

## **GREEN BUILDING & ENERGY**

**Vision:** *The City of Stevens Point will continuously work towards a more efficient use of energy through conservation and innovative technologies. The use of engineering practice will be implemented in the decision making process when new technologies are being considered. The City of Stevens Point will also make it a priority to increase the development and use of renewable energy technologies.*

### **GOAL 1: Stevens Point will have on staff a city sustainability coordinator.**

Justification: The issues related to energy usage are dealt with through a number of mechanisms and departments in city government. Presently, there is no central office or position to provide overall coordination between departments.

Objective 1: Create a new staff position focused on sustainability issues by 2009.

Action: The Mayor will develop a new position of sustainability and fill the position by January 2009.

Objective 2: Create a permanent sustainability commission to work with the sustainability coordinator by 2009.

Action: The Mayor will create a permanent sustainability commission to guide and work with the new City sustainability staff member.

Objective 3: The new position will work with all City departments to put into effect the Eco-municipality task force recommendations.

Action: The new sustainability staff member will work with the sustainability commission and all City departments to implement Eco-municipality recommendations.

Action: The new sustainability staff member will provide yearly reports to citizens and regular informational meetings to continue to gain community support and input.

### **GOAL 2: The city will require energy modeling as part of architectural design in all new public building construction.**

Justification: It can be predetermined what energy costs can be expected before a public building is constructed. That can assist in determining the construction materials and design as well as location and landscaping requirements. Energy modeling processes can help determine the most efficient construction for energy conservation.

Objective 1: Begin modeling energy consumption on all new public building construction starting January 2009.

Action: Energy modeling can be performed by the design team retained for a project or an independent consultant

Action: Use the information gained by modeling to ensure the new building is as energy efficient as possible

Objective 2: Share the information about public building energy modeling and results with the public.

Action: Before each public building is constructed, share the energy modeling information with the public to gain public input.

Action: Lead by example and teach how energy modeling is beneficial, sharing how other businesses and residential structures can also use modeling as an economic and environmental benefit.

**GOAL 3: The city will create a reporting system to establish a baseline for all energy costs in the city.**

Justification: City energy costs for buildings, street lights, stoplights, and equipment are all assigned to various departments. As a result, energy costs can only be compared by department rather than total energy costs for the city. A baseline for energy costs for the entire city is needed.

Objective 1: Create a reporting system that cuts across all city departments and standardizes the collection of energy usage data from all City activities, by January 1, 2009.

Action: The Mayor will designate a Coordinator to oversee the reporting and gathering of energy data.

Action: Energy data will be collected in a standardized fashion on at least a quarterly and annual basis.

Objective 2: Disseminate the energy use information to the public.

Action: On an annual basis, mail the energy information to the citizens of Stevens Point beginning January 2009.

**GOAL 4: The city will prepare an annual report on energy use and costs in the city as well as steps taken to reduce energy costs.**

Justification: All operational costs for the city including energy costs are paid by public funds. Expenditure of these funds should be available for public scrutiny and comments to help insure the city's duty to reduce energy costs and usage.

Objective 1: Energy usage data, categorized by energy type and end use, will be analyzed and an Annual Report to the public will be prepared, by January 1, 2009.

Action: The Coordinator will categorize energy use and break down energy usage into units suitable for comparison with other user averages, such as those from other governmental entities and/or State or National averages.

Objective 2: Energy usage data will be compared over time to track trends and serve as a benchmark for making improvements or changes to City energy use, after January 1, 2009.

Action: Current energy usage will be compared to past energy usage.

Action: The impact of changes in City operations will be identified and highlighted in the energy baseline data.

**GOAL 5: The city will continue its support of an urban forestry program and seek a 40% tree canopy for the city by assisting homeowners and incorporating this goal into city ordinances.**

Justification: An effective urban forestry program can assist in reducing air conditioning and heating costs for homes and businesses. Tree planting in boulevards can extend the life of a street surface by as much as ten years. Urban trees improve the business atmosphere and enhance the aesthetic and property value of homes. These values can be maintained with a 40% tree canopy.

Objective 1: Determine the current tree canopy percentage and provide recommendations, by January 1, 2009, to achieve the desired canopy percentage.

Action: City Forester will determine current tree canopy percentage as a benchmark.

Action: City Forester will develop a series of recommendations to achieve the desired canopy percentage over time.

Action: City Forester will identify constraints and obstacles to achieving the desired canopy percentage.

Action: The City Forester will educate the public on ways to improve the City's tree canopy.

**GOAL 6: The city will establish a physical location(s) where its residents can get up-to-date information on energy conservation, renewable energy, and green building. An electronic website should also be developed to assist in this effort.**

Justification: Energy issues are complex and constantly changing. City residents need a central location to secure information on how they can assist in reducing energy consumption through conservation and other sustainable practices.

Objective 1: The designated Staff person should establish a physical location in the City where residents can obtain energy conservation, renewable energy, and green building information, by January 1, 2009.

Action: Establish a physical location for energy information.

Action: Develop an ongoing program to keep energy information up to date. It is suggested that the use of local utilities assist in this process.

Objective 2: The designated Staff person should oversee the [www.sustainablepoint.org](http://www.sustainablepoint.org) website to ensure that it offers electronic versions of materials available at the physical location and offers links to other resources, by January 1, 2009.

Action: Maintain the already existing website by updating and promoting it.

**GOAL 7: The city will develop an outreach program to regularly distribute energy conservation, renewable energy, and green building materials to city residents including students.**

Justification: Materials dealing with energy conservation, renewable energy, and green building are an important part of the educational process for city residents.

Objective 1: Collaborate with organizations such as the Midwest Renewable Energy Association (MREA) and Focus on Energy to disseminate educational materials to City residents starting in 2009.

Action: Materials focused on energy efficiency in the home, renewable energy use, efficient transportation, etc. will be disseminated in multiple ways including tax bills and City newsletter.

Objective 2: Financially support the education of teachers in Stevens Point on energy issues beginning in 2010 to prepare them to incorporate energy education into their curriculums.

Action: The City will support 20 Stevens Point teachers/year to attend an energy education course developed and taught by the Wisconsin K-12 Energy Education Program (KEEP).

**GOAL 8: The city will undertake a thorough review of all zoning and other ordinances to make energy conservation a conscious part of the ordinance implementation process.**

Justification: City ordinances historically have not dealt with energy use or conservation including street lighting, home or business construction. As energy costs rise, this impacts the city tax base and ultimately the tax payer.

Objective 1: Change the city regulations that do not have sustainable building practice as a priority.

Action: The City will perform a review of all existing City ordinances and procedures, to determine their potential energy impact, by January 1, 2009

Action: The city staff will identify areas in the regulations that could be altered to increase energy conservation and sustainable building practices in both residential and commercial projects.

Objective 2: Develop and propose recommendations to City ordinances and procedures to reduce energy impacts, by January 1, 2009.

Action: Propose new ordinances and revisions to existing ordinances that are intended to reduce energy usage or use resources more efficiently.

**GOAL 9: The city will evaluate the opportunity to incorporate alternative energy and sustainable development strategies in all of its development or redevelopment activities and will encourage citizens to incorporate alternative energy and sustainability into residential projects.**

Justification: Energy consumption is primarily electrical, gas, fuel oil, gasoline or diesel. Energy can also be obtained from alternative energy sources such as wood, wind, solar or geothermal. Regarding sustainable development, infill development where existing infrastructure exists is a more effective use of land.

Objective 1: Evaluate opportunities to incorporate renewable energy systems or other alternatives to conventional fossil-fuel based technologies when undertaking development or reconstruction projects after January 1, 2009.

Action: Conventional systems will be compared to alternative systems on a life-cycle basis, with costs and benefits identified and quantified.

Action: Ensure the alternative energy potential is studied through an engineering process prior to all municipal construction. This will be accomplished prior to 01/01/2009.

Objective 2: Encourage citizens to incorporate alternative energy into residential projects.

Action: Provide financial incentives to residents in Stevens Point to encourage them to utilize renewable energy, especially solar hot water and photovoltaics.

**GOAL 10: The City of Stevens Point will become a leader in renewable energy consumption.**

Justification: The State of Wisconsin has joined other states to increase its renewable energy sources to 25% by 2025. Congress has also passed resolutions to achieve the same goal.

Objective 1: Meeting or exceed the goal of “25 X 25” beginning in 2009.

Action: Take advantage of Focus on Energy’s grants and incentives to fund renewable energy projects on public buildings.

Action: Research the possibility of Stevens Point having its own municipal wind turbine(s). Research complete by 2009. Report to public on feasibility.

Action: Research the possibility of constructing a waste-to-energy plant. Research complete by 2009. Report to public on feasibility.

Action: Schedule renewable energy workshops where technologies and financial incentives are showcased. One workshop per year starting in January 2009.

Action: Create energy co-ops for renewable energy produced locally.

**GOAL 11: The city will adopt the LEED certification and rating system for all publicly-funded buildings by ordinance and other governmental review processes.**

Justification: The Leadership in Energy and Environmental Design (LEED) Green Building Rating System represents the U.S. Green Building Council’s effort to provide a national standard for what constitutes a “green building.” Through its use as a design guideline and third-party certification tool, it aims to improve occupant well-being, environmental performance and economic returns of buildings using established and innovative practices, standards and technologies. This system while complex has been adopted by many cities as part of their efforts in energy conservation.

Objective 1: The City will employ third-party verification of sustainable design and construction features incorporated into new City projects, after January 1, 2009.

Action: All new construction projects will be registered and submitted for certification under the LEED Green Building Rating System of the U.S. Green Building Council

Action: The scope of work and associated design fees for new construction projects should reflect the tasks associated with the certification process.

Objective 2: The City will evaluate by January 1, 2009 all existing buildings for opportunities to make improvements in energy usage, operations and maintenance.

Action: All existing buildings will be evaluated under the LEED-EB Rating System for existing buildings.

Action: Existing buildings with significant potential will be registered and submitted for certification under the LEED-EB Rating System.

**GOAL 12: The city will undertake a comprehensive review of street light numbers, locations and intensity, with the goal of reducing overall public lighting levels. The city should by ordinance and other governmental review processes adopt a model “dark sky” lighting ordinance that addresses lighting location, acceptable fixture types, signage lighting and other relevant aspects.**

Justification: Public lighting has a worthwhile public benefit that should be balanced with mid-block streetlights, unshielded security and signage lights can be excessive and inefficient in their use of energy. Many communities are adopting “dark sky” ordinances to mitigate the effects of glare, light trespass, light pollution and other negative aspects of lighting in public and private areas alike, while at the same time using lighting fixtures that are highly efficient in directing light where it is most needed.

Objective 1: The City will undertake by January 1, 2009 to reduce the overall level of street lighting, to be phased-in over a specific time period.

Action: Identify current street lighting locations, intensities, energy usage and costs.

Action: Propose revised street lighting strategies to address safety concerns, while reducing the overall number and level of lighting throughout the City.

Action: Pass an ordinance to adopt a model “dark sky” lighting ordinance that addresses lighting location, acceptable fixture types, signage lighting and other relevant aspects.

**GOAL 13: The city will undertake a comprehensive review of traffic light settings with the intention of limiting the number of intersections with 24-hour signal operation to a select group of specifically-identified high-traffic locations.**

Justification: Traffic control lights perform a necessary function for public safety. However, many traffic control signals operate beyond peak traffic periods. This results in needless fuel use by vehicles waiting for traffic lights to change when there are no or very few other vehicles at the intersection, especially in later evening and early morning hours. Many communities convert a majority of lesser used intersections to all-flashing mode from early evening to early morning as a matter of policy.

Objective 1: Conserve energy on traffic signals and not lessen the safety of the roadways.

Action: Re-configure city traffic lights by January 1, 2009 to operate on a timed-mode only during peak traffic hours for the specific intersection where they are located. Few, if any, traffic lights should operate on a timed-mode late at night or continuously for 24 hours.

Action: Traffic lights should be programmed to revert to flashing-mode during off-peak and low-traffic periods.

Objective 2: City traffic lights with dedicated turn-signals should be reconfigured by January 1, 2009 to allow through traffic to proceed before turning traffic, as has been done in many other cities, to avoid holding up larger volumes of through-traffic for smaller numbers of turning-traffic.

Action: Traffic light turn-signals should be programmed to activate at the end of the cycle, rather than the beginning, in a “lagging-left” configuration.