

# Center For Clean Air Policy

2000

Thirty years after the first Earth Day and ten years after the creation of legislation to address acid rain, advances in clean air policy continue. Domestically in 2000 the US Environmental Protection Agency (EPA) moved forward with a decision to regulate mercury from the electricity sector and issued strict emissions standards for heavy-duty diesel vehicles, while the DC Circuit Court of Appeals upheld the NO<sub>x</sub> State Implementation Plan (SIP) Call.

On the international front, many European countries moved closer to implementing their own domestic emissions trading programs. As 2000 drew to an end, we also saw the culmination of over ten years of work to address climate change and just short of success at the Sixth meeting of the Conference of Parties (COP6) to the United Nations Framework Convention on Climate Change (UNFCCC) in The Hague.

This past year was also momentous for the Center as we marked our 15<sup>th</sup> anniversary. We expanded our efforts to address clean air and global warming to encompass some 38 countries and over a dozen US states. We saw our funding increase beyond all previous levels. And we grew our publications list by nearly 50 percent, including major contributions to a new landmark book on emissions trading.

Topping the list of endeavors were an intense effort at COP6 where we helped the Parties reach agreement on a strong compliance system, a solid Clean Development Mechanism (CDM) governance system and sound accounting measures for carbon sequestration. While COP6 discussions ended in a deadlock, our work leading up to the conference (in particular the CDM Dialogue that brought together negotiators from over 20 developed and developing countries and inspired the creation of six ground-breaking papers) fleshed out many issues and will continue to serve as a source for consensus-building efforts.

Also on the international front we helped launch the creation of a CO<sub>2</sub> emissions trading program in Slovakia, started a similar effort in Poland and worked closely with 18 Caribbean countries to develop regional emissions baselines for the Caribbean power sector to facilitate their participation in the CDM.

Recognizing that US states also have an important role to play in addressing global warming, we stepped up the efforts of our State Roundtable on Global Climate Change with a focus on opportunities for achieving multiple emissions reduction benefits. In addition, our workshop on New Directions in Clean Air and Clean Energy Policy brought together leading policy thinkers from industry, academia, government and environmental organizations, and underscored the need to integrate energy, environment and transportation policy.

To all those involved in these and our many other efforts highlighted below, I thank you for helping to make 2000 a year of successful growth for the Center and look forward to continued progress in the years ahead.

## A Year of Growth

**ANALYTICAL EXPERTISE**

**INNOVATIVE THINKING**

**POLICY LEADERSHIP**

**CAPACITY BUILDING**

**Ned Helme**

Ned Helme  
Executive Director

## POLICY LEADERSHIP

The Center's policy leadership reached new heights in 2000. We worked in both international and domestic circles to advance the design of environmentally robust emissions trading programs, be it as part of the Kyoto Protocol, a domestic greenhouse gas (GHG) emissions program or an international CO<sub>2</sub> trading program for aviation. Highlights of these efforts are listed below.

- Through our one-of-a-kind CDM Dialogue, delegates from Umbrella Group, European Union (EU) and G-77 countries, as well as representatives from the European Commission (EC), the UNFCCC Secretariat and staff from the Foundation for International Environmental Law and Development (FIELD) made significant headway on the governance structure for the CDM; the eligibility of land use, land use change and forestry (LULUCF) projects in the CDM; and understanding the options for assessing additionality and developing baselines.
- At COP6 we advanced various innovative policy ideas. Specifically we pushed for the establishment of a robust compliance system, provisions to assist developing countries by tapping CO<sub>2</sub> allowances allocated to developed countries and reductions of potential leakage from sinks projects.
- As part of a national coalition we promoted consideration of the Skytrust proposal, a comprehensive trading program for US domestic CO<sub>2</sub> that would auction permits to all upstream sources, with a price ceiling of \$25 per ton of carbon, and recycle the revenues back to citizens and governors to be used to help to adversely affected workers, industries and communities.
- As the primary consultant to the Slovakian Ministry of Environment, we prepared the first set of recommendations on the scope of a Slovakian CO<sub>2</sub> emissions trading program, which identified energy and industrial sectors for inclusion and developed preliminary emissions caps for these sectors.
- Literally "in the air," we advised a working group of the International Committee on Aviation Environmental Protection on design elements of a potential trading program for CO<sub>2</sub> emissions from international aviation and advocated for an environmentally sustainable program that addresses ozone pollution (also a powerful GHG associated with aviation NO<sub>x</sub> emissions) and includes stringent emissions targets with a strong compliance system.
- Following up on the Center's successful effort of last year for the EU Environment Directorate to flesh out the fundamental design of a European trading system, we embarked on a new initiative to define the systems for monitoring, reporting and verifying the GHG emissions that would be covered by an EU GHG trading system. The project team also includes emissions experts from TNO in the Netherlands and environmental lawyers from FIELD in the United Kingdom. The monitoring project will provide critical information to the Environment Directorate as it makes the case for a Europe-wide GHG trading system.
- Connecting policy makers from Germany and the United States, the Center co-hosted a forum on the environmental implications of electricity restructuring with the Washington, DC office of the German-based Heinrich Boll Foundation. Featuring speakers from industry, government and environmental organizations from both sides of the Atlantic, this forum provided success stories about ways to encourage increased use of renewable energy and energy efficiency and protect against emissions increases as part of the restructuring process. The forum highlighted the Center's work on the air emissions benefits of encouraging clean, efficient generation on brownfields sites.
- For nearly 10 years, the Center has facilitated the exchange of United States and European professionals examining environmental issues from climate change and energy efficiency to transportation and land use. This year's German Marshall Fund Environmental Exchange participants visited cities in the United States and Canada, participated in one-on-one meetings and attended Center-sponsored luncheons for policy makers and practitioners in Washington, DC and New York City. To keep former Fellows up-to-date and the Fellow's network strong, we released the third edition of Perspectives — the official Fellowship newsletter.
- In Central Europe, the Center organized a workshop in Lviv for regional and local policy makers, industry, NGOs and academia representatives. The workshop provided the opportunity to learn about and discuss international and domestic climate change issues. As a result of the workshop, Lviv's regional and city authorities asked for our assistance in developing a climate change strategy and exploring JI opportunities in their region.

## AT THE CENTER

### Thanks to Supporters

Not only was 2000 a big year for the Center policy-wise, it was also our most successful year to date financially. In addition to the generous support of our existing funders, we would like to acknowledge several new sources, including the Wallace Global Fund (for our international climate change efforts), the Tinker Foundation (for our Brazil work) and the following foreign governments: Australia, Canada, Denmark, Germany, the Netherlands, the United Kingdom and the European Commission. We were also excited to have the Energy Foundation return as a supporter.

The Center is pleased to recognize the following corporations for their support as Friends of the Center: Wisconsin Electric Power Company, Florida Power & Light and Arizona Public Service Company.

### New Faces

The Center welcomed two new members to its Board of Directors in 2000: Frank Cassidy, President of PSEG Power, who replaced retiring member Larry Codey and Dr. Bert Metz, Head of the Global and European Assessment Division of the Netherlands National Institute of Public Health and the Environment, who joined as the first international member. We appreciate the support of these and our existing board members in helping make our successes possible.

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**US Office**  
750 First Street, NE  
Suite 940  
Washington, DC 20002  
202.408.9260  
202.408.8896

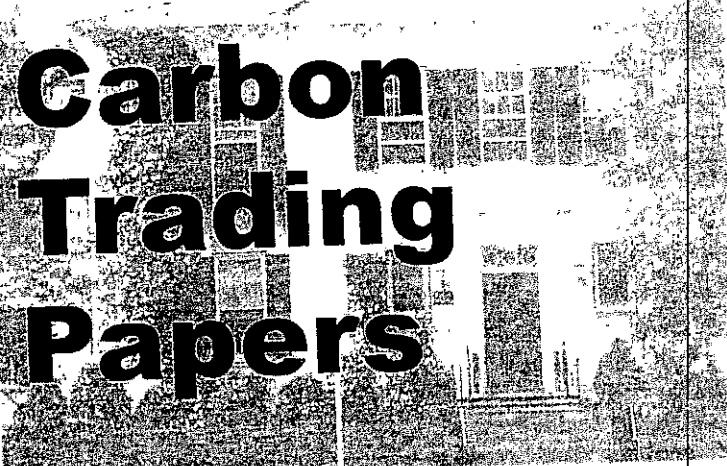
## Center for Clean Air Policy

[www.ccap.org](http://www.ccap.org)



**European Office**  
Michalska 12  
110 00 Prague 1  
Czech Republic  
420.2.2421.5303  
420.2.2422.9770

# Airlie Carbon Trading Papers



## Series Summary

### About the Process

The Airlie Carbon Trading Papers are intended to help lay the intellectual foundation for a US greenhouse gas emissions trading system, which is a leading policy option for realizing cost-effective reductions of greenhouse gas emissions. The papers are the product of a unique research, analysis and dialogue process directed by the Center for Clean Air Policy. Since November 1996, the Center has convened regular meetings of its "Greenhouse Gas Emissions Trading Braintrust", a group of high-level representatives of industry, environmental organizations, state and federal government agencies and academe. The opinions expressed in these papers

are those of the Center, though our views are informed by the extensive dialogue with Braintrust participants. Please see [www.ccap.org](http://www.ccap.org) for copies.

Braintrust members and Center staff conduct research and analysis of key design and implementation questions, then bring their findings and proposals to the group for discussion. The purpose of this process is to investigate alternative design options in detail rather than to arrive at consensus on a preferred option.

At the outset, the Braintrust identified a number of priority issues, including: definition of the instrument that would be traded, determination of who would be required to hold allowances, methods for allocating allowances, and the elements of the trading system compliance infrastructure. Braintrust members agreed to start with a focus on energy-related carbon dioxide emissions. Secondary issues identified by the Braintrust include the integration of additional greenhouse gases into the system, the incorporation of emissions reductions from forestry and land use activities and foreign countries, and the mitigation of any adverse impacts of carbon regulation on US industry.

### Why the "Airlie" Carbon Trading Papers?

The Airlie Center serves as the backdrop for the Braintrust's meetings. Situated outside Washington, DC in Warrenton, Virginia, Airlie provides an informal, congenial atmosphere that allows participants to leave their affiliations "at the door" and to build strong working relationships. These factors have been critical to the success of the Braintrust process.

### About the Center for Clean Air Policy

Since its inception in 1985, the Center for Clean Air Policy has developed a strong record of designing and promoting market-based solutions to environmental problems. The Center's dialogue on acid rain in the 1980s identified many of the elements of the SO<sub>2</sub> control program that were adopted by the Bush Administration and eventually codified in the Clean Air Act Amendments of 1990. Since 1990, the Center has been active on the issue of global climate change. Center staff have participated in the Framework Convention on Climate Change negotiations and in domestic efforts to address greenhouse gases, analyzing and advocating market-based climate policies such as emissions trading and joint implementation. The Center brokered the world's first energy sector joint implementation project. The Center is also active in the areas of air quality regulation, electricity industry restructuring, and transportation and land use.

# The Clean Development Mechanism (CDM) Dialogue Papers

*Bridging the Gap*

## About the Papers

The *Clean Development Mechanism (CDM) Dialogue Papers* recently published by CCAP are intended to help advance the design process for the CDM. Opinions expressed in these papers are those of CCAP or the Foundation for International Environmental Law and Development (FIELD), although these views have been informed by extensive interactions with participants in the CDM Dialogue. Since May 2000, CCAP, in partnership with FIELD, has facilitated three meetings of the Dialogue, which brings together a group of high-level climate negotiators from European Union, Umbrella Group and G-77 countries. The process gives participants a chance to informally discuss different approaches to the design of the CDM in a relaxed, off-the-record, non-negotiating setting. Financial contributions for these meetings were provided by the European Commission Directorate-General for Environment, Canadian Department of Foreign Affairs and International Trade, United Kingdom Foreign and Commonwealth Office, Danish Ministry of Environment and Energy, United States Environmental Protection Agency, Australian International Greenhouse Partnerships Office, Netherlands Ministry of Housing, Spatial Planning, and the Environment, and German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety.

The *CDM Dialogue Papers* do not reflect consensus recommendations of the participants; rather, they are an attempt to harvest the thoughts and discussions that have been part of the process.

## List of Papers

- Developing Terms of Reference for the CDM Executive Board and Operational Entities (CCAP)
- Implementing the Additionality Requirement & Ensuring the Stringency of Project Baselines under the CDM (CCAP)
- The Eligibility of Land Use, Land-Use Change and Forestry Projects under the CDM (CCAP)
- Sharing the Benefits: Mechanisms to Ensure the Capture of CDM Project Surpluses (CCAP)
- Ensuring CDM Project Compatibility with Sustainable Development Goals (CCAP)
- Defining and Distributing the "Share of the Proceeds" under the CDM (FIELD)

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Suite 940  
750 First Street, NE  
Washington, DC 20002 USA  
202.408.9260



Papers available at:  
**[www.ccap.org](http://www.ccap.org)**

# The Eligibility of Land-Use, Land-Use Change and Forestry Projects under the CDM

*Catherine Leining, Ned Helme, Cathleen Kelly and Tim Hargrave*

The eligibility of land-use, land-use change and forestry (LULUCF) projects under the CDM has become a highly controversial issue that will command attention at COP6. The Parties recognize that the treatment of LULUCF emissions and sequestration in Article 12 is ambiguous, and that they will need to issue some kind of decision on the eligibility of the various categories of LULUCF projects prior to the implementation of the CDM. Whereas some Parties argue that LULUCF projects offer important greenhouse gas benefits as well as other environmental and socio-economic benefits that should justify their eligibility, others question the environmental integrity of the greenhouse gas benefits from LULUCF projects relative to those of projects in other sectors, such as energy and industry. This paper provides an overview of the role of LULUCF activities in the global carbon cycle, and identifies three categories of projects – conservation management, storage management, and substitution management – whose eligibility should be evaluated separately by policy makers. This paper then analyzes the technical issues underlying the political debate on LULUCF projects in the CDM, and lays out a comprehensive framework of options for ensuring the environmental integrity of carbon credits from LULUCF projects. These options address the key risk factors associated with LULUCF projects: measurement uncertainty, baselines and additionality, leakage, and permanence.

## Sharing the Benefits: Mechanisms to Ensure the Capture of CDM Project Surpluses

*Tim Denne*

Annex I and non-Annex I Parties participate in the CDM with very different objectives. Annex I Parties are seeking low-cost certified emission reductions (CERs) whereas host Parties are seeking sustainable development co-benefits. Many of the rules suggested for the CDM will require projects to meet specific criteria that are likely to increase their costs and reduce the number of projects. This approach assumes that host Parties will only earn the direct project-related benefits of the CDM. However, in many instances, there will be a difference between the net project costs and the amount an Annex I Party investor would be willing to pay for the CDM project and the resultant CERs; part or all of this surplus can be appropriated by the non-Annex I host, adding to the local sustainable development benefits. Given the possibility of capturing these surpluses, rules that add to the costs of CDM projects (including sustainable development requirements) may impose costs on the host country rather than on the Annex I investor.

This paper examines the mechanisms for capturing CDM project surpluses. Economic surpluses from projects can be captured through a number of alternative investment fund operating procedures, taxation on projects, agreements on sharing CERs, and non-Annex I (unilateral) investment. The appropriate approach will differ widely and no rules will suit all circumstances. Rules to restricting eligibility of CERs with the products of other mechanisms are likely to have very little impact on the CER market, CER price, or the buying and selling actions of Annex I Parties and entities.



# HIGHLIGHTS OF STATE INITIATIVES ON GLOBAL CLIMATE CHANGE

In recognition of the important role states have in addressing global climate change, the Center for Clean Air Policy (CCAP) has been working actively to promote state-level efforts since 1992, when it was tapped to lead the Wisconsin Dialogue on Ozone Pollution and Global Climate Change. Since that time, we have continued to employ a holistic approach to addressing greenhouse gas emissions, working directly with several states, including Wisconsin, New Jersey and Massachusetts, to include climate change concerns into existing programs and to support establishing new programs, with a strong focus on ways to achieve "multiple benefits" that integrate climate change and air quality considerations.

On a more collective front, for the past two years, CCAP has directed the *State Roundtable on Global Climate Change*, which brings together key environmental and energy regulators – and soon, transportation and land use planning officials as well – from a dozen leading states, to share lessons learned, coordinate efforts and strategize on various multiple pollutant approaches. Throughout these efforts, we have highlighted the important areas where states can take action and promote others to act.

Below is a sample of innovative state initiatives aimed directly at addressing greenhouse gas emissions, or, where significant "side benefits" occur. While many of these could be considered only small "first steps", they highlight a recognition of the need to act. We encourage states, and others, to consider how similar actions can help address global climate change.

## STATE EFFORTS TO ADDRESS CLIMATE CHANGE

### GREENHOUSE GAS REDUCTION GOALS

The **New Jersey** Department of Environmental Protection (NJ DEP) has set a voluntary goal to reduce New Jersey's greenhouse gas emissions by 3.5 percent below 1990 prior to 2005. The goal was created in March 1998 under an Administrative Order issued by the Commissioner of the NJ DEP (Administrative Order 1998-09). Additionally, seven companies have signed and several more are currently considering the voluntary *Covenant of Sustainability/NJ Greenhouse Gas Initiative*, pledging to assist the State in achieving its greenhouse gas reduction goal, outlined above.

[www.state.nj.us/dep/dsr/gcc/gcc.htm](http://www.state.nj.us/dep/dsr/gcc/gcc.htm)

### CO<sub>2</sub> STANDARDS AND OFFSETS FOR ENERGY FACILITIES

**Oregon** has established a CO<sub>2</sub> standard for emissions from new energy facilities in the state, pursuant to state law passed in 1997. The standard, set by the Oregon Energy Facility Siting Council, applies to base-load natural gas plants, non-base-load power plants, and non-generating energy facilities. Applicants can meet the standard by either installing equipment that reduces direct emissions or through offset projects. The law requires that the new offset projects will avoid, sequester, or displace emissions in one of two ways: by implementing projects directly or through a third party or by paying an established amount per ton of CO<sub>2</sub>, currently \$0.57/ton, into a Climate Trust which purchases offsets. Under either option there is no limitation on the location of the project. (HB 3283)

[www.energy.state.or.us/climate/climhme.htm](http://www.energy.state.or.us/climate/climhme.htm) and [www.climatetrust.org/](http://www.climatetrust.org/)

**Massachusetts** Energy Facilities Siting Board requires that new generation projects offset one percent of their annual CO<sub>2</sub> emissions over a period of 20 years, currently at a cost of \$1.50 per ton. Before the first year of operation, the facility operators develop, in consultation with the staff of the Siting Board, an approved project for expending the funds.

The **Washington** State Energy Facility Site Evaluation Council recently voted to recommend that the Governor approve changes to a power plant's permitting requirements in several areas, including a requirement "to develop a plan and pay for activities that would offset the 1.8 million tons of CO<sub>2</sub> that will be emitted from the facility through the burning of natural gas and backup diesel fuel."

[www.efsec.wa.gov/Chehalis/adj/nov14press.htm](http://www.efsec.wa.gov/Chehalis/adj/nov14press.htm)

The Speaker and other Members of the **New York City Council** have proposed a rule that would establish an output-based CO<sub>2</sub> emission standard for all power plants within New York City. Under the proposed rule, the citywide emission rate for CO<sub>2</sub> would decrease as new generating capacity was installed within the City.

The Governor-elect of **New Hampshire** pledged as a part of her campaign to work within three to five years of the onset of her term in office to lead the effort to require older plants within the State to reduce greenhouse gases from these plants to "meet international treaty (Kyoto) goals".

## STATE MEASURES WITH CLIMATE CHANGE BENEFITS

In addition to the measures, listed above, aimed directly at addressing greenhouse gas emissions, below are several examples of some of the current measures employed by states that have potential climate change benefits.

### VEHICLE MILES TRAVELED REDUCTIONS

Several states and localities have developed initiatives aimed at reducing the amount of vehicle miles traveled by promoting such measures as: new transit lines, infill development and downtown redevelopment, commuter choice initiatives, and other so called "smart growth" initiatives.

[www.epa.gov/otaq/transp.htm](http://www.epa.gov/otaq/transp.htm) and [www.smartgrowth.org/](http://www.smartgrowth.org/)

### LOW-EMISSION VEHICLES

**California** requires that ten percent of new cars sold in the state, in 2003 and beyond, be zero-emission vehicles (ZEVs) as certified by the State; up to six percent of this can be met through partial credits for certain super low-emission vehicles (e.g. hybrids), the remaining four percent must be pure ZEVs (e.g. electric vehicles). In 2000, the California Air Resources Board adopted a similar regulation for transit buses, requiring certain transit agencies to demonstrate zero-emission buses (ZEB) in 2003 and to begin purchasing 15 percent ZEB for their fleets in 2008.

[www.arb.ca.gov/msprog/zevprog/zevprog.htm#facts](http://www.arb.ca.gov/msprog/zevprog/zevprog.htm#facts)

### NET METERING LAWS

30 states have passed net metering laws enabling customers who produce surplus energy, often generated from small-scale renewable sources, to feed the excess energy back to their energy supplier. These customers are then charged only for the net energy they consume during a given period.

[www.dcs.ncsu.edu/solar/dsire/regulatory.html](http://www.dcs.ncsu.edu/solar/dsire/regulatory.html)

### RENEWABLE PORTFOLIO STANDARDS

As a result of electricity restructuring and other state decisions, 10 states have passed renewable portfolio standards (RPS). This policy requires that a minimum percentage of electricity from a generator or supplier come from a renewable source. Additionally, the city of **Ann Arbor, Michigan** through its franchise rights has established an RPS for most electricity sold within the city (Chapter 37).

[www.dcs.ncsu.edu/solar/dsire/type.cfm?Type=RPS&Back=regtab](http://www.dcs.ncsu.edu/solar/dsire/type.cfm?Type=RPS&Back=regtab) and [www.ci.ann-arbor.mi.us/](http://www.ci.ann-arbor.mi.us/)