



Global Climate Change: What Does It Mean for the Mid-Atlantic States?

A report on the February 26, 1998 EPA Regional Conference sponsored by the EPA Office of Policy, Planning and Evaluation, Office of Economy and Environment

CONFERENCE CO-SPONSORS

- Academy of Natural Sciences
- BP America
- City of Philadelphia
- Crown Cork & Seal Company
- Delaware Department of Natural Resources and Environmental Control
- The George Washington University, School of Public Health and Health Services
- Institute for Business and Home Safety
- PECO
- Pennsylvania State University
- Pennsylvania Power and Light
- Physicians for Social Responsibility
- Solar Ex Renewables
- U.S. Department of Energy

INSIDE

- Rising Insurance Rates ... 2
- Point and... Counterpoint 3
- Solar Becoming Profitable 6
- Clean, Efficient, and Fun Cars 7
- And more...

MID-ATLANTIC CHALLENGED BY A CHANGING CLIMATE

The mid-Atlantic region, home to vital natural resources such as the Chesapeake Bay, is highly susceptible to the potential impacts of climate change. "I'm concerned because the mid-Atlantic region contains sensitive ecosystems that could be devastated by the effects of global warming," said W. Michael McCabe, regional administrator of the U.S. Environmental Protection Agency's Region 3.

McCabe kicked off a public conference on climate change convened by EPA in Philadelphia on February 26, 1998. The conference emphasized solutions. For example, the 491 companies that have joined the voluntary Green Lights program in the mid-Atlantic region are saving 512 million kilowatt-hours per year through efficient lighting and are reducing greenhouse gas emissions by 818 million pounds of carbon dioxide.

As concerns for environmental safety increase, technological innovation has risen to the challenge. "Who would have foreseen 10 to 15 years ago that there would be widespread curbside recycling and a market for yesterday's newspaper?" McCabe asked. "I sincerely hope that there will be soon a second wave of pollution prevention directed toward our use of energy, and we all need to be riding that wave."

Representatives from six news organizations attended the meeting. Articles appeared in *The Philadelphia Inquirer*; *Philadelphia Daily News*; *Richmond Times Dispatch* of Richmond, Virginia; *The Courier-Post* of Camden City, New Jersey; and *The News Journal* of Wilmington, Delaware. The local NBC affiliate and Warner Brothers channel also covered the conference.

The meeting was co-sponsored by 13 organizations and attended by representatives from a wide range of businesses; environmental and civic organizations; federal, state, and municipal agencies; electric and gas utilities; and academic institutions.

Sponsors and participants represented the five states of EPA's mid-Atlantic region: Delaware,



EPA Regional Administrator W. Michael McCabe responds to questions posed by an NBC reporter.



Conference participants chat beside a display for EPA's State and Local Climate Change program.

Maryland, Pennsylvania, Virginia, West Virginia, and the District of Columbia.

Following McCabe's welcoming remarks, EPA Assistant Administrator David Gardiner compared the treaty recently forged in Kyoto, Japan, to "buying an insurance policy against the risk of future climate change." Gardiner added that the Kyoto Protocol provides for a "cushioning transition" that will allow countries and industry to meet their obligations through flexible mechanisms.

Joseph J. Romm, of the U.S. Department of Energy, gave the keynote address in which he outlined U.S. strategies for developing new technologies that will hasten a cleaner and safer environment. "There are very large opportunities," he said, in technological advances such as fuel cells and advanced turbine systems.

Other speakers included representatives from the insurance, steel, auto, and energy industries. Two afternoon sessions focused on strategies that both state and local governments and the private sector could take to mitigate the effects of climate change on public health, natural resources, and other critical areas.

Immediately after the conference, three roundtables were held for business leaders, state and local government officials, and public health officials to share ideas, concerns, and strategies. ♦

Global Climate Change

reports the results of a conference sponsored by the U.S. Environmental Protection Agency entitled, "Global Climate Change: What Does It Mean for the Mid-Atlantic States?" The conference took place on February 26, 1998 in Philadelphia, Pennsylvania.

Global Climate Change articles may be reprinted without permission; however, please include an acknowledgment and send a copy of the published material to:

Norah Davis
Waste Policy Institute
2111 Wilson Boulevard,
Suite 600
Arlington, VA 22201.

For more information about the conference, visit the U.S. Environmental Protection Agency's global warming conference website at: www.eis.wpi.org/epaworkshops/.

In addition, EPA publishes a number of fact sheets about global warming and energy efficiency. Call EPA's Fax-On-Demand Service (202-260-2860) or access EPA's global warming website at: www.epa.gov/globalwarming.

NO TIME TO WAIT

"The Kyoto Protocol is an historic step forward to address a global problem," said EPA Assistant Administrator David Gardiner, in his remarks to the conference. Gardiner emphasized that if we do nothing and continue business as usual, greenhouse gas emissions are expected to rise to levels higher than they've been at any time in recorded history.

Greenhouse gases remain in the atmosphere, in some cases, for up to 25,000 years. "If we don't begin to do something today," Gardiner said, "our children and grandchildren will be stuck with the problem. We in the administration feel that is unacceptable."

Gardiner maintained that the agreement gives the United States 10 years to plan and 5 more years to average out emissions. This flexibility, which was one of the goals of the administration, allows public and private sectors time to adjust.

Gardiner added that the agreement embodies another objective of the administration: a market-based emissions trading program that will enable nations that achieve their targets for reducing greenhouse gas emissions to sell emissions permits to countries that fall short.

Stressing that the protocol is "a work in progress," Gardiner noted that another round of negotiations and individual work with developing countries will

be needed to get those nations on board. Talks already are underway in preparation for those negotiations, which are scheduled to take place in November when parties to the United Nations climate convention meet in Buenos Aires, Argentina.

The Clean Development Mechanism advanced by Brazil will increase participation by developing countries through joint implementation of new energy technologies. "There is a significant opportunity to do things differently in developing countries," Gardiner said. He added that all developing countries are not the same so that a one-size-fits-all approach is not good policy.

The Kyoto Protocol will help American businesses compete more effectively in the global economy by becoming more energy efficient. "It is a cost-effective, commonsense approach to solving a serious problem," Gardiner concluded. "The protocol is a only a first step, but an important one." ♦



◀ EPA Assistant Administrator David Gardiner compared the Kyoto Protocol to "buying an insurance policy against the risk of future climate change."

UTILITIES ON THE MARCH



▲ David Cesareo, environmental affairs director of PECO's legal department, noted that "we don't look like your traditional electric utility."

What impact will the Kyoto Protocol have on the utility industry, which is responsible for one-third of U.S. emissions? This question was posed by David Cesareo, director of environmental affairs at PECO, an energy utility that provides electric service to an area that contains approximately 3.6 million Pennsylvania residents. Cesareo said that the protocol will require his industry to reduce emissions by 30 percent by 2010.

During a six-year period, PECO's Limerick and Peach Bottom nuclear plants in York County avoided approximately 174 million tons of CO₂ emissions relative to a coal-fired plant. Nuclear power plants produce electricity without generating CO₂. Referring to PECO's efforts to seek and implement creative environmental solutions, Cesareo said, "We don't look like your traditional electric utility." ♦

RISING INSURANCE RATES

"The insurance industry is experiencing larger and larger losses," said Eugene L. Lecomte, president emeritus of the Institute for Business and Home Safety. Insured losses from Hurricane Andrew alone were \$15.5 billion.

To remain solvent in the face of a problem of this size, insurance companies are raising premiums, increasing deductibles, and, where permitted, withdrawing from doing business in high-risk regions. "These are all areas they have to pursue if they're going to remain in business," said Lecomte, "if we continue to have losses of the magnitude we've had during the past eight years."

Lecomte concluded by emphasizing that the scientific uncertainties related to global warming pose a quandary for the insurance industry, which needs to be able to forecast future risks in order to decide on premiums. ♦



▲ President Emeritus of the Institute for Business and Home Safety, Eugene Lecomte talked about the effect of increasingly severe weather on insurance premiums.



◀ Penn State Professor Brent Yarnal told the audience that the greatest potential impacts to the mid-Atlantic region are increased precipitation and sea-level rise.

Citing the evidence of rising temperatures at the earth's surface, Dr. Brent

Yarnal, associate professor at Pennsylvania State University, said that an overall warming trend is

unmistakable. He pointed out that 50 percent of the mass of mountain glaciers has wasted away globally, and the permafrost in polar regions is melting. These changes have occurred over the past century under a temperature gain of only 1 degree Fahrenheit.

Another expected effect of climate change is greater precipitation due to increased evaporation as temperatures rise. In fact, the United States has seen a significant increase in rainfall over the last 100 years. Case in point: 1996, one of the warmest years on record globally, was the wettest year in Pennsylvania's history. ♦

POINT AND...



◀ The ratification of the Kyoto treaty will lead to an "extraordinary economic cost," predicted Mary Novak, of the WEFA Group.

If the United States signs the Kyoto treaty, we will face extraordinary changes in the way we use energy in this country, according to Mary Novak, senior vice president of the WEFA Group, an economic and industry consulting firm. Novak represented the position of several interest groups that are opposed to the Kyoto agreement for economic reasons.

According to Novak, the gross domestic product by 2010 will be 1.5 percent (\$227 billion) below where it would have been without the cuts in energy use. Her economic studies indicate that 1.8 million jobs will be lost, especially in energy-exporting states.

"It will take every man, woman, and child using half of the energy they use today," Novak concluded. ♦



▶ Charlie Baxter, regional director at the U.S. Department of Energy, moderated a session on the economic impacts of climate change.

...COUNTERPOINT

Duncan Austin, an associate at the World Resources Institute, reviewed 162 economic forecasts and concluded that models such as the study done by Mary Novak's organization are imprecise. Austin emphasized that almost all of the differences in the conclusions of different models are the result of underlying assumptions. One model, for example, assumes that economic responses are slow and that it takes time for people to adapt to change. This type of model leads to very different results from one that assumes that the economy's responses are almost instantaneous.

Similarly, the models make differing assumptions about the availability of alternative fuels, air pollution damages averted, incentives to shift to less energy-intensive products, and the presence or absence of a joint implementation approach.

Austin concluded by questioning the view that a rise in energy prices will have a negative effect on economic growth. He argued that the impact will amount to no more than postponing the attainment of the gross domestic product that we would have reached in the first quarter of 2020 to the second or third quarter of 2021. ♦

▶ Economic models, for all their sophistication and complexity, are dependent on a number of assumptions, said Duncan Austin, of the World Resources Institute.



—
"As an environmentalist, I don't often hear the other part of the story—businesses doing their part. Even though we have a different point of view, we can't turn each other into the enemy."

Connie Fenty
Environmental Educator
Rejuvenation Creation

—
"We would like to see a program that recognizes clean energy contributions introduced by companies like PECO Energy and provides a level competitive and environmental playing field."

Thomas A. Sylvester
Environmental Consultant
PECO Energy Company

RENEWABLE INGENUITY

“By using the appropriate approach to the problem of global warming technology—we can resolve the artificial debate between the economy and the environment.”

Jim Florio
Former Governor
of New Jersey

In a keynote address that affirmed the strength and diversity of renewable technologies, Joseph Romm, principal deputy assistant secretary of the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy, told the conference, “We have an opportunity to make a transition to a clean energy future.” With the help of “technology roadmaps” and effective policy, climate change can be mitigated to ensure a safer future.

Romm outlined President Clinton's three-stage approach for the United States to meet its Kyoto targets without raising energy bills. During the first phase, we can “prime the pump” through voluntary actions and research and development of new technologies to reduce emissions. During the next phase, we can review and evaluate our progress. Then from 2008 to 2012, we can make adjustments to ensure that we meet the target. In other words, the Kyoto Protocol allows for a 10-year transition period, during which the United States can make gradual reductions.



◀ “We have an opportunity to make a transition to a clean energy future,” said Joseph J. Romm, of the U.S. Department of Energy.

▶ Representatives from British Petroleum talk with a conference participant.



In addition to this flexibility in the timeframe, the United States is not obligated to achieve all of its reductions domestically. An emissions trading program, clean development mechanism with developing countries, and reforestation could provide important emission offsets.

Recognizing the importance of technology, the administration has earmarked a total of \$6.3 billion for the development of energy-efficient technologies in the building, industry, transportation, and utility sectors. Romm provided a number of examples of technological innovations and common sense solutions that reduce emissions.

Engineering Efficiency

First, he maintained that there is hardly a building in the country that the U.S. Department of Energy and U.S. Environmental Protection Agency can't help to make more efficient. Romm added, “We have demonstrated every single day that we can walk into any lower-income building in the country and reduce its energy use by about 30 percent with a very rapid payback. We can design a house that uses half the energy of a traditional home with no increase in first cost.”

Something as straightforward as improved lighting can drastically increase a building's energy

efficiency. The City of Philadelphia saved more than \$500,000 by installing energy-efficient lights as part of the ENERGY STAR® and RebuildAmerica programs.

Working with manufacturers to create energy-efficient products also can reduce emissions significantly. The ENERGY STAR® program encouraged computer manufacturers to improve their products and lowered computer energy usage by 50 percent. Romm envisions a future in which consumers can easily find energy-efficient products by looking for special labels. This simple step could yield substantial benefits. As Romm pointed out,

“Appliances such as televisions and other electronics in homes consume the equivalent of 10 to 12 large coal-fired power plants every day just producing the electricity that these products use when they're in the standby mode.”

To reduce greenhouse gas emissions further, the Department of Energy is working on fuel cells that will provide power in houses and other buildings. A fuel cell runs on hydrogen, typically from natural gas, and generates electricity and hot

water while producing no air pollution. Fuel cells are 80 to 95 percent efficient, and they will appear on the market within two or three years.

Such solutions will greatly improve U.S. electricity generation. Currently, the average power plant fueled by fossil fuels throws away two units of energy as waste heat for every unit of electricity generated. In addition, Romm's office has developed an advanced turbine system that converts natural gas to electricity and steam, and can reduce CO₂ emissions by a factor of three.

Technology Roadmaps

Romm's Office of Energy Efficiency and Renewable Energy works with six industries that are responsible for 80 percent of U.S. industrial energy use and CO₂ emissions. His office is developing “technology roadmaps” and innovative advanced technologies that ultimately will help these industries become more productive, energy-efficient, and low-polluting. Currently, DuPont has promised to reduce 18 million metric tons of CO₂ equivalents by the year 2000. Chrysler is working to improve its paint systems, which will save 40 million BTU's of energy and minimize CO₂ emissions.

“This country has not really focused on energy for the last 10 or 15 years,” Romm concluded,

“and, frankly, there is a lot of fat in the system that can be gotten rid of quite cost-effectively.”

Turning to the transportation sector, Romm noted that the average car is only about 15 to 20 percent efficient at converting gasoline into usable driving energy. To improve automobile efficiency, the Office of Energy Efficiency and Renewable Energy is working with the Department of Commerce and automobile manufacturers to design improved



◀ Former New Jersey Governor Jim Florio makes a point during a discussion with a conference participant.

engines. Ford, General Motors, and Daimler-Benz plan to have fuel cell vehicles on the road by 2004. The fuel cells in these cars will generate about half the CO₂ of traditional engines and produce zero air pollution. “The race to develop a green car is probably going to be one of the great technological races of the next decade,” he said.

Not Your Father's Photovoltaics

Romm also forecast another technology that is primed to take off in the next decade—renewable energy. The cost of wind energy has come down from 40 cents per kilowatt-hour in 1980 to 5 cents today. Wind energy has been growing 20 to 25 percent in capacity annually for more than a decade.

Photovoltaics also have changed profoundly. Displaying a roof shingle that can generate electricity from the sun, Romm remarked, “This is not your father's photovoltaics. This is state-of-the-art.”

Concluding on an upbeat note, Romm maintained that a large international market for new

technologies could turn renewable energy into a \$300-billion-a-year industry. It would become one of the largest industries in the world, producing 40 to 50 percent of the global energy supply in 40 or 50 years. That means it would generate a lot of jobs in the United States. “America has traditionally been the world's leader in technology, job creation, and environmental performance, and we can continue to do so,” Romm said.

He added that his office has demonstrated that the United States can achieve the Kyoto targets without raising the nation's energy bill and, in some cases, lowering it. In addition, we will achieve ancillary benefits such as reducing oil imports by two million barrels a day, while lowering criteria air pollutant emissions by one-third.

During a question-and-answer session, Romm allayed concerns that Kyoto will require a dramatic response from the transportation sector. We need to take small, modest actions such as gradually stepping up efficiency so that one-third of the new cars on the road in 2010 are two or three times more efficient than today's cars. Another step is to make a gradual transition to lower-carbon fuels. If we were to substitute just 5 percent of gasoline used with cellulosic ethanol, the United States would save 15 million metric tons of carbon—already 5 percent of the Kyoto goal.

“We are not looking for any one silver bullet, but rather several dozen technologies,” Romm concluded. ♦



◀ General Motor's new electric pickup truck runs on a battery charge.

SERIOUS ENERGY CUTS IN THE STEEL INDUSTRY



◀ Bruce Stiner, of the American Iron and Steel Institute, said that his industry recognizes the need to improve its use of energy.

Pointing out that 20 percent of the U.S. steel industry is located in the mid-Atlantic region, Bruce Stiner, vice president of the

American Iron and Steel Institute, noted that the steel industry has serious concerns about the Kyoto Protocol. Nevertheless, said Stiner, the industry

recognizes the need to make progress on energy efficiency.

Steel, an energy-intensive industry, has significant accomplishments to date. Since 1975, the industry has reduced energy use by 45 percent per ton of steel produced. This was accomplished by employing measures such as phasing out open furnaces, using materials more effectively, and increasing the recycling of scrap metal.

“However, the pace of progress is slowing,” said Stiner, “making further gains much more difficult.” ♦

Like Father, Like Son

The Philadelphia conference may be the first time that a father and son attended a meeting on global warming together. Jay P. Clymer, Jr., takes an active part in streambank restoration as a member of Trout Unlimited and Delco Anglers.

He's interested in EPA's study on the impacts of climate change on trout populations because he raises trout for restocking streams.

He came to the conference with his son, Jay P. Clymer III, an associate professor of environmental science at Marywood University in Scranton, Pennsylvania. For five years, the professor has taught courses that deal in part with the issue of global warming. “Students in my classes plant trees,” he says, “and try to be more conscious of the fossil fuels they burn.” ♦

DUPONT: GOAL IS ZERO EMISSIONS

"Our corporate goal is zero injuries, zero waste, and zero emissions," said Edwin L. Mongan III, manager of pollution prevention and environmental auditing for DuPont. To date, the company has reduced its greenhouse gas emissions by 16 percent, or 22 million tons of carbon equivalents. The company, which has 100,000 employees and sales of \$45 billion, became a partner in EPA and the Department of Energy's Climate Wise program in 1994.



Since 1973, the company has made improvements in energy use that have resulted in savings of \$2 billion. In 1996 alone, DuPont realized a net savings of \$90 million from investments in energy efficiency.

"This is the real payback to our company," said Mongan. "We would be a lot less successful if we had not made those reductions." ♦

◀ Edwin Mongan talked about the savings that DuPont has realized from taking measures to improve its use of energy.

"I haven't heard anybody say what the impact [of policies to reduce greenhouse gas emissions] would be on West Virginia, which derives a substantial portion of its economy from the extraction of coal."

Edward L. "Skip" Kropp
Assistant Chief,
Enforcement
West Virginia Division of
Environmental Protection

SOLAR BECOMING PROFITABLE

"Solar technology is going to be a major factor in our nation's future energy supply with or without overt actions dealing with climate change," according to Gerald W. Braun, director of strategic business development at Solarex. Headquartered in Frederick, Maryland, Solarex is a subsidiary of Amoco/Enron Solar.

In recent years the solar energy industry grew at a rate of 15 to 20 percent per year and is now hitting 30 percent per year.



▲ Gerry Braun told the conference that photovoltaics are already competitive in Japan where energy prices are higher than they are in the United States.

Hydro, geothermal, and biomass sources currently supply about 10 percent of the world's total energy, with smaller contributions from solar and wind power. But by the year 2050, renewables are expected to provide 25 to 50 percent of the world's energy. Solar and wind need to grow by more than 25 percent per year to achieve those contributions—a rate that is currently quite realistic, Braun said.

By 2002, with market growth and cost reductions, photovoltaics will be competitive in the United States. "The Million Solar Rooftops initiative will probably be a success," Braun remarked. He concluded with a play on the words of a popular children's character, "It isn't easy being green," but it's starting to be profitable." ♦

ENLIGHTENED OR MARKET SAVVY?

BP, the third largest petroleum producer in the world with revenues exceeding \$70 billion, began assessing the issue of climate change more than two years ago. Initially, the company had adopted a more skeptical attitude toward global warming. But things changed after BP completed its assessment. "The company decided that it is unwise and potentially dangerous to ignore the mounting concern," said M. Todd Foley, director of regulatory affairs for BP America Inc. "We decided that the available evidence merits action."

Foley was asked whether the company is more enlightened than other petroleum companies or just has more market savvy. He replied, "Both."

Over the last decade, BP has increased its energy efficiency by 20 percent. Currently, it is reducing emissions from flares with a goal of eliminating flaring entirely except in emergencies. In addition, BP is measuring emissions from its operations and will develop realistic and independently verified

targets. In partnership with the Environmental Defense Fund, the company is developing a pilot emissions trading program modeled after the U.S. acid rain program.

"BP is committed to these actions regardless of Kyoto," said Foley. "They make good business sense. Cutting emissions is a matter of cutting energy consumption, and energy is cost." ♦



◀ M. Todd Foley, of British Petroleum, told the conference that the evidence on climate change merits our taking action.

CLEAN, EFFICIENT, AND FUN CARS



◀ *Michael Paritee, of General Motors, emphasized his company's commitment to electric vehicles.*

General Motors recently unveiled prototypes of hybrid cars powered by electricity and

conventional fuels. Michael S. Paritee, regional manager for marketing and infrastructure development at the Advanced Technology Vehicles division of General Motors, displayed an electric pickup truck at the conference and showed a video of the rest of GM's electric vehicle line.

One vehicle, which GM touts as the "next generation sportscar," is a hybrid vehicle that runs on a diesel engine coupled with electric batteries. The sportscar gets 80 miles per gallon, has a 500 mile range, and goes from 0-60 miles per hour in seven seconds. The hybrid vehicles, which will be ready for mass production by 2001, generate one-third to one-half the carbon dioxide emissions of conventional vehicles without sacrificing performance, safety, or appearance.

Paritee also showed a prototype fuel cell vehicle that burns hydrogen extracted from gasoline. The fuel cell generates electricity with water vapor as the byproduct. The vehicle generates near-zero emissions and will be ready for mass production by 2004. ♦

COOL INITIATIVES

State and local governments are on the move with ideas and strategies that will help ensure a safer environment despite rising temperatures. At a session focused on strategies for state and local governments to meet the challenges of climate change, John Balbus, acting chairman of environmental and occupational health at The



about species migration and longer fire seasons. He also mentioned the effects of climate change on coral ecosystems. When sea temperatures heat up, coral reefs become more susceptible to disease. In

◀ *The possibility of increased transmission of infectious diseases is one potential effect of global warming, according to John Balbus, of George Washington University.*



▲ *"Heat islands are a fact," said Sharon Ross, of Allegheny Power. "When you remove trees and replace them with concrete, it gets hotter."*



◀ *National Park Service Superintendent Mark Koenings described Assateague Island's struggle with rising sea levels.*



◀ *Mount Rainier Mayor Fred Sissine spoke proudly about his city's involvement in the Cities for Climate Protection Campaign.*



▶ *Marilyn Reedy, president of The Trees for Frederick Project, discussed the challenges and rewards of planting trees to cool urban areas.*

addition, an increase in storms has carried dust from Africa's Sahara Desert to the U.S. Virgin Islands, where it has negatively affected coral in the region.

George Washington University, said that if we do nothing to address climate change, heat mortality could double, water shortages may occur, and vector-borne diseases such as dengue may increase.

Balbus also discussed the effects of climate change on the elderly and affirmed the importance of disease surveillance. "From a population vulnerability standpoint," he said, "the extremes of age make individuals more susceptible to heat mortality." It is imperative that we monitor these populations.

Outlook for Flora and Fauna

"As things warm up, flora and fauna are taking a hike," said Mark Koenings, superintendent of the Assateague Island National Seashore. Koenings discussed the National Park Service's concerns

Koenings concluded by describing the impact of rising sea levels on a barrier island like Assateague. The National Park Service is trying to restore geological integrity to the island without compromising its fragile ecosystem. To preserve our precious national parks and seashores, Koenings told the audience, "we need strong regional planning."

Making it Cool

Strategically planted trees can go a long way toward reducing heat and energy use. Sharon Ross, a forester at Allegheny Power, and Marilyn Reedy, president of Trees for Frederick, are involved in planting trees to cool the streets of Frederick, Maryland. Ross and Reedy have planned and initiated projects to transform Frederick's "heat islands" from uninterrupted swaths of asphalt and

Continued on page 8

"We came to the conference to see what we can do to help solve the problem of global warming locally through education and outreach at health fairs and shows."

Ed Blevins
Supervisor of
Environmental
Field Services
Montgomery County
Health Department

“Carbon sequestration is one benefit of planting trees to mitigate global warming, but there are also ancillary benefits such as cleaner water and air, reducing stormwater runoff, and increasing wildlife habitat.”

Rick Crouse
Vice President,
Development
American Forests

To learn more about global warming, check out EPA's website at: www.epa.gov/globalwarming.



COOL INITIATIVES *Continued from page 7*

concrete to cooler and greener areas. Despite lack of funding, a core group of volunteers is continuing to make the effort a success.

“We’re planning on expanding beyond Frederick,” said Reedy. “We truly believe that from our humble beginnings come good ideas for our future.”

A Tale of Two Cities

Fred Sissine, mayor of Mount Rainier, Maryland, made a strong case for the Cities for Climate Protection Campaign, which has done a great deal to improve life in his city and nearby Takoma Park. Calling his story “A Tale of Two Cities,” Sissine noted that Takoma Park has established a compressed natural gas fueling station and is now in the process of acquiring a natural gas-fueled vehicle for the city’s police department.

JOIN EPA’S CLIMATE CHANGE MAILING LIST

Receive timely news about global warming via EPA’s climate change mailing list—an Internet listserv that provides information on impacts and solutions, international and national policies and programs, and relevant conferences and other events.

Climate Change and Public Health (climate-medical-L) – For medical practitioners, addresses the health risks associated with global warming, such as potential increases in infectious diseases, deaths from heat waves, and water-borne illnesses, and shares research findings, information on disease surveillance, and intervention strategies.

Climate Change Innovative Business (climate-business-L) – For business leaders, includes information on current findings, energy conservation programs, and opportunities to adopt renewable energy technologies.

Climate Change and State-Local Governments (climate-govs-L) – For state and local government officials, discusses the impacts climate change can have on our states and cities, and offers innovative



Robert Vatistas, with the Crown Cork & Seal Company, moderated an afternoon session on how state and local governments can meet the challenge of climate change.

In Mount Rainier, city officials decided to revitalize their downtown. They created a new “green space” in the town center—a verdant roundabout that has increased pedestrian safety and made driving easier for motorists. They also constructed a hiking and bicycling trail that leads to a mass transit station. A new city hall building has numerous energy improvements over the former building. “We have to lead by example,” Sissine concluded. ♦

ways to curb global warming while reducing pollution and saving money.

Climate Change and Outdoor Recreation (climate-outdoor-L) – For outdoor recreation enthusiasts, provides hunters, anglers, campers, hikers, and wildlife watchers with the latest scientific developments on climate change and its effects on the natural world.

Climate Change and Coastal Communities (climate-coastal-L) – For coastal communities, provides information on strategies for adapting to or mitigating sea level rise; potential effects on severe storms; and coastal success stories.

Climate Change and Meteorologists (climate-meteor-L) – For meteorologists, includes information on current findings and effects on weather patterns, including severe storms.

How to subscribe ...

Send an e-mail to: listserv@wpi.org. In the body of the message type: subscribe **the name of the list** and then **your first name and last name**; for example, subscribe climate-medical-l Kimberly Bell. ♦

CONFERENCE SPEAKERS

W. Michael McCabe, Regional Administrator, U.S. Environmental Protection Agency, Region 3

David Gardiner, Assistant Administrator for Policy, Planning and Evaluation, U.S. Environmental Protection Agency

Brent Yarnal, Ph.D., Associate Professor of Geography, Pennsylvania State University

Charlie Baxter, Regional Director, Mid-Atlantic States, U.S. Department of Energy

Mary Novak, Senior Vice President, WEFA Group

Duncan Austin, Associate, Economics and Population Program, World Resources Institute

David Cesario, Director, Environmental Affairs, PECO

Gene Lecomte, President Emeritus, Institute for Business and Home Safety

Bruce Steiner, Vice President, Environment and Energy, American Iron and Steel Institute

Joseph J. Romm, Principal Deputy Assistant Secretary, Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy

Edwin Mongan, Manager, Pollution Prevention and Environmental Auditing, DuPont

Gerry Braun, Director, Strategic Business Development, Solarex

M. Todd Foley, Director of Regulatory Affairs, BP America

Michael Paritee, Advanced Technology Vehicles, General Motors

Robert G. Vatistas, Vice President of Environmental Health and Safety, Crown Cork & Seal Company

John M. Balbus, Acting Chairman, Environmental and Occupational Health, M.D., MPH, The George Washington University

Marc A. Koenings, Superintendent, Assateague Island National Seashore, National Park Service

Marilyn Reedy, President, Trees for Frederick

Sharon Ross, Forester, Allegheny Power

Fred Sissine, Mayor, City of Mt. Rainier, Maryland