



The Chairman's Corner

Rep. Scott E. Hutchinson, Chairman

The conflict between consumer demand and energy policy reappeared recently with the latest report on new vehicle gas mileage. That report also lends impetus to research and development of fuel alternatives and the vehicles that use them.

According to the Environmental Protection Agency's (EPA) annual mileage statistics, the average fuel economy for 2003 models - 20.8 miles-per-gallon (mpg) - slipped slightly from 2002's mileage of 21 mpg, and is about six percent below the peak mpg figure of 22.1, set 15 years ago. The decline is consistent over different vehicle classifications as well. Passenger car (of which there are 488 models) mileage dropped from 23.9 mpg to 23.6. It was 24.2 in 2001. For SUV's, vans and pickup trucks (of which there are 446 models), the 2003 average of 17.6 mpg is less than 2002's 17.9, but better than 2001's 17.3 mpg.

Further, the share of vehicles getting more than 30 mpg drops from six percent to four, and from 48 of the models available in 2002 to only 33 models in 2003.

The reason for the declines? Industry officials, automakers and many buyers say it is "lifestyle choices" and a higher priority on comfort and family needs. Such desires apparently are driving the market, more so than gasoline prices or environmental concerns. As one prospective purchaser stated, "I buy a car for what I need it for and fuel is just a thing to go along with it."

(continued on page 8)

In This Issue...

- The Chairman's Corner p. 1
- Notes From the Director p. 2
- Research Briefs p. 3-6
 - ✓ Outdoor Activities Are Big Business
 - ✓ Texas "T" Not Oil but Renewable Energy
 - ✓ Easing Into Conservation Easements
 - ✓ Growing More Water
- On the Horizon p. 7
- Committee Chronicles p. 7
- Contacting the Joint Conservation Committee p. 8

Notes From the Director

Craig D. Brooks, Director

Wind farms are generating a lot of interest in Pennsylvania and the eastern United States these days. Proposals for constructing wind farms are popping up all over. This past summer, the committee had the opportunity to visit a wind farm located in Somerset County, just off the Pennsylvania Turnpike. It's just one of several wind farms that have created an alternative energy generating source for homes, businesses, colleges and universities in the Commonwealth. Now there's the possibility of another site being located in Lake Erie - where predominately westerly winds would make an ideal spot for generating electricity.

Winergy, a privately held company, is pursuing the development of the Lake Erie site as well as 22 other locations along the Atlantic seaboard. The Atlantic Coast projects range in size from a 207-acre site with six turbines to a 108-square mile ocean site with 506 turbines. Most of the projects would range from 250 megawatts to 450 megawatts of power. The Erie project would be small in comparison with a 10-megawatt facility and a minimum of three turbines, but it has the potential to produce all the power needed for about 3,000 homes.

Offshore locations for wind-powered electric generation offer some advantages. First, windy days are not in short supply. As a former resident of Erie, I can say with certainty that the winds are fairly consistent. The winds across Lake Erie are class four, which means they average about 12.5 miles-per-hour (mph). Second, shallow offshore water depths, as is the case with Lake Erie, make construction less costly. On land, certain locations of high wind production are also areas of high wind disturbance, often causing equipment damage and production losses. Because of these advantages, Winergy expects to have a Lake Erie site selected within the next 30 days.

Other developers and surrounding state agencies are following suit. Eleven new wind power projects are being proposed across New England, from the mountains of Maine to Boston Harbor. If built, these turbines would provide about four percent of the region's energy. This is important because a Massachusetts law takes effect next year requiring utilities to increase the amount of "green power" that's provided to customers.



This green power trend has grown rapidly over the past two years, mostly in western states where wind farms are viewed as an economic development tool, generating property taxes for local communities and royalties for private landowners. However, not everyone feels this way. Plans for what would be the largest wind farm in Pennsylvania are receiving criticism and some local opposition. Opponents of the Moosic Mountain project in northeastern Pennsylvania are concerned about the potential impacts the turbines would have on the environment and the local area. While the developer has conducted environmental studies on the area, opponents want independent studies done to determine if the turbines would affect bird populations, disturb rare species or harm wetlands.

Modern wind farms are proving to be much less threatening than their predecessors, however, and local officials appear ready to capture some green power from their mountains...and waters.



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.

Survey Shows Americans Spend Time and Money Outdoors

— Tony M. Guerrieri, Research Analyst

Want to know how many people hunt and fish and how much they spend to do it? According to the U.S. Fish & Wildlife Service (FWS) report *"2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation"*, over 82 million Americans spent over \$108 billion in 2001 hunting, fishing, and participating in wildlife watching, bird watching, animal feeding, and wildlife photography.

The report, which examines a variety of wildlife-associated activities and participants and estimates the economic value of wildlife related recreation, found that more than 34 million Americans fished, 13 million hunted, and 66 million participated in at least one type of wildlife-watching activity. In addition to providing fun and relaxation, the report states these activities also provide a major boost for the nation's economy. Billions of dollars are spent on food, lodging, gas, special equipment, licenses, and services. The \$108 billion total accounted for 1.1 percent of the gross national product. Of the total amount spent, \$28.1 billion was trip related, \$64.5 billion was spent on equipment, and \$15.8 billion on other items.

Fishing remains one of the nation's favorite pastimes. America's 34 million anglers spent \$35.6 billion on trips, equipment, and other items for their sport, averaging more than \$1,046 apiece. More than 28 million people went freshwater fishing, while nine million people went saltwater fishing. The Great Lakes, one of the most widely fished freshwater areas, attracted two million.

About 13 million Americans age 16 or older hunted. They spent more than \$20 billion on their activities and

equipment, or \$1,581 apiece. Nearly 11 million hunters sought big game such as deer and elk on 153 million days. Roughly five million hunters pursued small game, including squirrels and rabbits, on 60 million days. Three million migratory bird hunters spent 29 million days hunting for birds such as doves and ducks. And one million hunters spent 19 million days hunting other animals such as raccoons and woodchucks.

More than 66 million adults (31 percent of all Americans) participated in feeding, observing, and photographing wildlife and spent \$38.4 billion. Almost 22 million people took outings of one mile or more away from home to participate in these activities.

Almost 63 million, or 95 percent, enjoyed wildlife related activities around their home. Some 54 million enthusiasts fed birds and other wildlife around the home, and more than 42 million observed wildlife while 14 million photographed wildlife around the home. Almost 13 million people maintained plants or natural areas for the benefit of wildlife around the home, and 11 million visited public parks or natural areas to enjoy wildlife within a mile of home.

A comparison of estimates from the 1991, 1996, and 2001 surveys reveals that millions of Americans continue to enjoy wildlife-related recreation. In 1991, there were 35.6 million anglers and 14.1 million hunters. In 1996, 35.2 million fished and 14 million hunted. And in 2001, there were 34.1 million anglers and 13 million hunters. While the number of hunters and anglers has decreased slightly since 1991, their expenditures increased from \$53 billion in 1991 to \$70 billion in 2001.

Participation in wildlife watching seems to be on the rebound. It decreased from 76.1 million in 1991 to

62.9 million in 1996, but bounced back to 66.1 million in 2001. Expenditures for wildlife watching increased by 21 percent from 1991 to 1996 and 10 percent from 1996 to 2001.

The federal survey is conducted by the FWS every five years to keep track of state and national trends relating to hunting, fishing, and other forms of wildlife-related activities. The survey involved detailed interviews with 45,000 potential hunters, anglers, and wildlife watchers across the nation.

The 2001 survey is the tenth in a series that began in 1955. For a copy of the report visit: www.census.gov/prod/2002pubs/FHW01.pdf.

Texas Renewable Program Template For Other States

— Jason H. Gross, Research Analyst

A report entitled “*Renewable Resources: The New Texas Energy Powerhouse*”, was released by the SEED Coalition in September 2002 to detail the success of Texas’ renewable energy program. This living study of the successful use of renewable energy provides a template for other states to follow.

Texas is most often known as “big oil”, run by petroleum energy sources. And Texas is a major petroleum product producer. But, according to the report, a more accurate portrayal would be that Texas is a supporter of renewable energy sources. For example, Texas leads the nation in solar and biomass energy production. The Lone Star State is second only to North Dakota in wind energy production. In only a few years, Texas has shown that with state investment, the rewards of renewable energy can be reached in a relatively brief span of time. And the state of Texas has made a \$1 billion capital investment that built 912 megawatts of energy in a single year.

In examining wind farms, the report cites their economic benefits and several other positive effects. Direct benefits include development and construction expenditures for electrical and construction contractors. The indirect economic benefits occur when a contractor out-sources for goods and services used to construct the wind farms, and the benefits extend to equipment manufacturers, wholesalers, technologists, bankers, and accountants. Construction also stimulates the local economy by paying local workers’ wages, patroniz-

ing hardware and supply stores, and creating local community infrastructure that is adapted to accommodate the new electricity plants. Technological developments gained through the process of constructing renewable energy plants have positioned Texas to become a leader in wind technology and construction for other regions beyond its own borders.

According to the report, another benefit of wind plants is that they are decentralized. Large, centrally located power plants provide a prime target for terrorist attack. Further, large central type plants, should they go down for any reason, can seriously hamper an entire region’s power supply. By decentralizing into wind plants, each tower is responsible for a smaller proportion of overall power production. The modular structure of a wind farm means that the overall output of an entire plant will not be significantly impaired if one turbine goes down because of catastrophe, weather-related problems or maintenance.

Texas has gained numerous benefits from adding fuel diversity to its total fuel production. Diversity protects investors and consumers by spreading the fuel generating across several markets, lessening the economic impact of fuel fluctuations. If the entire fuel market were based on a single fuel, such as natural gas, consumer choice would be minimized.

The primary reason for Texas’ success in renewable energy generation is the sweeping legislation Texas passed to revise the state’s electric industry. One of the provisions called for an implementation of renewable energy, thus ensuring that a percentage of electricity in the state comes from renewable sources. The standard is a market-based approach that gradually increases the portion of electricity from renewable sources such as wind power. Also, the policy creates renewable energy credits, which create a market-based incentive mechanism that stimulates utilities to develop more renewable energy resources. The standards reduce costs by using a system similar to Pennsylvania’s green pricing system. In green pricing, customers have the option to pay a premium price on their utility bills in order to acquire blocks of green power derived from renewable sources. The increased green pricing premium goes toward adding more renewable energy sources for the future. By structuring the program in this way, Texas, like Pennsylvania, provides a cycle that continually adds to renewable energy sources.

The report concludes that stable and consistent political policies must back renewable energy efforts in order to maintain renewable energy increases. Other countries have developed renewable energy by long-term capital investment in renewable technol-

5 ogy. In order to do that, setting a standard for a specific renewable energy percent of the aggregate energy production is required. The report indicates by extending the production tax credit, constructing transmission lines, and increasing state investment, renewable energy can become an increasing part of total energy production.

For more information and a full copy of the report please visit <http://www.citizen.org/documents/Tx%20Energy%20Powerhouse.pdf>.

Report Provides Step-By-Step Advice for Conservation Easements

— Tony M. Guerrieri, Research Analyst

Conservation organizations and municipalities can overcome the obstacles to conservation easements through a step-by-step approach, according to a report by the Heritage Conservancy. The report, “*Conservation Easements to Preserve Open Space: A Guide for Pennsylvania Municipalities*”, examines the opportunities and obstacles involved in implementing one specific strategy for protecting open space: conservation easements.

Interest in conservation easements as an open space protection strategy is rising, largely out of concern over losing productive farmland due to rapid development. Besides the loss in farmland, sprawling development has also resulted in a reduction of open space in growing municipalities. The Heritage Conservancy’s guide provides a planning checklist that conservation organizations and municipalities can use as an outline for developing their own conservation easement programs.

The planning guide is divided into five main sections. The first section provides background information on conservation easements. An understanding of what conservation easements are – and are not – is essential for creating and implementing successful easement programs.

The second section, “Steps in Acquiring Easements,” lists the following key characteristics common to such efforts, and provides practical information for dealing with them successfully:

- Qualified appraisal
- Sales agreement

- Baseline documentation
- Title search
- Mortgage subordination
- Environmental assessment
- Drafting the easement document
- Survey
- Stewardship fund
- Settlement, and publicity.

The next section, “How Municipalities Can Help,” suggests that with conservation easements, local government options can be divided into two basic categories:

- those that involve acquisition of land and/or the legal rights belonging to the land, and;
- those based on the government’s ability to regulate what occurs on the land. Municipalities that want to preserve open space can be proactive. For example, open space requirements can be built right into the subdivision approval process.

The “Financial Benefits of Easements,” section notes that many private landowners are unaware of the significant benefits they may receive and how to go about getting them. By placing a conservation easement on a particular piece of land, a landowner gives up the right to develop the land, but receives significant tax benefits through lowered property valuation, the tax deduction of the donation of the easement to a charitable organization, and the possibility of reduced estate taxes.

The fifth section includes information on easement stewardship. As easement holder, the municipality or land trust takes on the perpetual burden of monitoring the easement to ensure that its terms are followed.

Finally, an appendix contains a bibliography that lists manuals and reports that may be helpful to people developing conservation easement programs. The report also contains a list of relevant land trust organizations in Pennsylvania.

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 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.



Using Growth to Reduce Water Shortages

— Jason H. Gross, Research Analyst

A report released by American Rivers, the Natural Resources Defense Council (NRDC), and Smart Growth America reveals that development, if done correctly, can have a less detrimental effect on water shortages. According to the report entitled *“Paving Our Way to Water Shortages: How Sprawl Aggravates the Effects of Drought”*, studies over the last decade have linked suburban sprawl to increased traffic and air pollution. In order to add road surface and living areas for suburbs, land must be used. The land that is converted for development is farmland and open space, both of which have seen a serious decrease in total land mass. By reducing these natural and open areas, sprawl is seriously inhibiting the ability for fresh water areas to recharge. According to the report, if sprawl is not reduced, our water shortages will reach even more acute levels.

Our state has suffered greatly in past years from drought, with the past season being particularly acute in this danger to our water supply. According to the study, sprawl is a heavy detriment to the natural supply of freshwater available to us. Sprawl is characterized by automobile-dependent, spread-out suburban hubs surrounding large urban areas. The increase in suburban areas creates activities that are dedicated to this lifestyle, namely that long distances linked by paved highway separate these areas. As a result of this spread-out lifestyle more man-made areas are taking over in traditionally natural areas through the construction of roads, parking lots, and roofs. These areas are impervious surfaces that significantly change natural patterns of water movement, which in turn alter the ability of groundwater to recharge effectively.

Also according to the report, suburban development causes water pollution problems. As rain and snow move across roads, they pick up urban pollutants and drain them into the water system. As water systems are overwhelmed, the condition known as a combined sewage overflow (CSO) results, dumping raw sewage into streams, rivers, and lakes. Under normal natural condi-

tions, rainwater is naturally filtered into the ground, feeding rivers through springs and seepage and recharging underground aquifers. But as urban sprawl reduces overall seepage, and adds contaminants above the level that natural seepage can filter, fresh groundwater is contaminated. So as sprawl increases, the freshwater contamination also increases to levels that severely inhibit the freshwater supply.

Another aspect of sprawl that contributes to water scarcity is the promotion of lawns, as compared to natural areas. Lawns are commonly seen as open areas that do not harm water recharge even though they do use a large portion of fresh water (32 percent of a household's residential use) to keep them green. Beyond this, however, lawns are detrimental to water seepage and recharge, acting in similar ways as impervious roads and parking lots. The use of turf and soils beneath lawns makes them shift water into roads and sewage drains, instead of contributing to recharge and filtration as a natural area would.

The report advocates using growth techniques that conserve water resources while also contributing to reduced overall pollution levels. The current system of converting wetlands, forests, and other natural lands to hard impervious surfaces is having a highly detrimental impact on wetlands by inhibiting filtration and seepage as well as by adding contaminants to the diminishing fresh water supply. By establishing sound growth strategies, the impact of development on healthy water resources can be minimized. It must be noted that the goal is not to inhibit growth itself, but instead to contribute to developing in environmentally friendly ways.

According to the report, there is no definition of such growth that fits all areas equally well. Instead there are general principles that ensure a land region will be used correctly. Some of the principles include:

- taking advantage of compact building design to minimize impacts on land;
- fostering walkable neighborhoods with easily accessible shopping to reduce automobile usage;
- preserving open-space, farmland, and natural areas;
- providing alternative mass transit choices that are fair and cost-effective.

By employing these and other similar principles, the land use in an area can still develop while ensuring the safety of the environment, the report states.

For the complete report please visit the website: <http://www.amrivers.org/docs/SprawlReportFINAL1.pdf>.

On The Horizon...

a look at upcoming committee events

► **Thursday, December 12th, 10 a.m. – 1 p.m., Room 205, Penn Stater Conference Center, State College – Legislative Forestry Task Force meeting.** The task force will discuss the forest industry's use of best management practices (BMP's) and their record of working in riparian areas, pursuant to Senate Resolution 81.

Committee Chronicles...

a review of some memorable committee events



The committee's October Environmental Issues Forum featured two guest speakers on the Sustainable Forestry Initiative (SFI), a voluntary, industry-driven forest management program utilizing comprehensive forestry and conservation practices aimed at perpetuating healthy forests and the benefits of forest products.

Here, Ken Manno, program manager of Pennsylvania SFI, makes a point about the program's progress in the Commonwealth. In the past year, Pennsylvania SFI has provided 35 core level courses to 372 individuals in the forestry industry and 36 advanced level courses to 543 individuals.

Also pictured below with Manno (left) and Joint Committee Chairman Rep. Scott Hutchinson (R-64, center) is the forum's other guest speaker, Jimmy Bullock, manager of Sustainable

Forestry and Wildlife for International Paper (IP). IP is the world's largest paper and forest products company and owns approximately 10-million acres of timberlands in the U.S. The practice of sustainable forestry is one of its basics in doing business.

Contact the office if you would like a copy of information on SFI provided by Manno and Bullock.

Earlier this year the Pennsylvania Biodiversity Partnership (PBP) was a guest presenter at an Environmental Issues Forum, and has asked the committee's help in letting individuals know about a new service. The PBP has established a moderated listserv – PABIODIV – focused on biodiversity

issues in Pennsylvania. You can subscribe to the list by sending a message to majordomo@webmail.upb.pitt.edu. Put the words "subscribe PABIODIV" (no quotes needed) on the first line of the body of the message. To receive the welcoming message, type the command "intro PABIODIV" (no quotes needed) on the second line of the body of the message. This will generate a message that your name has been submitted to the moderator for approval, and when added to the list, a welcoming message with general guidelines will be sent to you. If you have further questions, contact PBP at 16 Terminal Way, Pittsburgh, PA 15219-1209, or call 412-481-4100 or e-mail pbpinfo@pabiodiversity.org.



So, where do we go from here? General Motors, for one, sees the internal combustion engine being abandoned in favor of hydrogen-based electric fuel cells. The Bush administration has also turned its focus from higher-mileage gasoline-powered vehicles to fuel cell technology. Ford is developing a fuel-cell version of its Focus and has predicted that a fuel cell vehicle will be available to the public in 2010. The Siemens Corporation is developing a fuel cell technology operation in Pittsburgh.

In the shorter term, hybrid (gasoline- and electric-powered) vehicles continue to become more available. For example, Honda has added a Civic sedan to its existing hybrid Insight coupe, which shared the market with the Toyota Prius. Models of these vehicles as well as a Ford fuel-cell prototype were on display at the state Capitol earlier this year. Fuels such as compressed and liquefied natural gas, liquid propane gas, methanol and ethanol, biomass, and coal-derived liquid fuels vie for R&D dollars and market share.

The debate over alternative energy is very much alive in Pennsylvania. Through its Alternative Fuels Incentive Grant (AFIG) program, Pennsylvania has awarded more than \$19 million to 260 projects in 39 Pennsylvania counties over the past 10 years, and leveraged more than \$50 million in matching funds from 1995-2000. According to 2001 federal figures, there are about 14,600 alternative-fuel vehicles on

the road in Pennsylvania, putting the Commonwealth in the top 10 in the nation. And, among legislation being developed is a multi-bill package of alternative energy legislation put together by the Task Force for a 21st Century Energy Policy for Pennsylvania.

In the meantime, to conserve fuel, improve air quality and ease traffic congestion, perhaps Pennsylvania should reinvigorate formerly vital and active programs that encourage ride sharing. Such actions could be implemented by individuals, by employers and by

government. It seems a relatively simple and inexpensive alternative, and would appear to be warranted based on the statistics.

An examination of 2000 Census data shows that of more than 4.8 million Pennsylvanians who use a car, truck or van to get to work, more than 4.2 million of them drive alone. Only 577,364 - not even 12 percent - carpool. The carpooling percentage of the state's

total workforce (roughly 5.6 million people) is even worse at 10.4 percent. And of those that do share a ride, 81.4 percent are in two-person carpools. Carpools of four or more persons are few and far between.

Of the state's total workforce, 86.8 percent drive to work. Only 290,000 use public transportation, while 229,725 walk and a mere 14,001 bicycle.

The debate and the development of technology over more efficient and cleaner fuels, and cleaner air, will continue for the foreseeable future. Research and consensus-building on a comprehensive and coherent policy always takes time.



Under the hood of a hydrogen fuel cell engine.

How to Contact The Joint Conservation Committee

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