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**INTERIM REPORT ON PROGRESS IN DEVELOPING A STRATEGY TO  
OBTAIN MAXIMUM ECONOMIC BENEFIT FOR MINNESOTA FROM  
RENEWABLE ENERGY ACTIVITIES**

**To the chairs of the Senate and House Energy Committees**

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**Minnesota Department of Employment and Economic Development, August 1<sup>st</sup>, 2007  
Dan McElroy, commissioner**

SF563/HF660 calls for “the commissioner of employment and economic development, in consultation with the commissioners of commerce and agriculture and the Public Utilities Commission [to] develop a strategy to obtain the maximum economic benefit for the state and its citizens from the renewable energy activities prescribed by Minnesota statutes 216B.1691.” It further directs the commissioner to provide to the chairs of legislative committees primarily involved in energy policy, by August 1, 2007, an interim report on the progress in developing the strategy. This is that interim report.

Not only has DEED’s preliminary strategy been formulated, much of it already has been implemented. Therefore we report on the status of DEED’s efforts as well as on the strategy that has guided them. In implementing the statute’s mandate, DEED is pursuing its core mission and core competence: attracting new businesses and helping existing businesses create new jobs.

To achieve its mission, DEED must take advantage of the specific forms of renewable energy that are likely to create the most economic activity. The power utilities appear to have decided that issue. They expect to meet the renewable standards primarily with wind power. The renewable energy standards in Minnesota and elsewhere are creating a huge market for wind turbines, but a world-wide shortage is hampering the efforts of developers and utilities to create more electric power from that free, clean fuel source.

The surging demand and the shortage present DEED with a two-pronged opportunity: helping our utilities meet the standards at the same time we attract new manufacturing and jobs to Minnesota. DEED is working with several turbine manufacturers and their suppliers to bring their operations to Minnesota. If we are successful, we will deliver on both opportunities as envisioned in the statute.

Although biomass has significant long-term potential to generate dispatchable base-load power in Minnesota, especially since it has been added to the list of C-BED-eligible projects, DEED’s initial efforts focus on wind, the renewable energy that will spur the initial surge of economic activity. The strategy includes eight elements:

- Budget development
- Market research
- Strategic alliances
- Development of marketing materials
- Promotional activities

- Direct contacts and company visits
- Managing projects in progress
- Worker training

**Budget development.** Every strategic item that follows will cost money. Iowa now has three wind turbine manufacturers and a fourth in the wings because it has spent to send delegations around the world to call on companies, rent booths in trade shows, and offer special incentives.

- **Status:** DEED petitioned the LEETF for funding of a marketing effort but was unsuccessful. Until dedicated funding can be found, DEED will use the limited funds it has for general marketing activities to cover the costs of this initiative. To be as successful as we intend to be with this program, we will need to fund it fully.

**Market research.** 97 percent of all utility-scale turbines are made by just ten companies, and they are becoming even fewer through consolidations. Therefore market research will be deep rather than broad.

- **Status.** DEED has acquired from a Danish specialist market research firm a global survey detailing all ten companies. In early June DEED's working group attended the annual three-day Windpower 2007 conference and trade show in Los Angeles along with representatives of utilities, the Precision Manufacturers Association, regional economic development agencies and the Minnesota Department of Commerce. There the group attended panel discussions and spoke with executives of all the utility-scale turbine manufacturers and with many of their suppliers. DEED is gathering further information off the Internet.

**Strategic alliances.** DEED will involve other agencies, existing supplier networks, wind developers, trade associations, and educational institutions in this quest.

- **Status.** The Department of Commerce has been extremely supportive of DEED's renewable energy effort, which it had a hand in creating. The COO of Xcel energy has pledged to support DEED and supplied staff to assist. Minnesota Power also is on board. DEED will also engage Ottertail Power, which owns the wind tower manufacturer DMI. DEED is working with the Minnesota Precision Manufacturers Association, Arrowhead Manufacturers Alliance, and its own databases to assemble a list of potential component suppliers to turbine manufacturers; a supply chain is key to attracting OEM's. DEED teamed up with Precision Manufacturers and Xcel Energy to present an informational session July 31<sup>st</sup> in St. Cloud. DEED also will make a presentation at a conference in Bemidji attended by congressmen and legislators. A Minnesota manufacturer who makes turbine parts in plants here and in Denmark is mentoring DEED. The Seaway Port of Duluth, the port of entry for many turbine shipments from Europe, is supporting DEED with information, contacts and research. Apex, the private economic development agency in Duluth, has joined DEED on missions and

company calls. DEED is participating in calls that Minnesota contract manufacturers are making on OEM turbine companies in Chicago and Pennsylvania. DEED has joined University of Minnesota Dean of the College of Biological Sciences Robert Elde and IREE in hosting visits by renewable energy technology companies. Several wind farm developers are supplying DEED with intelligence and contacts with their turbine suppliers. DEED's regional representative in SW MN has organized a group interested in attracting wind power manufacturers.

**Promotional material.** DEED will design and produce promotional pieces targeted at specific industry segments and specific companies.

- **Status.** Attached is a flyer DEED created in-house to distribute with our generic promotional packet at the American Wind Energy Association's Windpower 2007 show in Los Angeles. DEED will produce others as occasions arise. An important addition to DEED's future publications will be a list of potential suppliers.

**Promotional activities.** DEED will attend trade shows, send out mailings, and issue press releases.

- **Status.** Preliminary. Much depends on funding yet to be determined.

**Direct contacts and company visits.** DEED will meet with officers of prospect companies.

- **Status.** As mentioned, the group organized by DEED attended the Windpower show and buttonholed OEM turbine manufacturers. The group will meet next month with the Chicago-based COO of Suzlon, which has purchased the world's largest turbine gearbox manufacturer with headquarters in Belgium. We expect to meet next month with an Iowa manufacturer planning an expansion.

**Management of projects in progress.** DEED will assist companies in site selection, laborforce information and recruiting, liaisons with local communities and permitting agencies, referrals to DEED workforce services, including recruitment and screening, financing and incentive packages, and the rest of DEED's business services.

- **Status.** While it may be premature to consider it a project, DEED is helping a Minnesota-based start-up turbine manufacturer with introductions to utilities and site information. After DEED introduced him to its assigned contact at Xcel, the contact brought him into a meeting with Xcel's CEO.

**Workforce training.** DEED will make its training programs known to windpower projects.

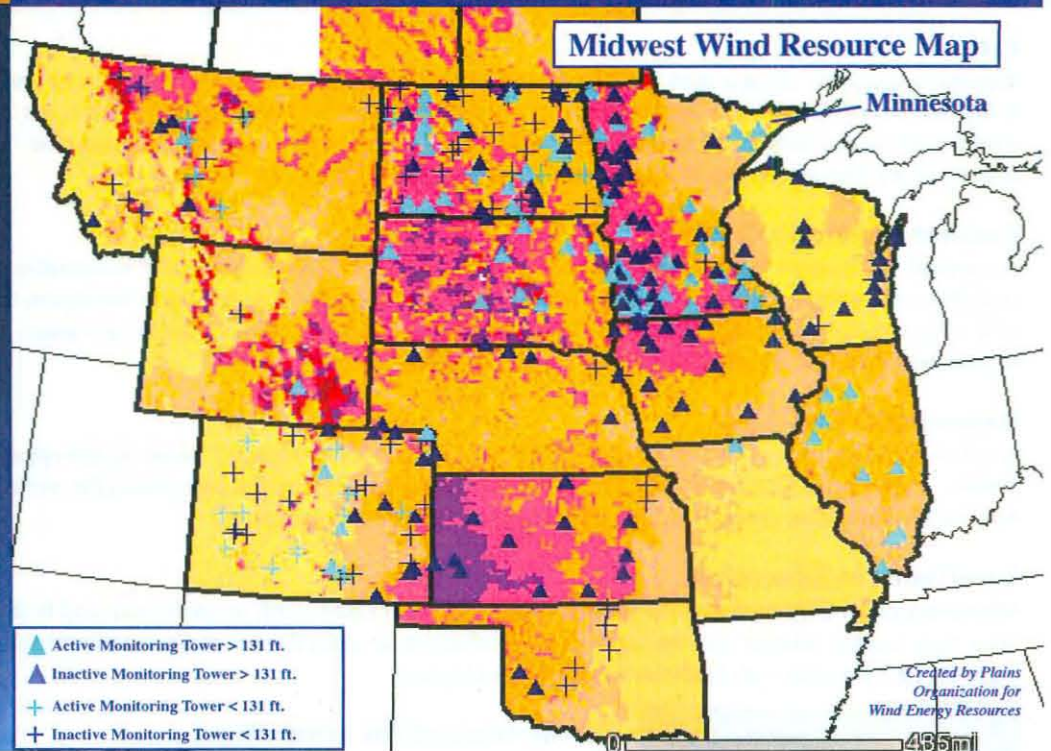
- **Status.** DEED is informing prospects that Minnesota West's Canby campus has a Wind Energy Mechanic Diploma program and a Wind Energy Technology A.A.S. program to teach assembly, service, repair and maintenance of wind turbine generators and related infrastructure. DEED also will inform prospects of the Minnesota Job Skills Partnership program that provides grants for specialized on-the-job training within a particular company or group of companies.

**Public involvement.** By this point it should be clear that DEED's process involves many public as well as private entities. Some specific development projects of course will have to be conducted in confidence because prospects demand it. But DEED will seek constructive suggestions for our strategy from communities, the legislature, other agencies and industry figures.

**Personnel.** The Renewable Energy Manufacturing Initiative team is led by Dentley Haugesag. In his twenty-two years at DEED, he has helped companies invest more than \$600 million in Minnesota, creating more than 3,000 new jobs. Before coming to DEED, Mr. Haugesag founded, owned, and for twenty years operated a millwork, furniture and kitchen business with four Minnesota locations. He is a Summa Cum Laude, Phi Beta Kappa graduate of the University of Minnesota and a former Woodrow Wilson Fellow.

# Minnesota

## The Manufacturing Hub of Wind Country



**Minnesota, the fourth-largest wind energy producer in America, is the place to build your North American manufacturing and distribution base.**

**Minnesota and surrounding states have the best winds in the country.**

- Number 1 - North Dakota
- Number 3 - Kansas
- Number 4 - South Dakota
- Number 5 - Montana
- Number 6 - Nebraska
- Number 7 - Wyoming
- Number 9 - Minnesota
- Number 10 - Iowa

**Minnesota is one of four states with the largest wind power capacities.**

- The 2007 Minnesota Legislature passed aggressive new renewable energy standards.
- By 2020, the state's largest electric utility will produce 30 percent of its power with renewable sources.
- By 2025, all Minnesota utilities will produce 25 percent of their power using renewable sources.



### Minnesota is a manufacturing powerhouse.

- Minnesota has the nation's 18<sup>th</sup> largest manufacturing sector.
- Employment in Minnesota's manufacturing sector is growing while employment nationally is declining.
- Electronics and machinery manufacturing are Minnesota's top industries.

### Minnesota has great transportation.

- The Port of Duluth will handle 500,000 tons of wind energy cargo in 2007.
- Four Class 1 railroads connect the Port of Duluth to the rest of the continental United States.
- Three major interstate highways crisscross the state, intersecting in the Twin Cities and in southern Minnesota.

### Minnesota has trained and skilled workers.

- Minnesota's 34 technical colleges offer a broad selection of customized training programs.
- Minnesota colleges and universities offer highly rated Ph.D. programs in electrical, mechanical and composites engineering.
- A statewide network of nearly 50 Minnesota WorkForce Centers offer assistance with staffing and training.

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**positively**  
Minnesota  
Department of Employment  
and Economic Development

# Why Minnesota?

## 10 Good Reasons

### Proven Performance

Minnesota regularly earns a spot on a respected national economic development honor roll and is the ninth most competitive state based a variety of key metrics. Minneapolis-St. Paul is the world's 13th most competitive knowledge economy and scores particularly high in economic activity (6th), human capital (6th), and patents registration (10th).

### Business Friendly Climate

A national index ranks Minnesota's property taxes 14<sup>th</sup> lowest. The state ranks 41<sup>st</sup> in the ratio of taxes to total business profits, well below the national average. The state is 14th in the nation for new corporate facilities and expansions, while the Twin Cities ranks 10th among metro areas. Minnesota is seventh in corporate activity in micropolitan areas.



### Renowned Work Ethic

A national survey ranks Minnesota third for its "Good Work Environment," based on job opportunities, job quality and job fairness. *Working Mother* magazine cited three Minnesota-based companies among the best companies for working women and *Business Week* cites two Minnesota companies among the nation's best places to launch a career.

### Excellence in Education

Minnesota ranks third in the nation for connecting education from birth to adulthood, and is the 13<sup>th</sup> "Smartest State" based on public school class size, teacher salaries and the high school graduation. It ranks third in the nation for high school graduates (90.9 percent) and the 11<sup>th</sup> highest (30.7 percent) with bachelor's degrees and higher.



### Fertile Ground for Innovation

Nine Minnesota companies are among the 500 largest software companies in the world and five are among the Deloitte "Fast 500 Technology Companies." The University of Minnesota ranks second in industrial outreach and ninth in nanotechnology research. It's also among the world's top 10 universities in several biotechnology transfer and commercialization categories.

### Best in the Business

Twelve Minnesota companies are among *Forbes* "400 Best Companies in America." With spectacular growth in revenues, ranging from 365 to 745 percent between 2000 and 2005, eight Minnesota companies are among *Inc.*'s "500 America's Fastest Growing Private Companies," and two are among *Entrepreneur* "Hot 100 Companies".



### Foundations of Commerce

With excellent interstate highways, railroad service, transportation and warehousing industry, and air cargo, Minneapolis-St. Paul is the third most logistics-friendly metro in the country. Minneapolis-St. Paul International Airport ranks 10<sup>th</sup> in the nation and 19<sup>th</sup> worldwide for passenger service; Northwest Airlines is fourth among the world's airlines.

### Global Competitor

Minnesota's exports totaled \$24.2 billion in 2006, with manufactured goods accounting for 62 percent (\$15 billion). With nearly 290,000 tons transported through the Minneapolis-St. Paul Airport (MSP), the Twin Cities main terminal ranks 24<sup>th</sup> among U.S. airports, according to *AirCargoWorld*.

### Wealth of Resources

In 2006, Minnesota companies received \$321.5 million in venture capital investments, an increase of more than 40 percent from the previous year, ranking 14<sup>th</sup> nationwide and second in the Midwest. Minnesota received \$62 in venture capital investment per capita, highest in the Midwest and 13<sup>th</sup> nationwide.

### Quality of Life

The United Health Foundation ranks Minnesota as the nation's healthiest state. It's seventh in the State Policy Report's "Camelot Index", which measure economic vitality, health, education, crime, society and government. Minneapolis ranks first among cities in golf courses per 100,000 residents (1.9) and park acres per 1,000 residents (14.3).

