

An open letter to Congress

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Re: Climate Change Legislation – Urgent Plea for Enactment of Carbon Fees and Ban on New Coal-Fired Power Plants without Carbon Sequestration

Dear Senators and Representatives:

We are writing to you about the urgent problem of climate change. Each of us has approximately two decades of public-sector experience in environmental enforcement.¹ In addition, Allan has substantial experience with cap-and-trade programs. The purpose of this letter is to communicate the bases for our opinion that attempting to address climate change through a cap-and-trade approach alone (as is currently contemplated in most of the major bills before Congress) is an inefficient and ineffective strategy to address the most pressing problem of our time. We believe that failure by the United States to enact meaningful and escalating carbon fees in the near future will result in an unacceptable risk of devastating and irreversible global climate change. Even if you have doubts concerning the time-frame remaining for effective action, please join us in insisting on a strategy that will effectively address this unacceptable threat to our children's future.

[1] We are writing this letter as citizens and as parents. Our educational background includes undergraduate degrees from Yale College (Laurie) and the University of California, Santa Cruz (Allan) and J.D.'s from Boalt Hall School of Law at the University of California, Berkeley. We are employees of the United States Environmental Protection Agency ("EPA"), Region 9, in San Francisco, however, we want to make it clear that we are writing to you only in our personal capacities, and nothing in this letter is an attempt to present the views of EPA or the Administration.

Here are our main points: (a) A cap-and-trade approach is inherently inferior to carbon fees; (b) the most efficient approach would be escalating carbon fees on all fossil fuels at the point of importation or extraction, along with appropriate carbon tariffs and international outreach as soon as the United States has taken appropriate action domestically; and (c) there is also a need for other interventions, including a ban on new coal-fired power plants without effective carbon sequestration.

A. Defects in "Cap-and-Trade": While recognizing that there are many variations on the cap-and-trade approach, here are the problems that cut across the board and would delay achieving the large emissions reductions needed to adequately address climate change:

1. **Problems Verifying Emissions in Many Sectors:** There are many barriers to a comprehensive system that would accurately report greenhouse gas emissions. A cap-and-trade system without accurate verification of emissions is an invitation to fraud and would significantly delay reductions. While it is possible to require accurate greenhouse gas reporting from large industrial facilities and electrical generators, there are many

other sectors of the economy from which it will be difficult or impossible to insure accurate reporting. In Europe, the methods used to estimate greenhouse gases are believed to have resulted in wide-spread under-reporting, which has helped to undermine the effectiveness of the Kyoto treaty. In our experience, the detective work needed to determine whether such under-reporting has occurred can be extremely complex. As a result, we do not think a reliably accurate system can be put in place for enough sources of emissions and offsets within the necessary timeframe.

2. **Problems in Setting a Starting “Cap” on Emissions:** In virtually all prior cap-and-trade systems, setting of the initial cap on emissions has been extremely contentious and has resulted in a cap that was significantly inflated above actual emissions. Setting the cap too high delays meaningful reductions and creates serious market distortions.
3. **Policing of Trading will be Complex:** Assuring that mitigation offsets and allowances that are bought and sold represent true reductions, not just paper credits, will be extremely difficult and resource intensive. Industry and its consultants will have tremendous financial incentives to understate actual emissions and overstate the amount of emission reductions or carbon sequestration offsets.
4. **Misplaced Market Theory, Uncertainty, and Economic Harm:** Market theory is based upon the exchange of real goods and services. In contrast, cap-and-trade proposals to address climate change are based upon the unproven hope that a market in a totally contrived commodity (allowances and mitigation offsets) will produce the technological innovation needed to adequately reduce greenhouse gas emissions. This reckless leap of faith is unjustified. The few and relatively minor experiments in emissions trading in our country have produced virtually no technological innovation, much less the kind of innovation necessary to power our economy on renewable resources rather than fossil fuels. In addition, the process of allocating allowances, either by auction or based upon historic emission levels, and creating mitigation credits is cumbersome and excruciatingly complex. This is further complicated by the “safety valve” provisions in many of the proposed laws, which allow greenhouse gas sources to pay to pollute if allowances reach unacceptably high prices. The volatility and uncertainty of such a system is inherently inefficient from an economic perspective. For businesses, this will make the cost of energy much harder to anticipate and economic planning far more difficult. This will cause a variety of problems that disrupt business and delay the incentives to invest in lower emitting technologies.
5. **Shifting of Assets to the Polluters:** Unlike carbon fees, whose proceeds can be used to cushion the impact of higher energy costs on individuals, cap-and-trade programs, like the European carbon market, have tended to enrich polluting industries and their consultants, while producing minimal decreases in emissions. While this could be addressed in part by having the polluters pay for all greenhouse gas allowances, this is not what is proposed in the cap-and-trade bills currently being considered by Congress.

B. Why Carbon Fees are the Winning Solution: As recognized by the February 2008 U.S. Congressional Budget Office report, carbon fees are the most efficient means to achieve meaningful emissions reductions in the necessary time-frame. They are also a means to regain the international credibility necessary to influence other countries.

1. **Predictability and Effectiveness:** Escalating carbon fees will have a more predictable impact on energy prices and will immediately create incentives for conservation and investments in alternative non-polluting energy technologies.
2. **Getting Started Quickly:** Carbon fees can be enacted and phased in much more quickly than a complex cap-and-trade system.
3. **Simplicity:** Carbon fees are more transparent and understandable. In cap-and-trade, failures and manipulations can more easily be hidden and are labor intensive to uncover. Failure to pay carbon fees on fossil fuels at the point of extraction or importation would be much easier to uncover.
4. **Incentives Spread Quickly to All Sectors of the Economy:** Carbon fees imposed on all fossil fuels will spread the incentive for conservation and non-polluting innovation quickly throughout the economy.
5. **Funding Rebates, R&D and International Assistance:** Carbon fee revenues can help protect individuals from the impact of higher energy costs by providing rebates in the form of reduced payroll tax or periodic payments to every person. In contrast, the costs of cap-and-trade systems are likely to become a hidden tax, as dollars go to market participants, their lawyers and consultants. A portion of carbon fees could also be used to fund the research and development needed to improve non-polluting energy technologies, and to create technology-transfer programs to assist developing countries, including China and India.

- 6. Phase-in of Carbon Fees and Carbon Tariffs:** We encourage you to enact carbon fees that would be phased in gradually, starting with relatively low per ton fees on fossil fuels and increasing each year, until we have achieved effective controls, along the lines suggested by the Carbon Tax Center and Representatives Pete Stark and John Dingell. Please consider including appropriate phased-in carbon tariffs, reflecting the level of emissions control in exporting countries, in order to protect American business from suffering a competitive disadvantage.

C. Ban on New Polluting Coal-Fired Power Plants: As a major source of greenhouse gases, please enact a ban on all new coal-fired power plants without carbon sequestration. This issue is discussed in the articles by Dr. James Hansen cited in the reference section below and is the subject of recently proposed legislation by Congressmen Waxman and Markey.

D. U.S. Historical Contribution to Global Climate Change: It is important to note that the United States through its unique and exponential economic growth has produced approximately 27% of all of the human-created greenhouse gas that is currently affecting our climate. The fact that our society has a very high standard of living that has been powered by fossil fuels gives us a unique responsibility to address climate change effectively and to assist developing countries in improving their standard of living while minimizing greenhouse gas emissions. Carbon fees and tariffs would help us fund this assistance. Carbon tariffs would protect U.S. manufacturers from unfair competition from carbon-intensive manufacturers outside the U.S.

E. Urgency: The Intergovernmental Panel on Climate Change (“IPCC”) released its Fourth Assessment Report (“AR4”) in 2007. The warnings and projections in AR4 are a call to action. However, some scientists, including by Dr. James Hansen, Director of the Goddard Institute of Space Studies, have expressed concerns that AR4 did not adequately address additional threats that might accelerate global warming. These threats include greater heat retention as formerly ice-covered ocean surfaces melt and become darker open water, thawing of huge areas of permafrost and resulting greenhouse gas emissions as those areas decay and ferment, and the reduced ability of the oceans to absorb and sequester atmospheric carbon, as some areas are nearing CO₂ saturation. Recent events and data, including the rapid decline of the Arctic sea ice, the diminishing capacity of the oceans near Antarctica to absorb CO₂, and the observed thawing of permafrost in Alaska and Russia, provide disturbing evidence that AR4 may be significantly underestimating the threat we are facing.

We recognize that new fees are not wildly popular at this point in history. We can only succeed if you are able to educate people to the point where they understand that these are fees on a material that threatens the future of our children and grandchildren, and that such fees will help “fuel” innovation, a sustainable business boom and a livable planet, by kick-starting the kind of World-War-II-type effort we need to make the necessary changes in time. Here you need to make the case and lead the way. Everything that we care about depends on your success.

Thank you for your consideration. Please let us know how we can be of further assistance.

Sincerely,

Laurie Williams and Allan Zabel
Citizens and Parents

Reference Categories:

A. Urgency of Addressing Climate Change

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3. Ocean CO₂ Saturation and Acidification

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C. Benefits of Carbon Fees

D. Coal Fired Power Plants and Sequestration

E. U.S. Historical Contribution to Greenhouse Gases

A. Urgency of Addressing Climate Change:

1. **Intergovernmental Panel on Climate Change (“IPCC”) Fourth Assessment Report, February 2, 2007.** <http://www.ipcc.ch/press/prwg2feb07.htm> (press release) www.ipcc.ch and <http://ipcc-wg1.ucar.edu> (full report)
2. **Wikinews, “Study says carbon dioxide levels rising faster than anticipated” October 23, 2007.** http://en.wikinews.org/wiki/Study_says_carbon_dioxide_levels_rising_faster_than_anticipated
3. **Dr. James Hansen, Director NASA’s Goddard Institute for Space Studies, “How to Avert Dangerous Climate Change” and “Climate Change - Why We Can’t Wait.”** www.columbia.edu/~jeh1/canweavert.pdf and www.thenation.com/doc/20070507/hansen
4. **TimesOnLine: “New CO2 Evidence Means Climate Change Predictions are Too Optimistic”, Lewis Smith, Environmental Reporter** <http://www.timesonline.co.uk/tol/news/uk/article2719627.ece> Higher production of inefficient coal fired power plants in China and India, reduced ability of the oceans to absorb carbon, and droughts causing a reduction in carbon sinks (i.e., plants) are causing an acceleration of global warming beyond the IPCC predictions, according to a study by British Antarctic Survey, published in the journal Proceedings of the National Academy of Sciences.

A.1. Impacts of Melting Permafrost:

1. **Science Daily, Sept. 15, 2007, “Lakes Boiling with Methane Discovered in Alaska”,** <http://www.sciencedaily.com/releases/2007/09/070911092139.htm> (impacts from methane and methane hydrate released from permafrost melting).
2. **Science Daily, August 13, 2007, “Climate Change and Permafrost Thaw Alter Greenhouse Gas Emissions in Northern Wetlands”,** <http://www.sciencedaily.com/releases/2007/08/070808213844.htm> (While short term fixing of carbon may occur in connection with new growth on permafrost, in the long term additional methane is released; methane is a more potent greenhouse gas than carbon dioxide).

A. 2. Melting Ice at Poles

1. **National Snow and Ice Data Center (“NSIDC”) October 1, 2007, news, “Arctic Sea Ice Shatters All Previous Record Lows”.** Mark Serreze. Senior Scientist at NSIDC, said, “The sea ice cover is in a downward spiral and may have passed the point of no return.” http://nsidc.org/news/press/2007_seaiceminimum/20071001_pressrelease.html
2. **Environment News Service, March 19, 2007, “Arctic Sea Ice Melt May Set Off Climate Change Cascade”** reporting on a review paper by Mark Serreze and Julienne Stroeve of CU-Boulder’s NSIDC and Dr. Marika Holland of the National Center for Atmospheric Research titled **“Perspectives on the Arctic’s Shrinking Sea Ice Cover”** appears in the March 16 issue of the journal “Science,” published by the American

Association for the Advancement of Science. <http://www.ens-newswire.com/ens/mar2007/2007-03-19-06.asp>

A. 3. Oceans CO2 Saturation and Acidification

1. **“Could Warmer Oceans Make Atmospheric Carbon Dioxide Rise Faster Than Expected?”** ScienceDaily (Oct. 24, 2007), www.sciencedaily.com/releases/2007/10/071023163953.htm - 47k .(The latest research results show that the oceans are generally able to fix more CO2 when they are cold. Oceans that warm up as a result of climate change release more CO2 into the atmosphere.)
2. IPS Environment, **“Southern Ocean Nears CO2 Saturation Point”**, Stephen Leahy, May 17, 2007. Reduced ability of the Southern Ocean to absorb carbon dioxide may accelerate warming. In addition, the presence of higher levels of CO2 at the ocean’s surface may cause acidification which harms marine life.) <http://ipsnews.net/news.asp?idnews=37774>
3. Mongabay.com, **“Carbon Dioxide Levels Threaten Oceans Regardless of Global Warming”**, by Rhett Butler, March 8, 2007 <http://news.mongabay.com/2007/0308-oceans.html> (formation of carbonic acid may threaten marine life, based on a study reported in the journal Geophysical Research Letters dated March 9, 2007)
4. **“September 2007 Monthly Update: Ocean Acidification, the Other Threat of Rising CO2 Emissions”**, by Crystal Davis on Tuesday, October 2, 2007. <http://earthtrends.wri.org/updates/node/245> (Ocean acidification is already occurring and is a threat to some marine organisms and to coral reefs.)
5. **Interview with Ken Caldeira**, chemical oceanographer with the Carnegie Institution at Stanford University, regarding impact of CO2 levels in the atmosphere on life in the oceans, indicating broad destruction of coral reefs. <http://www.loe.org/shows/segments.htm?programID=07-P13-00046&segmentID=5>

B. Problems with Kyoto and other Cap & Trade Proposals

1. William D. Nordhaus, Sterling Professor of Economics at Yale University, **“After Kyoto: Alternative Mechanisms to Control Global Warming,”** (Silver City, NM and Washington, DC: Foreign Policy In Focus, March 27, 2006). <http://www.fpif.org/fpiftxt/3167>
2. Prin, Gwyn (London School of Economics) and Rayner Steve (Oxford University), Nature, International Weekly Journal of Science, **“Time to Ditch Kyoto”**, 449, 973-74 (25 October 2007) doi:10.1038/449973a; Published online 24 October 2007. <http://www.nature.com/nature/journal/v449/n7165/full/449973a.html;jsessionid=9C43BD6F778D0060AA661EF8A8F0F7EB>

B. 1. Underreporting of Emissions

1. **“Top companies ‘failing to report true greenhouse gas emissions’”** Independent, The (London), Feb 19, 2007 by Michael Harrison http://findarticles.com/p/articles/mi_qn4158/is_20070219/ai_n18623936 (Andrew Pendleton, Christian Aid’s senior climate change analyst, said: “Our research reveals a truly staggering quantity of unreported carbon dioxide is emitted around the world by the top 100 companies on the London Stock Exchange.)
2. **“Kyoto promises are nothing but hot air”**, June 22, 2006 NewScientist.com news service by Fred Pearce, <http://www.newscientist.com/article/mg19025574.000.html> Scientists with the European Commission Joint Research Centre at Ispra, Italy, estimate that the UK may be emitting 92 per cent more methane than it declares under the Kyoto protocol, and France may be emitting 47 per cent more.

B. 2. Inflated Caps

1. **“Taking up the Slack: Lessons from a Cap-and-Trade Program in Chicago”**, by David A. Evans and Joseph A. Kruger, Resources for the Future, www.rff.org/Documents/RFF-DP-06-36.pdf Showing the potential for inflated caps on pollutants in a cap-and-trade system, the authors studied a Chicago Program, called Emissions Reduction Market System (ERMS) for volatile organic materials (VOMs). In this cap-

and-trade program, despite expectations to the contrary, emissions have been significantly below the annual allocation of emission allowances, and allowance prices have been much lower than predicted. Trading has been limited and many allowances have expired. Like ERMS, in the early years of RECLAIM, the caps for both pollutants were slack. (Harrison 2004)

B. 3. Enriching Energy Companies - Transfer of Wealth away from the Middle Class

1. **“EU Looks to Curb Utility Windfall Carbon Profits”**, by Gerard Wynn, Germany, Planet Ark, Reuters News Service, May 4, 2007, <http://www.planetark.com/dailynewsstory.cfm/newsid/41710/story.htm> (Power generators, Europe’s biggest carbon emitters, were estimated to make annual profits from trading schemes well in excess of 5 billion euros (US\$7 billion). Utilities are “passing on” the cost of emissions permits to consumers, despite getting most of the emissions permits for free, handing them profits and limiting incentives to cut emissions.”)
2. **“Windfalls in Lieberman-Warner Global Warming Bill: Quantifying the Fossil Fuel Industry Giveaways”**, Friends of the Earth analysis of bill’s auction and allocation giveaways, October 2007, www.foe.org/globalwarming/Lieberman-Warner_giveaways_analysis.pdf (Friends of the Earth states that the impact of the proposed bill would be to give away approximately \$800 billion pollution credits – suggests auctions would be preferable)
3. Davies, Nick, **“Truth about Kyoto: huge profits, little carbon saved”**, June 2, 2007 (<http://www.guardian.co.uk/environment/2007/jun/02/India.greenpolitics>) (Describes evidence that carbon markets have (1) over-allocated credits (cap too high), (2) made a fortunes for utility companies and speculators in carbon markets, while other market participants were disadvantaged, (3) used fraudulent credits from India to offset ongoing emissions, and (4) delivered little or no benefit for the environment.

B.4. Problems with Carbon Credits

1. Financial Times, **“Industry caught in carbon ‘smokescreen’”**, by Fiona Harvey and Stephen Fidler in London, published: April 25 2007, <http://www.ft.com/cms/s/0/48e334ce-f355-11db-9845-000b5df10621.html>
2. Financial Times, **“EcoSecurities Dives on Delayed Carbon Credits”**, by Fiona Harvey, Environment Correspondent, November 7 2007 03:14 | Last updated: November 7, 2007, <http://www.ft.com/cms/s/0/499c3fc0-8cbe-11dc-b887-0000779fd2ac.html>
3. **Mayor Michael R. Bloomberg Keynote Address At The United States Conference Of Mayors Climate Protection Summit - Accelerating Local Leadership, November 2, 2007**, http://www.mikebloomberg.com/en/issues/environment_sustainability/mayor_michael_r_bloomberg_delivers_keynote_address_at_the_united_states_conference_of_mayor (price volatility will undermine impact of cap and trade)
4. Washington Post article **“Value of U.S. House’s Carbon Offsets is Murky”**, by David A. Farenthold, January 28, 2008 (citing evidence of a lack of “additionality,” noting that many of the projects funding would have gone forward without Congressional funding.) <http://www.washingtonpost.com/wp-dyn/content/article/2008/01/27/AR2008012702499.pdf>
5. **“The Role of Offsets in a Greenhouse Gas Emissions Cap-and-Trade Program: Potential Benefits and Concerns”**, Congressional Research Service, April 4, 2008 http://assets.opencrs.com/rpts/RL34436_20080404.pdf (Provides an analysis of “offsets” and noting a concerns, such as the ability to verify permanent GHG reductions.)

B.5. Problems in Prior Cap & Trade Programs Including Lack of Innovation

1. **“Dispelling the myths of the acid rain story (part 2)”** Environment, Date: 7/1/1998, by Munton, Don (Don Munton is professor and chair of International Studies at the University of Northern British Columbia. He may be contacted at the University of Northern British Columbia, Prince George, BC, Canada V2N 4Z9 (telephone: 250-960-6644, e-mail: munton@unbc.ca). <http://www.encyclopedia.com/doc/1G1-20979661.html> (This article documents that most of the improvements in from the acid rain program did

not result from trading. Rather, an abundant source of low sulfur fuel became available and nearly all of the improvement in acid rain and the low expense of reduction are attributable to this fact. In addition, the author notes that the switch to low sulfur coal resulted in increases in mercury and carbon dioxide emissions.)

2. **“Climate Change: Caps vs. Taxes”**, by Kenneth P. Green, Steven F. Hayward, Kevin A. Hassett, Environmental Policy Outlook, June 1, 2007
http://www.aei.org/publications/pubID.26286.filter.all/pub_detail.asp (Documenting cap inflation and other problems in the Acid Rain and Reclaim Programs)
3. **“Pollution Trading and Environmental Injustice: Los Angeles’ Failed Experiment in Air Quality Policy”**, by Richard T. Drury, Michael E. Belliveau, J. Scott Kuhn and Shipra Bansal, 9 Duke Env’tl. L. & Pol’y F. 231 (1999) <http://www.law.duke.edu/journals/cite.php?9+Duke+Envtl.+L.+&+Pol’y+F.+231> (Describes lessons learned re: cap and trade from the L.A. RECLAIM program.)

C. Benefits of a Carbon Fees (in addition to articles under “B” above)

1. Christian Science Monitor, **“A Tax on Carbon to Cool the Planet”**, October 26, 2007
<http://www.csmonitor.com/2007/1026/p08s01-comv.html> and Al Gore’s Inconvenient Tax
<http://www.csmonitor.com/2007/0705/p08s01-comv.html>
2. **“Tax vs. Cap-and-Trade”**, Carbon Tax Center, <http://www.carbontax.org/issues/carbon-taxes-vs-cap-and-trade/>
3. **“Policy Options for Reducing CO2 Emissions”**, dated February 2008,
www.cbo.gov/ftpdocs/89xx/doc8934/02-12-Carbon.pdf (while not making recommendations, this report cites carbon taxes as an efficient mechanism.)
4. Scientific American, **“A Solar Grand Plan”**, by Ken Zweibel, James Mason and Vasilis Fthenakis, January 2008 <http://www.sciam.com/article.cfm?id=a-solar-grand-plan&page=1> (Describing how 35% of U.S. energy could be provided by 2050 using photovoltaics in the Southwest and efficient transmission lines to the rest of the country, potentially funded by a carbon fees.)

D. Coal Fired Power Plants and Sequestration

1. **“Coal Energy Conversion with Aquifer Based Carbon Sequestration”**
http://gcep.stanford.edu/research/factsheets/coal_aquifer-carbon_sequestration.html
2. **“Researchers examine carbon capture and storage to combat global warming”**, Stanford News Service, June 13, 2007 by Anna Jia, <http://news-service.stanford.edu/news/2007/june13/carbon-061307.html>
3. **Geologic Carbon Sequestration Frequently Asked Questions by Big Sky Carbon Sequestration Project** <http://www.bigskyco2.org/FAQs-geologic.htm#EISCDR>
4. **“Carbon Sequestration: Helpful or Harmful?”**
http://sitemaker.umich.edu/sec005group04/negative_effects
5. **“Carbon Sequestration: Injection of Toxic Gases into Poor Communities or the salvation of the fossil fuel industry, or both?”** By Jane Williams, Executive Director, California Communities Against Toxics, http://www.californiaprogressreport.com/2007/04/carbon_sequestr.html
6. **“Carbon Sequestration and the Precautionary Principle”** by Peter Montague, November 10, 2007,
<http://gristmill.grist.org/story/2007/11/10/151448/65>
7. **“More info on Carbon Sequestering”** by Jim McNelly
<http://mailman.cloudnet.com/pipermail/compost/1999-September/005589.html>
8. **“Nationalwide Ban on New Power Plants Without CO2 Controls Proposed”**, Environmental News Service, March 12, 2008. <http://www.ens-newswire.com/ens/mar2008/2008-03-12-091.asp> (describing proposed legislation introduced by Representatives Waxman and Markey).

E. U.S. Historical Contribution to Global Warming

1. **“Contributions to Global Warming: Historic Carbon Dioxide Emissions from Fossil Fuel Combustion, 1900-1999”**, <http://earthtrends.wri.org/text/climate-atmosphere/map-488.html> (Estimate U.S. contribution at 30.3%) (2006 World Resources Institute)

2. ***“Communicating Dangers and Opportunities in Global Warming”*** by James Hansen, December 14, 2006, draft for presentation to American Geological Union www.columbia.edu/~jeh1/agu_communicating.pdf US contribution at 27.8% for all Greenhouse Gas Emissions from 1750 – 2005, at page 16 of 18.
3. ***“Historical Contributions to Global Warming by Country”***, http://ivig.coppe.ufrj.br/doc/UKapresentaco_Muylaert.pdf (Looks at contributions by contaminant, sources include IPCC inventory.)