

POWERFUL CHOICES

a sustainable energy project for river falls



POWERful Choices!

*A Sustainable Energy Project for River Falls
5-Year Comprehensive Review*

RIVER FALLS MUNICIPAL UTILITIES | 222 LEWIS ST. | RIVER FALLS, WISCONSIN

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Section 1 – Introduction

This report reviews the POWERful Choices! program's first five years.

POWERful Choices! is the brand used for all conservation, efficiency, renewable energy and low income programs. There is also a citizen advisory committee by the same name. The POWERful Choices! mission, whether referring to the programming or advisory group, is to instill a community wide conservation ethic demonstrating the effectiveness of energy efficiency, conservation and renewable energy.

In developing POWERful Choices! programming, staff and community leaders utilized best management practices from throughout the energy industry. POWERful Choices! programming uses demand side management methodology as a means to modify consumer demand for energy through various methods such as direct install, financial incentives, behavioral science and education. Demand side management is a commonly used practice by essentially all utilities as a way to keep utility rates low by delaying the need for costly infrastructure, such as a new power plant.

Focus and/or advisory groups are commonly paired with demand side management programming to ensure relevancy and community buy-in. The POWERful Choices! committee structure and guidelines were developed by River Falls Municipal Utilities staff, the Utility Commission and professionals from the Energy Center of Wisconsin and WPPI Energy. The committee serves primarily as an advisory and marketing focus group. The committee has no spending authority. POWERful Choices! program spending is determined by City policy.

Improved understanding of the POWERful Choices! brand and committee will lead to greater benefits to the community in which we all serve.

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Mission Statement
A community-wide effort of instilling strong conservation ethics while demonstrating the effectiveness of energy efficiency, conservation and renewable resource development.

Vision Statement
Achieve a sustainable energy future for the River Falls community through conservation, efficiency, and renewable energy production and purchases.

Section 2 – History and Timeline

This section discusses the history and support made by progressive, committed entities to create and further POWERFUL Choices! A great deal of credit goes to the leaders listed below for their wisdom, forward thinking, and commitment to the community of River Falls by approving and moving forward with the POWERful Choices! initiative. The River Falls Municipal Utilities customers have benefited from rates remaining low due to the delayed cost of new infrastructure and by energy conserved through POWERful Choices!

2006

- In September of 2006, Governor Jim Doyle announced his selection of University of Wisconsin-River Falls as one of four University of Wisconsin campuses that will participate in his “**Off the Grid**” **Initiative** to achieve “energy independence” within five years. In response to this announcement, the University of Wisconsin-River Falls, River Falls Municipal Utilities and WPPI Energy representatives met to discuss cooperative efforts to develop mutually beneficial renewable energy and energy conservation programs projects, and educational activities. All parties agreed in principal to work cooperatively to identify and aggressively pursue cost-effective energy conservation initiatives, and renewable energy projects that will help achieve the goals of this initiative. To share the message of sustainability and responsible use of resources, an educational “green” kiosk was constructed at the new University Center to incorporate displays on energy, water, and resource conservation. River Falls Municipal Utilities and WPPI Energy agreed to fund the cost of the kiosk in exchange for University of Wisconsin-River Falls purchasing 100 percent of the electricity consumed by the University Center from the Green Power for Business program.



Left to right: University of Wisconsin – River Falls, Chancellor Don Betz and Mary Halada; River Falls Municipal Utilities, Carl Gaulke; and WPPI Energy, Mike Hodges, signing the Memorandum of Understanding in support of the Governor Doyle’s “Off the Grid” initiative.

2007

- To further support the Governor’s initiative, a **Memorandum of Understanding** was signed by the **University of Wisconsin-River Falls, River Falls Municipal Utilities and WPPI Energy** to identify the framework of cooperation among all parties to that will be leveraged to develop mutually beneficial renewable energy and energy conservation programs, projects and educational activities within the community and on campus.

Section 2 – History and Timeline Continued

2007 Continued

- In the spring, WPPI Energy launched the **Model Community Energy Project** to help River Falls, along with two other WPPI Energy member communities, implement multi-year campaigns to demonstrate the effectiveness of energy efficiency, conservation and renewable resource development. In April of 2007, the Utility Commission and Common Council formally approved participation in this project designed to “lead by example” and made a formal commitment of financial and human resources. Shortly thereafter, a committee consisting of a broad coalition of elected and appointed officials, educators, business leaders, environmental groups and citizens – all united around the goals of energy efficiency, conservation and environmental stewardship – was selected as an emerging models for successful and sustainable community-based initiatives. Without any spending authority, this volunteer committee was formulated to provide leadership in motivating the community to work together with the goal of establishing River Falls as a model in the state and region for implementing community-wide sustainability initiatives. In August of 2007, there was consensus of the committee to call this initiative POWERful Choices! and soon thereafter a logo was designed, mission and vision statements identified, and guideline structures established. (Committee membership has changed numerous times since first established. See Section 6 for the current membership listing.)



Members of the initial POWERful Choices! Committee, back left to right: Chairperson Jan Lorenz, River Falls Municipal Utilities; Paul Steiner, Steiner Plumbing and Heating; Kelly Cain, University of Wisconsin – River Falls; Mike Stifter, Elaine Baumann, River Falls High School; Chris Blasius, River Falls Municipal Utilities. Front row: Ian Johnson, Intern; Katie Chaffee, Citizen; Don Richards, Mayor of River Falls; and Matt Fitzgerald, City Council Representative. Not pictured: Steve Miller, Miller & Miller; and Joyce Mattson, Citizen.



Located at the River Falls High School, this 3.7 kW photovoltaic dual-axis tracker system is estimated to produce 5,236 kWh per year.

- In November of 2007, a **Memorandum of Understanding between River Falls Municipal Utilities and River Falls School District** was signed to identify the framework of cooperation in the deployment of a solar electric resource within the community. A photovoltaic system to be constructed at the River Falls High School property provides maximum community visibility to increase the acceptance of the technology, and to encourage others to investigate renewable energy, while providing an educational learning tool to incorporate into curriculum.

Section 2 – History and Timeline Continued

2008



A 199-foot temporary wind test tower was installed to gather wind speed data to assess the feasibility of erecting a permanent wind turbine to power local businesses and homes.

▪ WPPI Energy worked with member municipal electric utilities and local officials to install as much as 25 megawatts of wind power in member communities. **EcoEnergy** of Madison, Wisconsin, expressed interest in having a utility-sized wind turbine generator placed in River Falls. A site was selected on the high ground in the Whitetail Ridge Corporate Park, just west of State Highway 35, and a wind test tower was constructed. Based on data gathered at 60 meters, the wind power classification was listed as a “poor” resource class at 5.5 meters per second (m/s), but added that this specific location may not be the best option within the River Falls area. A higher elevation (80 meters) was virtually estimated at 6.2. Computer modeling also estimates 6.4-6.5 m/s west of town and 6.7 m/s east of town. Even though the wind estimates are not as high as hoped for, a three turbine project with each producing approximately 3.5 million kWh per year could power approximately 1,200 homes.

▪ **Neighborhood Electric Vehicles (NEVs)** are small, battery-powered cars meeting the National Highway Traffic Safety Administrations’ Federal Motor Vehicle Safety Standard for a “low speed vehicle” that serve as an alternative to gasoline-powered vehicles and emit no tailpipe exhaust. In February of 2008, the City Council approved an ordinance allowing the use of NEVs on roadways that have a speed limit of 35 miles per hour or less.

▪ In working extensively with the **River Falls School District**, an ENERGY STAR® benchmarking of all facilities was performed, a partnership was formed with the high school physics class to perform a service learning project where students outlined energy efficiency opportunities within the facility, and a similar project was implemented at the River

Falls Library where students investigated energy efficiency opportunities.

▪ In 2008 River Falls was one of sixteen WPPI Energy member communities that chose to participate in **Wisconsin’s Energy Independent Community Partnership** through the Office of Energy Independence. These communities adopted Wisconsin’s goal of generating 25 percent of electricity and transportation fuels from renewable resources by 2025.



Neighborhood Electric Vehicles were on display during a Customer Appreciation Event held at City Hall.



Section 2 – History and Timeline Continued

2008 Continued

- **Energy Center of Wisconsin** of Madison, Wisconsin, was hired to provide planning support for near-term electric energy efficiency efforts and guidance on long-term planning toward energy independence. Planning assistance continued through the end of the year. This workable plan was designed to achieve initiative goals and visions through the following four stage process:



This workable plan was designed to achieve initiative goals and visions through the following four stage process:

First Stage:

- **Baseline.** The year 2006 was chosen to represent the baseline (114,921 MWh) to be consistent with City of River Falls Resolution 960 passed in April of 2007 calling for a reduction in community demand for electricity by 10%. It was outlined that the highest performing energy efficiency programs in the nation achieve energy use reductions of 1.5% to 2% of total annual electric sales. On that schedule, achieving a target 10% reduction as proposed could take from 5 to 8 years, during which time significant business and population growth could occur in the city.
- **Savings Opportunity Assessment.** This step identifies the approximate energy saving potential, giving an approximate picture of where the energy savings are likely to be realized by customer type (residential, commercial, industrial, municipal) and end-use (lighting, cooling, heating, home appliances, motors, etc.). A useful estimate of savings potential may be achieved by taking the results from detailed studies conducted at the state level, overseen by utilities and state regulators, and scaling results to the particular customer profile of River Falls Municipal Utilities. This works as an approximation because most efficiency measures are typical of all customers of a certain type, regardless of their utility service provider.

Second Stage:

- **Develop a Quick Start Plan to Build Early Momentum.** Supporting resources (community resources, funded energy programs) were identified and matched to energy reduction opportunities identified in the savings assessment. Then, a short list of potential activities for near-term launch was identified to develop a “quick start” blueprint plan for the longer-term campaign.

Third Stage:

- **Expand the Campaign to Build Depth** (scope of assistance only covered the first two stages)

Fourth Stage:

- **Develop and Implement the Comprehensive Plan for Reaching Goals** (scope of assistance only covered the first two stages)

Section 2 – History and Timeline Continued

2008 Continued

- With the proposed construction of a new City Hall building, it was extremely important that the City “lead by example” by striving toward **Leadership in Energy and Environmental Design (LEED) Certification**, which would be the first in the state. High-efficiency boilers and chillers, a building automation system, and increased insulation anticipated the building to use 34% less energy than code requires. Low-flow faucets and toilets were estimated to use 20% less water than code, saving approximately 107,000 gallons of water annually.



River Falls became the first LEED-Certified City Hall in Wisconsin and received LEED-Silver recognition.

- A **part-time graduate student** was hired in partnership with University of Wisconsin – River Falls to assist with program.
- River Falls was selected as one of four partner cities (Apple Valley, MN; Milwaukee, WI; Grand Rapids, MI) for the **Midwest Efficiency Cities** project, which was created as a result of the Midwestern Governor’s Association Energy Security and Climate Change Summit. The **Joyce Foundation of Chicago** provided a \$600,000 grant to the Energy Center of Wisconsin to support this two-year project. This grant money was used to assist in planning and program design activities within the four cities, as well as for coordination of evaluation, communication and education activities at the regional level. As part of this grant, \$50,000 was allocated on behalf of River Falls to Energy Center of Wisconsin to complete Stage Three of the planning document.



Green Power Community is credited to many individuals and groups working together to make River Falls a national leader in the use of renewable energy.

- The formation of a City employee committee called **Green Teams** was established to educate employees on energy efficiency and conservation strategies to reduce electricity within municipal buildings.

2009

- River Falls was the first community in Wisconsin and the Midwest to be designated a **Green Power Community**, ranking Number 10 on the Environmental Protection Agency’s list. Green Power Communities are cities, towns and villages in which local government, businesses and residents collectively buy green power in amounts that meet or exceed the EPA’s purchase requirements as part of the Green Power Partnership. Through power supplier, WPPI Energy, our community is purchasing more than 18 million kilowatt-hours (kWh) of green power annually, enough green power to meet 15 percent of the community’s purchased electricity use.