

ENVIRONMENTAL SYNOPSIS

The Chairman's Corner

Rep. Scott E. Hutchinson, Chairman



Perhaps - like me - you occasionally get confused by the many abbreviations and acronyms that we face each day. Perhaps - like me - you also are sometimes confused by terms of science and/or art and find yourself wondering exactly what you may have just read. Science is just one of the fields loaded with acronyms and has its fair share of confusing technical terms as well.

I initially came across some of these shorthand names on the Internet and as I read the descriptions realized that many of them did positive things for consumers and employers. I wondered if the benefits were going wanting because everyday people failed to realize what they meant.

For example, what about the acronym LEED? It stands for "Leadership in Energy and Environmental Design" and is the most widely known and accepted green building certification program. Green Globes is another. Green buildings are energy savers and environmentally friendly structures.

VOC is another term individuals would be well advised to become more familiar with. It stands for volatile organic compounds, which are the noxious or toxic chemicals found in or released from paints, stains, adhesives and sealants. Whenever possible look for products labeled as having low, no or zero VOCs.

A dual-flush toilet doesn't mean you flush twice. It refers to water saving technology and is a toilet that is fairly common in the commercial world and is now starting to become available for residential use. It is a water-conserving toilet that gives you a choice of low flush (as little as 0.8 gallon) or a more powerful flush of about 1.8 gallons. Such water savings are important in times of drought or mandatory conservation.

You may have read the term "life cycle analysis", but how many really know what it means? It speaks to the tracing of a product, material or practice from its origin to its final disposal or reuse. It is a way to trace where such an item or process comes from, how much energy was used to create it, its effect on the home environment and its effect on the environment when no longer useful. All are good things to be aware of when selecting a product or practice.

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NOTES FROM THE DIRECTOR

CRAIG D. BROOKS, EXECUTIVE DIRECTOR

When it comes to energy, many states, including Pennsylvania, have adopted Renewable Portfolio Standards (RPS), and other states are considering doing the same thing. Although the specifics vary with each state and program, a RPS requires that a certain percentage of the electricity sold in the state be produced from renewable resources. A RPS is intended to achieve "greenness" in a lowest-cost way, thereby encouraging development of energy production by those methods defined as alternative.

Following Pennsylvania's lead in establishing Clean Energy Portfolio Standards, the state of New Jersey will require at least 20 percent of electricity supplied to retail customers to be generated from renewable energy sources by 2020. Their renewable portfolio standards, which were published in the New Jersey Register in May, also require that solar energy amount to two percent of the electricity supplied to New Jersey consumers by 2020. This solar energy goal is the most ambitious in the nation on a per capita basis and is exceeded only in California, which is four times the size of New Jersey in population and electricity consumption. It will expand New Jersey's solar market from 90 megawatts to be installed by 2008 to 1,500 megawatts of solar power by 2020.

The New Jersey RPS requires incremental increases each year from 2009 through 2021, when at least 22.5 percent of the electricity sold by retail suppliers to New Jersey customers must come from renewable sources. Of the total, 2.12 percent must be solar electric generation, 17.9 percent Class I renewable energy such as wind, geothermal, fuel cells and landfill gas recovery, and 2.5 percent Class II renewable energy sources such as approved resource recovery or hydro power facilities.

New Jersey recently commissioned Rutgers University to conduct a study to identify and quantify the incremental cost benefits of the 20 percent RPS compared to the existing standards. The study has suggested that the economic impact of establishing the 20 percent RPS is negligible. The 20 percent RPS would raise the electricity prices approximately 3.7 percent in the year 2020 and have no measurable impact on the growth of New Jersey's economy. The RPS would add approximately 11,700 jobs between 2008 and 2020 and support off-shore wind infrastructure, lower natural gas prices by reducing the burning of this fuel in power generation, and increase the reliability of the power grid by providing electricity when power is not available.

Both Pennsylvania and New Jersey have adopted RPS standards but there are interesting differences between the two plans

In Pennsylvania, Tier I requires eight percent of electricity sold at retail in the state to come from traditional renewable sources such as solar, wind or low impact hydro power. Notably, at least 0.5 percent of Tier I electricity must come from solar power. Pennsylvania is the first major coal producing state to adopt a RPS. Pennsylvania's statute not only promotes the use of traditional renewable resources but also new "clean" technology for the use of coal, and waste coal reserves. Tier II requires 10 percent of the electricity to be generated from waste coal, distributed generation systems, demand-side management, large scale hydro power, municipal solid waste, generation from pulp and wood manufacturing byproducts and combined coal gasification technology. The increased use of renewable resources is intended to provide greater fuel diversity for Pennsylvania, New Jersey and other states that adopt such measures, while at the same time, reducing energy costs, strengthening the economy, improving public health and reducing greenhouse gasses.

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: Better Management of Voluntary Emissions Reduction Programs Necessary

– Tony M. Guerrieri, Research Analyst

A report by the U.S. Government Accountability Office (GAO) concludes that the tangible results from two voluntary programs to reduce greenhouse gas emissions are highly varied.

The GAO report, "Climate Change: EPA and DOE Should Do More to Encourage Progress Under Two Voluntary Programs", examines the U.S. Environmental Protection Agency's (EPA) "Climate Leaders Program" and the U.S. Department of Energy's (DOE) "Climate VISION Program (Voluntary Innovative Sector Initiatives: Opportunities Now)." The former program focuses on firms, while the latter concentrates on trade groups.

While expectations are clearly set, results and efforts to track results vary widely

The GAO report examines the progress the EPA and DOE have made in implementing their respective programs. Specifically, for each program, the report discusses (1) the participants' progress in completing the program steps, the agencies' procedures for tracking progress, and their policies for dealing with participants that are not progressing as anticipated; (2) the types of emission reduction goals established by the participants; and (3) the agencies' estimates of the share of U.S. greenhouse gas emissions that their programs account for and their estimates of the program's impacts on U.S. emissions.

Both encourage polluters to cut their greenhouse-gas releases, but in each case, the agencies failed to ensure that participating firms set firm reduction targets or met their stated goals. According to the report, "The EPA and DOE each expect participants in their voluntary

emission reduction programs to complete a number of actions; however, participants' progress toward completing those actions, as well as the agencies' efforts to track accomplishments, has varied."

For example, within about one year of joining the program, the EPA expects firms to enter into discussions with the agency to establish an emissions reduction goal and to complete these negotiations, generally within another year. The EPA now partners with 74 corporations whose U.S. emissions represent an estimated eight percent of total U.S. greenhouse gas emissions. As of November 2005, only 38 of the 74 firms in the EPA program had set reduction goals; the rest are in the process of setting goals. The EPA is developing a program to track a participant's progress. However, the agency is still in the process of obtaining and validating data from participants.

The GAO had a more difficult time tracking participants' progress in the DOE's Climate VISION program because the participants measure their emissions reductions by varying methods and over varying time periods. In the VISION program, 15 industry trade groups are on record as creating their own work plans for reducing their respective members' greenhouse gas emissions. Of those 15 groups, 11 have established targets, and five have reported on their emissions. The DOE does not have a system for tracking how long each group takes to complete its work plan and report emissions data.

According to the GAO report, neither agency has established written policies for taking action against entities not progressing as expected.

The GAO report includes a number of specific recommendations to improve the management of both programs including:

- The DOE develop a system for tracking participants' progress in completing key steps associated with its program.
- The EPA and DOE develop written policies establishing the consequences for not completing program steps on schedule.
- The EPA and DOE find a way to determine the

emission reductions attributable to each program so that the same emissions reductions reported by organizations participating in Climate Leaders, Climate VISION, and other voluntary programs are not counted by more than one program.

The 51-page report, “*Climate Change: EPA and DOE Should Do More to Encourage Progress Under Two Voluntary Programs*”, can be found on the GAO’s website at this address: <http://www.gao.gov/new.items/d0697.pdf>.

Federal Agencies Could Face Billions in Cleanup Costs

– Craig D. Brooks, Executive Director

The federal government faces an estimated price tag of at least \$249 billion to clean up contaminated wastes at military installations and nuclear weapons production plants. The amount however, could be higher because the extent of the contamination cannot be fully determined. According to the Government Accountability Office (GAO), this estimate reflects the federal government’s third-largest reported liability, after the debt and retirement and veterans benefits. GAO looked at the environmental liability cleanup costs of the Department of Defense (DOD) and the Department of Energy (DOE). According to GAO, the DOE and DOD together make up \$246 billion (99 percent) of the government’s reported liability. The remaining \$3 billion (1 percent) of the reported liability represents the estimated environmental liability cleanup costs of 12 other federal agencies, with the largest being the Department of Transportation (1.1 billion), the National Aeronautics and Space Administration (\$987 million) and the Department of Veterans Affairs (\$339 million).

Federal agencies’ responsibilities for environmental cleanup are set by a number of different laws, regulations and agreements. However, GAO suggests that the progress in cleaning up sites frequently does not meet expected time frames and the costs often dramatically exceed available funding levels. In addition, the current approaches, according to GAO, are not economically nor environmentally cost effective or efficient. Management of environmental liability represents one of the federal government’s major challenges from both financial and environmental perspectives. Because of this, the GAO is strongly recommending that these agencies determine priorities for cleanup and disposal activities and to appropriately consider future budgetary resources needed to carry out these activities.

According to GAO, DOE’s recorded liability was

\$182 billion, the largest of any federal agency and was related primarily to the cleanup of nuclear waste and contamination at 50 energy locations across the country. Over 40 percent of the DOE’s total liability relates to the cleanup of “legacy wastes”, which refer to those wastes produced for the nation’s nuclear weapons production activities that occurred during World War II and the subsequent Cold War, and also the ongoing operations at active facilities such as the national laboratories which carry out scientific research for national and defense purposes. Most of these are located in Washington, South Carolina, and Idaho.

The estimated cleanup costs relate to the treatment and disposal of millions of gallons of radioactive byproducts from making plutonium and other nuclear materials, decontamination and demolition of facilities used for decades in nuclear materials production, and the cleanup of contaminated soil and groundwater at these locations.

What is the real price tag for the cleanup of contaminated wastes at military installations and nuclear weapons production plants?

In contrast to DOE, the DOD reports a need to clean up over 2,300 locations around the country. This includes about 600 current and base realignment and closure (BRAC) military locations and over 1,700 formerly used defense locations in every state in the country.

DOD is required to clean up contamination resulting from past and current waste disposal practices, leaks, spills and other activities that have created a public health or environmental risk. DOD’s environmental liabilities consist mainly of hazardous waste disposal and cleanup on training ranges, including the removal of unexploded ordnance and the disposal of nuclear ships, submarines and chemical weapons.

In addition, DOD is responsible for the cleanup of hazardous wastes such as petroleum products and PCB’s at military bases and formerly used defense sites.

The GAO report, “*Environmental Liabilities: Long-Term Fiscal Planning Hampered by Control Weaknesses and Uncertainties in the Federal Government’s Estimates*” (GAO-06-427) is available at <http://www.gao.gov/new.items/d06427.pdf>.

Michigan's Growth Outpaces Its Resources

- Tony M. Guerrieri, Research Analyst

Michigan is losing productive farmland, using energy and gobbling up natural resources at rates well beyond the state's population growth. That is the conclusion of a report by two environmental groups that shows that Michigan's citizens and what they consume are taking a toll on the state's land, water and wildlife.

The report, *"U.S. State Reports on Population and the Environment: Michigan"*, by the National Wildlife Federation and the Center for Environment and Population, provides a snapshot of how population growth and unrestricted land use can impact the environment in areas such as fisheries, wildlife, waste disposal and land use.

Michigan's population grew by 12 percent, to about 10.1 million, over the past three decades. Nearly a third of the state's population lives in just two southeastern counties. But the number of households grew by 43 percent during the same period, indicating the typical household has fewer residents than before.

Because every household contains possessions, occupies space and emits pollution, an increase in the number of households can significantly increase environmental impacts even when the population as a whole is not growing at a fast rate. Coupled with people's continuing desire for suburban lifestyles, the jump in households is encouraging sprawl, according to the report.

Roughly 820,000 acres of Michigan land were developed between 1982 and 1997. If that trend persists, 1.5 million to 2 million additional underdeveloped acres will be converted to residential, commercial or industrial use by 2020, the report says. That would represent a land development increase of 63 percent to 87 percent, while the population is projected to grow only 11.8 percent.

Some of the urban sprawl and development is happening on once-productive farmland, 40,000 acres of which are paved over each year, the report says. Michigan ranks ninth in the country for loss of farmland due to development.

Other increasingly popular locations for growth include coastal areas and forests, which damage wildlife habitat. Nearly one-half of Michigan's population resides in a coastal county, with effects on the habitat of many species of birds, mammals and fish.

Sprawl encourages driving, which helps explain why Michigan's energy consumption has risen about 1.3 percent annually for the past 20 years – three times the annual growth rate (0.4 percent) of the state's population, the report says.

Michigan could run out of landfill space in the next decade if it continues to accept out-of-state garbage, the report suggests. It generates an average of 15 million tons of municipal solid waste (MSW) annually, but disposes of over 21 million tons per year. Michigan imports MSW from 12 different states and Canada, and is the third largest importer of MSW in the country. Four million tons were imported in 2001 from Canada, Illinois, Indiana, New Jersey, Ohio, Pennsylvania and Wisconsin.

Michigan is the largest U.S. consumer of the public water supply in the Great Lakes, and ranks eighth nationally in overall public water supply withdrawals. The major water use sectors in the state include power generation (81 percent), public water supply systems (11 percent), self-supplied industries (six percent) and agricultural and golf course irrigation (two percent). Of all water withdrawn in Michigan, 91 percent comes from Great Lakes water sources.

Michigan's experience shares some common attributes with Pennsylvania

According to the report, 15 species of fish are currently listed as endangered or threatened in Michigan and nine are considered extinct, including the paddlefish, bluepike and Arctic grayling. In addition, 81 animal species, such as the cougar and Indiana bat, are listed as endangered or threatened in Michigan.

The Center for Environment and Population is a non-profit research, policy, and public outreach organization that examines the relationship between human population, resource consumption, and the natural environment.

The National Wildlife Federation is one of the nation's largest member-supported conservation education and advocacy groups.

The report, *"U.S. State Reports on Population and the Environment: Michigan"*, is available at: <http://www.cepnet.org/documents/MIReportFINALPDFforPublication6-29-06.pdf>.

GAO Report Reviews Endangered Species Act Recovery Plans

– Craig D. Brooks, Executive Director

The Endangered Species Act (ESA) is considered to be one of the most powerful of this nation's environmental laws. Passed in 1973, the act's purpose is to both conserve and restore species that have been listed by the federal government as either endangered or threatened. The act has several provisions that promote these goals:

- ✓ First, the act broadly prohibits anyone from doing anything that would kill, harm, or harass an endangered species. These prohibitions also apply when listed animals are on private lands.
- ✓ Second, federal agencies have a special obligation to ensure that they do nothing that would harm a listed species. The obligation specifically affects activities on federal lands, such as grazing, logging, and mining. It also means that a federal agency must assess whether its actions could affect a listed species before the agency signs off on projects like new highways for dams on non-federal lands.
- ✓ Third, the act tells the federal agencies to develop plans that show how a listed species could be restored or "recovered" so that it no longer needs the act's protections (delisted).

There are approximately 1,880 species listed under the ESA. Of these species, approximately 1,310 are found in part or entirely in the United States and its waters. The remainder are foreign species. Determining how much time and money are required to recover endangered and threatened species would make it easier to judge the success or failure of the ESA, but federal regulations generally do not include that information in species recovery plans, according to a Government Accountability Office (GAO) report. The U.S. Fish and Wildlife Service and NOAA Fisheries, the two agencies responsible for implementing the act, do not routinely include time and cost estimates in recovery plans. Cost and time estimates may be difficult, in part, because there are many variables involved in the recovery process. However, both agencies agree it is possible to make broad estimates for most species.

The findings and recommendations are part of a GAO report, "Endangered Species: Time and Costs Required to Recover Species are Largely Unknown". The report comes at a time when Congress is considering an overhaul of the ESA.

As of January 2006, the agencies had approved 558 recovery plans for 1,049 species, about 82 percent of the protected species in the United States, according to GAO. Since the act's inception, nine species have become extinct, while 17 have recovered to the point they no longer need endangered species protection. This is less than one percent of the species listed.

The implications of the GAO report for the possible overhaul of the ESA are uncertain

As Congress looks at amending the act, GAO examined a random selection of 107 recovery plans. According to the report, 73 did not provide estimates of when the species were expected to recover and 87 did not estimate the total costs of the recovery. Many plans do not include overall time and cost estimates because of the difficulty in developing accurate estimates due to so many variables in the recovery process, and the uncertainty of how a species will respond to recovery efforts.

Nonetheless, the agencies indicated that it is possible to develop broad estimates for most species, and recovery plans will now include overall cost estimates for recovery. Because of the low statistical recovery rates for the ESA, the GAO report has recommended that recovery plans, to the maximum extent possible, include recovery criteria such as costs and time for possible recovery and consideration of species delisting factors.

The GAO report (GAO-06-463R) is available at <http://www.gao.gov/new.items/d06463r.pdf>.

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

Have a great Summer!

COMMITTEE CHRONICLES . . .

REVIEW OF SOME MEMORABLE
COMMITTEE EVENTS



The Joint Conservation Committee's May Environmental Issues Forum featured a presentation by Lafarge, the largest building products company in the world, on its Alternative Energy in Manufacturing Initiative (AEMI). AEMI is a partnership between Lafarge North America, Lehigh University and the Pennsylvania Department of Environmental Protection to help Pennsylvania manufacturers reduce their reliance on non-renewable fossil fuels and become more competitive in the global marketplace.

Lafarge's Whitehall plant, more than 100 years old, has been a pioneer in the use of alternative fuels, becoming the first PA cement manufacturer to use recycled tires as a fuel source in 1993, and, in 2005, becoming one of the first manufacturing plants to be permitted to use plastic-derived fuel.

Pictured at left, Vince Martin, Director of Environmental Affairs at the Lafarge Whitehall plant, describes Lafarge's alternative energy plans.

At below right, committee and Lafarge officials pose for a photo at the conclusion of the program. From left to right are committee Vice-chairman Sen. Raphael Musto, Vince Martin, Carla Eustace of Lafarge, committee member Rep. Julie Harhart, in whose district the Lafarge Whitehall plant is located, and committee Chairman Rep. Scott Hutchinson.



Pennsylvania state government is no stranger to shorthand terms, and many refer to beneficial programs. How about “ESP”? It is not extra-sensory perception but the Engineering Services Program. This is a program through the Pennsylvania Department of Environmental Protection (acronym – DEP) designed to aid small drinking water systems with engineering assistance in providing adequate quantities and quality of safe drinking water. Call DEP at 717-772-4018 if you want more information.

Pennsylvania is also home to MSAs, or “multi-site agreements”. The MSA program provides an opportunity for property owners to voluntarily address environmental conditions through a single, cooperative statewide agreement. It is intended to be used when groups of properties requiring assessment and cleanup to make the properties safer, cleaner and more valuable are under single ownership. The emphasis of an MSA plan is to meet environmental goals with controllable costs by using flexibility, common sense, long-term planning and innovative problem solving.

Don't let acronyms and scientific jargon keep you from learning about programs that can help you and the environment

AFIG is a good example of the state's current emphasis on development of alternative fuels. It is an acronym for the Alternative Fuels Incentive Grant Program. The program provides financial assistance and information on alternative fuels, alternative fuel vehicles, hybrid vehicles and other alternative fuel technologies. The goal is to reduce Pennsylvania's dependence on imported oil, improve the state's environmental quality and foster economic development through the commercialization of innovative energy technologies and the use of fuels indigenous to Pennsylvania.

Of special interest to Pennsylvania motorists will be the hybrid electric vehicle rebate program. Eligible commonwealth residents are expected to have the opportunity to apply for a rebate to assist with the incremental cost for the purchase of a new hybrid electric vehicle, because DEP plans to reopen the rebate program. The new state budget includes \$3 million for the hybrid vehicle rebate program, double what was available previously. Visit DEP's website at www.depweb.state.pa.us to learn more. Use the “Search” section for an alphabetical listing of programs, and go to the AFIG page under the letter “A”.

At the federal level, the Energy Star program (www.energystar.gov) is one that could help you in choosing household appliances or deciding how to supply energy to your home. Energy Star is the name given an energy-efficiency rating system sponsored by the U. S. Environmental Protection Agency (another acronym – EPA).

These are just a few of the program abbreviations referring to environmental issues that are out there. The point is don't let acronyms and scientific shorthand deter you from finding out more about programs that can improve the environment, increase energy efficiency or save you money as a consumer. These eco-terms are not really as complicated as they seem. Use them to your benefit.

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