

ENVIRONMENTAL SYNOPSIS

The Chairman's Corner

Rep. Scott E. Hutchinson, Chairman



Before turning to this month's topics, allow me to wish all of our readers a Happy New Year. While 2008 ended on a sour economic note, 2009 represents a new beginning and a chance to renew and recharge our batteries. The new session of the Pennsylvania General Assembly has begun and while the problems we will face are certainly serious, new and different dynamics are in place which may lead to innovative proposals to solve Pennsylvania's problems. That is certainly my hope.

The actual work on legislation begins later this month, so I'd like to take a few moments now to offer information about two timely public interest programs. Both have to do with health and safety in the home.

January has been designated by the governor as "Radon Action Month", and as such, all homeowners in Pennsylvania are being urged to test their homes for radon. Many of you may already be familiar with radon, but if not, radon is a colorless, odorless gas that occurs naturally through the breakdown of uranium in soil and rocks. Radon is the nation's second leading cause of lung cancer and is responsible for an estimated 22,000 deaths each year, according to the U. S. Environmental Protection Agency (EPA). Found in many parts of Pennsylvania due to natural rock and mineral formations, radon seeps into homes through cracks in basements and foundations, and it can build up inside a home.

An estimated 40 percent of Pennsylvania homes are believed to have elevated radon levels. The EPA recommends taking action to lower the level of radon if the level is 4.0 picocuries per liter or higher. The only way to determine the radon level is to have the air tested in one's home.

For more information on radon and radon testing, visit www.depweb.state.pa.us, keyword: Radon or call 1-800-23-RADON

There is a simple test to detect radon gas seeping into a home using a kit that costs about \$25. The kits are available at many home improvement, hardware, outdoor supply, lawn and garden and department stores or by contacting a Pennsylvania-certified radon laboratory. In addition, there are more than 83 hospitals in the state that participate in the Pennsylvania Department of Environmental Protection's (DEP) newborn radon program, which gives new parents information about radon along with a certificate for a free radon test kit. Most homeowners can perform the radon test themselves, but the completed test kits are then sent to a state-certified lab for analysis, and the results returned to the homeowner. The winter heating season is the best time to test for radon because homes are closed, and if radon is present it will be found in peak concentrations.

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NOTES FROM THE DIRECTOR



CRAIG D. BROOKS, EXECUTIVE DIRECTOR

The U. S. Environmental Protection Agency (EPA) has launched an interactive website that maps 15 million acres of vacant waste sites in an effort to promote their redevelopment for wind and solar energy and other types of renewable energy generation. The initiative, known as “RE-Powering America’s Lands: Renewable Energy on Contaminated Land and Mining Sites”, supports a new way of looking at brownfields by promoting renewable energy production on unused contaminated land. The use of these brownfields can contribute to economic recovery and job growth while lessening our dependence on traditional fuels.

The project has two main features. First, is the interactive mapping feature that superimposes nearly 10,000 color-coded dots over a Google Earth map of the United States. Each dot represents a contaminated site or abandoned mine, and each color a site category.

The second feature is the data linked to each site, as well as the raw data that is presented with a link to an Excel spreadsheet. A click on any dot brings the user to descriptive information on a site, its federal and state environmental history, and data that quantifies and ranks a site’s renewable energy potential for eight types of power generation, including: utility level wind, community wind, utility level solar, utility level photovoltaic solar, biomass and biorefinery facilities.

A second click takes the user to an incentive sheet listing applicable federal and state incentives. Thirty-five states have incentives associated with renewable energy portfolio standards that require a prescribed percentage of energy generated in the state to be renewable energy.

These kinds of tools are always helpful to anyone considering development of wind power facilities. And,

developing renewable energy on contaminated land and mining sites reduces the stress on non-contaminated, undeveloped lands.

Brownfields are considered exceptional candidates for conversion to “energyfields” for many reasons. For example, there are thousands of such sites nationwide and many are situated where the aesthetics of wind or solar power structures would not be problematic. Infrastructure such as power lines, roads, transmission capacity and appropriate zoning are often already in place. Also, many of the sites are easier to purchase because of the remote locations and there is often low desirability for residential or commercial purposes.

Are brownfields destined to be America’s future “energyfields”?

Many EPA-tracked lands may be saddled with environmental conditions that make them ill-suited to residential or commercial redevelopment. But in many cases, federal and state controls can be maintained without any interference with above ground installations.

Apparently the Department of Energy (DOE) agrees. A fact sheet on a department website suggests that solar energy technologies are well-suited for use at brownfield sites because they require very little maintenance and can be installed on the ground without penetrating the surface or disturbing existing contamination.

There have been record-breaking increases in wind power installations over the past few years and the EPA and DOE fully expect public utility commissions and utility companies to take advantage of this opportunity as they shift greater resources toward renewable energy power sources.

“RE-Powering America’s Lands: Renewable Energy on Contaminated Lands and Mining Sites”, is available at: <http://www.epa.gov/renewableenergyland/>.

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.

Pennsylvania 15th in Promoting Energy Efficiency

– Tony M. Guerrieri, Research Analyst

California tops the list of U.S. states employing energy efficiency as the "first fuel" to grow their economies while meeting electricity demand, combating global warming, and contributing to the nation's energy security. This according to a report by the American Council for an Energy Efficient Economy (ACEEE).

"The 2008 State Energy Efficiency Scorecard" aims to recognize leadership among the states and identify best practices. It is the ACEEE's latest analysis of state-by-state ranking on the adoption and implementation of energy efficiency policies.

The report looks at how states are approaching eight energy efficiency categories: utility and public benefits programs and policies (20 points), transportation policies (six points), building energy codes (eight points), combined heat and power (five points), appliance efficiency standards (four points), state facility and fleet initiatives (two points), financial and information incentives (three points), and research, development and deployment (two points). States can earn up to 50 possible points in these eight categories combined, with the maximum possible points in each area weighted by the magnitude of its potential impact on energy savings.

In the previous edition, the 2006 Scorecard, California tied for first with Connecticut and Vermont. In the 2008 analysis, California (40.5 points) is alone in first place. Among its programs, policies and goals, California was the first to adopt appliance and equipment efficiency standards. But just because it is the top state does not mean it tops all others in each category. In looking just at the utility and public efficiency program, Vermont is first. In the Green Mountain state, energy customers pay an energy efficiency charge that funds Efficiency Vermont, which provides efficiency services. In 2006 the state spent more than \$15 million on such programs, about 2.4 percent of utility revenues, the highest of any state.

California was followed by Oregon (37), Connecticut (36), Vermont (33), New York (32.5) and Washington (32), to round out the top six places. Minnesota and Massachusetts tied for seventh place with a score of 26.5. Wisconsin (26) and New Jersey (25.5) were ranked ninth and tenth. The top 10 states are almost the same as in the previous rankings, except that Wisconsin bumped Rhode Island out of the top ten.

The next 23 states' scores trail fairly moderately behind: all scored at least 10 points, up to 23 points. This group includes Pennsylvania, which is tied for 15th place overall. Pennsylvania ranked 34th for its public utility programs to promote efficiencies, 39th for efforts to reduce electricity used, and 36th in the nation for electricity savings as a percentage of electricity sales. Pennsylvania came in 9th for implementing transportation policies designed to reduce greenhouse gas emissions, and it got points for being among the 14 states to adopt California's vehicle emission standards. It came in 24th for its use of building codes to promote efficiency, largely because of a poor rate of compliance. Pennsylvania's total score was 17 points, the same as Hawaii and Nevada.

The bottom 18 states, however, lag seriously behind the other states, scoring between zero and nine points. At the bottom: West Virginia (5.5), Oklahoma (5.5), Missouri (4.0), Tennessee (3.5), Mississippi (2.0) and South Dakota (2.0), with North Dakota and Alabama tied for 49th place with 1.5 points. The dubious distinction of being 50th goes to Wyoming, which scored zeros in all eight energy efficiency categories.

Pennsylvania ranked in the second tier of states, whose scores reflected moderate success

Some states that were in the middle and lower rankings in the previous ranking made significant jumps in 2008, showing how much action they have taken on energy efficiency over the past few years. Idaho, for example, moved up from 25th place to 13th, due to an increase in efficiency investments. From 2004 to 2006, the state almost tripled its spending on electric utility efficiency programs. Florida, which developed a number of new programs including stricter building codes, jumped from 29th to 19th, and Maryland moved up from 20th to 12th.

The report includes detailed tables looking at how states compare to one another on the various issues, along with numerous examples showing what states are doing differently and, in turn, what states are not doing anything at all.

The ACEEE is a non-profit organization dedicated to advancing energy efficiency as a means of promoting both economic prosperity and environmental protection. Its report, "The 2008 State Energy Efficiency Scorecard", is available at: <http://aceee.org/pubs/e086.pdf?CFID=1905607&CFTOKEN=99328399>.

Source Water, Infrastructure Top Concerns for Water Utilities, Industry

– Craig D. Brooks, Executive Director

Dwindling source water supplies and aging infrastructure lead the list of concerns for drinking water utilities and industry professionals, according to a report by the American Water Works Association (AWWA). The report reflects responses from more than 1,800 water professionals on the key challenges and the overall health of the industry. The objective of the survey and report is to provide AWWA members and the public with information to help them make critical water-related decisions.

Three distinct survey questions were asked:

- **What critical issues are facing the industry in the near term (one to two years)?**
- **What critical issues are facing the industry in the long term (three to five years)?**
- **What current issues are inadequately addressed?**

During the past five years, concerns have grown substantially over source water quality and the availability of water resources. Concerns have also grown over financing capital projects and rebuilding water and sewer lines. Source water remained the top issue in the AWWA's fifth annual report, but for the first time it was called a top issue in both the short term and long term.

Infrastructure was cited as the second leading concern and most frequently cited as an inadequately addressed issue area. Regulatory issues followed close behind. Concerns over water security have dropped somewhat since September 11, 2001, which may be due to newly installed sensors and other security equipment at water facilities.

The report suggests that the rise of source water supplies to the top of the list may be attributed to the near depletion of Atlanta, Georgia's primary drinking water reservoir in 2007. The major component of source water concern remains the basic need to have adequate quantities of treatable water, especially in areas with high demand growth.

Unfortunately, according to the report, areas such as the Southwest and Southeast experience pressure from both demand growth and drought, compounding source water concerns. The other primary components of source water concern are the need for conservation and more efficient water use and reuse to better manage scarce water

resources. The report suggests that it is appropriate to conserve water even if it is in plentiful supply.

The sources of water and aging infrastructure topped the lists of major concerns in an AWWA survey

The state of the water industry infrastructure continued to be a top area of concern. While many respondents described public works to be aging, crumbling or failing, water infrastructure continues to be an "out of sight, out of mind" issue that has not been adequately addressed, according to the report. The report suggests that deferring maintenance is no maintenance at all, and the costs for many waterworks will be prohibitive. Water and sewer regulations could be held off while the industry addressed infrastructure replacement. Infrastructure issues also included water leakage, cross connections and water storage concerns.

General concerns about compliance prevailed over the regulatory issue. According to the report, many U.S. water industry professionals specifically challenged the basis for new regulations and the cost/benefit relationship of newer and stricter mandates. The report suggests that regulatory agencies do not take into account the real world limitations of cost versus benefits.

The "2008 State of the Industry Report" is available for purchase from AWWA at: <http://www.awwa.org>.

Greenhouse Gas Reduction Strategies in Iowa

– Tony M. Guerrieri, Research Analyst

In 2005, activities in Iowa accounted for approximately 120 million tons of carbon dioxide emissions, an amount equal to 1.7 percent of total U.S. greenhouse gas (GHG) emissions. According to a report by the Iowa Climate Change Advisory Council (Council), over the next 40 years, Iowa and its residents can achieve significant reductions in the amount of GHGs they discharge into the atmosphere.

The Council was established by the Iowa General Assembly in 2007. The Council was specifically charged with developing a range of scenarios for reductions of statewide GHG emissions and recommending the best strategies for statewide emissions reductions.

The Council's report proposes two GHG reduction scenarios that include benchmarks for lowering emissions. In the first, the state would adopt a plan for a 50 percent cutback from 2005 emissions by 2050, with interim goals

of one percent by 2012, and 11 percent by 2020. The other scenario would set as a goal a 90 percent cutback from 2005 emissions by 2050, with interim goals of three percent by 2012 and 22 percent by 2020.

The report presents 56 environmental policy options (out of more than 300 potential options considered) that promote energy efficiency, use of fuels and practices that pollute less, and development of new technologies that reduce or do not contribute to GHGs in the atmosphere.

The report contains a cost analysis of 38 options and found that lowans would spend almost \$4.8 billion, or a weighted average cost of \$8.80 per metric ton of carbon dioxide emissions reduced, over the next decade if state lawmakers implemented the 38 options recommended by the Council.

Iowa's study and proposals may be instructive for other states seeking to increase energy efficiency and reduce greenhouse gas emissions

The report said that many of the policies are estimated to yield significant cost-saving opportunities for lowans, while other policies will incur net costs. For example, improving energy efficiency would save Iowa more than \$1 billion between 2009 and 2020, offsetting the total net costs. But, producing renewable energy would cost more than \$5.9 billion, according to the report.

The Council found that the 38 recommendations that were analyzed yielded emissions totaling 20 million metric tons of carbon equivalent in 2012, and 105 million metric tons of carbon equivalent in 2020. The combined effect of implementing those 38 options and recent federal and state actions would enable the state to achieve the 2020 goals, the report concluded.

The energy industry, which accounts for 31 percent of Iowa's GHG emissions, would be most impacted by the Council's options. The industry would be required to increase renewable energy sources and reduce carbon dioxide discharges.

Policy options listed by the 23-member Council included specific suggested goals. Some of them included:

-- CAP AND TRADE: The system would limit the amount of GHG emissions a business may legally produce. Companies producing less than their limit would be able to sell or trade their credits with businesses that fail to meet emissions limits.

-- NUCLEAR: A new 1,200-megawatt nuclear power plant, large enough to provide energy to roughly 900,000 homes, would be constructed. Plans should begin immediately because design, permit and construction stages would likely take more than a decade to complete.

-- DECARBONIZATION FUND: Electric utilities would pay a fee for each ton of carbon emissions they produce, according to this proposal. The goal would be that the industry would transition to lower-emitting sources of power. Such a fund would collect an estimated \$320 million by 2019, which would be used to further develop renewable fuel production.

-- PASSENGER RAIL: The state should promote a statewide passenger rail system to supplement existing service.

-- REQUIRED ENERGY REDUCTIONS: By 2015 the state would require Iowa utilities to save at least two percent of their annual retail sales of natural gas and electricity by using energy efficiency programs.

-- EFFICIENCY: Retail consumption of energy would be reduced by at least 15 percent by 2020 under this option. The proposal would give consumers greater incentives to adopt efficient technologies.

-- TRAINING: Professionals in construction and design would have licensing requirements that address energy reduction techniques by 2010.

The Council did not set priorities for its recommendations and in some cases, its members did not unanimously approve the ideas. The nuclear plant option as well as the cap and trade idea, for example, were opposed by five of the 23 voting Council members.

The full report and proposals (469 pages) can be found at: <http://www.iaclimatechange.us/capag.cfm>.



Regulating Carbon Has Little Impact on Total Transportation Emissions

– Craig D. Brooks, Executive Director

Federal policies that could put a price on carbon dioxide emissions to help curb global warming would have only a modest impact on emissions from the transportation sector, according to the Congressional Budget Office (CBO). Emissions reductions from vehicles would provide only about a five percent contribution to total U.S. emissions cuts under future carbon policies, according to the CBO report, *“Climate-Change Policy and CO2 Emissions from Passenger Vehicles”*.

According to the CBO, policies to curb emissions, which could be instituted either through an emissions trading program or a carbon tax, would probably encourage deeper emissions reductions from sources where cuts would be more cost effective, such as power plants.

A cap-and-trade program or carbon tax would raise the price of gasoline, with the intent of encouraging customers to drive less and to buy vehicles that are more fuel efficient. But the effects on the price of gasoline and on consumer behavior would be modest under most policy proposals, the report says.

For example, the CBO found that a rise in gasoline prices from \$1.50 to over \$3.00 a gallon between 2003 and 2007 caused only a small decline in the amount of driving, a slight reduction in vehicle speeds on congested freeways, a moderate increase in the purchase of vehicles relative to light trucks, and a somewhat better than average fuel economy for new cars and light trucks.

Furthermore, the report suggests that imposing a price on CO2 emissions is unlikely to cause the passenger vehicle fleet to become more fuel efficient because the corporate average fuel economy (CAFE) standards already call for greater improvements in fuel economy than a CO2 price would achieve. The CAFE standards will result in the reduction of CO2 regardless of how the CO2 is priced. In 2007, Congress boosted the vehicle efficiency standards to require light trucks and automobiles to achieve a fleetwide standard of 35 miles per gallon by 2020, roughly 10 miles per gallon higher than the fleet average today. The report suggests that the more stringent CAFE standards will help drive down emissions and improve fuel economy more than setting a carbon price.

As gasoline prices hovered around \$4.00 a gallon by May 2008, the CBO updated and expanded its analysis. However, according to the CBO, the results were nearly identical. According to the report, drivers reacted by reducing the number of miles driven, but only slightly. Motorists drove 2.8 percent fewer miles in the first half of 2008 compared with the first half of 2007.

Over time, the CBO estimates CO2 emissions would decline by about 2.5 percent – with all else being equal – still much less than from other sources given that the average reduction in emissions is about 10 percent.

In the short run, total gasoline consumption would remain essentially the same. Consumption might be reduced over time because consumers took the increase in the price of gasoline into consideration when replacing existing vehicles and revisited decisions about where to live and work.

The CBO report, *“Climate-Change Policy and CO2 Emissions from Passenger Vehicles”*, is available at: <http://www.cbo.gov/doc.cfm?index=9830>.

The Congressional Budget Office says putting a price on CO2 emissions will do little to curb emissions in the transportation sector

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

The Environmental Synopsis is issued monthly. The newsletter examines timely issues concerning environmental protection and natural resources.

If someone you know would like to receive a copy of the Synopsis each month, please contact the Committee office at 717-787-7570.



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ON THE HORIZON . . .

A LOOK AT UPCOMING EVENTS

✓ **Monday, February 9, 2009, 12 noon, Room 205, Matthew J. Ryan Building, Capitol Complex, Harrisburg, PA** – Environmental Issues Forum on the Susquehanna Greenway Partnership (Partnership). Gary Bloss, executive director of the Partnership, will speak about the state’s largest greenway, nearly 500 miles long, which is a planned corridor of green infrastructure composed of revitalized river towns, interconnected trails, parks, river access points, riparian buffers and pathways linking the Susquehanna River and its West Branch with cities, towns, rural areas, conserved natural lands and forests. *

✓ **Thursday, February 12, 2009, 10 a.m., Penn Stater Conference Center Hotel, 215 Innovation Boulevard, State College, PA** – Meeting of the Joint Legislative Air and Water Pollution Control and Conservation Committee’s (Committee) Forestry Task Force. *

* Please call the Committee office at (717) 787-7570 if you plan to attend.

Check the Committee website at <http://jcc.legis.state.pa.us> for events that may be added to the schedule.

COMMITTEE CHRONICLES . . .

REVIEW OF SOME MEMORABLE COMMITTEE EVENTS

The most recent meeting of the Joint Legislative Air and Water Pollution Control and Conservation Committee’s Forestry Task Force featured a presentation on the Federal Highlands Project, a multi-level project aimed at assisting Pennsylvania, New York, New Jersey and Connecticut in conserving land and natural resources in the Highlands region. The region is a nationally significant and ecologically diverse swath of forested mountains and hills stretching over portions of the four states. Pennsylvania and Connecticut have been the subjects of a two-phase inventory and evaluation by the USDA Forest Service.

Providing a conservancy perspective of the project to the task force was guest speaker Andrew Pitz (photo at upper right), vice-president of Strategic Policy and Planning for the Natural Lands Trust.

Also speaking and providing a Pennsylvania perspective was Todd Stell (photo at center right), the Highlands Outreach Coordinator with the Highlands Coalition.

The final speaker was Martina Barnes (photo at bottom right), a regional planner with the USDA Forest Service. She was joined by Bob Lueckel, a field representative with the Forest Service.



According to DEP, if radon is found to be present above the minimal recommended level, a home can be fixed for less than \$1,500, with radon mitigation systems typically costing between \$800 and \$1,200. Professional installers of such systems must be certified by the department, and a list of state-certified radon contractors can be found on DEP's website at www.depweb.state.pa.us, keyword: Radon. Then click on "Radon Services Directory". Or, you may call 1-800-23-RADON.

Testing one's home for radon is not required. However, if a home has been tested, the test results must be disclosed if and when the home is sold.



The second item in the public interest is that according to DEP, effective just a few days ago on January 1, substantially lower rates for mine subsidence insurance became available to homeowners and commercial building owners. Effective the 1st, annual premiums for residential mine subsidence insurance dropped by 25 percent, while rates for commercial structures dropped by 60 percent. This is important because most homeowner policies do not cover damage caused by mine subsidence, but more than one million Pennsylvania homes sit on top of abandoned mines.

Pennsylvania's Mine Subsidence Insurance program is a non-profit fund administered by DEP that provides coverage up to \$250,000 for homes, businesses and attached structures in the event of subsidence from abandoned coal and clay mines. The department estimates that under the reduced rates, homeowners could get \$250,000 of coverage for \$157 per year and business owners the same coverage for \$314 per year.

If you think you live in an area prone to mine subsidence, check out www.pamsi.org or call the Department of Environmental Protection toll-free at 800-922-1678

There is also a 10 percent discount for homeowners age 65 and older. In addition, the department has expanded available coverage to include sidewalks, driveways, retaining walls, in-ground pools and other types of property.

You can apply for mine subsidence insurance directly from DEP by phone at 800-922-1678, or online at www.pamsi.org. You may also want to contact your local insurance agent about the program. The website above includes lots of information and an interactive map program so property owners can see if their property is atop an abandoned mine.



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