction system may sound good in theory, in reality it will face many political hurdles. After Phase I of the EU ETS was nearly universally recognized as a failure,² a lead official of the EU publicly announced that allocations would be by 100% auction under Phase-II. However, when Phase-II took effect on January 1, 2008 nearly all allowances, 93% of UK credits will be given gratis with the slight remainder auctioned.³ Under Phase-II, “[t]he UK's biggest polluters will reap a windfall of at least £6bn from rising power prices and the soaring value of carbon under the new European carbon trading scheme that critics say fails to correct the flaws of the system it replaced.”⁴ The Prime Minister of the U.K. even called for the creation of an independent EU carbon bank “to take the task of allocating CO₂ allowances from the European commission and into independent hands from 2013. He said that the main concern was to avoid short-term political pressures when allocating allowances.”⁵

In the U.S., the predominate proposal to address global warming at the federal level, the Lieberman-Warner bill, would repeat the EU's grandfathering strategy by giving away over half of the pollution allowances.⁶ An auction faces significant opposition from industry and other regulated entities. For example, one utility representative in California warned that entities may bring suit against implementation of any auction because it is a tax.⁷ Thus, there is no guarantee that an auction can be successfully implemented even if it is attractively designed, and the problems of allocations are still significantly relevant which many attribute as one of the principle failures of the EU ETS.

Even where a 100% auction is established under the Northeast states' Regional Greenhouse Gas Initiative (RGGI), over-allocation problems persist.

“Recent analyses have shown that the RGGI market [allocation] is likely to be long, as fuel switching from oil to gas and generally warmer winters have caused power plant emissions to sink close to the levels the caps will require. Some market observers therefore expect a low initial price for allowances... [causing] suggestions that the upcoming auctions impose a reserve price – a minimum bid on allowances – to counteract the likely over-allocation.”⁸

The first publicly-announced compliance trade of emissions allowances under RGGI occurred on February 14, 2008, when a permit to emit a short ton of CO₂ traded in the range of \$5 to \$10.⁹ The EU ETS showed that when permits are over-abundant and cheap, little to no emissions reductions take place.¹⁰

Moreover, auctions inherently bring volatile prices. Volatile prices create disincentives for capital investments because investors are not sure what their payoff will be.

2. It's Not Really a Market When...

Even if a cap-and-trade system was able to achieve a decent cap and price for carbon, the market can still be distorted. For example, when the price for PM₁₀ recently skyrocketed to \$250,000 per pound in Southern California, the agency distributed "priority reserve" credits, allowing companies to purchase hastily printed credits at a small fraction of the market price so that 11 new natural gas plant proposals could go forward.

Proposed measures to fix the high volatility problems in a carbon market, such as minimum bids on allowances, contradict claims by cap-and-trade advocates that “pure price discovery is essential to functioning markets.”¹¹

“U.S. CAP said it wants lawmakers to make sure there are no short-term extreme price spikes or

continuously high allowance prices. It also expects the trading market to have both a large number of buyers and sellers and compliance prices that don't stay so low that they discourage investments in emission-reduction technologies... It also is open to... an independent Carbon Market Board that keeps track of the cap-and-trade system and undertakes intervention measures if the market gets too unstable.”¹²

Or perhaps it will be a market that does not operate on its own. Rather the market could be subject to substantial political oversight and intervention in order to counter known financial incentives for fraud when pollution is transformed into a commodity.

Southern California, notorious for its smog, has had a trading scheme to reduce smog since 1993 that has failed to deliver the clean air promised, has been plagued by manipulation, and remains rife with political compromises that continue to weaken the failed program. The Los Angeles regional pollution trading car-scrapping program was plagued by widespread under-reporting of *actual* emissions from industry and an over-reporting of *claimed* emissions reductions from cars.¹³ Under a documented comparison of actual versus reported emissions under RECLAIM, one Freedom of Information Act (FOIA) request revealed that oil companies under-reported their oil tanker emissions by factors between 10 and 1000.¹⁴ “Despite the hope that RECLAIM would be simple and transparent, there were serious instances of fraud and market manipulation, followed by the inevitable lawsuits and criminal investigations.”¹⁵

In the case of carbon, efforts in California, Europe and the rest of the world to cut greenhouse emissions “are driving a booming trade in carbon credits, now a \$5 billion-a-year global business.”¹⁶

“On February 26 and 27, [2008] the international carbon trading financial community descended on San Francisco to present Carbon Forum America, the first American carbon trading conference to include a full trade show featuring 80 companies that manage carbon credit assets and trades,

negotiate contracts, validate projects, and perform various other market services.”¹⁷

“Environmental critics of a cap-and-trade system worry carbon traders, like other derivatives traders, will get carried away and game the system to produce excessive profits for themselves.”¹⁸ Gaming is a notorious trait of markets. The market solution of energy deregulation resulted in rolling blackouts and the Enron scandal. The market solution of bank deregulation brought the current sub-prime mortgage mess, and now the market solution of carbon trading is a recipe for global catastrophe and climate collapse.¹⁹

3. Money Can’t Buy Everything

In response to concerns from Environmental Justice (EJ) groups that pollution trading enables or exacerbates concentrated pockets of localized co-pollutants, because no source emits carbon alone, several advocates of cap-and-trade suggest that auction revenue could be returned to disadvantaged communities to compensate for regressive impacts. However, offers of money to low-income, communities of color would not nearly compensate residents for potential increased health risks, and most likely, would not even reach individuals directly. The revenue stream could be tied up in other government expenditures and general funds “where the money goes in but may not come back out to the taxpayer.”²⁰ The money could be used for parks, studies, and asthma education programs as has been the case in other pollution trading schemes, never reaching the people most impacted directly.

4. Solutions Should be Cost-effective for Society—Not Corporations

Despite claims by cap-and-trade advocates that carbon trading will realize the most “cost-effective” pollution controls, polluters’ calls for “cost-effectiveness” can be a large circular loophole that they keep expanding, tacking on more escape routes—i.e. multiple means to buy their way out of a particular environmental

regulation. First they turned pollution (and people’s health) into a tradable “credit” to be profited from. Then came speculative “banking”—an investment—followed by global “offsets”—which creates “flexibility” to buy their way out of a regulation, collectively leading to the over-availability of “credits,” leading to their devaluation (e.g..02¢ per pound of carbon in Europe.) In the end, pollution markets create multiple “cost-effective” alternatives for polluters’ to avoid achieving direct emissions reductions at their facilities from fuel switching, energy efficiency, renewable energy, etc....

Whereas, if cost-effectiveness is measured based upon the total costs to society, carbon trading will fail even this criterion, as the EU ETS has demonstrated:

“Even a back-of-the-envelope calculation suggests that the EU’s ETS is far from being the most cost effective way to reduce net carbon emissions. Adding up simply the transfer cost and the administrative cost suggests a cost to the UK economy of £530 million a year (without including the knock-on costs of higher energy prices). This is unacceptably high, given that there is no evidence that the scheme is actually limiting emissions across the EU... One way or another, the administrative costs of the current trading scheme means that the same objectives could be achieved at lower cost with... targeted action on power generators.”²¹

The impartial Congressional Budget Office released a report concluding that “a given long-term emission-reduction target could be met by a tax at a fraction of the cost of an inflexible cap-and-trade program.”²² Meanwhile, the quantifiable costs to continuing business as usual of public health and increased natural disasters are not factored when “cost-effectiveness” is measured based upon the monetary savings to polluters alone.

“[E]xcessive volatility or unduly high prices of quotas on carbon emissions might disrupt the economy severely.”²³ If all of the inherent problems in pollution trading programs create insignificant emissions reductions and harm the economy severely, what is the public’s response to efforts to address global warming? Economists at the conservative American

Enterprise Institute warned, “a severe global emissions-reduction policy through emissions trading (on the order of a minimum 50 percent cut by 2050) could turn out to be the costliest public policy mistake in human history, with the costs vastly exceeding the benefits.”²⁴

5. The SO₂ Acid Rain Program—Not a good model for carbon regulation after all

Many advocates of a cap-and-trade program point to the success of the U.S. sulfur dioxide pollution trading system in reducing acid rain emissions as an adequate model for carbon regulation.²⁵ However, economists warn that such comparisons are unwarranted because: 1) the scale of a carbon trading system would be up to 100 times larger than that for sulfur.²⁶ 2) Unlike SO₂, because of the lack of readily available “technical fixes” for filtering or capturing CO₂ (there is no “low-CO₂ coal” or carbon-equivalent of an SO₂ scrubber),²⁷ “any serious reduction in CO₂ emissions will require a suppression of fuel combustion”, meaning that “SO₂ and CO₂ are not comparable targets for emissions reduction.”²⁸ 3) An international GHG emissions trading scheme will be politically unsustainable in the long term, where some members will be non-compliant, and the cost of such a system might erode the competitiveness of the U.S. economy against developing nations that do not join the system.²⁹

While the Acid Rain Program in the U.S. did achieve emissions reductions, they were modest gains as compared to a regulatory control program.

“Compare the success of the often-touted sulfur dioxide trading system the U.S., instituted in 1990, with the speed and quantity of reductions under rule-based systems during the same period. U.S. SO₂ emissions dropped by 31% between 1990 and 2001. Over the same period of time, under old fashioned rule-based regulation, Germany reduced its emissions by 87%, Italy by 62%, and Western Europe as a whole by 57%. ... In general, it is not surprising that emission

trading discourages innovation. The whole point of spatial flexibility is to encourage use of all cheap means before turning to expensive ones.”³⁰

The reduction strategies available to the utilities to reduce SO₂ were all well known at the time: switch energy dispatch to the lowest emitting plant, switch to low sulfur coal, or put on acid scrubbers. All the actions were taken by the capped entity.

To reduce carbon, you need to get reductions from multiple sectors at once, and much of the reductions will need to come from: new technologies that are not yet developed (i.e. more efficient appliances), the maturing of existing technologies (i.e. more cost effective rooftop solar), and individual behavior changes (i.e. less driving, more use of mass transit.) There is little in that which is akin to just putting on a scrubber or switching energy dispatch to a lower emitting plant.

Fundamentally, technological innovation played no role in SO₂ reductions, while innovation will need to play a vital role in carbon reductions.

6. Cap and Trade May Stifle the Deployment of Renewable Energy

Many recognize that to achieve the steep emissions reductions necessary to avert global catastrophe, investments are necessary that result in a timely transition to clean renewable energy. If the most emissions reductions are expected to come from regulations such as Renewable Portfolio Standards (RPS’), it will be imperative to choose overlying approaches that enable the actual achievement of a RPS. Trading, at best, is an unwieldy, round about, hopeful way of getting there and at worst stands in the way of such a transition. For example,

“Of the 65% of companies surveyed by Point Carbon earlier this year [2007] which claimed that the ETS had led them to abate their emissions (up from 15% the previous year), most were planning to buy credits rather than cut their own emissions....European emissions overall are not falling, which suggests there may not be as much

switching out of coal, or as much technological innovation, as had been hoped. Chinese CERs [credits] are too cheap and the carbon price is too low and too volatile. Even when it was bouncing around at €15-25, it did not seem to encourage much new investment.”³¹

Meanwhile, the volatility and uncertainty of carbon prices under a cap-and-trade program creates great difficulty when planning, developing, and financing lower carbon alternatives. “Without a true, market-based price of carbon, companies will be unwilling to invest. An industry source said: ‘We need a much higher carbon price for the economics to make sense.’”³² By accepting a trading approach, implicit is the acceptance of the volatility inherent in markets.³³ For example,

“Say there’s a very hot summer week in California. Utilities would have to shovel more coal to produce more juice, causing their emissions to rise sharply. To offset the carbon, they would have to buy more credits, and the heavy demand would cause credit prices to skyrocket. The utilities would then pass those costs on to their customers, meaning that power bills might vary sharply from one month to the next.”³⁴

Electricity generation is particularly vulnerable to changing weather patterns. The resulting volatility may discourage investments in less carbon-intensive electricity generation, carbon-reducing energy efficiency, and carbon-replacing renewable energies.³⁵

“Under the [EU] ETS, companies can sell any excess allowances and pocket the profits. They can also pass on the implied increase to generation costs to customers through higher energy tariffs, thus benefiting from the system without the desired effect of also being encouraged, through the payment of large carbon bills, to invest in new clean generation technologies.”³⁶

In these ways, a cap-and-trade system will stifle the deployment of renewable energy, while a carbon trading program may be at odds with an RPS entirely.

According to leaked papers from the U.K.,

“One of the main objections of government to meeting the renewables target set by Mr. Blair is that it will undermine the role of the European emission trading scheme. This scheme was devised by the Treasury under Mr. Brown and allows wealthy governments to pay others to reduce emissions. ‘[Meeting the 20% renewables target] crucially undermines the scheme’s credibility ... and reduces the incentives to invest in other carbon technologies like nuclear power’, say the papers.”³⁷

In California, companies are also arguing that there is no need for the RPS because allegedly, a cap-and-trade system would be duplicative. However, several municipal utilities across California have recently stated publicly that they oppose being included within a cap-and-trade system because they will be forced to purchase credits on the carbon market *instead of* making investments in renewables and meeting RPS goals.³⁸ Thus, an entity may have to choose between making investments in lower carbon energy generation *or* purchasing offsets from covering pig manure piles in Patagonia or replacing native forests with palm plantations under the Kyoto Protocol’s Clean Development Mechanism.

7. Doing Something Dysfunctional Is Not Better Than Doing Nothing at All

“The great danger of confronting peak oil and global warming isn’t that we will sit... and do nothing while civilization collapses, but that we will plunge after ‘solutions’ that will make our problems even worse.”³⁹

Several environmental groups believe that doing something is better than doing nothing,⁴⁰ and that if they repeat often enough that trading will work, such repetition will somehow erase the long history of failure of pollution trading schemes.⁴¹ Several advocates of cap-and-trade argue that it is the only “politically viable” approach as they simultaneously lobby for

regional and federal carbon trading programs. However, cap-and-trade programs would no longer be seen as “inevitable” when groups and individuals dare to speak out for alternatives and fight for real reductions of greenhouse gas emissions. For example, New York Mayor, Michael Bloomberg, is actively advocating for a carbon tax saying, “I think it’s time we stopped listening to the skeptics who say, ‘But for the politics,’ and start being honest about costs and benefits.”⁴²

The passage of the Lieberman-Warner bill in Congress is as likely as we collectively make it.

“It’s clear from Chairman Boxer’s comments today that she does not anticipate being able to move this bill this year,’ EPW ranking member James Inhofe (R-Okla.) said in a prepared statement... ‘As Chairman Boxer is aware, several amendments designed to protect the economy and to deploy low emission energy sources like nuclear are likely to pass during a floor debate,’ Inhofe said. ‘Even ardent supporters of cap-and-trade in the business community, notably Jim Rogers, CEO of Duke Energy, believe this bill is the wrong approach for America.’... ‘While we have great respect for Senator Boxer and appreciate the leadership she is showing on global warming, it is premature to suggest that there is unity behind ‘America’s Climate Security Act’ as introduced by Senators Lieberman and Warner,’ said John Passacantando, executive director of Greenpeace USA. ‘The legislation is more a reflection of the pitfalls of political compromise than a real solution to safeguard the planet.’”⁴³

With growing scientific evidence that “cutting greenhouse gas emissions enough to avert a dangerous rise in global temperatures may require the world to cease carbon emissions altogether within a matter of decades,”⁴⁴ and the millions of lives and livelihoods at stake,⁴⁵ perhaps we should not settle for “solutions” that serve to only further entrench the fossil fuel interests that created the climate catastrophe in the first place. The point, after all, is to achieve significant greenhouse gas emissions reductions to avoid global catastrophe. We need not tell future generations that we compromised on a system where the planet and its inhabitants are worse off just because it was politically possible. Indeed, we can continue to

waste time and resources attempting to make failed pollution trading schemes work, or we could individually speak out and collectively come together working towards a genuine transition to a clean energy economy.

8. Keep the Cap – Ditch the Trade

Several cap-and-trade advocates assert that the primary difference between a cap-and-trade system and that of a carbon fee or tax is that a cap-and-trade will enable quantifying reductions certainty, whereas a fee or tax will only provide price certainty. However, an emissions cap can be combined with a fee or tax just as easily, to create a “cap-and-fee,” providing both emissions and price certainty. Moreover, a fee or tax is actually more conducive to achieving a stringent emissions cap while under a trading scheme, market manipulation, political favors, and global offsets will blow right through any cap. Under a cap-and-trade system the cap can literally be traded away.

For example, even if a cap-and-trade system was able to achieve a decent cap in its design and polluters initially paid through an auction, the use of unverifiable offsets allows emitters to shoot right through that cap with little to no emissions reductions actually achieved.

“[T]he world’s carbon markets generated US\$60 billion (€40 billion) last year, ... [m]ost of that private investment is going into carbon emissions trading deals. Rich nations that signed on to the 1997 Kyoto Protocol were given a limit for permitted carbon emissions. Companies in these countries can earn credit toward their quotas by paying to clean up the environment in poorer nations.”⁴⁶

However, many regard global “carbon offsets” as a farce when they occur in repressive regimes in the Global South, are rife with fraud, unverifiable, and may simply give money to projects that would have already occurred on their own.⁴⁷

However, under an entity-specific fee or tax approach, a stringent cap could not be traded away with phantom credits.

9. Effective Alternatives to Achieve Actual and Significant Emissions Reductions Exist

Despite PR campaigns to the contrary, several alternative approaches to carbon trading exist that should be evaluated individually and in combination to ensure that they are complementary. In the absence of a federal program, statewide or regional programs could be tailored to specific regional variances and legal parameters. For California, we recommend the following hybrid approach, which is by no means exhaustive.

- a. An entity-specific and stringent declining cap
- b. A mitigating effects carbon fee

The California Air Resources Board (CARB), charged with implementing California's Global Warming Solutions Act of 2006, already has the authority to charge a carbon fee under AB32. A fee has several advantages over a trading program, while sending a consistent and transparent price signal that companies can rely upon when making investments, versus the highly unreliable and volatile price of carbon under a market scheme. Under a fee, companies will not have to guess and speculate what the value of making reductions is and whether or not to invest.

A fee is far simpler to administer, can be used to fund further emissions reductions and a transition to a clean energy future, avoids the most negative aspects of trading and—importantly—results in a revenue stream that can be used to protect families helping mitigate past and future effects of climate change such as expected energy price increases. Whereas under an auction approach, the government could use

the revenue in any manner it chooses, including filling general budget holes, a fee under the California Supreme Court's *Sinclair Paint* ruling must be used wholly for activities which have a "nexus" to the harm for which the fee was imposed.

A fee approach could also address concerns by entities that they will be charged twice under a carbon trading system, having to pay for both the credits to meet a cap and separate clean energy requirements. Under a fee, part of the fee could be rebated to entities that invest in meeting aggressive efficiency and clean energy goals to help businesses meet the costs and make a genuine transition. In this way, a fee would work to help achieve direct regulations such as meeting California's RPS, versus trading that works against RPS goals as explained above.

A wide range and growing number of people and institutions prefer using a carbon fee or tax over a trading system, combined with a broad set of tools, to bring efficient and effective reductions in carbon emissions.

- c. Aggressive regulatory measures and Incentives

Just as governments mandate seat belts to protect human health, so too can governments mandate emission reductions to protect its citizens from the numerous bodily threats that climate change imposes.⁴⁸

At a February 2008 CARB AB32 program design workshop, several representatives from utilities welcomed old-fashioned command-and-control regulations where they would know what to expect, versus an unknown and potentially volatile carbon trading market. A couple representatives stated that they expect the majority of reductions in the electricity sector to come from the RPS and energy efficiency measures, with little reductions from a cap-and-trade program.

We support an aggressive RPS and energy efficiency measures (and potentially a

Community Empowerment Feed-in Tariff that will help utilities achieve aggressive RPS goals), in addition to the plethora of direct regulations specific to the various regulated sectors.

d. Economic opportunities

We also support worker transition and green collar job training to capture the multitude of economic, as well as health and environmental benefits that could flow from measures to address global warming. For example,

“A project called Nevada Solar One got switched on in a place called Boulder City, Nevada... even though it was the first plant of its kind to be built in 17 years... It generates 64MW of electricity and powers more than 14,000 homes... The first thing Duprey has to say about Solar One is that it produces peak power. Its output is maximum when demand is highest, when power is most expensive... In this one deal, the state was able to meet its renewable portfolio standard -- 5% by 2015... ‘We created 200 jobs in the US through Acciona projects like Nevada Solar One,’ Duprey said. ‘And that’s just in our company. There’s a ripple effect when you count suppliers and construction. It’s a great way to stimulate the economy.’”⁴⁹

A cap-and-fee, combined with regulation, incentives, and leadership will result in a workable combination achieving synergistic and actual solutions to the growing threat of climate change.

¹ See, “The Cap and Trade Charade for Climate Change,” http://www.ejmmatters.org/docs/Cap-Trade_FACTSHEET.pdf

² See e.g. Helmer, Roger, Member of the European Parliament for the East Midlands, “Climate Change Policy in the EU: Chaos and Failure,” *European Journal*, Feb. 2007, <http://www.rogerhelmer.com/ejclimatechange.asp>

³ Fortson, Danny, “Power firms to pocket £6bn from carbon ‘handouts’ in new emissions regime,” *The Independent*, Jan. 2, 2008.

⁴ Fortson, Danny, “Power firms to pocket £6bn from carbon ‘handouts’ in new emissions regime,” *The Independent*, Jan. 2, 2008.

⁵ Point Carbon, “Recent Global Carbon Politics,” *Carbon Market North America*, v.3, issue 4, Feb. 27, 2008,

http://www.pointcarbon.com/getfile.php/fileelement_133456/CMNA20080227_2.pdf

⁶ Wilson, Kelpie, “Coming Soon - The Carbon Economy,” *Truthout*, Mar. 4, 2008,

http://www.truthout.org/docs_2006/030408A.shtml

⁷ “Divisions Deepen Over State GHG Emission-Allowance Plan,” *Inside CalEPA*, Vol.19, No.23, Jun. 6, 2008.

⁸ Point Carbon, “First RGGI trade announced,” *Carbon Market North America*, v.3, issue 4, Feb. 27, 2008,

http://www.pointcarbon.com/getfile.php/fileelement_133456/CMNA20080227_2.pdf

⁹ Point Carbon, “First RGGI trade announced,” *Carbon Market North America*, v.3, issue 4, Feb. 27, 2008,

http://www.pointcarbon.com/getfile.php/fileelement_133456/CMNA20080227_2.pdf

¹⁰ See, “The Cap and Trade Charade for Climate Change,”

http://www.ejmmatters.org/docs/Cap-Trade_FACTSHEET.pdf

¹¹ Point Carbon, “First RGGI trade announced,” *Carbon Market North America*, v.3, issue 4, Feb. 27, 2008,

http://www.pointcarbon.com/getfile.php/fileelement_133456/CMNA20080227_2.pdf

¹² Samuelsohn, Darren, “CLIMATE: U.S. CAP suggests cost-containment solutions,” *E&E News PM*, Mar. 20, 2008.

¹³ Drury, p. 259.

¹⁴ Drury, p. 260.

¹⁵ Green, et. al.

¹⁶ Downing, Jim, “Green Rice on Menu,” *Sacramento Bee*, Feb. 17, 2008.

¹⁷ Wilson, Kelpie, “Coming Soon - The Carbon Economy,”

[truthout | Report](http://www.truthout.org/docs_2006/030408A.shtml), Mar. 4, 2008,

http://www.truthout.org/docs_2006/030408A.shtml

¹⁸ Wilson, Kelpie, “Coming Soon - The Carbon Economy,”

[truthout | Report](http://www.truthout.org/docs_2006/030408A.shtml), Mar. 4, 2008,

http://www.truthout.org/docs_2006/030408A.shtml

¹⁹ See e.g., Eilperin, Juliet, “Carbon Output Must Near Zero To Avert Danger, New Studies Say,” *Washington Post*, Mar. 10, 2008, <http://www.washingtonpost.com/wp-dyn/content/article/2008/03/09/AR2008030901867.html>.

²⁰ Wilson, Kelpie, “Coming Soon - The Carbon Economy,”

[truthout | Report](http://www.truthout.org/docs_2006/030408A.shtml), Mar. 4, 2008,

http://www.truthout.org/docs_2006/030408A.shtml

²¹ Open Europe, “The High Price of Hot Air: Why the EU Emissions Trading Scheme is an Environmental and Economic Failure,”

<http://www.openeurope.org.uk/research/ets.pdf>

²² “Policy Options for Reducing CO2 Emissions,”

Congress of The United States Congressional Budget Office (CBO), Feb. 12, 2008,

<http://www.cbo.gov/ftpdocs/89xx/doc8934/02-12-Carbon.pdf>

²³ “Carbon Markets Create a Muddle,” *Financial Times*, Apr. 26, 2007, <http://www.ft.com/cms/s/4b80ee18-f393->

11db-9845-000b5df10621,Authorised=false.html?_i_location=http%3A%2F%2Fwww.ft.com%2Fcms%2Fs%2F0%2F4b80ee18-f393-11db-9845-

000b5df10621.html%3Fnclick_check%3D1&_i_referer=&nclick_check=1

²⁴ Green, Kenneth P., et. al., "Climate Change: Caps vs. Taxes," American Enterprise Institute, June 3, 2007, http://www.aei.org/publications/filter.all.pubID.26286/pub_detail.asp

²⁵ Green, et. al.

²⁶ Green, et. al.

²⁷ Carbon Tax Center, "Cap & Trade Problems," <http://www.carbontax.org/introduction/#cap-and-trade>

²⁸ Carbon Tax Center

²⁹ Carbon Tax Center

³⁰ Lipow, Gar, "Emissions trading: A mixed record, with plenty of failures," *Gristmill*, Feb. 19, 2008, <http://gristmill.grist.org/story/2007/2/18/205116/813>

³¹ "Trading Thin Air," *The Economist*, May 31, 2007, http://www.economist.com/surveys/displaystory.cfm?story_id=9217960

³² Fortson, Danny, "Power firms to pocket £6bn from carbon 'handouts' in new emissions regime," *The Independent*, Jan. 2, 2008.

³³ See, Green, et. al.

³⁴ *Los Angeles Times*, May 28, 2007.

³⁵ "Tax vs. Cap-and-Trade," *Carbon Tax Center*, <http://www.carbontax.org/issues/carbon-taxes-vs-cap-and-trade/>

³⁶ Fortson, Danny, "Power firms to pocket £6bn from carbon 'handouts' in new emissions regime," *The Independent*, Jan. 2, 2008.

³⁷ Vidal, John, "Labour's plan to abandon renewable energy targets," *The Guardian*, Oct. 23, 2007, <http://www.guardian.co.uk/environment/2007/oct/23/renewableenergy.energy>

³⁸ "Electricity Sector Cap-and-Trade Plan Draws Mixed Review," *Inside CalEPA*, Vol.19, No.7, Feb. 15, 2008, p. 5.

³⁹ Goodell, Jeff, "The Ethanol Scam: One of America's Biggest Political Boondoggles," *Rolling Stone*, Issue 1032, Jul. 2007,

http://www.rollingstone.com/politics/story/15635751/ethanol_scam_ethanol_hurts_the_environment_and_is_one_of_americas_biggest_political_boondoggles/1

⁴⁰ See e.g., Samuelsohn, Darren, "CLIMATE: U.S. CAP suggests cost-containment solutions," *E&E News PM*, Mar. 20, 2008 ("And we [U.S. CAP] all believe that good enough will be better than nothing at all.").

⁴¹ See e.g., Moore, Curtis A., "Marketing Failure: The Experience With Air Pollution Trading in the United States," *Health & Clean Air Newsletter*, Feb. 2004, http://healthandcleanair.org/emissions/marketing_failure.html, ("Comparing and contrasting [trading] programs revealed grave flaws common to all of them. Finding the

same failings in all trading programs—as well as evidence of the emergence of these failings in smaller or younger programs, even though they are for different pollutants, time frames and circumstances—suggests that the deficiencies are intrinsic to trading itself, not the result of faulty program design or implementation.")

⁴² Redburn, 2007.

⁴³ Samuelsohn, Darren, "Senate Dems outline June floor strategy for Lieberman-Warner bill," *E&E Daily*, Mar. 13, 2008, <http://www.eenews.net/EEDaily/print/2008/03/13/2>

⁴⁴ Eilperin, Juliet, "Carbon Output Must Near Zero To Avert Danger, New Studies Say," *Washington Post*, Mar. 10, 2008, <http://www.washingtonpost.com/wp-dyn/content/article/2008/03/09/AR2008030901867.html>.

⁴⁵ See e.g., Oliver, Rachel, "Rich, poor and climate change," *CNN.com*, Feb. 18, 2008, <http://edition.cnn.com/2008/BUSINESS/02/17/eco.class/>, ("1 billion of the poorest people on Earth will lose their livelihoods to desertification (UNEP). More than 200 million environmental refugees will be created by 2050, as a direct result of rising sea levels, erosion and agricultural damage (World Development Movement).")

⁴⁶ *The Associated Press*, "Investors Tackling Global Warming While Governments Spar," Feb. 21, 2008, <http://www.iht.com/articles/ap/2008/02/21/europe/EU-FIN-Monaco-Green-Finance.php>

⁴⁷ See e.g., <http://www.cheatneutral.com>

⁴⁸ E.g. In December 2007, a group of more than 200 leading climate scientists released the statement that: "...many millions of people will be at risk from extreme events such as heat waves, drought, floods and storms, our coasts and cities will be threatened by rising sea levels". For the link to the declaration issued by scientists, see, <http://www.climate.unsw.edu.au/bali>

⁴⁹ Sassoon, David, "A Solar CEO's Beef with Washington Lawmakers," *Solve Climate*, Mar. 5, 2008, <http://solveclimate.com/blog/20080305/solar-ceos-beef-washington-lawmakers>

"Based on our experience as environmental enforcers..., we believe that the California Air Resource Board's confidence in cap-and-trade is misplaced and that carbon fees provide the more effective and efficient path to the goals of AB 32, California's landmark climate protection law." -- GUEST JUICE: Cap & Trade - Misplaced Confidence, [California Energy Circuit](#), Jul. 11, 2008.