



In This Issue...

- The Chairman's Corner.....p. 1
- Notes From the Directorp. 2
- Research Briefsp. 3-6
- ✓ Centralized Energy Policy Council
Down the Road?
- ✓ Are Businesses Getting Greener?
- ✓ China and Illegal Timber Trading
- ✓ Coal, Electricity and EPA - A Volatile
Mix
- On The Horizonp. 7



Joint Legislative
Air and Water
Pollution Control and
Conservation
Committee

ENVIRONMENTAL SYNOPSIS

The Chairman's Corner

Sen.-elect Scott E. Hutchinson, Chairman

Several months ago (February 2012 *Environmental Synopsis*) I wrote an article about the "National Tree Benefit Calculator". The topic of trees and their value is a natural one for me because the Joint Legislative Air and Water Pollution Control and Conservation Committee's Legislative Forestry Task Force has long been involved with sustainable forestry.

The calculator is a fun, informational online system designed to help homeowners estimate the benefits of individual trees one might find on one's property or street-side in one's community.

The calculator is just one part of a much more comprehensive online system known as i-Tree, which was developed by USDA Forest Service Research with several partners. At the time I wrote the article on the calculator, I knew I wanted to devote more time to the spectrum of services and information available from i-Tree, but did not have the space to do so then. Today I do.

The i-Tree system – which was first released in 2006 - is free to use and is self-described as a "state-of-the-art, peer-reviewed computer software suite containing urban forest inventory and analysis tools." It helps communities assess and care for neighborhood trees and forests, and measure ecosystem benefits from forests, and it provides information to help in decision-making and education.

To learn more about i-Tree, visit its website at

www.itreetools.org

For assistance in using i-Tree, call toll-free 877-574-8733



The Forest Service designed i-Tree specifically to meet community needs, whether the community is a large city or a small municipality. Among its prospective users are state forest agencies, municipalities, non-profits, consultants, volunteers, students and anyone interested in learning more about and providing better care for community forest resources.

According to Dr. David J. Nowak, Ph.D, one of the builders of i-Tree, and the project leader at the USDA Forest Service Northern Research Station in Syracuse, NY, i-Tree is intended to help communities "make informed management decisions about their resource." And that resource is trees.

(continued on page 8)

NOTES FROM THE DIRECTOR

CRAIG D. BROOKS, EXECUTIVE DIRECTOR



More than half of the non-residential construction in the United States is expected to be green by 2016, according to a new report.

Green building is expected to represent 44 percent of all commercial and institutional construction in 2012, which equates to a \$60 billion market, and its share is projected to grow to up to 55 percent by 2016, according to the report *"Green Outlook 2013"*. By way of contrast, green building represented only two percent of commercial and institutional construction in 2005, according to the report.

The report reveals the newest size of the U.S. green building market, tracking the data and estimating the long-term opportunity over the next five years, and hopefully providing some insight into the future of this growing segment of the construction industry.

The report examines residential and non-residential sectors including office, retail, education and health care, and provides insight into key trends.

Additionally, the report explores how some green labels and products are being specified over time.

Green structures are defined as buildings constructed to the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) standards or an equivalent certification program, or one that is energy- and water-efficient and addresses resource efficiency or improved environmental quality. The LEED program is becoming an industry norm for high-value projects, the report says. The term LEED appears in 60 percent of the report's construction database which tracks projects that are bid or sub-bid by contractors.

The report projects large increases. The U. S.

green building market, including residential and non-residential buildings, grew from \$10 billion in 2005 to \$78 billion in 2011. It is expected to be worth \$85 billion in 2012 and projected to rise to between \$98 billion and \$106 billion in 2013 and to between \$204 billion and \$248 billion in 2016.

Non-residential green building starts are expected to be worth between \$115 billion and \$132 billion in 2016 and many green building practices are becoming a standard part of the construction industry, the report says. The report was based on construction projects tracked and surveys conducted between 2005 and 2012.

Green building construction is expected to equate to 54 percent of office building starts by value in 2012, which could mean up to a \$9 billion opportunity, according to the report.

Office buildings represent the largest share of green construction, being the first to exceed 50 percent, compared to retail, hotel, education and other building types.

The green office market is expected to remain strong over the next five years. According to the report, the green office market is driven by a number of factors including city regulations on disclosing energy consumption, a corporation's desire to green the company's portfolio, and the perception by the investment and insurance community of green building as a better investment than non-green building investment.

From 2009 to 2012, the share of companies that dedicated more than 60 percent of their building portfolio to green buildings increased from 12 percent to 30 percent, according to the report.

The report is available for a fee at: <http://bit.ly/Ss2h4A>.

Green building is expected to increase, rising to an estimated 55 percent of commercial and institutional construction by 2016

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.

Please Note: The information and opinions expressed in the Research Brief articles do not necessarily represent the opinions or positions of the Joint Legislative Air and Water Pollution Control and Conservation Committee, nor those of the Pennsylvania General Assembly.

Report Calls for Centralized Energy Policy Council

-- Tony M. Guerrieri, Research Analyst

The United States is experiencing a resurgence in domestic energy production. With so many opportunities and challenges facing the nation, a strategic path forward is vital. Decisions made by the federal government will have important implications for the continued reliability, affordability, security and environmental responsibility of domestic energy production.

In light of these developments, a report by the Bipartisan Policy Center (BPC) contains recommendations on the role that the president and his Cabinet can play in removing inefficiencies and redundancies in the sphere of energy policy and strategy in the United States.

The U.S. Department of Energy and the 20 other agencies and departments involved in energy policy each play an important role in the development and implementation of the nation's energy policy. As a result, no single entity is in a position to implement, coordinate and assess all of the federal government's energy-related activities and initiatives, the report says.

The BPC report, *"The Executive Branch and National Energy Policy: Time for Renewal"*, argues that the executive branch should take a more active role in setting energy policy. The report begins with a brief overview of the last 50 years of national energy policy and related legislation. It then describes how the executive branch can best organize itself to create a national energy strategy.

The highlight of the report is its two recommendations. The first calls for the president and Congress to establish a cross-agency energy council to oversee all aspects of U.S. energy policy. This National Energy Strategy Council would be headed by the secretary

of Energy and be charged with overseeing all aspects of U.S. energy policy. The council would include the secretaries of Agriculture, Commerce, Defense, Interior, Transportation, Treasury and State, along with the U.S. Environmental Protection Agency administrator. It could coordinate energy programs government-wide and referee agency disputes.

It would also be tasked with developing a National Energy Strategy to help guide each administration's energy goals. The council would be expected to complete a national energy strategy by July of the first year of a new administration. The strategy should be a brief, high-level document outlining the administration's broad energy goals, budget priorities and legislative agenda, the report says. The council would also be tasked with producing an annual report available to the public that tracks progress made toward those goals.

A report from the Bipartisan Policy Center makes two recommendations on how to formulate and update a national energy policy

In the past, national energy policy has lacked long-term vision and been inconsistent, uncoordinated, oriented toward special interests and too ad hoc, the report says. Policies formed in crises risk focusing too much on short-term problems, the report also says.

The second recommendation is that the president and Congress should direct the Department of Energy to undertake an interagency Quadrennial Energy Review (QER) with the help of Congress and outside groups by the end of the second quarter of the second year of an administration. The QER would review existing policies and specify executive actions and new legislation and dollars needed to implement the National Energy Strategy, according to the report.

This mirrors the approach used to develop national security policy, in which the executive branch prepares a National Security Strategy subject to a Quadrennial Defense Review prepared by the U.S. Department of Defense.

The BPC is set to advance more detailed energy policy recommendations in early 2013.

The BPC is a Washington, D.C. research and advocacy group financed by foundations, unions and corporations (including some major energy companies) that attempts to break the political deadlock that has stymied any action on comprehensive energy policy.

The 26 page Bipartisan Policy Center report, *"The Executive Branch and National Energy Policy: Time for Renewal"*, is available at: http://bipartisanpolicy.org/sites/default/files/BPC_Governance_Report_0.pdf.

More Companies Adopt Green Initiatives; Business Opportunities Cited

-- Craig D. Brooks, Executive Director

Sustainability is becoming part of standard operations for a growing number of companies in the United States, according to a new study. In only six years, says the study, sustainability has grown from being a fledgling concept to becoming a standard element of corporate strategy.

The report, *"2012 Greening of Corporate America"*, indicates that the percentage of companies that are highly engaged in sustainability has risen from 18 percent in 2006 to 42 percent in 2012. The report also notes that the share of companies that used sustainability practices only to comply with regulation has fallen from 11 percent in 2006 to two percent in 2012.

The report further suggests that the percentage of companies that view sustainability as an opportunity, engaging in activities such as selling sustainable products and services, has grown from 15 percent in 2006 to 34 percent in 2012.

The report surveyed more than 200 of the largest corporations in the United States.

According to the study, 58 percent of the companies said in 2012 that they were selling green products, defined as those that are energy efficient, save resources, reduce the carbon footprint of buildings or have other green characteristics.

Other study results show that 37 percent of the sustainability activities undertaken by companies are generating revenue, while 63 percent are internal activities. Forty-three percent of the companies surveyed said they prepare annual sustainability reports, compared to 30 percent in 2009. Sixty-five percent of the companies surveyed said that adopting sustainability practices has given them a competitive edge, compared to 31 percent in 2006.

Forty-seven percent of the companies said they expect to be largely or fully dedicated to green buildings by 2015, meaning 60 percent or more of their projects will be sustainably built. Thirty percent of the companies said more than 60 percent of their 2012 projects are already green buildings. Fifty-eight percent of those surveyed reported they have green buildings in their portfolios, compared to 53 percent in 2009.

According to the report, more companies are dedicating funds to sustainability, with 43 percent reporting a sustainability budget in 2012 compared to 31 percent in 2009. Sixty percent of the companies reported having staff dedicated to sustainability in 2012.

A new report believes that sustainability is being embraced by a growing number of U.S. companies, and provides some numbers to demonstrate that

Chief sustainability officers (CSOs) are increasing in influence, according to the report, with 28 percent of the firms with CSOs saying executives set direction and are involved in procurement and operations. That compares to only 19 percent in 2009.

Ninety percent of the companies surveyed expect to see reduced costs due to sustainability practices, compared to 71 percent in 2009. Energy and cost savings are the biggest drivers for corporate sustainability, according to the report, while the largest challenge to pursuing sustainability is budgetary. The second most important challenge for companies is the difficulty in measuring the return on investment for sustainability initiatives, demonstrating that companies need more data to support results.

The report is the third in a series started back in 2006 looking at corporate sustainability trends.

The report is available at: <http://bit.ly/TseplW>.

China at the Center of Global Illegal Timber Trade

- Tony M. Guerrieri, Research Analyst

China is a major player in the global forest products market, both as a producer and consumer. According to a report by the London-based Environmental Investigation Agency (EIA), China is fueling the global illegal timber trade as it tries to power its rapidly growing economy.

The EIA report, *"Appetite for Destruction: China's Trade in Illegal Timber"*, accuses China of being the world's top importer of illegal timber, a market that is worth billions of dollars a year. Globally, Interpol estimates total trade in illegal timber is more than \$30 billion. The report highlights what the EIA said was China's lack of action in combating illegal trading, in contrast to major trading partners.

Though the report puts the volume of illegal timber at 30 percent of overall world production, it says significant progress has been made to stop illegal logging as countries such as the United States, the European Union and Australia have taken steps to exclude illegal timber from their markets, while significant timber-producing countries, especially Indonesia, have beefed up enforcement of illegal logging activity. Because of this, the report says, illegal logging activity has been reduced by 22 percent over the past decade.

However, China has built a vast wood-processing industry, reliant on imports for most of its raw materials supply. It is in effect exporting deforestation, according to the report. It said China's state-owned companies played a major role in securing supplies. An EIA analysis of China's trade data for 2007 showed state-owned enterprises were responsible for purchasing nearly half the tropical wood imported into the country.

By contrast, China's forest cover has increased because of tough forest protection laws and replanting programs. The government has been credited with an ambitious \$31 billion tree planting program that, over four years ending in 2008, increased forest cover to more than 20 percent of the country.

The EIA, which drew on its own investigations and the work of Interpol, the World Bank and the United Nations, said the unlawful cutting of tropical rain forest is a contributing factor in the growing violence among loggers, forestry workers and environmental activists in Africa and Asia. In the past year, several

people in Southeast Asia have died in such skirmishes, according to the EIA, including a Cambodian journalist killed for his coverage of the illegal timber trade.

China's booming economy has driven demand for timber for construction. In addition, many of its newly wealthy are willing to pay steep prices for teak beds, merbau wood flooring and mahogany trim. In Laos, rare rosewood logs can fetch \$18,000 per cubic meter and even more in neighboring countries, says the EIA.

China's rapidly growing timber imports are underpinning huge growth in exports of furniture, flooring, moulding and paper products. Wood product exports have increased nearly seven-fold in the past decade to \$34.2 billion in 2010, the report indicates.

Log imports in 2000 totaled 13.6 million cubic meters worth \$1.6 billion. By 2011, imports totaled 42 million cubic meters worth \$8.2 billion, with Russia the top log supplier last year, the United States second and Papua New Guinea third.

A new report examines China's role in the international illegal timber trade and its effect on forest products and others in the industry

More than half of China's current supplies of raw timber material are sourced from countries with a high risk of illegal logging and poor forest management, according to the report. In 2011, the report estimates that of all the wood products China imported, illegally logged timber accounted for about 10 percent – or 18.5 million cubic meters – a volume worth \$3.7 billion and enough to fill Beijing's Olympic Stadium six times.

Such rampant illegal trade is having a dire impact on the forests of Asia-Pacific and local communities. In the Solomon Islands, exports to China are seven times higher than the sustainable logging rate, with forests predicted to be emptied of commercial timber by 2015, the EIA said.

In Myanmar (also known as Burma), illegal log exports to China's Yunnan province were 500,000 cubic meters by mid-2012, the EIA said. Myanmar lost 18 percent of its forest cover between 1990 and 2005, with much of the wood trucked into China, despite a 2006 agreement that bans such trade.

The Environmental Investigation Agency report is available at: <http://www.eia-international.org/wp-content/uploads/EIA-Appetite-for-Destruction-lo-res.pdf>.

Report Says EPA Power Rules to Cost \$13 Billion Annually, Job Losses

-- Craig D. Brooks, Executive Director

The Environmental Protection Agency (EPA) regulations on pollution control and coal ash management at coal-fired generation plants could cost power companies \$13 billion annually and lead to the elimination of 1.5 million jobs in just the next four years, according to a report released by the American Coalition for Clean Coal Electricity.

The report, *"Economic Implications of Recent and Anticipated EPA Regulations Affecting the Electricity Sector"*, suggests that the EPA rules could force 42 gigawatts of coal-fired capacity to close by 2019, leading to significant job losses. The report also projects increased demand for natural gas in power generation, driving up gas prices and electricity costs for customers.

The report, which was prepared by the National Economic Research Associates, identifies seven regulations that affect the power industry:

- The mercury and air toxics standards;
- Regional haze regulations;
- The national ambient air quality standards for sulfur dioxide;
- Proposed regulations for coal ash disposal;
- Proposed regulations for cooling water intake towers;
- An upcoming review of the air quality standards for ozone; and
- An upcoming review of the air quality standards for particulate matter.

The report and analysis does not include EPA's proposed carbon dioxide emission performance standard for new fossil fuel-fired power plants. The report does, however, project that natural gas prices will increase by \$1 per million Btu, the peak increase forecast by the Energy Information Administration.

Additionally, the report projects that EPA will set a revised air quality standard for ozone of 65 or 70 parts per billion. This is based on information received by EPA's Clean Air Scientific Advisory Committee that is considering increasing the ozone air quality standard.

According to the report, EPA regulations are driving more power producers to invest in natural

gas facilities. Natural gas generation is expected to increase by an average 6.3 percent annually between 2013 and 2034, while coal-fired capacity is expected to decrease by 5.4 percent annually.

Power plants have already announced plans to retire older coal-fired power plants as a result of EPA's regulations, particularly the mercury and air toxics standards.

A clean coal industry report estimates that federal regulations could cost power companies \$13 billion annually and mean the loss of 1.5 million jobs over the next four years

In the latest closures, Santee Cooper, an electric utility operated in South Carolina, announced plans to retire six generation units. Additionally, this past February GenOn Energy announced plans to close eight power plants with a generation capacity of 3.14 gigawatts due to EPA's regulations and market conditions.

The report is available at: <http://op.bna.com/env.nsf/r?Open=smy-8zfp8z>.



ON THE HORIZON...



✓ Monday, February 11, 2013, 12 noon, Room G-50, K. Leroy Irvis Building, Capitol complex, Harrisburg, PA – Environmental Issues Forum.

The February 2013 forum will feature a presentation by a business partnership of two Pennsylvania companies who have begun a new venture to collect and recycle plastic well pad liners from Marcellus shale gas drilling sites. The companies worked with the PA Recycling Markets Center to establish the venture, which is expected to bring about both environmental and economic benefits.

Please e-mail Geoff MacLaughlin in the committee office at gmaclaughlin@jcc.legis.state.pa.us or call Geoff at 717-787-7570 if you plan to attend the Environmental Issues Forum.

And, check the committee website at <http://jcc.legis.state.pa.us> for events that may be added to the schedule.

Don't forget to Visit Our Website

Learn More at
<http://jcc.legis.state.pa.us>

To learn more about the Joint Legislative Air and Water Pollution Control and Conservation Committee, simply pay a visit to our website.

Website visitors will find information such as the Environmental Issues Forums schedule; the *Environmental Synopsis* monthly newsletter; Committee members; current events; Committee reports; staff contact information; Committee history and mission; and links to other helpful sites.

The website address is <http://jcc.legis.state.pa.us>. Stop by the website often to keep up with Committee information and events. We hope you enjoy it.

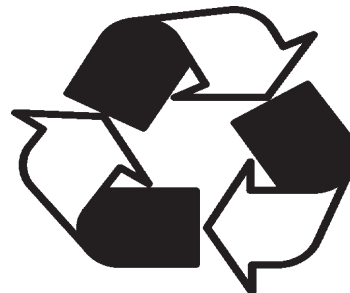


Want To Go "E-Synopsis"?

You can receive the *Environmental Synopsis* electronically if you don't want to wait for the mail to be delivered or you want to save paper.

If readers would like to change the method in which they receive the *Synopsis* from mailed hard copy to an e-mailed version, please contact Geoff MacLaughlin at 717-787-7570, or by e-mail at gmaclaughlin@jcc.legis.state.pa.us requesting to be removed from the mailing list and added to the e-mail list. Remember to provide your e-mail address.

Readers are also reminded that the *Synopsis* is available on the committee website each month after the *Synopsis*' printing. The website address is <http://jcc.legis.state.pa.us>.



**Printed on
Recycled
Paper**

Nowak said the precursor of what is now i-Tree goes back as far as 1995 to what was called the Urban Forest Effects Model or UFORE. He added that the refinement and further development of i-Tree has not stopped and is constantly evolving.

It's most recent iteration (i-Tree v5.0) was unveiled in October. And, says Nowak, another update, version 6.0, will probably be coming within a year and a half to two years. The 5.0 version allows mobile devices such as smart phones or tablets with modern internet browsers to collect and enter field data. In the meantime, i-Tree continues to incorporate new features such as the use of Google maps and a link to Environmental Protection Agency (EPA) benefit mapping (Ben-MAP).

A look at the list of applications gives one an idea of the diversity of services available from i-Tree. The applications are:

Eco – to quantify forest structure, environmental effects and values;

Streets – to work with a municipality's street tree population;

Design – to assess trees at the parcel level (includes the calculator mentioned earlier);

Canopy – uses Google map aerial images to estimate and study land cover types;

Vue – uses satellite-based imagery to assess land cover and ecosystem services;

Hydro – to simulate the effects of tree changes within a watershed using stream flows and water quality;

Pest – a pest detection module;

Species – to help select appropriate tree species based on environmental function and geographic area; and

Storm – to assess widespread severe storm damage.

So, how does one get i-Tree data for his or her area? There are two basic ways, according to Nowak. One can do it entirely on his or her own. The user must input tree data called for and i-Tree will produce a report. One can call i-Tree's toll-free number (listed on page one) and get some free help if needed. Second, one can hire a consultant (such as a private company, non-profit or a university for example), to gather and prepare information.

Nowak noted that Pennsylvania communities already have utilized and continue to make use of i-Tree. He said reports have been prepared for Pittsburgh and Scranton, and work is currently ongoing on an analysis of Philadelphia. As of September 2012, there had been 368 downloads of the i-Tree Eco application in the state, ranking Pennsylvania fifth in the nation in usage of that feature.

This year, the Forest Service established a field station in Philadelphia for the city's metro area and is in the process of staffing the station and building local partnerships. According to Nowak and station coordinator Sarah Low, a study of the city of Chester is upcoming, and research has been done in Wilmington and northern Delaware. The Philly station's website is <http://nrs.fs.fed.us/philadelphia/>.

And, i-Tree is national and international as well. According to a Forest Service news release, programs are active in more than 7,000 communities nationwide. More than 100 countries around the world have used it, and it has been downloaded more than 10,000 times. Australia and Canada are among recent users and Nowak said interest has recently been expressed by Chile, Colombia and New Zealand.

As I mentioned in my February article, trees are more than just aesthetic greenery. They provide a number of services to communities and can generate and enhance value in a variety of ways. Communities planning to make management decisions involving forest resources should check out i-Tree if they would like to know how potential decisions might affect how the future will look, or simply want to know more about urban forestry. In this case, one can see the forest through the trees.

How to Contact The Joint Conservation Committee

Phone:
717-787-7570

Fax:
717-772-3836

Location:
Rm. 408, Finance Bldg.

Internet Website:
<http://jcc.legis.state.pa.us>

Mail:
Joint Conservation Committee
PA House of Representatives
P.O. Box 202254
Harrisburg, PA 17120-2254



Joint Legislative
Air and Water
Pollution Control and
Conservation
Committee