Creating Collaboration: Community Participation Model

Gratiot County Wind Project
May 9, 2013
Windpowering America
All States Summit, Chicago

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Creating Collaboration:
Community Participation Model

I. Engage, Educate and Involve The Public

II. Gratiot Project: Investing in the Community

Protecting 35,000 Acres of Family Farms
for Future Generations

III. Community Participation Model

Gratiot County Wind Energy Project

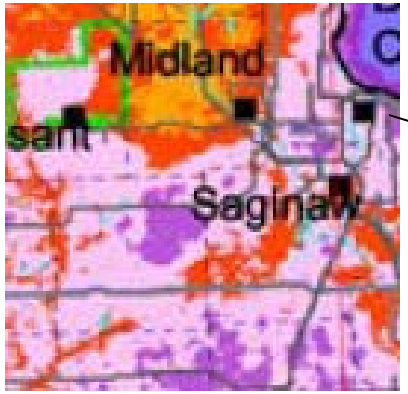
- **Location and Size:**
  - Gratiot/Midland Counties, Michigan
  - 212.8 MW
  - 133 GE 1.6 MW XLE Turbines on 100 meter towers
- **Wealth from the Wind:**
  - $450M Investment
  - 20 Year PPA Negotiated and Approved
  - ~ 260 Construction Jobs
  - ~ 15 Permanent Operations Jobs
- **Key Points:**
  - Strong Community Support earned
  - Unique Pooling Easement Agreements
  - Unanimous Zoning and Special Use Permit Approvals
  - Site Plans Approved & Construction done on time on budget

- MISO & ITC Interconnection completed providing 99.9999999% power quality.
- ~ 35,000 acres leased = only ~ 300 acres out of production

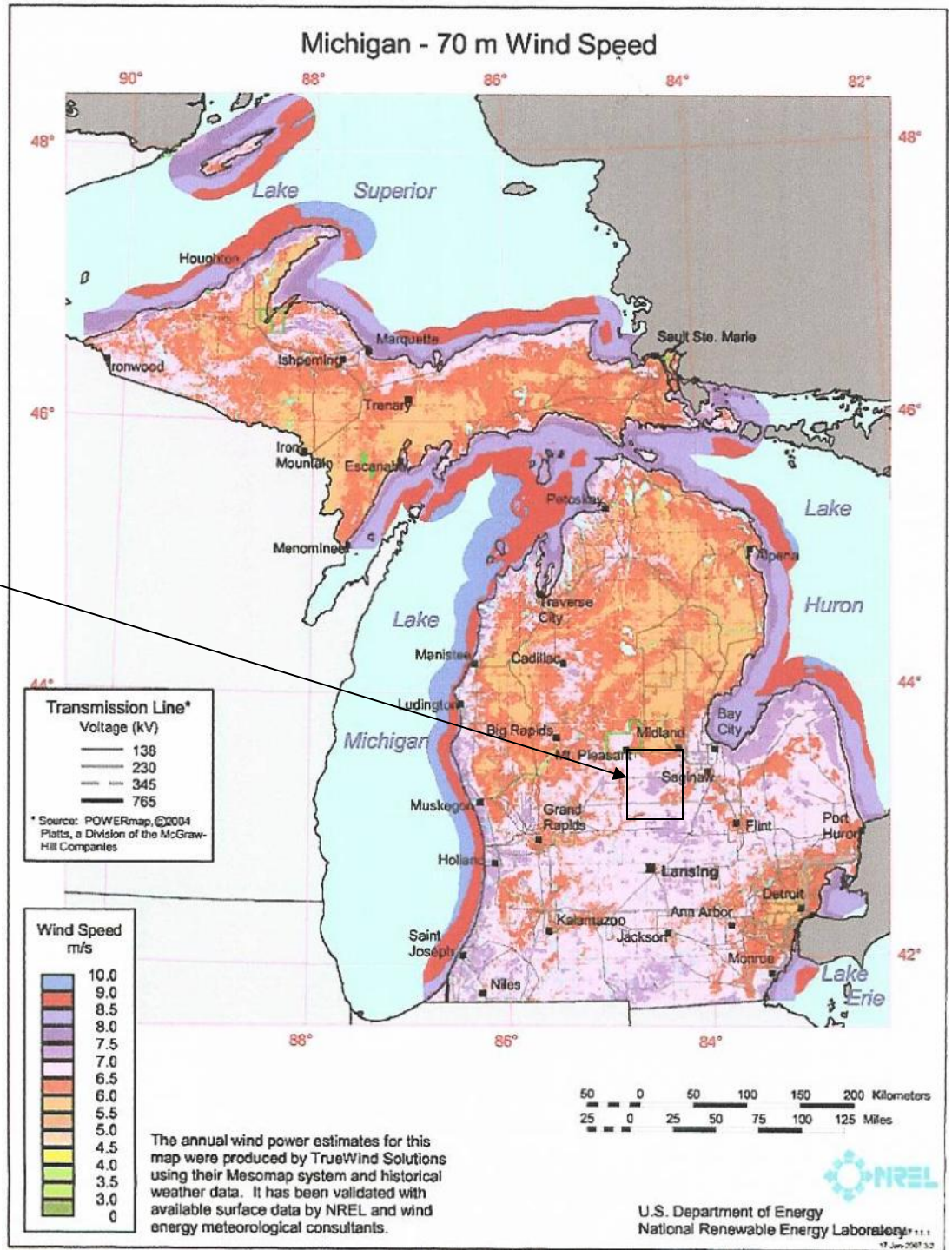
WIND RESOURCE LLC

Gratiot Wind Project

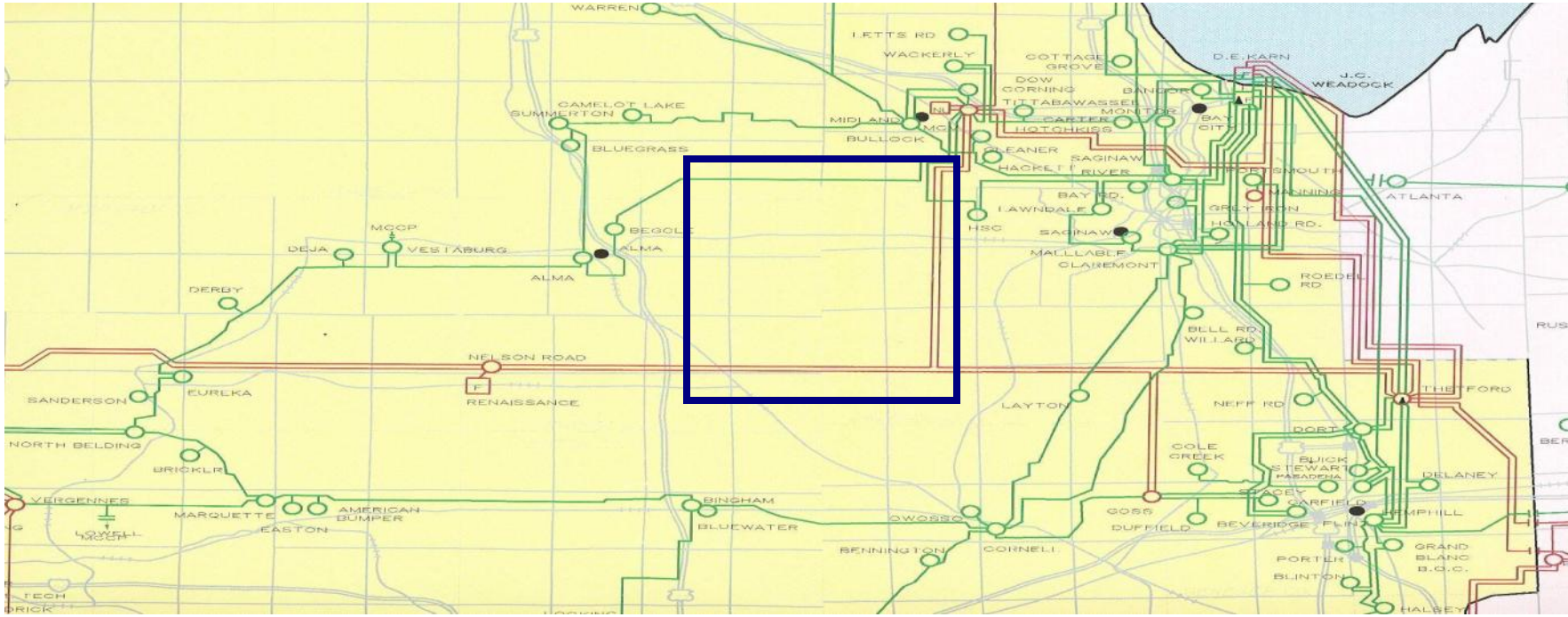
Wind Resource Invested in 4 Years of Wind Studies



AWS Targeted GE 1.6 MW XLE Turbines on 100 meter towers



Interconnection Studies & LGIA Completed



Wind Resource Filed the 2007 MISO Interconnection Request First & Invested in MISO/ITC Feasibility, Systems Impact and Feasibility Studies

"No Limiting Factors" Determination for Gratiot Wind Farm LLC

Competitive advantage for 2012 Commercial Operation

How the Gratiot Wind Project Created New Jobs

Gratiot Wind Economic "ripple effect"

Direct Impacts

On-site	Off-site
260 Construction workers **Management** **Administrative support**	**Boom truck & management, gas and gas station workers, blades and towers & workers**
Cement truck drivers, road crews, 15 maintenance workers, some trained by KVCC WTTA	**Hardware store purchases and workers, spare parts and their suppliers**

Indirect Impacts

These are jobs in and payments made to supporting businesses, such as bankers financing the construction, contractor, manufacturers and equipment suppliers of subcomponents.

Breckenridge Industrial Park: 65 jobs retained/created

Induced Impacts

These jobs and earnings result from the spending by people directly and indirectly supported by the project, including benefits to grocery store clerks, retail salespeople and child care providers.

How the Gratiot Wind Project Reduces Emissions

Est. Reductions per Detroit Edison 2008 Reports
200 MW Generating 500,000 MWh **Annually**

Fossil Plant Emission or Nuclear Plant Waste Jan. 2008 - Dec. 2008	**Detroit Edison Average for Fossil/Nuclear Generation**	**Regional Average for Fossil/Nuclear Generation (MI, IL, IN, OH, and WI)**
Sulfur Dioxide	10.4 lbs./MWh	11.33 lbs./MWh
Carbon Dioxide	2,072 lbs./MWh	2,089.9 lbs./MWh
Nitrogen Oxides	3.1 lbs./MWh	3.25 lbs./MWh
High-Level Nuclear Waste	.0055 lbs./MWh	.0083 lbs./MWh

Emissions	**Annual Emissions Reduced Per Detroit Edison Average in lbs./MWh**	**Annual Emissions Reduced Per Regional Average in lbs./MWh**
Sulfur Dioxide	5,200,000	5,665,000
Carbon Dioxide	1,036,000,000	1,044,950,000
Nitrogen Oxides	1,550,000	1,625,000
High-Level Nuclear Waste	2,750	4,150

Wind Energy
Builds Community

Wealth from the Wind:

Estimated $100M Federal Tax Credits = >$1 Billion in Revenue, 2012-2032

- Increasing competitiveness and securing a 20 year PPA, locking in long-term, firm price for the utility and its customers, 2012 – 2032
- Increasing Project IRR and ROI
- Investing $450M Capital to buy and install > 130 wind turbines on 100 meter towers
- Creating > 250 Construction & 15 Permanent Operations Jobs = new local, state and federal taxes
- Providing $35M in Property Taxes over 20 years to schools, senior citizens, roads, safety patrols, townships and county
- Providing $40M in Lease Payments protecting 34,700 acres of Family Farms for future generations = only ~ 300 acres out of production
- MISO Interconnection completed providing 99.9999999% power quality

Unanimous Zoning and Special Use Permit Approvals earned through use of a Community Participation Model

500,000,000+ kWh/Year x 20 Years of New, Zero-Emissions Wind Power for > 50,000 Homes

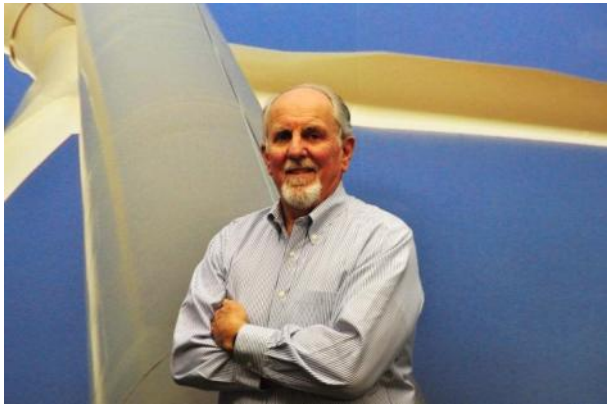
Wind Project Development Models

- **"Utility & Outside Developer Model"**
  - Develops, Finances, Constructs & Owns
  - PPA, interconnection, Outside Investors
  - "Decide & Defend" = High Community Risk
- **Community Wind Model**
  - Landowners Own. This is a big plus; however, Project owners assume full, significant Risks of Development, Permitting, PPA Sales, Project Finance, Construction & Operation
- ***Community Participation Model***
  - *Lessons Learned from Experience; Early Public Engagement; Development with Best Practices; Earning Trust; Inviting Pooling Easement & Community "Ownership" & Shared Rewards*

Community Wind

- Windustry.org - Toolbox
  - Building support for landowner owned wind farms

    - Chapter 1: Introduction
    - Chapter 2: Overview and Checklist
    - Chapter 3: Project Planning and Management
    - Chapter 4: Wind Resource Assessment
    - Chapter 5: Siting Guidelines
    - Chapter 6: Permitting Basics
    - Chapter 7: Leases and Easements
    - Chapter 8: Costs
    - Chapter 9: Financing
    - Chapter 10: Tax Incentives
    - Chapter 11: Choosing a Business Model
    - Chapter 12: The Minnesota Flip Business Model
    - Chapter 13: Power Purchase Agreement
    - Chapter 14: Interconnection
    - Chapter 15: Turbine Selection



AWEA Community Wind

www.awea.org

- 20 MW or less (up to 100 MW with 33.3% landowner equity)
- Clear community benefits
- Direct involvement in project development decision making
- Local financing
- AWEA Community Wind Working Group (CWWG) = forum to exchange ideas and successes, develop outreach efforts, support strategic analyses and affect federal and state policy.

SUPERIOR WATERSHED PARTNERSHIP AND LAND TRUST

Community Wind Power

A GUIDE FOR UPPER PENINSULA COMMUNITIES

Community Participation Model (CPM)

- Defining "Community" beyond political boundaries…Watersheds & Private + Public + Non-Profit Sectors…
- Communities are the only thing that creates change
- Defining community vision and empowering/facilitating
  - Alma: Loss of major employer; major brownfield sites
  - St. Louis: Velsicol Chemical Company disaster; major Superfund Site
  - Ethanol plants canceled

The Importance of Hearing the Local Voices: Community History.

Velsicol Chemical Company, St. Louis, MI

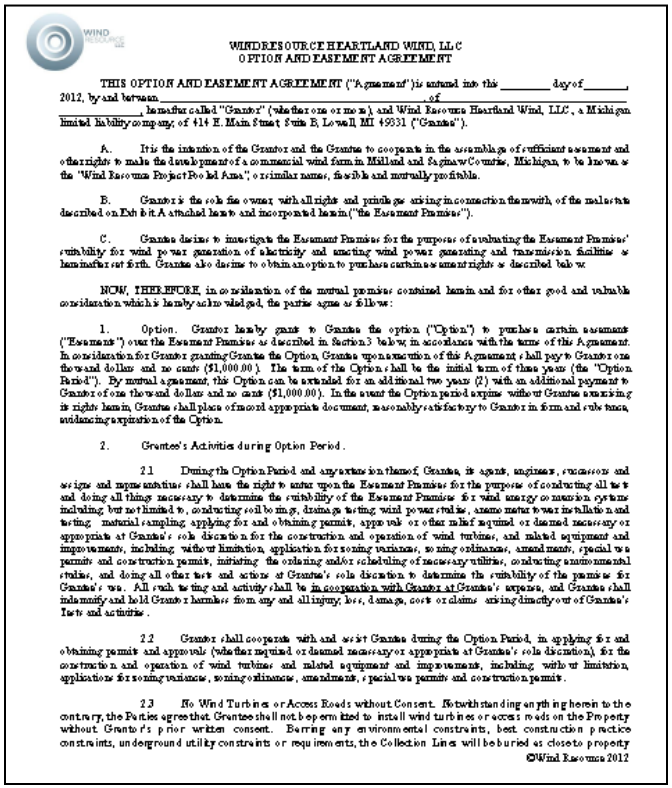
- Produced and distributed DDT
- In 1973, Velsicol's packaging error at the plant resulted in several thousand pounds of polybrominated biphenyls (PBBs) contaminating cattle, pork and chicken feed. This entered the entire food chain, creating toxics in virtually every adult and child. When the error was finally recognized, 10s of 1,000s of animals in the state were slaughtered.
- The site of the St. Louis plant is now one of the costliest superfund sites in the U.S.

Alma, MI

- Fought Consumers Energy to become a municipal electric company, lost its largest employer

Community Participation Model (CPM)

- Listening Tour, Public Engagement & Collaboration
- Asking: "How can we, together, create the best possible project?"
- Cooperatives … Unique Pooling Option & Easement Agreement Invited Everyone, Early . . . 300 kitchen tables . . . 50 cups of coffee per MW
- *Earning Trust & Creating Vested Interests, Ownership and Shared Rewards*



WIND RESOURCE HEARTLAND WIND, LLC
OPTION AND EASEMENT AGREEMENT

THIS OPTION AND EASEMENT AGREEMENT ("Agreement") is entered into this _____ day of _____, 2012, by and between _____ of _____, hereinafter called "Grantor" (whether one or more), and Wind Resource Heartland Wind, LLC, a Michigan limited liability company, of 414 E. Main Street Suite B, Lowell, MI 49331 ("Grantee").

A. It is the intention of the Grantor and the Grantee to cooperate in the assemblage of sufficient easement and other rights to make the development of a commercial wind farm in Midland and Saginaw Counties, Michigan, to be known as the "Wind Resource Project Pooled Area", or similar names, feasible and mutually profitable.

B. Grantor is the sole fee owner, with all rights and privileges arising in connection therewith, of the real estate described on Exhibit A attached hereto and incorporated herein ("the Easement Premises").

C. Grantee desires to investigate the Easement Premises for the purposes of evaluating the Easement Premises' suitability for wind power generation of electricity and erecting wind power generating and transmission facilities as hereinafter set forth. Grantee also desires to obtain an option to purchase certain easement rights as described below.

NOW, THEREFORE, in consideration of the mutual promises contained herein and for other good and valuable consideration which is hereby acknowledged, the parties agree as follows:

1. Option. Grantor hereby grants to Grantee the option ("Option") to purchase certain easements ("Easements") over the Easement Premises as described in Section 3 below, in accordance with the terms of this Agreement. In consideration for Grantor granting Grantee the Option, Grantee upon execution of this Agreement shall pay to Grantor one thousand dollars and no cents ($1,000.00). The term of the Option shall be the initial term of three years (the "Option Period"). By mutual agreement, this Option can be extended for an additional two years (2) with an additional payment to Grantor of one thousand dollars and no cents ($1,000.00). In the event the Option period expires without Grantee exercising its rights herein, Grantee shall place of record appropriate document, reasonably satisfactory to Grantor in form and substance, evidencing expiration of the Option.

2. Grantee's Activities during Option Period.

2.1 During the Option Period and any extension thereof, Grantee, its agents, engineers, successors and assigns and representatives shall have the right to enter upon the Easement Premises for the purpose of conducting all tests and doing all things necessary to determine the suitability of the Easement Premises for wind energy conversion systems including, but not limited to, conducting soil borings, drainage testing, wind power studies, anemometer tower installation and testing, material sampling, applying for and obtaining permits, approvals or other relief required or deemed necessary or appropriate at Grantee's sole discretion for the construction and operation of wind turbines, and related equipment and improvements, including, without limitation, application for zoning variances, zoning ordinances, amendments, special use permits and construction permits, initiating the ordering and/or scheduling of necessary utilities, conducting environmental studies, and doing all other tests and actions at Grantee's sole discretion to determine the suitability of the premises for Grantee's uses. All such testing and activity shall be in cooperation with Grantor at Grantee's expense, and Grantee shall indemnify and hold Grantor harmless from any and all injury, loss, damage, cost or claims arising directly out of Grantee's tests and activities.

2.2 Grantor shall cooperate with and assist Grantee during the Option Period, in applying for and obtaining permits and approvals (whether required or deemed necessary or appropriate at Grantee's sole discretion), for the construction and operation of wind turbines and related equipment and improvements, including, without limitation, applications for zoning variances, zoning ordinances, amendments, special use permits and construction permits.

2.3 No Wind Turbines or Access Roads without Consent. Notwithstanding anything herein to the contrary, the Parties agree that Grantee shall not be permitted to install wind turbines or access roads on the Property without Grantor's prior written consent. Barring any environmental constraints, best construction practice constraints, underground utility constraints or requirements, the Collection Lines will be buried as close to property

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Community Participation Model (CPM)

Countywide WE Zoning Ordinances:

- Balanced rules protecting the public's health, safety and welfare
- Protecting wildlife
- Providing clear rules for wind project development

Community Meetings & Unanimous Zoning Approvals by all 16 Townships

Public engagement, education and involvement never ends

Serving County Residents

Since 1855

Future Farmers of America

Debate Topic: ***"Wind Power – Are the Benefits Blown Away by the Risks?"***

BRECKENRIDGE FFA ALUMNI AND BOOSTERS

700 WRIGHT STREET * BRECKENRIDGE MI 48615 * (989) 842-3182 EXT 434

January 4, 2011

Dear Wind Resource LLC,

On behalf of the Breckenridge FFA Alumni and Boosters and Breckenridge FFA, I would like to thank you for your support of our chapter by buying a trailer sponsorship. Your sponsorship helps support FFA members with scholarships, contests, and leadership contests. This fall, the trailer traveled with our Agricultural Issues team to Indianapolis for the National FFA Convention. The team made it to the semi-final round of the National contest. Below you will find a picture of the group who traveled to National Convention in front of the trailer. Your support helped make this possible.

Again, thank you for your continued support of the Breckenridge FFA Chapter. Your contributions make great things happen in this community.

Sincerely,

Royce Humm, President
Breckenridge FFA Alumni and Boosters

Community Participation Model (CPM)

- CPM engages a professional team to negotiate the PPA, MISO Interconnection, conduct appropriate studies and use Best Practices to earn permit approvals & achieve Project Financing

Gratiot County Wind Project Under Construction

First Rotor Lift, Site 50: 8.16.11

Best Practices

2805 S. Industrial Hwy., Suite 100
Ann Arbor, MI 48104-6791
p: 734-971-9135
f: 734-971-9150

Great Lakes
Wind Collaborative

NEWS RELEASE

July 19, 2011

STEERING COMMITTEE

STAFF

Best Practices for Sustainable Wind Energy Development in the Great Lakes Region

A new online guide to advancing wind energy while protecting the environment and addressing community concerns was released today by the Great Lakes Wind Collaborative (GLWC), a public/private coalition of interests advancing sustainable wind energy development within the Great Lakes region.

Best Practices for Sustainable Wind Energy Development in the Great Lakes Region highlights policies and practices to ensure wind development is environmentally protective, sensitive to community concerns and maximizes economic development potential. Best Practices for turbine siting, noise, environmental impacts and financial mechanisms are among the 18 "best practices," which cover all phases of developing a wind energy project, from initial planning to operations and eventual decommissioning of spent turbines. Each best practice features a case example of that practice in action in the Great Lakes region or across the country.

"The stakeholders of the Great Lakes Wind Collaborative are steadfast in their belief that the need for renewable energy in the region must be balanced with sound economics and protection of the Great Lakes basin ecosystem," said Terry Yonker, GLWC Steering Committee co-chair and president of Marine Services Diversified, LLC. "The development of wind power requires us to utilize the best practices that are available to us to insure that what results meets the highest possible standards of acceptance."

The best practices were identified through a year-long process that included a literature review, online survey and interviews under the guidance of a Great Lakes Wind Collaborative workgroup that included environmental groups, industry, academia, and federal, state and local government regulators. The project was coordinated by the Great Lakes Commission, a compact of the eight Great Lakes states and the provinces of Ontario and Québec based in Ann Arbor, Michigan.

"These best practices will serve as a catalyst for innovation that will drive community and economic reinvention, diversification and development in the Great Lakes region," said Mark Clevey, GLWC Steering Committee co-chair and manager of Consumer Education & Renewable Energy Programs for the Michigan Energy Office.

Community Participation Model
Educational Materials

- NREL 10 Benefits and 10 Myths about Wind Power
  - Benefits- http://www.nrel.gov/docs/fy05osti/37602.pdf
  - Myths- http://www.nrel.gov/docs/fy05osti/37657.pdf
- The *MSU Wind Energy Siting Bulletin* provided to Michigan Townships Association, Michigan Municipal League, Michigan Environmental Council, http://www.emdc.msue.msu.edu/product/michigan-land-use-guidelines-for-siting-wind-energy-systems-982.cfm
- NREL County Commissioners Planning Book – distributed at the 2007 meeting of the Michigan Association of Counties www.**nrel**.gov/docs/fy07osti/40403.pdf
- AWEA Siting Guidelines www.awea.org
- Utility Wind Integration Group – Setting siting and wind integration standards through utility experience, www.uwig.org
- The National Wind Coordinating Council www.nationalwind.org
- Wind on the Wires http://www.windonthewires.org/reg_resource.html
- The American Wind and Wildlife Institute www.awwi.org
- The Great Lakes Wind Collaborative, www.glc.org/energy/**wind**
- Lawrence Berkeley Lab – Ryan Wiser & Co: Expert Reports on Property Values, Annual Wind Markets, RPS Laws and other science-based studies, http://eetd.lbl.gov/ea/ems/re-pubs.html
- Michigan Land Use Institute – Trust, Teamwork Keys to Gratiot's Windpower Success, www.mlui.org
- MiBiz
- TEDx Marquette Talk 3/12 http://www.tedxmarquette.com/TEDxMarquette/Home.html

Please visit our websites for further information.

www.windresourcellc.com

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