

# Earth, Wind, Fire: Preparing for Bio-energy Opportunities in Wisconsin



By Andrew Dane

**E**arth, Wind, Fire: Preparing for Bio-energy Opportunities in Wisconsin is an outreach initiative developed by University of Wisconsin-Extension educators in the northwest part of the state. Northwest Wisconsin, an area roughly 120 miles by 120 miles in size, is a region rich in natural resources. The landscape transitions from mostly agriculture and scattered woods in the south to thick forests to the north. Rivers, lakes, and wetlands are found throughout the region and support a robust tourist economy. Agriculture, forestry, manufacturing, education, and healthcare related industries are also key contributors to the regional economy.

The University of Wisconsin-Extension, in partnership with local government, is located in each of the twelve counties that comprise the region. UW-Extension also operates out of four 4-year campuses and one 2-year campus, as well as two agricultural research stations. UW-Extension has been a trusted partner for the region's communities working on agriculture, youth, family, community, and economic development issues for nearly a century.

In 2006, in response to widespread grassroots interest in renewable energy, UW-Extension organized a series of workshops and conferences covering wind, solar, and bio-energy. Over 400 individuals, businesses, and organizations learned about these renewable energy technologies, their potential benefits, and their drawbacks. By 2007, a set of common issues and opportunities related to energy had begun to emerge across the region. For example, in Polk County, local elected officials had begun to identify their strengths and assets related to renewable energy development. In Barron County, a local economic development corporation had begun promoting renewable energy as a green jobs strategy. Farming- and forestry-related businesses had also begun to look more closely at renewable energy, in particular bio-energy, as a potential source of income.

While these types of opportunities had begun to surface across the region, a set of concerns arose as well. Natural resource professionals began questioning and researching the sustainability of bio-energy development, including its impact on soil, wildlife, and water quality.

Existing forest industries began to express concern that bio-energy development might negatively impact their business profitability by driving feedstock prices too high.

UW-Extension educators, specialists, and researchers responded to these emerging issues by developing an innovative regional initiative with a catchy title: Earth, Wind, Fire: Bio-energy Opportunities for Wisconsin. The purpose of the initiative is to work with regional stakeholders to address the social, environmental, and economic issues associated with the development of bio-energy as well other renewable energy technologies. The project is a catalyst for initiating local and regional conversations aimed at providing answers so that leaders make informed decisions regarding the economic, land-use, and human impacts associated with bio-energy development.

The initiative began by identifying and convening key renewable energy stakeholders including farmers, forest industries, conservationists, utilities, and community leaders in a series of four roundtable discussions held across

the region. The following themes were identified through those discussions:

- Bio-energy projects should not be a “surprise.” Developers and permitting agencies must have a transparent process to involve the public.
- Public agencies and developers need to communicate effectively to avoid problems. Communication needs to happen early in the project cycle and should be open, clear, honest, and concise.
- Bio-energy will only be developed and used, ultimately, if it makes economic sense. Green energy incentives and policy will drive bio-energy development.
- Local elected officials and government agencies must do their homework; they must be proactive and learn about the social, environmental, and economic impacts of alternative energy projects before they’re on one’s doorstep.
- Long-term planning is important to ensure the sustainability of the feedstock resources. Systems must be put in place to track impacts over time

Information from the roundtables was used to develop four renewable energy forums held during Spring 2008. The forums not only addressed the themes outlined above, but they also provided an opportunity to engage local leaders. Local businesses and farmers presented their own projects, including what worked and what did not. Local elected officials shared their own experiences developing energy efficiency and renewable energy projects. Feedback from over 300 participants at the forums indicated a strong desire to get out and see local projects first hand, to continue networking around renewable energy topics, and to learn more about financing opportunities. The next phase of the initiative was designed to address those objectives.


From late spring through the fall of 2008, UW-Extension organized two large renewable energy tours visiting fifteen hydro, solar, wind, and bio-energy projects within the region. The field tours were very well attended by business and community leaders eager to learn more from their innovative neighbors and counterparts from across the region.

In the fall of 2008, a bio-energy workshop at the Spooner Ag Research Station provided an opportunity to learn about bio-energy technologies and conservation challenges. Farmers, utilities, conservationists, greenhouse growers, and others also learned about and had the opportunity to see and touch alternative crops like miscanthus, switch grasses, and hybrid poplar tree species. More recently, UW-Extension organized a business-to-business renewable energy roundtable, developed four renewable energy case studies, authored a regional survey of 150 public institutions to better understand their current demand for energy, and organized multiple grants and project-financing workshops.

Results of the Earth, Wind, Fire initiative include the formation of several county committees focused on developing municipal energy plans and policies. Many of these same communities, working with UW-Extension, recently received State Office of Energy Independence grants to further develop and implement their energy plans. On the business side, several projects have been influenced by the initiative. One community is currently working on a collaborative digester project, a concept they learned about and discussed at one of the energy forums. Several other types of projects have resulted from the initiative as well. For example, a large utility, after learning about and seeing the potential for short rotation woody biomass crops at the Spooner Ag Station workshop, began working with UW-Extension to develop further studies after announcing their plans to convert their local power plant to

run on 100% biomass.

## Conclusion

The Earth, Wind, Fire initiative was developed to respond to a set of common emerging issues related to renewable energy development in northwest Wisconsin. The project was implemented through a loose and growing network of UW-Extension educators, businesses, local government entities, farmers, and forest industries. The organizers of the project readily recognized the need for a networked approach. The complexity of the issues necessitates an iterative approach based on on-going project evaluation and multiple perspectives beyond those of the UW-Extension system. By refining and adjusting the initiative over time, UW-Extension has been able to meet the rapidly changing needs of the communities with which we work. By linking key stakeholders including business, natural resource professionals, and farming and forestry industries, the initiative has stimulated important discussions related to the future use of our region’s farms and forests and their ability to provide for locally-generated, clean, renewable energy. 

## Author’s Picks for Further Reading


Wisconsin’s Bioenergy Forum

 [www.bioenergyforum.com](http://www.bioenergyforum.com)

Agricultural Resource Marketing Center

 [www.agmrc.org](http://www.agmrc.org)

University of Wisconsin Extension Bio-Energy and Bio-Economy Team

 <http://bio.uwex.edu/>

## About the Author

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