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**Feature Article by Sarah James and Torbjörn Lahti from their book**

***The Natural Step for Communities: How Cities and Towns Can Change to Sustainable Practices***

## **The Bumblebee That Changed the World:**

*Övertorneå - the first eco-municipality in Sweden*

In the mid-1980s, the little town of Övertorneå (Eu-vehr-tawr'-neh-aw) in northern Sweden received a national prize as the "Municipality of the Year". In his speech at the award ceremony, a prominent county official, Councilman Jan-Olof Hedstrom, compared Övertorneå to a bumblebee. As lore has it, the famous aeronautic engineer Sikorsky hung a sign in his office lobby that read, "the bumblebee, according to our engineers' calculations, cannot fly at all, but the bumblebee doesn't know this and flies".

This was the regional and national establishment's view of Övertorneå. Changes were happening in the town outside the envelope of what was then regarded as "business-as-usual" community development. The municipal government and its larger community had made a commitment to develop in a way that was in harmony with nature. Övertorneå residents and town officials sought a win-win-win relationship between humans, society and nature. Residents and officials were coming to understand that investing in ecological approaches to meeting community needs could also bring about an economically positive future. To characterize its transformation, Övertorneå began to call itself an "eco-municipality".

Övertorneå was discussing and practicing ideas such as mobilizing people, taking a bottom-up approach to community planning, collaborative com-

munity development, cooperating across department and industrial sector boundaries, investing in local culture, and taking into account the local "informal economy". Such ideas were foreign to conventional Swedish town planning and community development practices at that time. What the regional and national establishments could see, without understanding why, was that these strange ideas evidently produced remarkable results - for example, over 200 new business enterprises producing several hundred jobs in a small town of barely 6,000 inhabitants. These county and national agencies considered new jobs and businesses to be the most important indicators of successful community development.

## *Background*

Övertorneå was located in the Swedish region hardest hit by the 1980 economic recession that brought about a 20 per cent regional unemployment rate and subsequent out-migration and population loss. Övertorneå's population dropped 25 per cent from its level 30 years earlier. Apathy and lack of trust in the future typified local attitudes. Social experts predicted the region was doomed to die, since no possible solutions were apparent.

In this seemingly hopeless situation, Övertorneå and its municipal government decided to explore

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## Notes from the Chair

I would like to begin this column with a hearty thank you to Steven Lease, who has been our outstanding newsletter editor for the past several years. Steven has been instrumental in upgrading our newsletter to the quality publication it has become. He also has saved the Division expense and effort in its distribution.

Steven has turned the reins over to Tyler Frazier, AICP a planner in Lee County of hurricane-battered Florida. Thus will be the first issue Tyler is shepharding to completion. We thank Tyler for volunteering and look forward to working with him in the future. Please feel free to send him contributions you want to make in terms of articles and announcements. Also, please see Tyler's column in which he describes his plans for the newsletter over the next few issues.

In July, I attended the Sustainable Communities 2004 Conference in Burlington, VT. Attending also were ENRE members Anindita Mitra, AICP, Sarah James, and Ingrid Kelley. Peter Lowitt, AICP, Massachusetts Chapter President and Peter Hawley of the APA Washington office participated as well. APA and ENE were involved in the program committee and it was good to see the number of planners in attendance. One of the final sessions, conducted by myself along with Sarah, Peter, and Peter, focused on what APA can do to better promote sustainability, especially in the planning profession. A summary of the conference and this session in particular is being prepared and I will share that with you in the next issue of the newsletter.

Finally, I will be representing the Division in making a presentation to a delegation of Chinese Mayors visiting the U.S. in October. I will speak to them on environmental regulation when they visit Boston on October 7<sup>th</sup>. APA and AICP are sponsoring this 27-member delegation from Jiangsu Province for a 21-day training in urban planning and development. As described in the Program Overview:

The training covers a comprehensive array of topics in planning, including transportation, housing, environment, economics, urban design and sustainability. The training will provide a broad and balance view towards the success and limitations of planning in America. The leadership training helps mayors with decision-making in urban planning in their cities. This training, as with previous and forthcoming training sessions, provides ample opportunities for professional exchange and mutual learning. In the era of economic globalization, good planning is important not only at the local scale. APA China Program will continue to bridge expertise and experience across the Pacific.

I look forward to my participation in this program, which is an ongoing effort by APA and AICP. This is the fourth such delegation visiting the U.S.

**Ralph R. Willmer, AICP**

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what other future scenarios might be possible besides the prevailing bleak view. This decision was the town's first step toward becoming Sweden's first eco-municipality. It also was the first step toward changing both the perceived negative future and the actual negative conditions of hard economic times and population loss. In the first six years following this decision, over 200 new companies in Övertorneå developed and prospered. These new enterprises included organic farms, bee keeping, fish farming, sheep husbandry, and eco-tourism enterprises.

Key to these successes was widespread community participation. The citizens of Övertorneå took on their own community development work to become the town they wanted. Over 600 residents took part in special study circles discussing regional development issues and future possibilities. Out of these study circles emerged village development associations that took charge of the ideas sprouting and gradually taking form. The ecological perspective blossomed in a municipal government investment in bio-fueled district heating, support for ecological farming such as farmer education and municipal purchasing of organic foods, establishing a "health home" and building an eco-village to attract new families. Övertorneå's municipal government and town planner held continuous training events and seminars explaining the ecological perspective to citizens, businesses, farmers, and the entire range of interests in Övertorneå, gradually raising the community's awareness of the importance of ecology and the environment. New post-high school level education courses, elementary school education and child care taught with an eco-perspective started up. Marketing and outreach of this emerging "eco-region" brought about a surge of tourist interest and subsequent birth of new tourist-oriented businesses.

At the same time, local culture was undergoing a renaissance. Revival of the local Finnish dialect minority language, establishment of a local theater, start-up of music groups, among others, brought about a cultural revolution in Övertorneå and its region where pessimism transformed into trust in the town's future, its traditional culture and its development potential.

The transformation continues to this day. Övertorneå currently has the lowest incidence of sicknesses in Sweden, measured by the proportion of absence of long-term illness, as one example. The community's good health is considered to be due in large measure to consistent municipal investment that supports public health.

The municipality of Övertorneå has become 100

per cent free of fossil fuel use in its municipal operations and is working for community independence from fossil fuel as a heating source by 2010. The town has converted all five of its oil-based village heating plants to wood pellet-burning facilities. The town government and many citizens have purchased cars that run on ethanol, a grain-based alcohol, instead of gasoline. Now there are ethanol gas pumps in town. The town has made all public transportation available at no cost. This decision increased public ridership by 700 per cent. The town designed and constructed new schools based upon ecological principles.

News of Övertorneå's transformation spread throughout the country over the next several years. Inspired in part by Övertorneå's small village revitalization, a national rural movement of 3,300 similar village development groups evolved, where hundreds of thousands of village inhabitants began to take part in developing their communities in the direction of a future they wanted.

In the early 1990s, scores of other Swedish cities and towns signed onto the idea of becoming an eco-municipality. At the same time, similar eco-community development was going on in Norway, Denmark and Finland. Collaborations among these Nordic eco-cities and eco-towns brought about a combined Nordic eco-community presentation at the 1992 United Nations Conference on Environment and Development, held in Rio de Janeiro. This conference, also called the 1992 Rio Summit, established an action plan for local sustainable development that has come to be known as "Agenda 21". Much of the contents in this world guide to local sustainable development emerged from the Nordic eco-municipality contributions to the summit, when many conference participants realized that they offered one of the few serious examples of sustainable community development in the western world. Thus, the United Nation's world guide to local sustainable development urges communities to begin to work in the same manner as Övertorneå began to work ten years earlier.

Since the 1992 Rio Summit, all municipalities in Sweden have begun local development work using this United Nations sustainable development guide. More than sixty of these cities and towns have declared themselves as "eco-municipalities". The eco-municipality concept also has spread to other countries such as Japan and New Zealand. The little bumblebee that couldn't fly has evidently influenced matters far outside its own boundaries!

## **State Wildlife Conservation Strategies: A Vision for Conserving Wildlife and Habitat as well as a Platform for Collaborative Planning at the State Level**

The State Wildlife Grants program is our nation's core program for keeping fish and wildlife from becoming threatened or endangered. Efforts are underway to restore habitat, enhance or reintroduce native species, and improve the stewardship of public and private lands. State Wildlife Grants arose from the work of the *Teaming With Wildlife* campaign, a decade-long effort led by state fish and wildlife agencies to increase funding for comprehensive fish and wildlife conservation. This campaign expands game and sport fish wildlife conservation funding beyond traditional hunting/angling license sales and excise taxes on hunting/angling equipment sales to include species and habitats of greatest conservation need.

To receive State Wildlife Grants funding, each state and territory must submit a Comprehensive Wildlife Conservation Strategy (strategy) by October 2005. Each state's strategy will identify priority fish and wildlife species and their habitats, assess threats to their survival, and identify actions to be taken to conserve them over the long term. Fish and wildlife agencies are not only leading the strategy development process, but are using a broad, collaborative approach to seek input and assistance from stakeholders in their state, including conservation groups, government agencies and planning entities, resource users, private landowners, and others interested in wildlife. The *Organization of Wildlife Planners*, is comprised of professional planning process facilitators employed by state fish and wildlife agencies, and is one of these groups helping forge meaningful actions through wildlife conservation planning projects.

State wildlife strategies present a tremendous opportunity to build relationships between land use and environmental planners at any level and state wildlife agency planners as well as scientists. Working together, we can integrate wildlife conservation into environmental and land use planning toward attaining shared local and regional priorities in agency management decisions. By taking action to conserve a species before it becomes federally threatened or endangered, we can help avoid the regulatory problems that would interfere with economic priorities and quality of life in many communities. Together, we can seek, inform and engage partners in active conservation work to benefit species and habitats in greatest need of conservation.

For more information on state comprehensive wildlife conservation strategies, see the *Teaming With Wildlife* web site at <http://www.teaming.com>. There you can find information and links on wildlife strategy development, including contact information for each state agency's strategy coordinator.

The *Organization of Wildlife Planners* is poised to assist land use/environmental planning entities integrate wildlife planning processes and insights. To learn more, visit us at <http://www.owpweb.org>. Resources available include upcoming training, conferences, planning/technical services and a quarterly newsletter.

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## Commentary

There have been many changes in the works over the past few months. After replacing Steven Lease as newsletter editor, I decided to try and start out with a personal touch. For starters I have added the concept of a journal to our division publication. It is my hope that our publication can accommodate submissions that will inform members with regard to current events, future conferences and educational sessions that address environmental planning as well as include scholarly publications. Journal entries could also address case studies from individual works or theoretical and philosophical planning issues associated with environmental protection, natural resource management, and energy use.

For this quarterly journal the theme was sustainable development. The first submission is a book excerpt from Sarah James and Torbjörn Lahti that describes the pioneering experiences of a self-proclaimed eco-community in Sweden. The second submission is a piece by Ingrid Kelly of the Energy Center in Wisconsin and provides a framework for understanding the sources of energy production and their proportional negative, external impacts.

For the next journal, we will continue with an additional article on the eco-municipalities of Sweden. I also hope to have a submission on green architecture, as well as efforts to promote sustainable development in Australia. If you have an idea for a submission, please send me a note with your suggestions at [TFrazier@leegov.com](mailto:TFrazier@leegov.com) and we can discuss potential length in further detail. If you prefer, just go ahead and e-mail your submission.

Just as a reminder, the APA national conference will be held in San Francisco on March 19-23, 2005. The exhibit and sponsorship application deadline for this conference is December 3rd.



## Beyond MPG: Looking at Non-mobile Energy Sustainability

*By Ingrid Kelley, Energy Center of Wisconsin*

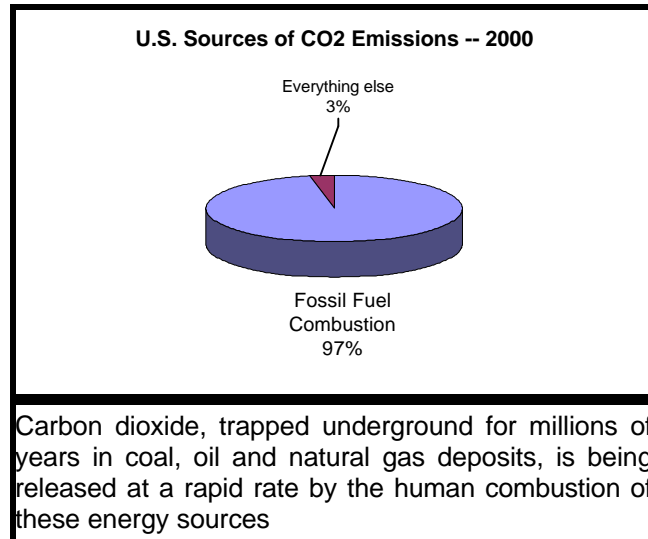
MPG is, of course, miles per gallon. We know that our dependence on the automobile harms the environment and worsens our dependence on foreign oil – thus the controversy about driving inefficient vehicles like SUV’s. Transportation is a key component of sustainability planning from a number of perspectives, including the problems associated with fossil fuel consumption. However, we also depend heavily on coal, natural gas and oil to fuel other aspects of our economy and lifestyle. Sustainability planning requires that we understand the whole picture.

### Where Do We Stand? – A Few Facts

First, how does our energy consumption fit into the concept of sustainability? The following are all impacts of our present day energy choices. Which of them will have the greatest long term impact on whether or not we sustain (or improve) our quality of life on this planet?

1. Air pollution
2. Water pollution
3. Climate change
4. Political and economic upheaval from competition over scarce resources

Despite the serious threats posed by the other three, most scientists would agree that the answer is num-



ber 3, climate change. Scientific evidence now strongly suggests that greenhouse gas emissions, especially CO<sub>2</sub>, will profoundly affect the earth’s climate in the future. Many experts consider this to be the greatest threat; not only for its physical effects, but for the effects forced adaptation would bring, particularly on the most economically vulnerable populations.

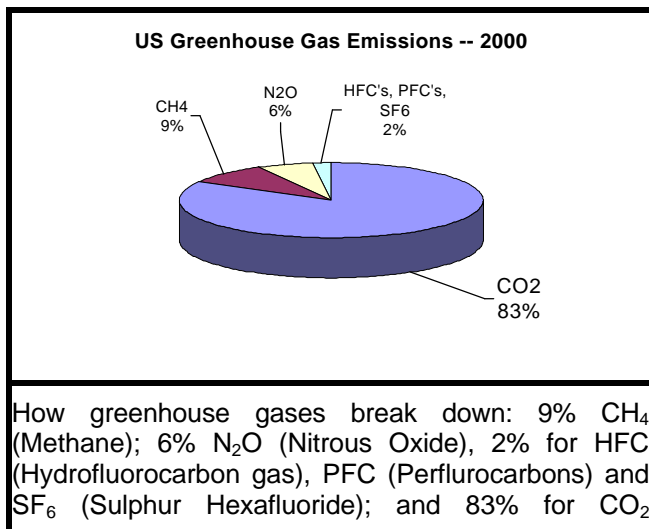
Many countries outside the U.S. consider the reduction of CO<sub>2</sub> levels to be essential for establishing global sustainability and are working to achieve specific goals. The Kyoto Protocol, which the U.S. so far refuses to ratify, calls for reduction of CO<sub>2</sub> levels to 7% below 1990 levels by 2012. Some climate change experts project that we will need to reduce CO<sub>2</sub> emissions in the U.S. by 80% in the next 35-40 years in order to prevent the worst effects of global climate change.

Even this general an overview illustrates the magnitude of the problem. Sustainability in the future depends on a dramatic change in our energy use, and it goes beyond public transportation and miles-per-gallon. Let’s consider the largest non-transportation source of greenhouse gasses: the generation of electricity.

### What about electricity?

The development of electricity has had a profound influence on the development of human soci-

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ety. Electricity is now considered to be essential for maintaining a reasonable quality of life, from computer and technology-driven industries supporting thousands of employees to the isolated, Third World medical clinic keeping its vaccines cool in a solar-powered refrigerator. The two major advantages of electricity are that it can be generated in a variety of ways, and at point of use it is a clean and predictable source of power.

However, electricity is not itself an energy resource. It must be generated from fossil, nuclear or renewable sources. Because no generation method is totally efficient, significant losses occur at the generator and along transmission and distribution lines on its way to be used. The thermal and mechanical efficiency of an average coal plant is about 35%, which means that only 35% of the coal's energy emerges as electricity. Another 10% is lost in delivery through transmission and distribution lines. This means that for every kilowatt hour's worth of coal energy in the ground, only one hour is delivered. Three kilowatt hour's worth of coal energy was lost along the way.

### **What about renewable energy?**

Renewable energy is held out as the primary hope for a sustainable future. It may be surprising to know which renewable sources are currently used most.

Renewable energy is currently the most dynamic energy development market in the world. Germany and Spain are international leaders in renewable electric power, as is Japan, where residential solar PV is already economically competitive. The growth of wind power development internationally over the last five years has been tremendous. Methane recovery from anaerobic digesters for agricultural waste, municipal sewage treatment and landfills provides another growing source of fuel for electrical generation.

### **What about energy conservation and efficiency?**

Energy conservation and efficiency can help reduce the CO<sub>2</sub> emissions from the electric power sector. There are many efforts currently dedicated to helping residential, commercial, industrial and agricultural sectors reduce their energy use. Progress is indeed being made at the individual project level, but significant opportunities for improvement exist within sustainability or smart growth planning at a broader level.

### **How can planners help?**

Planners are in a unique position to introduce energy issues into community based planning. This may sound

like a daunting idea, but there are many resources available. In the spring of 2004, the American Planning Association adopted its first Energy Policy Guide for planners, which outlines four primary policy positions: (a) increasing energy efficiency; (b) reducing fossil fuel use and increasing renewable energy use; (c) mitigating adverse energy impacts; and (d) promoting equity and justice through community involvement in energy issues. Twenty-one policy initiatives outline specific areas of action. Referenced as well in this document are related APA policy guides.

### **Energy and Sustainability:**

The following web sites provide further background information about energy sources, uses, technologies and impacts:

#### **General Information:**

[www.eia.doe.gov/emeu/aer/eh/frame.html](http://www.eia.doe.gov/emeu/aer/eh/frame.html)

#### **Energy Efficiency:**

[www.energystar.gov](http://www.energystar.gov)—U.S. Environmental Protection Agency (EPA)

[www.usgbc.org/leed/leed\\_main.asp](http://www.usgbc.org/leed/leed_main.asp)—Leadership in Energy & Environmental Design (LEED)

[www.darksky.org](http://www.darksky.org) International Dark-Sky Association

[www.sustainable.doe.gov](http://www.sustainable.doe.gov) is the U.S. Department of Energy's (DOE) Smart Communities Network

#### **Renewable Energy:**

[www.eere.energy.gov](http://www.eere.energy.gov) is the U.S. Department of Energy's (DOE)

[www.nrel.gov](http://www.nrel.gov) is DOE's web site for the National Renewable Energy Laboratory

[www.awea.org](http://www.awea.org) is the web site for the American Wind Energy Association

[www.ases.org](http://www.ases.org) is the web site for the American Solar Energy Society

#### **Sustainable Building/Green Energy**

[www.cmpbs.org](http://www.cmpbs.org) - Center for Maximum Potential Building Systems

[www.dcat.net](http://www.dcat.net) - Development Center for Appropriate Technology

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**DEADLINE DATE FOR SUBMISSION OF ARTICLES FOR NEXT ENRE NEWSLETTER**  
**January 30, 2004.** To submit articles, email articles as attachments in Microsoft Word compatible  
format or Rich Text Format to [tyfrazier@comcast.net](mailto:tyfrazier@comcast.net)

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