



## The Chairman's Corner

Rep. Scott E. Hutchinson, Chairman

The beginning of a new legislative session gives one pause...to take stock of things that have happened and of what may happen. It is a good time for reflection about directions and issues.

As I took some time to do just that, I decided that one of the great strengths of the Joint Conservation Committee is its diversity, both in membership and in direction. Our 18 bipartisan members hail from all parts of the state and all backgrounds. We have members from Washington County east to Bucks and from York County north to Bradford.

The committee membership also is a microcosm of the occupational diversity of Pennsylvania. Sprinkled throughout the committee membership are attorneys, business people, dairy farmers, educators, former municipal government officials and more. Once again, this provides a unique perspective on and a flexible approach to issues, a variety of points of view and a mixture of priorities and concerns.

Such diversity is reflected in some of the directions that the committee is already taking in the very early days of the 2003-2004 legislative session. For example, a recent committee visit to Pittsburgh encompassed two very different issues. An initial stop at Siemens-Westinghouse Power Corporation provided an excellent learning experience about fuel cell technology.

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Craig D. Brooks, Director

**E**nergy. We use a lot of it. The total figures for U.S. consumption can be staggering. As Americans we consume six times the world's average per capita use of energy. Two-thirds of our demand for oil is generated by the transportation industry and the United States uses more fuel than the next five nations combined. During the last decade, growing demands for fuel have led to the consideration of removal of fuels from areas that would never have been contemplated in the past. Most recently, mountain top removal of coal, oil and gas exploration in state and national forests, and demands for coastal exploration are all issues facing states and energy suppliers alike.

However, renewable energy sources are gaining ground in the production of energy to meet our needs. Geothermal, fuel cell, solar, biomass and wind have the ability to generate electricity with little environmental impact. Wind power is now the fastest growing renewable energy source in the United States and the Farm Bill has also taken great strides toward the development of bioenergy technology (biomass resources) which ranks second only to hydropower in renewable energy production.

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**A broad-based energy strategy will decrease dependence on oil, reduce environmental impacts and conserve reserves for the future.**

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Fuel cell technology, which generates electricity and heat using electrochemical processes has the potential to revolutionize the power industry. The Joint Committee had the opportunity to tour a fuel cell research and development facility in Pittsburgh



*Committee member Rep. Greg Vitali (right) and committee staffer Jason Gross (center) listen and examine hydrogen fuel cells as Siemens Westinghouse Power Corporation's Manager for Tactical Marketing Joseph Pierre explains the fuel cell energy creation process.*

recently, and while the engineered science behind the fuel cell may be complex, the idea is simple. A fuel cell works like a battery that doesn't run down or need recharging. The cell consists of two electrodes...a positive and a negative...sandwiched around an electrolyte. Hydrogen is fed to one side and oxygen is fed to the other. This produces a reaction that creates a flow of electricity and the byproducts heat and water. The fuel cell produces electricity and heat as long as fuel (hydrogen) is supplied. It can be used to power vehicles, or in the case of the Pittsburgh facility, to provide stationary heat and electricity for industry.

While research on wind, biomass, fuel cells and other alternative sources of energy has been ongoing for many years, the time is here for widespread application of these technologies. We are currently looking at a state energy policy based on conservation, alternative energy sources and improved efficiency in the energy industry. A goal of several Pennsylvania organizations is to set a 10 percent renewable energy requirement for Pennsylvania utilities to be accomplished by 2010. Texas, Nevada and New Jersey have already done this. A broad-based energy strategy will not only decrease our dependence on oil, but will also reduce environmental impacts and conserve reserves for the future.

*Committee member Rep. Jeff Coleman (rear, left) and committee Chairman Rep. Scott Hutchinson (rear, center) listen as Neville Island and local air quality officials discuss air pollution on the island. Seated at right is committee member Rep. Tom Petrone who requested the committee to tour the island.*





# Research Briefs

Each month, the committee's staff researches and prepares a number of "briefs" on several topics relevant to the Joint Conservation Committee's mission. Very often, these briefs include references to reports and further research on the topics so that readers may pursue issues on their own.

## Want To Cut Gasoline Use? Raise Taxes

—Tony M. Guerrieri, Research Analyst

The United States is the largest consumer of oil in the world, and the transportation sector accounts for the greatest portion of total U.S. consumption. Amidst the renewed sense of urgency about growing U.S. dependency upon imported foreign oil, policies that could be used to implement a gasoline reduction strategy have gained attention. According to a report by the Congressional Budget Office (CBO), a cap-and-trade program for carbon emissions or a carefully planned increase in gasoline taxes would be more cost-effective methods to reduce U.S. gasoline consumption than raising federal fuel economy standards for automobiles.

The CBO report, *"Reducing Gasoline Consumption: Three Policy Options"*, examines policies for reducing U.S. dependence on foreign oil and lowering emissions of carbon dioxide. The policy options are new gasoline taxes, carbon emissions limits from gasoline consumption, and raising corporate average fuel economy (CAFE) standards. The report examines the pros and cons of each option based on several criteria, including cost effectiveness, predictability of gasoline savings, effects on safety, and effects on other external costs related to driving.

The CBO report concludes that a cap-and-trade program for carbon emissions or a "well-designed" gas tax increase would be more cost-effective than raising CAFE standards because those options encourage a wider range of gas-saving activities.

For example, both policies would raise the price of gasoline and thus provide an incentive for households to undertake measures that would lower their gasoline use. Such measures include buying more fuel-efficient vehicles, reducing their driving (by carpooling or taking public transportation, for example), improving vehicle maintenance, or driving more slowly.

In contrast, raising federal CAFE standards (currently 20.7 miles per gallon for light trucks, minivans,

and sport utility vehicles and 27.5 mpg for passenger cars) provides less of an incentive for reducing gas consumption because it would lower the cost of driving. According to the report, research suggests that a ten percent increase in CAFE standards would result in a two percent increase in the number of miles driven.

The report further suggests that neither an increase in CAFE standards nor a rise in gasoline taxes would necessarily ensure a specific decline in U.S. gas consumption. Predicting actual gas savings from a tax increase would be difficult, the report said. Projections from raising CAFE standards would be easier to calculate if the federal program disallowed "unproductive compliance methods" – such as modifying the design of passenger cars so they qualify for the less stringent light truck category. If such methods were not allowed, "estimating gasoline savings from CAFE would mainly involve predicting increases in the number of miles driven," the report said.

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### Which of three policies would work best to reduce gasoline consumption?

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The report said a cap-and-trade system could be constructed to ensure a specific decline in gas consumption. For example, the government would issue the number of emission allowances that correspond to that target level, and only that amount of gasoline would be sold in the United States.

Any policy that lowers gas consumption could have an effect on safety, the report said. If higher gasoline taxes, a cap-and-trade system, or increased CAFE standards were enacted, consumers would possibly buy more smaller and lighter cars, which tend to be involved in more dangerous accidents, the CBO report noted. However, the report indicates that virtually no research has been done on how higher gasoline taxes or a cap-and-trade system would affect the safety of driving. The report did cite a study from the National Academies that said increased traffic fatalities would occur if automakers improved fuel efficiency by reducing the weight and size of

JCC cars, and recommending that CAFE be redesigned to discourage automakers from reducing the size and weight of cars to meet tougher standards.

The report concluded that all three policies would have an impact on traffic congestion. It said a tax increase would tend to decrease traffic congestion. By contrast, it said higher CAFE standards would encourage driving and result in greater congestion and road construction needs.

For further information and a copy of the full report go to <http://www.cbo.gov/showdoc.cfm?index=3991&sequence=0>.

## Report Focuses on Eastern States Emissions Reduction

—Jason H. Gross, Research Analyst

The Environmental Defense group recently released a report entitled “*A Plan for All Seasons: Costs and Benefits of Year-Round NOx Reductions in Eastern States*”. The report takes the position that states can no longer afford to wait for federal intervention in order to regulate pollution caused by nitrogen oxide (NOx). The current federal approach only calls for NOx reductions during the more ozone problematic summer months. The only way to effectively reduce NOx emissions, states the report, is to create a regulatory structure that reduces emissions year-round.

According to the report, NOx emissions react to the atmosphere in the presence of sunlight to form ground-level ozone and smog. Code red and orange unhealthy days throughout the Northeast have become common because of the health hazards caused by NOx emissions. Fine particulate matter also creates a health hazard by becoming imbedded in the lungs, contributing to heart attacks and lung difficulties.

The report says the U.S. Environmental Protection Agency (EPA) took a significant step to curb summertime ozone problems when it called on Eastern states to revise their state implementation plans to reduce power plant NOx emissions from May through September. But the seasonal approach that is currently used ignores the health and environmental hazards that occur year-round from NOx emissions. The report goes on to state that although there is an array of federal solutions, the regulatory responsibility should fall to the states, since a more local approach to poor air quality would be more effective.

According to the report, many states are their own sources for their pollution, and espouses the strategy that states have the power to regulate the emissions problems that most greatly affect their state. The responsibility to limit NOx pollution falls particularly to the Eastern states that have a more increased risk of health issues arising from emissions.

The report lists key steps, with the first being immediate adoption of a year-round, state-based NOx emission

reduction program. According to the report, utilities in many Eastern states are already engaged in a long-term effort to install NOx control equipment. The report suggests an easy way to achieve the desired result is to amend existing regulations as opposed to enacting new laws. Or, in other words, extend current practices beyond the summertime programs that presently exist. According to the report, immediately extending the summertime reduction strategies to a year-round approach will reap enormous public health and environmental benefits.

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### Locally-based, year-round approach to NOx reductions is recommended

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The report also suggests states work politically to encourage the EPA to adopt a year-round NOx program in order to achieve reductions. An effective opportunity to do so arises when the EPA is already adjusting its policies. At the end of the year the EPA plans to designate communities that fail to meet health protection standards for fine particles. The EPA also intends to develop a transport rule to assist communities with achieving attainment by trading credits with areas that are already in attainment. By working with the ongoing amendments to the rule, states can engage in a dialog with the EPA that will create a year-round policy.


The report also identifies legal action that can be taken in order to work with the EPA to create a year-round approach to emissions reductions. Under the federal Clean Air Act, section 126 of the statute empowers a downwind state, county or city to file a petition with the EPA. This petition, if successful, compels upwind sources of pollution to lower their emissions. The statute directs the EPA to address the claims of the petition within 60 days. Filing such a petition, even if not successful, would focus public attention on upwind air pollution from power plants. This would create more support for action by other states as well as the federal government.

For more information go to: <http://www.environmentaldefense.org/pdf.cfm?ContentID=2533&FileName=seasons.pdf>.

## News to Use in the Environmental Synopsis... share it with a friend

The *Environmental Synopsis* issued monthly.

The newsletter examines timely issues concerning environmental protection and natural resources.

If you or someone you know would like to receive a copy of the *Synopsis* each month, please contact the committee office at 717-787-7570.  PRINTED ON RECYCLED PAPER

## 5 States Act To Reduce Greenhouse Gas Emissions

—Tony M. Guerrieri, Research Analyst

The United States has no national strategy on global climate change, but according to a report by the Pew Center on Global Climate Change, many states are taking actions to reduce their greenhouse gas emissions. States have taken a variety of approaches to climate change, including the promotion of renewable energy, air pollution controls, energy development, and solutions in the agricultural, forestry, transportation, and waste management sectors.

The report, *“Greenhouse & Statehouse: The Evolving State Government Role in Climate Change”*, examines case studies of nine states that have taken action to mitigate climate change. The case studies featured in the report are Georgia, Massachusetts, Minnesota, Nebraska, New Jersey, North Carolina, Oregon, Texas, and Wisconsin. The report tracks trends in state climate change action and draws conclusions about the potential of state action and its implications for national policy.

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**While there are different approaches in different states, a common thread is the linkage of climate change and economic development strategies.**

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States have a variety of interests in addressing climate change, including the potential for rising sea levels, the effect of changing climate patterns on agriculture, and the need for stable, renewable energy supplies. Linking climate change policies, either explicitly or incidentally, to economic development strategies is a common feature across the states.

According to the report, Texas has probably made the most progress on greenhouse gases. In Texas, development of renewable energy was not driven by a specific policy aimed at reducing greenhouse gases, rather it was part of a larger 1999 energy restructuring bill that included renewable portfolio standards. These standards require that by 2009, power companies in the state must obtain 2.2 percent of the electricity they sell from renewable energy sources, providing a market for the state’s rapidly growing wind energy industry. The program has been so successful that the state “is thinking it didn’t set the bar high enough.” Some 16 states now have enacted legislation similar to the Texas model.

In Wisconsin, mandatory reporting for large carbon dioxide generators, which began in 1993, has given the state and reporting firms a clear measure of their emissions. Wisconsin is the only state with this requirement. It has provided a basis for the state to develop a registry that

will allow any firm in the state to report reductions of carbon dioxide and other greenhouse gases, with the prospect of future credit for action.

New Jersey offers a look at a comprehensive, multi-sector strategy largely driven by fear of how sea level rise might affect this low-lying state. New Jersey’s long-standing concern about climate change took shape in 1998 when it established a goal of reducing its total greenhouse gas releases to 3.5 percent below 1990 levels by 2005. Among New Jersey’s initiatives is the creation of covenants. Under these voluntary agreements, organizations pledge to reduce their greenhouse gas emissions in line with the state’s goal. Several private companies as well as all of New Jersey’s 56 colleges and universities have signed on to the covenant.

Nebraska is looking at ways to help farmers enrich their soil while pulling carbon dioxide out of the atmosphere. Massachusetts includes carbon dioxide in a comprehensive assault on air pollution. Minnesota actively promotes the planting of trees to maintain forest health and help clear the air, and North Carolina is curbing methane emissions through tougher regulation of animal waste.

Steps taken by the states have considerable potential to reduce greenhouse gas emissions, according to the report, as individual U.S. states are contributing more to climate change than many countries.

However, the report notes that there are also clear limitations facing state policies. Funding is a primary barrier facing state-led efforts, and increasing budgetary pressure could imperil future climate change policies. Fragmentation is another fundamental concern for state policies. There is the potential that a “patchwork quilt” of state regulations and policies could increase compliance costs and create reporting and monitoring difficulties.

Some states remain hostile to policies on climate change. The Michigan legislature in 1999 passed a law that prohibited state agencies from proposing any rule to reduce greenhouse gases. The year before, the West Virginia legislature prohibited state agencies from entering into any agreement with federal agencies to reduce the state’s greenhouse gas emissions. In 1999, 16 states passed legislation or resolutions highly critical and opposing ratification of the Kyoto Protocol on Climate Change, a treaty committing industrialized nations to reductions in six greenhouse gases. The protocol would have required U.S. reductions in annual greenhouse gas emissions equal to more than a billion tons of CO<sub>2</sub> by 2008.

A copy of the report, *“Greenhouse & Statehouse: The Evolving State Government Role in Climate Change”*, is available on the Pew Center’s web site, [http://www.pewclimate.org/projects/states\\_greenhouse.cfm](http://www.pewclimate.org/projects/states_greenhouse.cfm).



## UN Report on Environmental Governance

—Jason H. Gross, Research Analyst

The United Nations is releasing a report this month concerned with environmental governance entitled “*A Guide to World Resources 2002-2004*” under the auspices of the United Nations Development Programme.

The report has three goals. The first is to define what environmental governance means and how it relates to environmental trends and social conditions. This goal entails determining what lies behind environmental decisions that shape our lives. The second goal is to assess the state of environmental governance around the world. Part of that is determining what principles embody good governance practices as well as measuring performance. The third goal is to advance the premise that attention to better environmental governance is one of the most direct and effective routes to reversing the world’s environmental decline. The intent is that better governance would translate into more inclusive processes for making decisions regarding environmental health.

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### Just what is “environmental governance”?

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According to the report governance should not be confused with governments, although it is inevitably associated with institutions where official authority resides. The set of institutions normally associated with political authority is not the same as the decisions that are made which organize and maintain the environment. Environmental governance entails policy decisions regarding how the environment is treated and managed. Environmental governance is defined as the exercise of authority over natural resources and the environment. Environmental governance includes making decisions at the appropriate level, providing access to information, participation, and redress, and integrating the environmental decisions.

Governance also includes individual choices regarding stewardship over the environment. Often corporations or individuals act in place of the state in order to govern environmental resources. States may grant forest or mining concessions to companies for a fee. This allows the company broad discretion as to how to cut trees, build roads, or otherwise remediate environmental hazards. These decisions greatly affect environment in a way that is similar to the way governments do. Individual actions as consumers are powerful governing forces over

the environment. Voting, lobbying, public hearings, or working with monitoring groups are ways in which an individual can influence environmental decisions. These actions can sway governance sources in such a way that massively affects the way the environment is managed.

According to the report, the current state of environmental degradation is a direct result of poor environmental governance. The report states that the depletion of many marine fish stocks is due to the failure to limit and allocate fishing rights effectively. Many countries have no effective authority over fishing activity, which results in open access and unrestricted exploitation. The disruption of the world’s river systems with dams and canals that alter the hydrological cycle result in compartmentalized decision-making in which industry, construction, and management of water resources is seriously under-managed.

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### There are seven elements of environmental governance that influence environmental health.

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The report recommends that seven elements of environmental governance be recognized and managed in a holistic fashion so as to create the greatest environmental health. First, institutions and laws must be created which effectively manage environmental and economic policies, rules and treaties so that the environment is administered in an effective way. Second, participation rights and representation must be allocated so the public can influence and contest rules over natural resources to reach a determined level of fairness in environmental governance. Third, the authority level or scale of approach must be combined to create effective governing strategies at the local, regional, national, and international levels. Fourth, accountability and transparency must exist so it is understood who controls and manages what and how they manage. Fifth, property rights and tenure must be resolved so the boundaries of land, water, mineral, and fishing resources can be allocated and responsibility and stewardship can be resolved. Sixth, markets and financial flows must be investigated to reach an understanding of market forces, economic policy, and market behavior and how they influence authority over natural resources. These economic forces must be managed in such a way so economic health works in conjunction with environmental health. Seventh, science and risk assessment must be incorporated into sound governance decisions so the risk to natural resources is minimized.

For more information please go to [http://pubs.wri.org/pubs\\_pdf.cfm?PubID=3764](http://pubs.wri.org/pubs_pdf.cfm?PubID=3764).

# On The Horizon...

## a look at upcoming committee events

- **Monday, March 10, 12 noon, Hearing Room 1, North Office Bldg., Capitol Complex – Environmental Issues Forum.** The Pennsylvania Recreation and Park Society (PRPS) will present a program entitled “*Discover What’s In It For You: Benefits of Your Community Recreation and Parks Programs.*” Among the guest presenters will be Carolyn Hanel, president of PRPS and the director of Parks and Recreation for West Whiteland Township, Chester County; Tim McGregor, director of the Titusville Leisure Services Board; John Mikowychok, director of the Chester County Department of Parks and Recreation; and Larry Williamson, director of the Bureau of Recreation and Conservation in the Department of Conservation and Natural Resources (DCNR).

Environmental Issues Forums are open to the public. Please call the committee office at (717) 787-7570 if you would like to attend.

## Committee Chronicles...

### a review of some memorable committee events

Earlier this month the committee traveled to the Pittsburgh area on a two-fold mission. The first was to get information and an update on the Siemens-Westinghouse Power Corporation’s efforts to develop stationary fuel cell technology.

The second visit was to study air quality problems on Neville Island, an island near Pittsburgh in the Ohio River.

The photos show various scenes from those visits. Both are described in more detail in The Chairman’s Corner and Notes from the Director.



*Gottlieb Inc.'s Director of Operations Bob Gottlieb (center, hard hat) explains new anti-pollution equipment being installed at the Neville Island operation.*

*Joseph Pierre, Siemens Westinghouse Power Corporation's manager of tactical marketing (2nd from right), shows a bundle of hydrogen fuel cells to (l. to r.) committee Executive Director Craig Brooks, committee Chairman Rep. Scott Hutchinson and committee member Rep. Tom Petrone.*



*Committee member Rep. Greg Vitali (on truck) examines smelted aluminum ingots at Gottlieb Inc. on Neville Island. Standing are (l. to r.) Greg Parrish, a division chief in DEP's Bureau of Air Quality, committee Chairman Rep. Scott Hutchinson and committee members Reps. Jeff Coleman and Tom Petrone.*





It was an informal opportunity to discuss both the environmental improvement that could result from greater use of hydrogen fuel cells and the economic development potential of expansion of fuel cell technology. (See Craig Brooks' Notes from the Director on page two.)

While recent national headlines regarding hydrogen fuel cells have focused on their use in automobiles, Siemens-Westinghouse is focusing on stationary use of cells for power generation. One interesting potential use currently the subject of R & D efforts is the use of fuel cells as an energy source in residential homes. Right now, it is not economically feasible, but research is continuing.

From fuel cell technology, the committee turned to air quality issues. In response to local government concerns, and at the invitation of Rep. Tom Petrone (D-27<sup>th</sup>), a committee member, the committee then visited Neville Island, a Pittsburgh-area community with several very different lifestyles coexisting on one five-mile long and three-eighths of a mile wide island in the middle of the Ohio River.

Neville Island can almost be divided into thirds; its lower third being a heavily industrialized area dating back to pre World War I, a middle third being a residential area and the island's upper end the site of a new sports center, featuring ice rinks, playing fields and restaurants.

The committee's visit to an animal rendering plant, long a source of odors both on and downwind of the island, and an expanding aluminum smelting

operation was both a learning experience and an effort to assist state and local officials and employers to bridge differences in regard to air quality, livability and economic development. It was a good reminder that there are different perspectives to real life problems that we don't always get to see in Harrisburg.

This month the committee will examine coalbed methane (CBM) wells and gas rights. The proliferation of CBM wells in recent years as fuel sources has pointed up the sometimes conflicting ownership of land rights, coal rights and oil and gas rights.

The committee's diversity is also seen in its Environmental Issues Forums. In January we discussed land value taxation and its impact on communities, blight and growth. In March, we will discuss community recreation and parks programs with the Pennsylvania Recreation and Park Society (see On the Horizon on page seven).

And, the committee's Forestry Task Force continues its studies into forest management, sustainability and related issues.

Like Pennsylvania's forests and their diverse stands of different trees, the committee continues to tackle a variety of issues and concerns. Our goal is to bring light to important issues that may have been obscured (or obscure) until now, and to help the General Assembly deal with them. Based on its beginning, this legislative session promises to be another busy one for the Joint Conservation Committee.

## How to Contact The Joint Conservation Committee

**Phone:** 717-787-7570

**Fax:** 717-772-3836

**Location:** Rm. 408, Finance Bldg.

**Internet Website:** <http://jcc.legis.state.pa.us>

**Mail:** Joint Conservation Committee/PA House of Representatives/House Box 202254/Harrisburg, PA 17120-2254