

ENVIRONMENTAL SYNOPSIS

The Chairman's Corner

Rep. Scott E. Hutchinson, Chairman



I have recently reintroduced legislation (House Bill 409) that would establish a comprehensive system of electronic waste (e-waste) recycling in Pennsylvania. The legislation is based on the Joint Legislative Air and Water Pollution Control and Conservation Committee's (Committee) 2008 report which offered a series of recommendations on how Pennsylvania should handle e-waste recycling.

It will not be the only piece of legislation to be offered this session in regard to e-waste recycling. As a matter of fact, there is one other bill already in the legislative hopper and others can be expected. What is important is that the discussion over how to handle e-waste moves forward and we take action to establish a safe, consumer-friendly system of e-waste recycling.

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House Bill 409 has 24 bipartisan cosponsors and is entitled the "Manufacturer Responsibility and Consumer Convenience Computer Equipment Collection and Recovery Act." Its foundation lies in several basic principles. The first is that the e-waste recycling program be based on a system of individual manufacturer responsibility. Before a manufacturer could offer computer equipment for sale in Pennsylvania, the manufacturer must adopt and implement a recovery plan.

That recovery plan must provide for a collection system that is "reasonably convenient and available to consumers." Such a system would allow for returns by mail, by use of physical collection sites, and by collection events. Collection services could make use of electronics recyclers and repair shops, recyclers of other commodities, reuse organizations, not-for-profit corporations, retailers, and other suitable operations. Manufacturers must provide information on recycling to consumers via the Internet, through information in product packaging when the equipment is sold and through the Department of Environmental Protection (DEP). The department would be responsible for a consumer education program regarding e-waste recycling and for developing a list of manufacturers with recovery plans.

Retailers would only be permitted to offer for sale computer equipment from a manufacturer that is on the department's list of those with suitable recovery plans.

DEP would be permitted to conduct audits and inspections to determine compliance with the act and both the department and the state attorney general could take enforcement action against anyone in violation of the act.

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NOTES FROM THE DIRECTOR

CRAIG D. BROOKS, EXECUTIVE DIRECTOR

The U.S. voluntary carbon offset market has grown rapidly in recent years but questions remain about the credibility of the offsets, which may lack adequate mechanisms to verify the levels of greenhouse gas emissions. In the United States more than 600 companies develop, market or sell carbon offsets, a tradable instrument that companies or individuals can use to compensate for or “offset” their business-as-usual greenhouse gas emissions.

A carbon offset is defined as a measurable reduction of greenhouse gas emissions from an activity or project in one location that is used to compensate for emissions occurring elsewhere. For example, a manufacturer may offset its emissions by funding a project located in another location that captures methane that is emitted from a landfill or agricultural operation. These reduced emissions are referred to as carbon offsets.

The supply of offsets has grown 66 percent since 2004, increasing from approximately 6.2 million tons of carbon dioxide in 2004 to 10.2 million tons by 2007. In that same time, the number of projects in the United States that produced carbon offsets grew from 93 in 2004 to more than 200 in 2007.

This information can be found in a new report by the Government Accountability Office (GAO) entitled, “*Carbon Offsets: The U.S. Voluntary Market is Growing, but Quality Assurance Poses Challenges for Market Participants*”. The GAO was asked to look at the U.S. voluntary offset market including the role of the federal government and the extent to which the mechanisms for determining credibility are available and used.

According to GAO, despite the recent growth in the supply of carbon offsets, market participants

still face several challenges to ensure their credibility. While the voluntary offsets market uses a variety of quality assurance mechanisms, there is insufficient information and data available to determine the extent of their use. In conducting the study, GAO purchased offsets from 33 retail providers, with information provided about the purchased offsets varying “considerably”.

According to GAO, the federal government currently plays a small role in overseeing the voluntary market, with limited consumer protections. While there are other technical assistance efforts from the Federal Trade Commission and the Environmental Protection Agency, no single body has regulatory oversight responsibility.

**GAO...Carbon offsets might be growing, but there are still challenges to their credibility...
“Clear rules” are needed**

In 2006, carbon dioxide released from the burning of fossil fuels accounted for approximately 78 percent of human-caused greenhouse gas emissions in the United States. The remaining 22 percent of emissions included carbon dioxide from non-energy uses such as methane from landfills and agricultural

operations.

Greater federal oversight of the market could improve credibility of offsets and enhance consumer protection, but it could also reduce market flexibility and potentially raise the costs and hold back innovation, the GAO says. Also, GAO suggests that Congress, as it considers legislation to limit greenhouse gas emissions, consider including “clear rules” about what type of projects can qualify for offsets as well as a standardized registry to track the creation and ownership of carbon offsets.

The full text of the report is available at <http://www.gao.gov/new.items/d081048.pdf>.

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.

Intercity Bus Industry Makes a Comeback in the United States – Tony M. Guerrieri, Research Analyst

A study by Chicago-based DePaul University's Chaddick Institute for Metropolitan Development finds that buses are back. Perhaps it is because growing numbers of travelers refuse to tolerate the inconveniences of airport travel, or are simply tired of high gasoline prices. Or, perhaps it is the new amenities offered by bus companies, like on-board movies, nicer coaches, and wireless Internet service. Whatever the reason, bus companies are happy.

The study, *"2008 Update on Intercity Bus Service: Summary of Annual Change"*, finds that the intercity bus industry is coming off a historic year of growth, and predicts that the pace of growth will continue to build momentum in 2009.

Many Americans are choosing not to fly and are leaving the driving to bus companies. Intercity bus ridership surged to record levels between the fourth quarters of 2007 and 2008, as scheduled intercity bus departures rose 9.8 percent in that time period. This marks the second year of robust growth after more than four decades of persistent decline (the annualized rate of growth between the second quarter of 2006 and the fourth quarter of 2007 was 8.1 percent).

Growth in passengers choosing to take the bus has also had an environmental impact. Due to significantly higher fuel efficiency per passenger mile achieved through bus travel, the trend toward buses for city-to-city travel also produced a bonanza in reduced greenhouse gas emissions. Over the past year, bus route growth has cut carbon dioxide emissions by about 36,000 tons, and reduced fuel use by an estimated 3.48 million gallons (diesel fuel, gasoline and jet fuel).

The increase in the amount of service provided by the intercity bus sector has significantly outpaced other modes of intercity transportation, according to the study. Other forms of long-distance travel experienced pronounced declines, especially air travel which has seen a roughly eight percent decline in seat-miles between the fourth quarters of 2007 and 2008. Travel by private vehicle was

also down 3.3 percent for the first eight months of 2008 compared to a year earlier. Train ridership as reported by Amtrak also has sharply increased over the past year, though the number of seat-miles on trains so far this year has increased only about 3.3 percent.

The study found the renaissance of intercity bus service is attributable to many factors, including the escalation of fuel prices, as well as the revival of downtown districts in major cities, higher parking costs, and the growing acceptance of bus travel among younger, as well as pleasure-oriented, travelers.

The study includes all arrivals and departures of all conventional intercity bus companies, such as Greyhound Lines and Continental Trailways, as well as curbside bus operators, but not commuter bus operators.

Will the robust growth of intercity bus travel in 2008 continue in 2009?

The majority of the growth in service was driven by two companies: Megabus and Boltbus (a joint venture of the Greyhound and Peter Pan bus companies), which began curbside pick-up in Northeastern states in spring 2007. The two companies offer high-frequency service between major U.S. cities, as well as on-board wireless Internet service.

According to the study, intercity bus service is most popular between cities located 175 to 300 miles apart. The majority of train service growth during the past year occurred in markets in the Northeast, especially between New York and Washington, D.C.

The 2008 study offers fresh figures to update a study released in late 2007, *"The Return Of The Intercity Bus: The Decline and Rise of Scheduled Service to American Cities, 1960-2007."*

The latest Chaddick Institute for Metropolitan Development's study, *"2008 Update on Intercity Bus Service: Summary of Annual Change"*, is available online at: http://las.depaul.edu/chaddick/docs/Docs/2008_Update_on_Intercity_Bus_Service.pdf.

EPA Assesses Cruise Ship Discharges

- Craig D. Brooks, Executive Director

The Environmental Protection Agency (EPA) has released its *"Cruise Ship Discharge Assessment Report"* that analyzes cruise ship waste streams and reviews options that address cruise ship discharges. The report assesses five cruise ship waste streams – sewage, graywater, oily bilge water, solid waste and hazardous waste. EPA is currently seeking comments on the findings. The report identifies possible options and alternatives representing a wide range of actions that could be taken to address the five waste streams from cruise ships.

The report shows that cruise ship dumping is out of control and will only get worse as more and larger ships carry more passengers to environmentally sensitive ports-of-call. The report provides the final evidence that Congress needs to place strong limits on cruise ship discharges in order to protect coastal areas, beaches, shellfish beds and marine sanctuaries.

The EPA report concludes that cruise ship dumping is out of control and will only get worse

EPA found that the most significant analysis came from the generation and treatment of sewage and graywater aboard cruise ships. Graywater is wastewater generated by sinks, baths, laundry, showers and galleys. The report found that average sewage generation rates are about 21,000 gallons per day or 8.4 gallons per person, per day. Average graywater generation was about 170,000 gallons per day or 67 gallons per person, per day.

Although EPA did not make specific recommendations or announce plans for new regulations, it did cite a number of possible options for addressing cruise ship discharges including:

- Establishing a detailed nationwide sampling, testing and monitoring program to gather information on the volume of discharges, concentrations of pollutants of effluent, and locations of most frequent discharges in terms of volume and toxicity;
- Conducting an environmental review (under the National Environmental Policy Act) to assess the full extent of environmental impacts, and cumulative impacts on the marine environment and human health;

- Increasing the study on the detriment to human health and the effect on the nation's coastal zones and marine protected areas, including analysis of cumulative impacts from cruise ships;
- Continuing research and development on promising new treatment technologies for the management of cruise ship waste streams;
- Engaging the cruise ship industry to conduct more research directed at cruise ship discharges;
- Directing research into geographic areas that may be impacted by cruise ship discharges; and
- Designing cruise ships to be more environmentally friendly.

EPA's *"Cruise Ship Discharge Assessment Report"* is available at http://www.epa.gov/owow/oceans/cruise_ships/disch_assess.html.

Maine Task Force Promoting Homegrown Wood-Based Heat

- Tony M. Guerrieri, Research Analyst

In the past decade, policies to encourage the use of renewable energy have grown in importance as part of the efforts to reduce dependence on non-renewable energy sources such as fossil fuels. Wood energy has been identified as a potentially significant source of renewable energy, and for this reason a number of states have shown interest in increasing its use. A 28-member task force created by the governor of Maine believes the public is ready to start making the switch back to the state's most plentiful homegrown resource – wood.

According to *"The Governor's Wood-to-Energy Task Force Report"*, issued in September 2008, Maine needs to diversify its fuel base. It is the state with the highest dependence on No. 2 heating oil. More than 80 percent of all Maine homes rely on foreign oil as a primary source of heat, using 400 million gallons of No. 2 heating oil a year. Maine's commercial buildings on average use an additional 100 million gallons per year.

Approximately 440,000 households in Maine use an average of 900 gallons of oil a year. At the average statewide cash price for heating oil in Maine at \$4.64 per gallon, the expected heating bill will be on average in excess of \$4,100 per household. This extreme reliance on heating oil makes Maine vulnerable to magnified negative economic effects from high oil costs, the report warns.

In addition, the report estimates that every \$1 increase in the cost of a gallon of oil for homes and businesses drains almost a half-billion dollars from the state's economy, most of it going out of the country.

In Maine, communities with increasing populations and nearby forests may be able to consider using wood to generate energy. Maine has about 17 million acres of woodlands that could be harvested commercially. The state is a net exporter of wood, and according to the Maine Forest Service, the state's annual wood harvest is about 18.6 million tons.

The report suggests that there is currently a growing inventory of wood that can be sustainably harvested to supply the conversion of 45,000 homes and small businesses in Maine to wood fuel (10 percent of Maine's heating oil users), using pellet or wood chip technology, over the next five to seven years.

The task force said in its report:

- Improving the energy efficiency of all buildings as well as the implementation of conservation measures should be promoted simultaneously with any conversion to wood fuels.
- Any solutions should provide a net benefit to Maine's air and water quality and should not have a negative impact on the healthy forest ecosystem.
- A long-term goal is to increase the reliable, consistent, and sustainable supply of wood while maintaining the environmental standards that are important to Maine's forest from the perspective of industry, tourism, and the ecosystems of which they are a part.

The report suggested that wood stoves are a viable wood-to-energy solution if they are modern, efficient and clean-burning, and there is already a developed market for wood stoves and cordwood delivery in Maine. At the same time, care is needed in shifting more from oil to wood to avoid health problems. The report warned, "This situation presents potential serious public health concerns. The amount of air pollution emitted by woodstoves this winter could approach record levels."

While wood-to-energy is considered a viable solution, care is needed to avoid health and environmental problems

The report recommends tax incentives and a state buyback program designed to help Maine residents reduce their dependence on home heating oil. Among the 11 recommendations:

- Before switching systems, provide incentives for homeowners and businesses to weatherproof and insulate.
- Provide financing for the wood harvesting industry so it can modernize operations.

- The state should encourage the conversion of old polluting oil-fired and wood-fueled systems through tax incentives or a direct "buyback" program to help homeowners and small businesses replace older furnaces, boilers or stoves with more modern, clean-burning systems.
- Increased use of wood for heat could also lead to an increase in wood prices, the report said, calling on the forest products industry and state to educate youth about the benefits of a career in wood harvesting.
- Require state agencies to closely monitor use of older wood stoves to reduce air pollution and chimney fires.

Any solutions, the report concluded, should provide a net benefit to Maine's air and water quality and should not have a negative impact on the healthy forest ecosystem.

"The Governor's Wood-to-Energy Task Force Report", can be found online at: http://maine.gov/doc/initiatives/wood_to_energy/documents/WoodtoEnergyTaskForceReport.pdf.

Fuel Economy Increases Slightly For 2008

- Craig D. Brooks, Executive Director

Projected fuel economy for model year 2008 light-duty vehicles increased only slightly compared to 2007, according to a report released by the Environmental Protection Agency (EPA), but the agency said the actual increases are probably larger. According to the report, "*Light-Duty Automotive Technology and Fuel Economy Trends: 1975 Through 2008*", fuel economy for model year 2008 was 20.8 miles per gallon, compared to 20.6 for 2007. According to EPA, although the increases were only slight, fuel economy has increased 8 percent from 19.3 miles per gallon in 2004.

According to EPA, the projected fuel level for model year 2008 is based in part on sales projections provided by automakers. The report says the agency expects actual fuel economy to be greater when sales for model years are totaled. According to the report, the actual fuel economy performance for model year 2008 is based on pre-model year sales projections made by automakers at a time when gasoline prices were considerably lower.

Manufacturers provided the data in 2007 when gasoline prices ranged between \$2.50 and \$3.00 per

gallon. However, the report said actual gasoline prices have averaged about \$3.50 during model year 2008.

Although not a surprise, the report suggests that sub-compact, compact and midsize cars have been the only vehicle classes to have met or exceeded sales projections by automakers, while sales of midsize SUVs, large SUVs and large pickup trucks are 15 to 25 percent lower than automaker projections.

Only two-tenths of a mile-per-gallon was the improvement in fuel economy from 2007 to 2008

Since 1975, according to the report, overall new light-duty vehicle fuel economy has moved through four phases:

1. A rapid increase from 1975 through the early 1980s;
2. A slower increase reaching its peak in 1987;
3. A gradual decline until 2004; and
4. An increase beginning in 2005.

According to the report, historically, growth in the light truck market was primarily driven by the explosive increase in the market share of SUVs. Sales of light trucks, which include SUVs, vans and pickup trucks, have accounted for 50 percent of the U.S. light-duty vehicle market since 2002. After two decades of constant growth, light truck market share has been relatively stable from 2002 through 2007.

According to the report, the projected market share for trucks will be far less this year. The SUV market share increased from less than 10 percent of the overall new light-duty vehicle market in model year 1990 to about 30 percent of the vehicles built since 2003. The increased overall market for light trucks, which in recent years averaged five to seven miles per gallon lower than

cars, accounted for much of the decline in fuel economy through 2004.

Automotive engineers are constantly developing more advanced and efficient vehicle technologies. From 1987 through 2004, new vehicle technology was used exclusively to enhance other vehicle attributes such as vehicle weight, performance and utility instead of fuel economy. In 2005, technology was used to increase both fuel economy and performance while keeping vehicle weight relatively constant.

Fuel economy continues to be a major area for public policy interest for several reasons. First, fuel economy is directly related to energy security because light-duty vehicles account for approximately 40 percent of all U.S. oil consumption and much of this oil is imported. Second, fuel economy is directly related to the cost of fueling a vehicle. And third, fuel economy is directly related to emissions of greenhouse gases, and light-duty vehicles account for about 20 percent of all U.S. carbon dioxide emissions.

The National Highway Traffic Safety Administration proposed an increase in fuel economy standard for cars and light trucks from the current 25 miles per gallon to a combined standard of about 31.6 per gallon in 2015.

The EPA report is available at <http://www.epa.gov/otaq/fetrends.htm>.



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The *Environmental Synopsis* is issued monthly.

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

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ON THE HORIZON . . .

A LOOK AT UPCOMING EVENTS

✓ **Monday, March 30, 12 noon, Room G-50, K. Leroy Irvis Building, Capitol Complex, Harrisburg, PA** – Environmental Issues Forum featuring guest speaker John E. Burrows, Jr., the president/CEO of Energex Corporation, located in Mifflintown, PA. Energex is involved in the production of wood fuel pellets for use as an alternative heating source with wood pellet heating systems. Mr. Burrow's presentation is entitled "Wood Fuel Pellets – Opportunities for Pennsylvania."

✓ **Thursday, April 23, 2009, 9 a.m. – 12 noon, Hearing Room 1, North Office Building, Capitol Complex, Harrisburg, PA** – Joint Legislative Air and Water Pollution Control and Conservation Committee Public Hearing into Act 101 of 1988 – Its Past, Present and Future.

✓ **Monday and Tuesday, April 27-28, 2009, Whitaker Center, Harrisburg, PA** – "PA ReMaDe Expo 2009... Where Recycling Means Business" sponsored by the PA Recycling Markets Center (PA RMC). An inaugural business and industry marketplace exposition for recycled commodities and recycled content products. Contact the PA RMC for schedule and registration details at 717-948-6660, or e-mail info@parmc.org or visit the website www.parmc.org.

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 February 2009 meeting of the Joint Legislative Air and Water Pollution Control and Conservation Committee's Forestry Task Force featured a presentation on the impacts of buffer zones on forests and forestry.



Dr. Jim Finley, professor of Forest Resources at Penn State's School of Forest Resources, (photo at left) spoke about the impact of buffer zones on non-industrial private forest landowners in Pennsylvania.

Providing a look at buffer zones' impact on water quality and associated voluntary conservation and best management practices was Ken Roberts, a forester with the New Page Corporation (photo at right).



The meeting concluded with a presentation by Dave Trimpey, resource manager with Kane Hardwood, (photo at bottom left) who spoke about the relationship of buffer zones and timber production on industrial private forests in Pennsylvania.



2008 Annual Report Now Available

The Joint Legislative Air and Water Pollution Control and Conservation Committee recently released its 2008 Annual Report, a comprehensive review of the committee's activities for the past calendar year.

You may view the report on the "Reports" page of the committee's website at <http://jcc.legis.state.pa.us>, or call the committee office at 717-787-7570 if you would like a copy.

Another basic goal is to reduce the quantity of e-waste as well as the amount of toxins in electronic items. The volume of e-waste is growing, which means without an e-waste recycling system in place, landfilling and incineration of e-waste is growing, too. The legislation seeks to set up an economical, efficient and environmentally sustainable system that encourages consumers to return electronic items to responsible entities instead of tossing e-waste in the trash or hoarding it in their closets. It also encourages manufacturers to design electronic items that do not become obsolete but retain value for future use.

The proposal was developed after the Committee conducted a public hearing on the issue on October 4, 2007, held a roundtable discussion with stakeholders, examined systems in place in other states, and sponsored an e-waste simulation exercise using systems in operation in other states to get a feel for what might work in Pennsylvania.

**House Bill 409 would establish a safe, comprehensive,
manufacturer-based, consumer-friendly system
of e-waste recycling for PA**

As I reintroduced the legislation, I have been interested to observe recent developments in e-waste recycling around the state and the nation. There have been a number of positive steps forward. For example:

-- On February 15, Best Buy announced it was expanding its e-recycling program nationwide, offering drop-off services at any of its 1,006 stores, using gift cards in exchange for recycling fees for units with screens.

-- On December 30, 2008, Michigan became the 18th state to pass electronics recycling legislation, meaning 52 percent of America is now covered by e-waste laws. Michigan's is a manufacturer responsibility model as well.

-- HP now offers cash rewards for reusable computer devices under its "Consumer Buyback and Planet Partners Recycling Program", and offers free recycling for HP or Compaq devices without trade-in value.

-- On February 11, Dell announced an expansion of its free computer recycling program with six new states joining the Dell/Goodwill Reconnect Partnership Program. There are more than two dozen drop-off locations in Pennsylvania through the Goodwill program. Check out <http://reconnectpartnership.com/locations.php> for in-state locations. Dell also launched "Dell Exchange" a free online trade-in system exchanging e-waste for Dell gift cards (www.dell.com/tradein), in addition to its free in-store recycling program through Staples stores.

-- MRM (Electronic Manufacturers Recycling Management Company, LLC) announced on January 15 that it will manage a drop-off e-waste recycling operation for Panasonic, Toshiba and Sharp. Two hundred eighty sites opened in January and MRM expects to have 800 in place by 2011. Currently, there are four drop-off sites in Pennsylvania and at least six major collection events are planned each year in the state.

What my legislation seeks to do is build on the success of Pennsylvania's voluntary system of e-waste recyclers. Pennsylvania has been a national leader in "traditional" recycling efforts, dating back to Act 101 of 1988. There is no reason why Pennsylvania cannot be a leader in the high-tech world of electronic recycling and reuse as well.

The system envisioned combines the best of approaches by other states and by the industry itself, combined with clearly defined roles for consumers, manufacturers, government, retailers, recyclers, non-profits and other entities who would be partners in this effort. It is a system of simplicity, efficiency and effectiveness that should increase responsible recycling and reuse.

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