

## Endnotes

- <sup>1</sup> This represents approximately 3 percent of total U.S. installed nameplate electricity generating capacity; U.S. Energy Information Administration, 2011, Table 1.2. Existing Capacity by Energy Source, 2009 (November), <http://www.eia.doe.gov/cneaf/electricity/epa/epat1p2.html>; Global Wind Energy Council (GWEC), 2011, Annual Market Update 2010, Brussels, Belgium: GWEC, <http://www.gwec.net/index.php?id=8>; American Wind Energy Association (AWEA), 2011, U.S. Wind Energy Industry Market Report, Year Ending 2010, Washington D.C.: AWEA.
- <sup>2</sup> AWEA, 2011, Industry Statistics, [http://www.awea.org/learnabout/industry\\_stats/index.cfm](http://www.awea.org/learnabout/industry_stats/index.cfm).
- <sup>3</sup> AWEA, 2011, U.S. Wind Energy Industry Market Report, Year Ending 2010, Washington D.C.: AWEA.
- <sup>4</sup> Database of State Incentives for Renewable Energy (DSIRE), 2010, Renewable Energy Production Tax Credit (PTC), [http://www.dsireusa.org/incentives/incentive.cfm?Incentive\\_Code=US13F&re=1&ee=0](http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=US13F&re=1&ee=0).
- <sup>5</sup> DSIRE, 2010, Business Energy Investment Tax Credit (ITC), [http://www.dsireusa.org/incentives/incentive.cfm?Incentive\\_Code=US02F&re=0&ee=1](http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=US02F&re=0&ee=1).
- <sup>6</sup> DSIRE, 2010, Modified Accelerated Cost-Recovery System (MACRS) + Bonus Depreciation (2008–2012), [http://www.dsireusa.org/incentives/incentive.cfm?Incentive\\_Code=US06F&re=1&ee=0](http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=US06F&re=1&ee=0).
- <sup>7</sup> AWEA, 2011, State Energy Facts: Wyoming, <http://www.awea.org/learnabout/publications/upload/4Q10-Wyoming.pdf>; National Renewable Energy Laboratory (NREL), 2010, Estimates of Windy Land Area and Wind Energy Potential by State for Areas – 30 percent Capacity Factor at 80 m, [http://www.windpoweringamerica.gov/docs/wind\\_potential\\_80m\\_30percent.xls](http://www.windpoweringamerica.gov/docs/wind_potential_80m_30percent.xls).
- <sup>8</sup> AWEA, 2011, Industry Statistics, [http://www.awea.org/learnabout/industry\\_stats/index.cfm](http://www.awea.org/learnabout/industry_stats/index.cfm).
- <sup>9</sup> AWEA, 2011, U.S. Wind Energy Industry Market Report, Year Ending 2010, Washington D.C.: AWEA.
- <sup>10</sup> Available wind energy is based upon the following equation:  
$$\text{AEO (kWh/yr)} = K \times C_p \times D^2 \times V^3$$
  
Where  
AEO = Annual Energy Output  
K = 0.4574 (a constant to convert metric to standard units and output to kilowatt hours per year),  
C<sub>p</sub> = the power coefficient,  
D = rotor diameter in feet, and  
V = average annual wind speed (mph)
- <sup>11</sup> Windustry, 2008, Community Wind Toolbox, <http://www.windustry.org/CommunityWindToolbox>.
- <sup>12</sup> In addition, Doppler SODAR (SONic Detection and Ranging) is a technology that is gaining acceptance in the wind industry for measuring wind speed. This technology utilizes a high frequency sound pulse to gather meteorological data. The system consists of a digital acoustic signal processor, audio power amplifier, fiberglass enclosure, steered beam speaker array antenna, and associated cables and connectors. At most entire system is 10 feet by 10 feet and 20 feet high and can be mounted on a portable trailer secured by anchors or transported by pickup. Units are powered by a bank of 12 volt DC batteries that are recharged by solar cells.
- <sup>13</sup> Presenting a detailed process of transmission development and impacts of transmission lines on private landowners is outside of the scope of this publication. For more information, visit the Kansas Farm Bureau publication “Negotiating Transmission Line Easements” (<http://www.kfb.org/views/irvintransmissionlines.htm>) and Texas A&M University’s guide to negotiating transmission line easements (<http://recenter.tamu.edu/pdf/1928.pdf>). See also the Western Area Power Administration’s (WAPA’s) “Working with Landowners Eastern Plains Transmission Project” (<http://www.wapa.gov/transmission/archive/EPTP/landowner.htm>).
- <sup>14</sup> As mentioned in Section 2.3, the definition of a “wind energy agreement,” as stipulated by the Wind Energy Rights Act, is a “lease, license, easement or other agreement” granting or reserving the right to “develop or participate in the income from or development of wind powered energy generation.”

- <sup>15</sup> See Rules and Regulations Board of Land Commissioners, Chapter 6, Wind Energy Leasing, Section 12, <http://soswy.state.wy.us/Rules/RULES/7904.pdf>.
- <sup>16</sup> This is not a complete list of potential federal issues requiring a federal permit. An attorney should be consulted about any potential federal issues with a proposed wind energy project.
- <sup>17</sup> CH2M Hill, 2009, “Wyoming Industrial Development Information and Siting Act: Section 109 Permit Application, Dunlap Wind Energy Project” (15 June), [http://deq.state.wy.us/isd/downloads/Campbell\\_Hill\\_All\\_Combined\\_Final\\_010709.pdf](http://deq.state.wy.us/isd/downloads/Campbell_Hill_All_Combined_Final_010709.pdf).
- <sup>18</sup> See Wyoming Statutes, Title 18, Chapter 5, Article 5, “Wind Energy Facilities,” <http://legisweb.state.wy.us/statutes/statutes.aspx?file=titles/Title18/Title18.htm>.
- <sup>19</sup> For more information on property taxes and wind energy, see the Wyoming Department of Revenue guide on the “Valuation of Wind Farms” at <http://revenue.state.wy.us/uploads/WindFarmBrochure.pdf>.
- <sup>20</sup> Calculation based on average assessed values in Wyoming and the industrial property tax rate of 11.5 percent of assessed value at 65 mils.
- <sup>21</sup> National Research Council, 2007, Environmental Impacts of Wind-Energy Projects, Washington, D.C.: NRC (May).
- <sup>22</sup> See <http://www.fws.gov/windenergy/> for more information.
- <sup>23</sup> Wyoming Game and Fish Commission, 2010, “Wildlife Protection Recommendations for Wind Energy Development in Wyoming” (17 November), <http://gf.state.wy.us/downloads/pdf/Final%20WGFC%20Approved%20Wind%20Recommendations%2011-17-10.pdf>.
- <sup>24</sup> See Wyoming Game and Fish Commission, 2010, “Wildlife Protection Recommendations for Wind Energy Development in Wyoming” (17 November), <http://gf.state.wy.us/downloads/pdf/Final%20WGFC%20Approved%20Wind%20Recommendations%2011-17-10.pdf>.
- <sup>25</sup> See <http://www.fws.gov/windenergy/> for more information.
- <sup>26</sup> See the National Trust for Historic Preservation Web site (<http://www.preservationnation.org/issues/public-lands/renewable-energy.html>) for more information and best practices on siting wind energy development in areas where there may be historical or cultural resources.
- <sup>27</sup> Job range obtained from the NREL JEDI (Jobs and Economic Development Impact) model; see [http://www.windpoweringamerica.gov/economics\\_jedi.asp](http://www.windpoweringamerica.gov/economics_jedi.asp).
- <sup>28</sup> R. Phadke, et al., 2009, Wind Energy and Scenic Considerations in Wyoming: Workshop Report (4 August), <http://www.macalester.edu/windvisual/workshops/WindEnergyScenicConsInWY.pdf>.