



## The Chairman's Corner

Rep. Scott E. Hutchinson, Chairman

It's been said that change is inevitable. If so, this is a time of change in the state Capitol. It's a new year and new legislative session. A new governor begins his term of office, and with him a bevy of new cabinet department heads.

To reflect the changing times, there are also some changes in this month's *Environmental Synopsis*. We wished to offer the outgoing secretaries of the departments of Environmental Protection (DEP) and Conservation and Natural Resources (DCNR), David E. Hess and John C. Oliver respectively, the opportunity to reflect on their respective tenures. Both secretaries have worked closely with the committee over the past eight years on a variety of projects and we thank them for their commitment and service. You will find reflections from each secretary replacing our usual features on pages seven and eight.

We are also hopeful of having the incoming secretaries of DEP and DCNR join us in the near future for one of our popular Environmental Issues Forums.

Please enjoy this month's *Environmental Synopsis*' special features.

**A Legislative Service Agency of the Pennsylvania General Assembly**

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# Notes From the Director

Craig D. Brooks, Director

Every election brings about change. We lose some old friends and trusted colleagues and gain new ones as departing administrations clean out their desks. There are so many people who deserve our thanks. But there are two gentlemen in particular to whom we owe a profound debt of gratitude—Dave Hess and John Oliver. We want to thank them for setting an example of good public service, and for their commitment to environmental stewardship, their vision for our future, an unyielding sense of fairness and unfailing sense of humor. Together they have shown that political, business and community leaders can work together as responsible stewards, recognizing shared ideals, ready to do the right thing for Pennsylvania.

It's important to recall that not too long ago, many tried to tell us that Pennsylvanians had to choose between a healthy environment and a strong economy. The leadership of Secretary Hess and

Secretary Oliver has demonstrated that environmental protection and economic prosperity go hand-in-hand. They've helped move Pennsylvania in a positive direction by embracing stronger environmental and natural resource protection through innovation, flexibility and partnerships. Although there are still many challenges ahead, today the Commonwealth enjoys the greatest protection of our natural resources and cleanest environment in a generation. Maintaining a clean and healthy environment; protecting our great natural treasures; and assuring the sustainable, multiple uses of our resources is not only *our* obligation as citizens of the Commonwealth... it has been *theirs*.

On behalf of the Joint Committee members and staff, it has been a pleasure working with them. And to those that follow in the footsteps of Secretary Hess and Secretary Oliver, may they be guided by their principles of fairness, decency, respect and an unflinching commitment to making Pennsylvania a better place. We wish them only the best.

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## On The Horizon...

### a look at upcoming committee events

- ▶ **Wednesday, February 5, 10 a.m., Neville Island, Neville Township, PA** - The committee will tour the Neville Island complex, site of several industrial plants, in regard to studies of air quality.
- ▶ **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.



# 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.

## GAO Predicts Increasing Power Needs May Boost Pollution

—Tony M. Guerrieri, Research Analyst

A report by the U.S. General Accounting Office (GAO) estimates that carbon dioxide emissions could increase anywhere from 659 million tons (28 percent) to 1,129 million tons (48 percent) and mercury emissions from 5,700 pounds (seven percent) to 17,000 pounds (21 percent) by 2020.

The GAO report, *"Air Pollution: Meeting Electricity Demand Will Increase Emissions of Some Harmful Substances"*, made the forecast based on an anticipated increase in power plants' use of fossil fuels to keep pace with demand, and a general absence of federal or state regulations establishing standards for carbon dioxide and mercury.

The GAO reviewed information from the Energy Information Administration (EIA) within the U.S. Department of Energy and the U.S. Environmental Protection Agency (EPA). According to projections by the EIA, domestic electricity generation will increase by 42 percent by 2020.

As power generation increases, power plants' annual carbon dioxide and mercury emissions will rise nationwide by about 800 million tons and four tons, respectively, notes the GAO report. The projected mercury emissions could decrease, however, once EPA proposes mercury limits, which are required by 2004, according to the report.

At the same time, the EIA forecasts that power plants' annual emissions of nitrogen oxides will decline by about 100 thousand tons (two percent), while sulfur dioxide emissions will decrease nationwide by about two million tons (19 percent). The EIA forecasts also suggest that emissions of nitrogen oxides, sulfur dioxide and mercury will increase in some areas of the country, with these

regional increases possibly complicating efforts to improve air quality and curb acid rain.

The expected overall decline in nitrogen oxides and sulfur dioxide emissions results from the anticipated need for power plants to meet projected increases in electricity demand while complying with clean air regulations, the GAO report concludes. This will necessitate building new plants that emit relatively lower levels of these pollutants and installing emissions controls at some existing plants.

Using its own review methods, the GAO found that the EIA had not used the most current data on certain emissions limits in its model, although this had limited impact on the forecasts.

The GAO report also estimates that power plants will use between three percent less and 17 percent more water by 2020, although they will use less water for each unit of electricity produced than they now do, due to the

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***Projections are that domestic electricity generation will increase by 42 percent by 2020 with concurrent changes in emissions.***

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introduction of new technologies. The total increase in water use is not likely to create shortages, but it could affect companies' decisions about where to locate new plants and what type to build, the report concludes.

To obtain a copy of the report, call the U.S. General Accounting Office at (202)-512-6000. Request report number GAO-03-49. The report is also available on the GAO's website at: <http://www.gao.gov/newitems/d0349.pdf>.

## Designing A Climate-Friendly Energy Policy

—Jason H. Gross, Research Analyst

The Pew Research Center on Global Climate Change recently released a report entitled “*Designing A Climate-friendly Energy Policy*”. The report espouses that energy use and climate change are directly linked, and takes the position that choices made now as part of the current energy policy debate will determine how future climate change will occur.

This connection, says the report, highlights the importance of a sound comprehensive environmental policy. The report declares that, contrary to some popular opinion, environmental and economic policies are not necessarily in opposition as policy goals, but that economic interests can occur within the same policy regime as long as care is taken in balancing the approach used. The Pew Center seeks a balancing approach that secures a plentiful and diverse primary energy supply, has a robust and reliable infrastructure for energy conversion and delivery, has affordable and stable energy prices, and is environmentally sustainable.

According to the report, the majority of U.S. greenhouse gasses (GHG) are produced by fossil fuel combustion. Energy policies can reduce CO<sub>2</sub> emissions by increasing energy efficiency, reducing reliance on fossil fuels, and by shifting from high carbon to low carbon fuels. By not utilizing such strategies, energy policy can enable and even assist GHG emissions.

The federal government is currently reviewing the U.S. energy policy in an effort to adopt a climate change regulatory system. In the opinion of the report, the United States will eventually adopt a mandatory GHG reduction program in order to reduce CO<sub>2</sub> emissions. The report suggests that this be done sooner rather than later to arrest the increasing negative effects of GHG emissions.

The Pew Center suggests that the following guidelines be considered in developing the U.S. environmental policy: immediate reduction in GHG emissions; promotion of technology advancement and infrastructure development that will reduce the costs of achieving GHG emission reductions; and minimizing the amount of new capital investment in assets that would be devalued if a GHG reduction program were adopted.

According to examples in the report, producing electricity that is renewable and clean by increasing fuel cell usage can reduce the environmental costs of producing electricity. By maintaining a role for nuclear hydroelectric power, energy diversity can be enhanced, foreign dependence can be reduced and fossil fuel consumption reduced until other renewable sources of electricity gain wider usage.

By enhancing the energy efficiency of building and industry, overall consumer costs as well as the GHG produced in electric consumption will be reduced greatly. Another way to increase efficiency and reduce GHG emissions is to enhance the efficiency of automobiles and trucks so that oil consumption is reduced, also reducing reliance on oil imports.

The report states there is substantial convergence between energy policy objectives and climate policy objectives, noting healthy climate policies in particular.

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***The report recommends a mandatory greenhouse gas reduction program as part of a balanced environmental-economic energy policy.***

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The Pew Center goes on to say that suggested energy policies enhance energy security, increase energy diversity, and strengthen energy delivery infrastructure. These policies include increased domestic oil production, expanded electricity transmission infrastructure, and promotion of competitive electricity markets. Trying to achieve climate goals indirectly through energy policy will be a necessary step in achieving a healthy environment. It can be done in such a way that promotes growth, economic stability, and political stability.

For further information and a copy of the full report go to [www.pewclimate.org/projects/energy\\_policy.pdf](http://www.pewclimate.org/projects/energy_policy.pdf).

## 5 Weighing Sprawl Factors in Large U.S. Cities

—Tony Guerrieri, Research Analyst

Pennsylvania's three major metro areas (Pittsburgh, Philadelphia, and Allentown-Bethlehem-Easton) ranked among the lower half of metro areas nationwide for their degrees of sprawl, according to a report by Smart Growth America entitled "*Measuring Sprawl and Its Impact*".

Smart Growth America defines sprawl as unplanned urban growth that happens outside the existing infrastructure. The report ranks 83 metro areas (representing nearly half of the nation's population). The report issues five comparative sprawl scores for each metropolitan area: residential density; neighborhood mix of homes, jobs, and services; strength of activity centers and downtowns; accessibility of the street network; and an overall ranking.

Smart Growth ranked the metro areas from least to most sprawled according to each of the above four factors, with the least sprawl indicated by the highest index number and the most sprawl by the lowest index number. New York City ranked as the least sprawling area, with the overall highest index score of 177.8. Others in the top four are Jersey City, New Jersey (162.3); Providence, Rhode Island (153.7); and San Francisco, California (146.8).

The city ranking highest in the strength of its social and economic center is Honolulu, Hawaii. The city with the highest-density housing is New York City. Jersey City ranked highest in two categories: strongest mix of home, jobs and shops and the place with the most connected street network.

At the other end of the scale, the most sprawling area was Riverside-San Bernardino, California, with the lowest score of 14.2. In the overall national ranking, Riverside-San Bernardino is followed by the Greensboro-Winston-Salem-High Point area of North Carolina (46.8); Raleigh-Durham, North Carolina (54.2); Atlanta, Georgia (57.7); Greenville-Spartanburg, South Carolina (58.6); and West Palm Beach, Florida (67.7).

The most sprawling metropolitan area in terms of low-density housing is Knoxville, Tennessee; the place with the poorest mix of homes, jobs, and shops is Raleigh, North Carolina; the place with the weakest centers of activities such as town centers is Vallejo-Fairfield-Napa, California; and the place with the most poorly connected street network is Rochester, New York.

How did Pennsylvania cities fare? Pittsburgh ranks near the middle of the pack, receiving an average score of 106 on the overall ranking, making it the 51<sup>st</sup> most sprawling city. The city was near the average in each of the key measures, scoring 90 for its compact, convenient housing, 87 for its segregation of homes from offices and shops, 104 for its

strong activity centers, and 124 for the accessibility of its street network.

The Philadelphia area ranks No. 63 for its degree of sprawl, indicating it has less sprawl than Pittsburgh. Philadelphia scored 115 on density, 120 on home and job mix, 96 on the availability of its downtown, and 113 for its street accessibility.

The Allentown-Bethlehem-Easton area received an average score of 124, making it No. 70 on the index.

The report also demonstrates how sprawl development patterns affect the way people live. It concludes that people who live in more sprawling places drive more, face a greater risk of dying in a traffic crash, and breathe more polluted air than people in less sprawling areas. The report shows that the daily distance driven per person is more than ten miles more in the most sprawling places than in the least sprawling. The ten most sprawling places average 36 traffic deaths for every 100,000 people, while the least sprawling average 23 deaths per 100,000. Ozone pollution levels are as much as 41 parts per billion higher in the most sprawling areas, which may mean the difference between meeting federal health standards and violating them. The report also found that higher levels of sprawl had no independent impact on traffic delay or travel times, refuting the idea that sprawl helps ease congestion.

Based on the research, the report offers six policy recommendations:

- o Reinvest in neglected communities and provide more housing opportunities.
- o Rehabilitate abandoned properties.
- o Encourage new development or re-development in built-up areas.
- o Create and nurture thriving, mixed-use activity centers.
- o Support smart growth management strategies.
- o Create transportation policies that complement smarter growth.

Smart Growth America is a Washington, D.C.-based nationwide coalition of more than 80 national and local groups. The coalition promotes protecting open space, neighborhood revitalization, affordable housing, and a variety of transportation options. The full report, as well as a technical research paper and metropolitan area fact sheets, can be found at <http://www.smartgrowthamerica.org/sprawllindex/sprawllindex.html>.



## Midwest Clean Energy Program is Example of Renewable Energy Policy

—Jason H. Gross, Research Analyst

Under the leadership of the Environmental Law and Policy Center, a report entitled *“Repowering the Midwest”* was written to highlight the policy objectives behind developing a cohesive clean energy policy for the region. The Midwest is a region that can benefit from a strategic clean energy development plan which would incorporate and implement smart policy practices over a large planning area that spans an entire region.

The report outlines a sustainable energy development strategy that makes sense for both environmental and economic growth. Clean energy development would reduce pollution, improve reliability, and diversify the power supply in the region. Along with this change goes an expenditure of money that generates cash and revenue for the builders of the new clean energy as well as making a cash crop for wind farmers, as an example, who house clean energy sites on their properties.

According to the report, much of the Midwest is powered by inefficient 1950's era equipment. This equipment is found in coal and nuclear plants, which have deteriorating transmission and distribution systems. These factors inhibit efficient transmission and contribute to pollution problems at the points of generation. In this way the Midwest's economic issues mirror those of Pennsylvania. Both areas are in need of infrastructure and electrical production upgrades.

Economists contributing to the report predict that technological advances will shape the new economy as well as energy production. Technological growth stimulates economic growth and generates new jobs and as a result creates greater wealth. With technological progress come modern processes that produce less waste and pollution. One of the areas of progress is in the electrical industry. As technological processes modernize energy production, new methods of producing energy are created. The products of these new methods are clean, reliable, and efficient energy sources which produce electricity at a fair price. Upgrading the equipment with renewable and efficient generators would make the electricity greener as well as adding a dose of economic and technological growth through development and implementation of the new systems.

Renewable energy used to be very cost-ineffective. Often, green sources of energy would be many times the price of the equivalent conventional energy sources. This difference in price was so great that clean energy was not economically viable even though it was environmentally healthy. According to the report, there has been a turnaround in the costs associated with renewable energy, with sources such as wind, biomass, and solar power technologies improving and gaining wider acceptance such that their costs relative to traditional power sources have gone down.

The report states that by implementing clean energy policy, dramatic improvements in environmental quality

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***There has been a turnaround in the costs associated with renewable energy, such that the costs relative to traditional power sources have gone down.***

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would occur by the year 2020. Energy efficient improvements will save consumers 17 percent of electricity use as compared to conventional methods of energy production. Improved electricity reliability will result in a more robust and diversified mix of power resources that will reduce the current reliance on foreign fuel for energy needs.

The economic development from the change in energy production sources will lead to job growth through new wind power and biomass production facilities. In short, improvements to energy policy that can be made by converting to a cleaner and more economically viable policy can reap both economic as well as environmental rewards. Although this policy model was designed with the Midwest in mind, it can be easily used as a template for energy policy change in other areas of our country.

For more information visit the Environmental Law and Policy Center on the web via <http://www.repowermidwest.org/documents.php>.

### 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.



## 7 "Many New Hands Now Help Protect Penn's Woods"

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by David E. Hess  
Pennsylvania Secretary for Environmental  
Protection

The last eight years under the Ridge and Schweiker administrations have seen a dramatic improvement in our environment by almost any measuring stick.

Solid waste, air pollution and water pollution have been permanently reduced by hundreds of millions of tons and billions of gallons; and millions of pounds of toxic emissions have been eliminated.

Over 33,300 acres of abandoned mines have been reclaimed, 967 miles of stream cleaned up, 5,000 acres of wetlands were restored and we exceeded our 35 percent recycling goal.

And the bottom line— 91 percent of the individuals, businesses and local governments regulated by the PA Department of Environmental Protection (DEP) comply with our environmental regulations.

DEP's environmental programs have won international and national awards from groups like the United Nations, the Council of State Governments, Harvard University and the Ford Foundation — more than any other state.

But our real success has been empowering people to be better stewards of their watersheds, businesses, farms and communities. And I saw this success firsthand by visiting every county in Pennsylvania at least twice in my 20 months as Secretary.

I visited people like John Dumot, of Liberty Electronics in Venango County, who turned an old foundry site into an electronics factory, preserving jobs and cleaning up the environment under our Land Recycling Program.

Jose Taracido of Washington County now has the resources to do stream bank fencing and restore habitats on farms to improve water quality thanks to the Growing Greener Program.

Carole Williams-Green of the Cobbs Creek Community Environmental Education Center in Philadel-



phia educates inner city children and adults about the environment.

Ed Wytovich in Schuylkill County now turns coal banks and orange streams into green fields and great fishing holes.

Chris Kocher and the Wildlands Conservancy work in the Lehigh River watershed to preserve land, restore stream buffers and treat mine discharges and produced a TV documentary to educate Valley residents on watershed issues.

Margaret Dunn and the Slippery Rock Watershed Association treat over 500 million gallons of polluted mine water and remove enough iron and aluminum to make 273,000 soda cans and 200 small pick-up trucks!

We also established the Pennsylvania Center for Environmental Education, adopted the first K thru 12 Environment and Ecology curriculum standards for schools and partnered to create the *GreenWorks for Pennsylvania* television program and an environmental video website to educate the public about protecting the environment.

But we also kept the old tools handy, mounting the largest enforcement effort ever undertaken to keep unsafe trash trucks off our highways and helping Attorney General Mike Fisher collect the largest criminal penalty for environmental crimes.

In 1995 we were challenged to create the most advanced partnership in the nation to protect and restore Pennsylvania's environment.

We met that test and positioned Pennsylvania to achieve even more in the future because we have even more ambitious goals to achieve.

**David E. Hess** became Secretary for Environmental Protection in April 2001. He can be contacted by e-mail to: [dehess@comcast.net](mailto:dehess@comcast.net). For more information on DEP programs, visit [www.dep.state.pa.us](http://www.dep.state.pa.us) and [www.GreenWorks.tv](http://www.GreenWorks.tv), [www.Watersheds.tv](http://www.Watersheds.tv) and [www.PaWatersheds.org](http://www.PaWatersheds.org)

## "Birds, Bunnies" and So Much More

by John C. Oliver  
Secretary of the Pennsylvania Department of  
Conservation and Natural Resources



**T**aking on the job as the first secretary of a brand new state agency had its challenges. Defining a mission and goals. Determining priorities. Hiring key staff. But perhaps one of the greatest challenges was convincing others the Department of Conservation and Natural Resources (DCNR) was a deserving agency dealing with important issues affecting every Pennsylvanian.

Overcoming the "birds and bunnies" stereotype didn't come overnight. After all, for more than 25 years, conservation, natural resource and recreation issues were tucked away within a vast bureaucracy called DER. Air and water quality regulatory reform were defining issues of the 1970s and '80s; parks and forests, recreation and conservation, simply put, were not.

In July 1995, that all changed as then-Governor Tom Ridge created a seat at the cabinet table for these oft-forgotten issues. He knew their value in today's world. And society was beginning to catch on, too.

By the mid-nineties, citizens were shifting their focus to quality of life issues relating to the environment. Communities were beginning to develop park and open space plans. Grass-roots groups were talking about improving rivers and building trails. Travelers turned to "eco-tourism" opportunities.

And so was DCNR. Off and running, our agency zeroed in on programs that would define this agency, meet citizen demand, and set a legacy for others to follow: state park and forest rehabilitation, community conservation and recreation, forest beautification, biodiversity conservation, greenways planning and development, heritage and nature tourism, forest certification, environmental education, and much more.

We began with restoring our state parks and forests — rebuilding and repairing at a record pace, bringing our system up to the standards our visitors expect and deserve. Now, more than \$350 million dollars later, you'll find modern restrooms, smooth roads, updated pools and

marinas, improved trails, access for people with disabilities and more.

We see our investment into our parks and forests as an investment into Pennsylvania's communities and economy. As a key component of the state's number two industry — tourism — these parks and forests are the lifeblood of many nearby small businesses and rural towns.

Much of the credit for our revitalized parks goes to Growing Greener, the environmental improvement package that has seen none like its kind in history. For 12 years, Growing Greener will continue to pay deep dividends for Pennsylvania's natural resources and environment.

Growing Greener also has fueled DCNR's Community Conservation Partnerships Program, a conservation and recreation initiative helping to revitalize communities, beautify downtowns, attract new industry, and create places where people want to live and work.

Over the past 7 ½ years, the program has provided more than \$170 million to communities - small towns, crowded suburban environments and cities - for recreation projects, greenways and trails, river conservation, open space protection and heritage tourism.

DCNR has accomplished much in a short time, all due to strong partnerships with business, local government, citizen groups and communities. While we're quite proud of our "birds and bunnies" label, we're even prouder of what else we're now known for: the largest certified forest and rail-trail system in the nation, one of the best greenways networks in the country and world-class state parks.

We have tried to set a high benchmark for those who will follow. With a strong commitment to this agency's mission, its priorities and its initiatives, our natural treasures will continue to provide huge rewards for centuries to come.

## How to Contact The Joint Conservation Committee

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