

# Iowa Wind Energy Fact Sheet

## Iowa is a wind energy leader

- Iowa is a national leader in wind energy, producing the highest percentage of electricity by wind of any state. Iowa generated 31.3 percent of its electricity from wind energy in 2015 and is the first state to generate more than 30 percent of electricity from wind.<sup>1</sup>
- Iowa's total wind capacity by the end of 2015 was 6,212 MW. This ranks second nationally in installed wind capacity.<sup>2</sup>
- New wind projects are under consideration or under development that could bring Iowa to over 7,000 MW of wind by 2017. In 2015, Alliant Energy released an RFP for 200 MW of wind energy<sup>3</sup> and MidAmerican Energy received approval to build 552 MW of new wind energy.<sup>4</sup>

## Wind energy is good for Iowa's economy and job market

- The wind industry currently employs approximately 7,000 Iowans, including manufacturing, operations and maintenance, design and engineering professionals.<sup>5</sup>
- There are currently 12 manufacturers<sup>6</sup> in Iowa and 75 Iowa companies in the wind industry supply chain.<sup>7</sup>
- Wind companies in Iowa supply the Iowa market as well as markets beyond Iowa. For example, the Siemens plant in Fort Madison is currently supplying wind turbine blades for 122 wind turbines in a project in Kansas.<sup>8</sup>
- Wind energy currently accounts for more than \$10 billion in capital investment in Iowa.<sup>9</sup>
- Wind turbines provide over \$17M in land lease payments to landowners in Iowa annually. These landowners are located in rural Iowa and throughout most parts of the state.<sup>10</sup>
- Google and Facebook are among the companies that identified use of Iowa wind energy as one of the reasons to locate new facilities in Iowa.<sup>11</sup>

## Wind energy is affordable energy

- Wind energy in Iowa grew from about 800 MW in 2005 to over 6,200 MW today.<sup>12</sup> Iowa's electric rates have remained below the national average during this time.<sup>13</sup>
- Iowa is among the 10 clean energy leader states – all of which have lower rates than the national average.<sup>14</sup>
- New wind energy in Iowa is a low cost option and less expensive than new coal, natural gas, or nuclear.<sup>15</sup>
- Other Midwest state electricity rates are higher than Iowa's. For example, Iowa's electricity rates are 30 percent lower than Wisconsin's electricity rates. Wisconsin gets only two percent of its energy from wind (compared to 28.5 percent for Iowa).<sup>16</sup>
- Building more wind energy can create more savings. A recent report finds that Iowa can use a combination of renewables and efficiency to save households over \$80 per month on electricity bills, the third-highest amount of any state. Customers "see the largest savings in states that build renewables early on and become net exporters of electricity."<sup>17</sup>

## Wind energy is reliable and stable

- Effectively integrating renewable energy while maintaining grid reliability *is already being achieved*. More than 75,000 megawatts of wind and solar power have been integrated into the U.S. electric grid to date.<sup>18</sup>
- Many studies “show that renewables can be integrated at high levels without significant issue” including the Renewable Energy Futures Study, the Western Wind and Solar Integration Study, the Wind Vision Study (all NREL) and the PJM Renewable Integration Study (GE).<sup>19</sup>
- The nation’s major grid operators have found that wind and solar energy need very little backup power. MISO, the grid operator for the middle part of the country, needs almost no additional fast-acting power reserves to back up its 10,000-plus MW of wind power on the system.<sup>21</sup>
- Wind and solar power need less backup than coal, gas and nuclear. Wind energy output changes tend to be gradual and predictable,<sup>22</sup> unlike “large, abrupt” output changes in coal and nuclear power plants.<sup>23</sup> And because a wind farm is a collection of many individual turbines, the failure of one turbine will not have much impact on the wind farm’s overall output.<sup>24</sup>

---

<sup>1</sup> AWEA, *U.S. number one in the world in wind energy production* (Feb. 29, 2016), available at <http://www.awea.org/MediaCenter/pressrelease.aspx?ItemNumber=8463>.

<sup>2</sup> AWEA, *U.S. Wind Industry Fourth Quarter 2015 Market Report*, (Jan. 27, 2016), available at <http://www.awea.org/Resources/Content.aspx?ItemNumber=8319>.

<sup>3</sup> Electric Light & Power, *Alliant Energy utility in Iowa seeks 200 MW of wind energy*, at <http://www.elp.com/articles/2015/04/alliant-energy-utility-in-iowa-seeks-200-mw-of-wind-energy.html>.

<sup>4</sup> Des Moines Register, *MidAmerican gets OK to build \$900 million wind project*, at

<http://www.desmoinesregister.com/story/money/business/2015/08/21/midamerican-gets-ok-build-900-million-wind-project/32143545/>.

<sup>5</sup> AWEA, *A Wind Vision for New Growth in Iowa* (2015) at 6, available at [http://awea.files.cms-plus.com/iowa%20Report\\_7.15%20%281%29.pdf](http://awea.files.cms-plus.com/iowa%20Report_7.15%20%281%29.pdf).

<sup>6</sup> AWEA, *Iowa Wind Energy* (2015) at <http://awea.files.cms-plus.com/FileDownloads/pdfs/iowa.pdf>.

<sup>7</sup> ELPC, *Iowa Wind Power & Solar Energy Supply Chain Businesses* (2015).

<sup>8</sup> Siemens USA, *Siemens receives major order from Westar Energy for 280-MW wind project in Kansas*, at <http://news.usa.siemens.biz/press-release/siemens-receives-major-order-westar-energy-280-mw-wind-project-kansas>.

<sup>9</sup> AWEA, *Iowa Wind Energy*.

<sup>10</sup> AWEA, *Iowa Wind Energy*.

<sup>11</sup> <http://www.desmoinesregister.com/story/money/business/2014/04/03/facebook-google-green-wind-energy-greenpeace/7239627>.

<sup>12</sup> AWEA, *Iowa Wind Energy*.

<sup>13</sup> Data available from the U.S. Energy Information Administration.

<sup>14</sup> DBL Investors, *Renewables Are Driving Up Electricity Prices Wait, What* (2015).

<sup>15</sup> See Lazard’s Levelized Cost of Energy v. 9.0 (September 2014).

<sup>16</sup> John Imes, *Wisconsin Must Do Its Part to Reduce Emissions*, Wausau Daily Herald (March 2015).

<sup>17</sup> Synapse Energy Economics, *Clean Power Means Lower Bills for Consumers* (July 2015) at 2, available at <http://synapse-energy.com/sites/default/files/Clean-Power-Means-Lower-Bills-for-Consumers.pdf>.

<sup>18</sup> Natural Resources Defense Council, *Transforming the Power Grid with Clean Energy—Reliably—Every Day* (2014) at 1. Available at: <http://www.nrdc.org/air/pollution-standards/files/power-grid-reliability-FS.pdf>.

<sup>19</sup> AWEA & SEIA, *A Handbook for States: Incorporating Renewable Energy into State Compliance Plans for EPA’s Clean Power Plan*, Version 1.0, February 2015, at 98. Available at: <http://awea.files.cms-plus.com/FileDownloads/pdfs/Handbook%20for%20States%20final.pdf>.

<sup>20</sup> NRDC, *Transforming the Power Grid with Clean Energy*.

<sup>21</sup> NRDC, *Transforming the Power Grid with Clean Energy*, citing Nivad Navid, MISO, *Reserve Requirement Identification with the Presence of Variable Generation*, presentation to the Utility Variable Generation Integration Group (2012), at <http://www.uvig.org/wp-content/uploads/2012/12/SanDiegoTechWorkshopAgenda.pdf>.

<sup>22</sup> NRDC, *Transforming the Power Grid with Clean Energy*.

<sup>23</sup> NRDC, *Transforming the Power Grid with Clean Energy*.

<sup>24</sup> NRDC, *Transforming the Power Grid with Clean Energy*.