

# Wind Energy Laws and Incentives: A Survey of Selected State Rules

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## I. INTRODUCTION

The U.S. wind energy industry is poised for tremendous growth. In fact, even with gyrations in the credit and tax-equity markets last year, there are fifty-seven commercial wind energy projects currently under construction in the United States.<sup>1</sup> This article provides an overview of the salient laws, incentives, and rules relating to wind energy project development in seventeen key wind states across the country.

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1. AMERICAN WIND ENERGY ASS'N, AWEA 2ND QUARTER 2009 MARKET REPORT 11-15 (2009), available at <http://www.awea.org/publications/reports/2Q09.pdf>.

In recent years, economic incentives, along with renewable energy requirements, known as Renewable Portfolio Standard(s) (RPS) or Renewable Energy Standard(s) (RES), have been important factors in states that have seen substantial growth in commercial-scale wind energy development. States' regulatory oversight has increased, however, as the industry garners more attention from a variety of interest groups. As the wind energy industry moves forward, the authors of this piece wonder if the pace and scope of regulations will foster or complicate wind energy project development. States wanting to support growth of utility-scale wind energy projects would do well to follow the examples of other active wind states in implementing legal frameworks with reasonable levels of regulatory oversight, as well as sufficient levels of economic incentives and RPS targets.

## II. STATE WIND ENERGY LAWS AND INCENTIVES

### A. California

Despite ranking third in the nation in installed wind generation capacity in 2009,<sup>2</sup> the State of California has experienced a major slowdown in wind energy development. Of the state's 2,787 megawatts (MW) of installed wind capacity, only 359 MW have come online since 2008.<sup>3</sup> California developers have encountered a myriad of issues that have caused a lag in growth, including difficult and costly siting regulations, a lack of transmission, and a failure by the state to enforce policies intended to foster industry growth.<sup>4</sup>

Unlike Texas and Iowa, which both exceed California in the number of wind installations, California imposes a number of complex regulatory measures requiring approvals from several agencies.<sup>5</sup> Among them are laws imposed by the California Environmental Quality Act (CEQA) that require counties and cities to document and consider the environmental impacts of their actions, such as granting approval of a wind energy project. For the approval of wind projects subject to the CEQA, "Lead Agencies"<sup>6</sup> are required to consult with the California

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2. AMERICAN WIND ENERGY ASS'N, Resources: U.S. Wind Energy Projects, <http://www.awea.org/projects/> [hereinafter AWEA] (then follow "CA" on map) (last visited Oct. 6, 2009).

3. *Id.* (California installed 89 MW in 2008 and 270 MW in 2009).

4. Kate Galbraith, *California's Wind Slowdown*, N.Y. TIMES, Jan. 29, 2009, available at <http://greeninc.blogs.nytimes.com/2009/01/29/californias-wind-slowdown/>.

5. *Id.*

6. "Counties, cities, federal agencies such as the Bureau of Land Management and the U.S. Forest Service (if federal lands are involved) and sometimes public utilities are the 'Lead Agencies' that approve wind energy projects within their jurisdictions." Cal. Dep't of Fish and Game, Frequently Asked Questions about California Guidelines for Reducing Bird and Bat Impacts from Wind Development, <http://www.dfg.ca.gov/habcon/energy/wind> (follow "Frequently Asked Questions about Wind Development" hyperlink at the bottom of the page) (last visited Oct. 6, 2009).

Department of Fish and Game before determining whether a negative declaration or environmental impact report is required for the project.<sup>7</sup> In turn, Lead Agencies must consult with a trustee,<sup>8</sup> responsible agencies, and other public agencies that may have jurisdiction by law with respect to the project.<sup>9</sup>

Another reason for the state's sluggish growth could be California's loosely worded RPS, which allows a utility that demonstrates a good faith effort to comply with the RPS to forego paying the penalty for non-compliance.<sup>10</sup> According to critics, some utility companies are entering into purchase contracts for "speculative" solar generation at "unrealistically low" prices rather than purchasing readily available wind contracts.<sup>11</sup>

### 1. Renewable Portfolio Standard

Generally speaking, an RPS is designed to increase the amount of renewable energy provided by utilities to their retail electric customers in order to reach a minimum percentage of renewable-energy production.<sup>12</sup> Like many other RPS programs, California's RPS includes a state-regulated Renewable Energy Certificate (REC) program.<sup>13</sup> An REC is typically a tradable instrument representing the non-power attributes of one megawatt-hour (MWh) of production from renewable energy: "The REC product is what conveys the attributes and benefits of the renewable electricity, not the electricity itself."<sup>14</sup> California currently has the nation's most aggressive RPS law.<sup>15</sup> The State's original goal was to obtain 20% of its energy from renewable sources by 2010.<sup>16</sup> Governor Schwarzenegger, however, subsequently added to the standard through a November 2008 executive order that set a renewable en-

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7. CAL. PUB. RES. CODE § 21080.3(a) (West 2007).

8. For example, the California Department of Fish and Game (CDFG) is considered a "trustee agency" with "jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species" and has authority to regulate activities that might affect those resources. CAL. FISH & GAME CODE § 1802 (West 1998). The CDFG makes recommendations to lead agencies regarding the protection of those resources. *See id.*

9. CAL. PUB. RES. CODE § 21153(a) (West 2007).

10. CAL. PUB. UTIL. CODE § 399.14(a)(2)(C)(ii)(1)-(IV) (West Supp. 2009).

11. Jesse Broehl, *California Utilities Hide Behind Solar Smokescreen: Legal Loophole Allows Penalties to Be Avoided for Failing to Bring Wind Power Online*, WIND POWER MONTHLY, April 2009, at 29-30.

12. NAT'L RENEWABLE ENERGY LAB., RENEWABLES PORTFOLIO STANDARD OVERVIEW (2005), available at [http://www.windpoweringamerica.gov/pdfs/wpa/37627\\_rps.pdf](http://www.windpoweringamerica.gov/pdfs/wpa/37627_rps.pdf).

13. *See* CAL. PUB. UTIL. CODE § 399.12-399.16 (West Supp. 2009).

14. EPA Green Power Partnership, <http://www.epa.gov/grnpower/gpmarket/rec.htm> (last visited Oct. 6, 2009).

15. Tom Cheyney, *Gov. Schwarzenegger Signs Executive Order Raising California RPS to 33%—Highest in U.S.*, PV-TECH.ORG, Sept. 16, 2009, [http://www.pv-tech.org/news/\\_a/gov.\\_schwarzenegger\\_signs\\_executive\\_order\\_raising\\_california\\_rps\\_to\\_33-hig/?utm\\_source=Feeds&utm\\_campaign=News+Feed&utm\\_medium=rss](http://www.pv-tech.org/news/_a/gov._schwarzenegger_signs_executive_order_raising_california_rps_to_33-hig/?utm_source=Feeds&utm_campaign=News+Feed&utm_medium=rss).

16. CAL. PUB. UTIL. CODE § 399.11(a) (West Supp. 2009).

ergy goal of 33% by 2020.<sup>17</sup> Utility companies failing to comply with the RPS are penalized on a case-by-case basis.<sup>18</sup> Utilities can be excused from RPS compliance if their inability to comply is due to a lack of transmission capacity—so long as they make a reasonable effort to obtain renewable power.<sup>19</sup>

The California Public Utilities Commission recently published its quarterly RPS report.<sup>20</sup> With the interim 2010 RPS goal for California set at 20%, it appears the state's utilities will be forced to purchase out-of-state RECs to meet the 20% goal. The 2008 year-end renewable energy utilization stood at 13% for the three largest investor-owned utilities, a percentage that has not changed substantially during the last six years.<sup>21</sup> Thus, it looks as if the state's renewable energy development and out-of-state REC purchases will have to increase significantly in 2009 and 2010 in order to meet the 2010 RPS goal. Indeed, more than half of the projected new contracts to provide renewable energy to California retail customers will come from out-of-state projects.<sup>22</sup>

## 2. Net Metering

In addition to RPS, California has instituted a net metering (also known as co-metering) program that requires utility companies to purchase up to one megawatt of wind energy produced by retail customers at a rate and term approved by California's Public Utility Commission.<sup>23</sup> California utility companies are only required to purchase customer-produced renewable energy totaling no more than 2.5% of the utility's total peak demand.<sup>24</sup>

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17. Cal. Exec. Order No. S-14-08 (Nov. 17, 2008). The California Governor added to the 2008 Executive Order with another recent executive order. Cal. Exec. Order No. S-21-09 (Sept. 15, 2009). Governor Schwarzenegger expressed concern about recent legislation diluting the 2008 Renewable Portfolio Standard (RPS) Executive Order, explaining:

Unfortunately, the bills the legislature recently passed are unnecessarily complex, would substantially increase costs on Californians and California's businesses and, if passed, the state standard could be held up in legal battles because the bills violate the U.S. Constitution's commerce clause by restricting the sale of energy across state lines. For these reasons, the Governor is taking action administratively today to increase California's RPS to the highest in the nation - 33 percent by 2020.

Press Release, Arnold Schwarzenegger, Cal. Governor, Gov. Schwarzenegger Signs Executive Order to Advance State's Renewable Energy Portfolio Standard to 33 Percent by 2020 (Sept. 15, 2009), available at <http://gov.ca.gov/index.php?/print-version/press-release/13273>. The statements in the press release and the language in the new executive order indicate the California Governor's intent to allow in-state utilities to help meet their RPS requirements by purchasing Renewable Energy Certificates (RECs) from out-of-state renewable energy project operators. See Cal. Exec. Order No. S-21-09, *supra*.

18. See CAL. PUB. UTIL. CODE § 399.14(c).

19. *Id.* § 399.14(a)(2)(C)(ii)(I)-(IV).

20. CAL. PUB. UTILS. COMM'N, RENEWABLE PORTFOLIO STANDARD QUARTERLY REPORT (July 2009).

21. *Id.* at 6.

22. *Id.* at 4.

23. See CAL. PUB. UTIL. CODE § 2827 (West Supp. 2009).

24. *Id.* § 2827(c)(1). At the time this article was written, however, a bill to increase California's net-metering requirement from 2.5% to 5% had passed the Assembly and was in committee with the Senate. Assem. B. No. 560, 2009-10 Gen. Sess. (Cal. 2009).

### 3. Tax Credit

Wind facilities located exclusively in an “enterprise zone” or “targeted tax area”<sup>25</sup> are eligible to receive a tax credit for sales and use taxes paid towards the purchase of no more than \$20 million in “[m]achinery and machinery parts used for the production of renewable energy resources.”<sup>26</sup> The tax credit cannot exceed a wind generator’s tax liability in any given year; however, the credit can be carried forward from year to year until it is exhausted.<sup>27</sup>

### 4. Siting

Wind project siting involves a wide range of issues including the location of roads and transmission lines. Siting must also take into consideration the wind project site’s terrain, placement of turbines to optimize energy output, spacing between turbines, and accommodation of federal laws such as those imposed by the Federal Aviation Administration. In light of the many wind project siting logistics, adherence to state and local turbine setback requirements can be challenging.<sup>28</sup> A 2006 survey conducted by the California Wind Energy Collaborative found that setback requirements in five California counties ranged between 500 feet to 1,000 feet from property lines and dwellings.<sup>29</sup> Wind energy developers in California are therefore advised to carefully review local rules and ordinances to ensure compliance with local setback mandates and other possible siting requirements.

The California Energy Commission has also published a report establishing guidelines for minimizing the effects of a wind farm on wildlife.<sup>30</sup> The report recommends that wind facilities not be placed near endangered species’ habitats, gives engineering guidelines on how to minimize roosting and otherwise attracting birds and raptors, and instructs operators on how to monitor the facilities’ continuing effect on wildlife.<sup>31</sup>

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25. For an explanation of enterprise zones, see CAL. GOV’T CODE § 7073 (West 2008). For an explanation of a targeted tax area, see CAL. GOV’T CODE § 7097 (West 2008).

26. CAL. REV. & TAX. CODE § 23612.2(b)(2)(A)(ii) (West 2004); CAL. REV. & TAX. CODE § 23633(b)(1)(A)(ii) (West 2004).

27. *Id.* § 23612.2(d).

28. The term “setback” as used in the wind industry refers to the minimum distance a turbine must be from a property line, dwelling, or road. *See, e.g.*, KERN COUNTY, CAL., CODE § 19.64.0140F.1 (2009).

29. CAL. WIND ENERGY COLLABORATIVE, PERMITTING SETBACK REQUIREMENTS FOR WIND TURBINES IN CALIFORNIA 12 (2006).

30. *See* CAL. ENERGY COMM’N, CALIFORNIA GUIDELINES FOR REDUCING IMPACTS TO BIRDS AND BATS FROM WIND ENERGY DEVELOPMENT (2007).

31. *Id.* at 59-81.

### B. Colorado

Colorado currently has 1,067 MW of installed wind generation capacity, ranking it eighth nationally.<sup>32</sup> In 2007 alone, Xcel Energy added 776 MW of wind power to its portfolio.<sup>33</sup> Yet, Xcel has not added significant additional amounts in light of potential reliability concerns.<sup>34</sup> Since 2007, Xcel has proposed a conservative plan to add 100 MW per year throughout 2010-2012.<sup>35</sup>

#### 1. Renewable Energy Standards

Colorado's RES require each qualifying retail utility to acquire 10% of its energy from eligible renewable sources by 2011 and 20% by 2020.<sup>36</sup> Qualifying utilities include Colorado retail electric providers, "other than municipally owned utilities that serve forty thousand customers or less."<sup>37</sup> Cooperative and municipal utilities with 40,000 customers or fewer have a smaller requirement of 3% by 2011 and 10% by 2020.<sup>38</sup> If a utility does not comply with the RES in a given year, Colorado law requires the Public Utilities Commission to determine "what, if any, administrative penalties should be assessed against the [utility] for its failure to meet the renewable energy standard."<sup>39</sup> The State may charge the utility up to what it would have spent if it had complied with the RES.<sup>40</sup> Alternatively, it can choose to reduce or even waive the penalty if it finds that non-compliance was due to circumstances beyond the utility's control, such as third-party construction delays.<sup>41</sup> Further, a penalty will not be assessed against the utility if "the shortfall is attributable to the retail rate impact limit."<sup>42</sup> Any penalties assessed for non-compliance cannot be recovered through rate increases; however, costs associated with compliance may be recovered in a rate-making proceeding.<sup>43</sup>

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32. AWEA, *supra* note 2, (then follow "CO" on map).

33. *Id.*

34. Rebuttal Testimony and Exhibits of Thomas A. Imbler, Vice President of Commercial Operations of Xcel Energy Services Inc. at 13-14, *In re* Application of Pub. Serv. Co. of Colo. for Approval of its 2007 Resource Plan, No. 07A-447E, Colo. Pub. Util. Comm'n (2008) ("While we have been successful at maintaining high levels of reliability with the existing wind portfolio, we simply do not have the requisite operating history to demonstrate that we could handle a similar increase in a single year. At some point further additions of wind may exceed the limits of flexibility inherent in the current Public Service thermal generation fleet. . .").

35. *In re* Application of Pub. Serv. Co. of Colo. for Approval of its 2007 Res. Plan, No. 07A-447E at 6 (Pub. Util. Comm'n Nov. 15, 2007). The PUC would prefer Xcel to adopt a goal to add 800 MW by 2015. *Id.* at 3.

36. 4 COLO. CODE REGS. § 723-3654(a) (2009).

37. COLO. REV. STAT. § 40-2-124(1) (Supp. 2008).

38. *Id.* § 40-2-124(1)(c)(V).

39. 4 COLO. CODE REGS. § 723-3663(c)(I) (2009).

40. *Id.* § 723-3663(c)(I)(A).

41. *Id.* § 723-3663(c)(I)(C).

42. *Id.* § 723-3663(c)(I)(B).

43. *Id.* § 723-3663(c)(II).

## 2. Siting

Colorado landowners cannot create covenants or other servitudes that unfairly prohibit or restrict the use or installation of a renewable energy device, including wind turbines.<sup>44</sup> Nonetheless, landowners may create easements to reduce noise, promote safety, and advance aesthetic purposes, so long as the restrictions are reasonable.<sup>45</sup>

In order to qualify as renewable-energy facilities under Colorado's RES, wind developers must consult with the Colorado Division of Wildlife (CDW) and other applicable regulatory agencies.<sup>46</sup> Any development larger than 2 MW is required to perform and publish avian studies and minimize wildlife impacts in accordance with the studies' findings.<sup>47</sup>

The CDW has published a Resource Guide referencing federal agencies with which a developer may need to comply in order to obtain a permit.<sup>48</sup> The Resource Guide also lists third-party organizations that provide selected recommendations on how to reduce environmental impacts.<sup>49</sup> In 2005, the CDW published a study examining the effect of wind turbines on the Gunnison sage grouse.<sup>50</sup> Among other things, the publication recommends that turbines should not be placed within 0.6 miles of a sage-grouse breeding area.<sup>51</sup>

## 3. Net Metering

Colorado's net-metering requirement allows retail customers to offset their energy costs by up to 2 MW of the energy they produce from renewable sources.<sup>52</sup> Unlike in California, however, utilities are not required to pay their customers for any excess energy they produce, but the excess can be carried over to offset their energy costs for up to sixty days.<sup>53</sup> Many of the other states mentioned in this article have net-metering laws similar to Colorado and will not be mentioned in the remainder of this paper unless the law is particularly unique.

### C. Illinois

As of June 2009, Illinois was on course to add 703 MW of new wind

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44. COLO. REV. STAT. § 38-30-168(1)(a)-(b) (Supp. 2008).

45. *Id.* § 38-30-168(2)(a)-(c).

46. 4 COLO. CODE REGS. § 723-3656(a)-(b) (2009).

47. *Id.* § 723-3656(c).

48. See JENNIFER GERSON & DAVID KLUTE, COLO. DIV. OF WILDLIFE, WIND POWER AND WILDLIFE IN COLORADO: AN INFORMATIONAL RESOURCE GUIDE (2006).

49. *Id.*

50. See COLO. DIV. OF WILDLIFE, GUNNISON SAGE-GROUSE RANGEWIDE CONSERVATION PLAN (2005), <http://wildlife.state.co.us/WildlifeSpecies/SpeciesOfConcern/Birds/GunnisonConsPlan.htm>.

51. *Id.* (then follow "Appendix I" hyperlink).

52. 4 COLO. CODE REGS. § 723-3664(a)(I) (2009).

53. Compare *id.* § 723-3664(b), with CAL. PUB. UTIL. CODE § 2827(c)(1) (West Supp. 2009).

capacity to its existing 915 MW.<sup>54</sup> This will almost double the state's wind installations and provide Illinois with the second highest number of new wind projects under construction in 2009.<sup>55</sup> The state's increase in installations is not surprising given that Illinois possesses two key elements necessary for wind project development. The first is access to large load centers such as Chicago and St. Louis.<sup>56</sup> The second is an existing transmission infrastructure that can be utilized by wind projects to deliver wind-generated electricity to load.<sup>57</sup>

### 1. Renewable Portfolio Standards

In 2007, Illinois passed an RPS, which requires that 25% of the state's total electricity come from a renewable energy source by 2025.<sup>58</sup> The Illinois RPS further requires that, "to the extent available," 75% of the renewable energy come from wind energy.<sup>59</sup>

### 2. Sales Tax Exemption

During its 2009 Regular Session, the Illinois Legislature passed Senate Bill 1923, which provides an important sales-tax exemption for wind-power projects. Under the previous tax regime, a wind-power project had to be located not within an "Enterprise Zone" in order to be considered a "High Impact Business" and thus eligible for the tax exemption.<sup>60</sup> Under the new law, wind projects can be designated as High Impact Businesses, allowing them to claim a full exemption from the state's 6.25% sales tax—a few jurisdictions have a higher rate.<sup>61</sup> In order to qualify, the wind-power project must be new or an expansion of an existing project and must have been placed in service on or after July 1, 2009.<sup>62</sup> Transmission lines, substations, and associated equipment are included in the definition of a wind power project.<sup>63</sup> The wind turbines used must have a nameplate capacity of 0.5 MW or greater.<sup>64</sup>

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54. AWEA, *supra* note 2 (then follow "IL" on map).

55. *Id.* Texas leads with 1,095.55 MW of wind power projects under construction. AWEA, *supra* note 2 (then follow "TX" on map).

56. See Caleb Hale, *Wind Has Come a Long Way in Illinois*, THE SOUTHERN, May 23, 2009, [http://www.southernillinoisan.com/articles/2009/05/23/front\\_page/29001389.txt](http://www.southernillinoisan.com/articles/2009/05/23/front_page/29001389.txt).

57. See The Illinois Wind Energy Association, About Wind Power in Illinois, <http://www.windforillinois.org/> (last visited Oct. 6, 2009).

58. Illinois Power Agency Act, Public Act 095-0481, § 1-75(c)(1) (1995).

59. *Id.*

60. See 20 ILL. COMP. STAT. 655/5.5(a) (2008).

61. See *id.* § 655/5.5(a)(3)(E).

62. *Id.*

63. *Id.*

64. *Id.*

### 3. Siting

Illinois allows wind-project regulation on a local rather than state level.<sup>65</sup> The Illinois County Code grants statutory authority to counties and municipalities to regulate the siting aspects of wind farms.<sup>66</sup> Both codes require at least one public hearing that must be publicized by notice in a newspaper of general circulation in the county or municipality.<sup>67</sup> Both codes, however, allow for a meteorological tower to be installed prior to holding a public hearing.<sup>68</sup> Counties possess siting jurisdiction in unincorporated areas not within 1.5 miles of a municipality's zoning jurisdiction.<sup>69</sup> Municipalities' siting jurisdiction extends to municipal corporate limits and 1.5 miles beyond those limits.<sup>70</sup> In August 2009, the Illinois Legislature passed House Bill 883 to remove the requirement that meteorological towers be dismantled within three years of installation.<sup>71</sup>

Many counties in Illinois have adopted ordinances that regulate the siting of wind turbines and their ancillary facilities.<sup>72</sup> The ordinances often contain a siting approval application process that requires wind developers to file a site plan for the county's approval.<sup>73</sup> Typically, the site plan must show the locations of the wind energy facilities, specify which public roads will be used, and confirm compliance with setback distances imposed by the applicable ordinance. Many of the ordinances also require the developer to post a decommissioning bond for removal of the wind energy facilities after termination of the lease.<sup>74</sup> Wind projects are also required to comply with Illinois's Pollution Control Board noise standards.<sup>75</sup>

#### D. Iowa

With 3,043 MW of wind energy in service, Iowa ranks second in the nation for installed wind generation capacity—all without an RPS.<sup>76</sup> Iowa developers enjoy one of the most generous state-based monetary incentive programs in the nation, including a production tax credit of \$0.015 per kilowatt hour (kWh) sold during the first ten years of produc-

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65. 55 ILL. COMP. STAT. 5/5-12020 (Supp. 2009); 65 ILL. COMP. STAT. 5/11-13-26 (Supp. 2009).

66. 55 ILL. COMP. STAT. 5/5-12020; 65 ILL. COMP. STAT. 5/11-13-26.

67. 55 ILL. COMP. STAT. 5/5-12020; 65 ILL. COMP. STAT. 5/11-13-26.

68. 65 ILL. COMP. STAT. 5/11-13-26.

69. 55 ILL. COMP. STAT. 5/5-12020.

70. 65 ILL. COMP. STAT. 5/11-13-26.

71. See H.R. 883, 96th Gen. Assem., Reg. Sess. (Ill. 2009).

72. See, e.g., LOGAN COUNTY, ILL., ZONING ORDINANCE Appendix E, § IV(C) (2009), available at [http://www.co.logan.il.us/zoning/ordinance/appendix\\_e.pdf](http://www.co.logan.il.us/zoning/ordinance/appendix_e.pdf).

73. See generally *id.*

74. *Id.*

75. ILL. ADMIN. CODE tit. 35, § 900.102 (2009).

76. AWEA, *supra* note 2 (then follow "IA" on map).

tion.<sup>77</sup> Despite Iowa's lack of an RPS, wind generators are still able to sell RECs to utilities in other states.<sup>78</sup>

### 1. Energy Independence Plan

In lieu of an RPS, Iowa has set a goal to be energy independent by 2025.<sup>79</sup> Although the plan does not consist of specific renewable energy goals like an RPS, it is clear that renewable energy will play a central part in achieving energy independence.<sup>80</sup>

### 2. Incentives

In 2005, Iowa implemented two production tax-credit programs for eligible wind energy facilities. If a facility has received a tax credit pursuant to Chapter 476B, it is not eligible for a tax-credit certificate under Chapter 476C of the Iowa Code.<sup>81</sup> Chapter 476B applies to wind energy facilities only,<sup>82</sup> while both wind energy and certain other renewable energy facilities may be eligible for the Chapter 476C tax credit.<sup>83</sup>

Chapter 476B provides a production tax credit of one cent per kWh of qualified electricity that the owner "sells or uses for on-site consumption during the ten-year period beginning on the date the qualified facility was originally placed in service."<sup>84</sup> The credit can be applied toward the state's personal income tax, business tax, financial institutions tax, or sales and use tax.<sup>85</sup> The Iowa Utilities Board must make a determination of eligibility.<sup>86</sup> In order to qualify, the facility owner may not own more than two eligible facilities and must submit a copy of any power purchase or interconnection agreement—unless the electricity will be used for on-site consumption.<sup>87</sup> Additionally, the facility must be placed in service on or after July 1, 2005, but before July 1, 2012, and must have no less than 2 MW and no more than 30 MW of generating capacity.<sup>88</sup> The maximum amount of generating capacity eligible for the credit is 150 MW for the entire state.<sup>89</sup>

The Chapter 476C production tax credit requires that renewable

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77. IOWA CODE § 476C.2, 476C.5 (Supp. 2009).

78. See, e.g., Horizon Wind Energy, Pioneer Prairie I Wind Farm, <http://www.horizonwind.com/projects/whatwevedone/pioneer-prairie-I.aspx> (last visited Oct. 6, 2009).

79. IOWA CODE § 469.4.2 (Supp. 2009).

80. THE OFFICE OF ENERGY INDEPENDENCE, ENERGY INDEPENDENCE PLAN 9 (2009) (reiterating the Iowa Governor's goal to be a leader in renewable energy).

81. IOWA CODE § 476C.4.6.

82. IOWA CODE § 476B.1.4, 476B.2 (Supp. 2009).

83. IOWA CODE § 476C.1.6, 476C.1.11 (Supp. 2009); IOWA CODE § 476C.2.1 (Supp. 2009).

84. IOWA CODE § 476B.2.

85. See *id.*

86. *Id.* §§ 476B.1.1, 476B.5.

87. *Id.* § 476B.5.5, 476B.5.1(e).

88. *Id.* § 476B.1.4.c.d.

89. *Id.*

energy facilities be originally placed in service on or after July 1, 2005, and before January 1, 2012,<sup>90</sup> to qualify for a tax credit of \$0.015 per kWh sold during each taxable year for the first ten years of the facility's production.<sup>91</sup> Facilities must have one qualifying owner for each 2.5 MW of nameplate capacity,<sup>92</sup> and qualifying owners cannot own more than two qualifying facilities.<sup>93</sup> According to section 476C.3, subsection 4, the maximum amount of nameplate generating capacity of all of the state's wind energy conversion facilities eligible for the tax credit cannot exceed 330 MW.<sup>94</sup>

### 3. Siting

In addition to recommended general wildlife protection guidelines similar to those used by other states—to keep turbines away from endangered species' habitats and to avoid creating perches for birds and raptors—Iowa has other specific siting guidelines for developers to follow.<sup>95</sup> Among other things, those guidelines recommend that developers avoid bird migration paths or position turbines so that the blades turn in a direction that is parallel with bird migration paths whenever possible in order to reduce risk of collision.<sup>96</sup> The State also recommends that operators take measures to dispose of carrion and to control rodent populations that might attract raptors.<sup>97</sup>

Although Iowa demonstrates that a state can have a successful wind industry without an RPS, the state may not have seen as much growth had it not provided the above-described state tax credits.<sup>98</sup> In contrast, Texas has one of the nation's most stringent RPS laws which imposes stiff penalties for utilities that do not comply, but the state has virtually no additional incentives for developers.<sup>99</sup> RPS laws come at a higher administrative cost because the market for Renewable Energy Credits (REC) must be regulated, but this market allows the value of renewable energy to change with demand. Tax incentives, on the other hand, have fewer administrative costs, but their value cannot adjust with changes in market conditions. Both RPS programs and monetary incentive packages come with different risks and benefits to state govern-

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90. IOWA CODE § 476C.1.6.d (Supp. 2009).

91. IOWA CODE §§ 476C.2, 476C.5 (Supp. 2009).

92. *Id.* § 476C.1.6.c.

93. *Id.* § 476C.3.6.

94. *Id.* § 476C.3.4; S. File 456, 83d Gen. Assem., 1st Sess. (Iowa 2009).

95. See ASS'N OF FISH & WILDLIFE AGENCIES, WIND POWER SITING, INCENTIVES, AND WILDLIFE GUIDELINES IN THE UNITED STATES (2007) (summarizing environmental and wildlife guidelines across the United States).

96. IOWA DEP'T OF NAT. RES., WIND ENERGY AND WILDLIFE RESOURCE MANAGEMENT IN IOWA: AVOIDING POTENTIAL CONFLICTS 3 (2007).

97. *Id.*

98. See discussion *supra* Part II.D.2.

99. See *infra* Part II.P.4.

ments. Yet, both methods of encouraging wind energy development seem to be effective.

### E. Kansas

Almost half of Kansas's 1,013 MW of utility-scale wind power installations occurred in 2008.<sup>100</sup> Even before this burst of activity, Kansas had both advisory and mandatory guidelines for wind developments in place. In 2003, then-Kansas Governor Kathleen Sebelius asked the State Energy Resources Coordination Council (SERCC) to form a special task force to study and make recommendations regarding the siting of wind-power projects in the Flint Hills and Tallgrass Prairie Regions.<sup>101</sup> In response, the SERCC formed the Wind and Prairie Task Force (Task Force), which delivered its final report in 2004.<sup>102</sup> Recognizing the sensitivity of the region, the Task Force recommended that the grasslands of Kansas be preserved, and the Governor publicly discouraged wind development in that region of the state.<sup>103</sup> In response to the prospect of wind development in the Flint Hills region in 2006, local landowners donated more than 10,000 acres to the Kansas Chapter of The Nature Conservancy (Conservancy) which placed a conservation easement on the acreage.<sup>104</sup> This particular conservation easement precludes development on the land if such development is incompatible with the tallgrass prairie.<sup>105</sup> The number of acres covered by the conservation easement has expanded since that time, and as of October 2008, the Conservancy oversaw 22,357 acres protected by conservation easements in the Flint Hills region.<sup>106</sup> Further ensuring no wind development will occur in the Flint Hills region, on October 30, 2009, the Kansas Supreme Court issued an opinion upholding a 2004 Wabaunsee County ordinance that banned the construction of commercial wind farms in the county.<sup>107</sup> Wabaunsee County is located in the Flint Hills

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100. AWEA, *supra* note 2 (then follow "KS" on map) (stating that 460 of Kansas's 1013 MW were installed in 2008).

101. Letter from Kathleen Sebelius, Governor of Kan., to Lee Allison, Chairman, State Energy Resources Coordinating Council (Dec. 2, 2003), *available at* [http://kec.kansas.gov/wptf/sercc\\_wptf\\_sebelius.html](http://kec.kansas.gov/wptf/sercc_wptf_sebelius.html).

102. *See* WIND AND PRAIRIE TASK FORCE, WIND AND PRAIRIE TASK FORCE FINAL REPORT (2004), *available at* <http://kec.kansas.gov/wptf/WPTFFinalReport.pdf>.

103. Press Release, Kathleen Sebelius, Governor of Kan., Statement from Governor Kathleen Sebelius upon Receiving the Wind and Prairie Task Force Report (July 7, 2004), *available at* <http://kec.kansas.gov/wptf/GovernorsRelease060704.pdf>; RenewableEnergyWorld.Com, Kansas Governor Halts Wind Power In Tallgrass Prairies, (Dec. 2, 2004), <http://www.renewableenergyworld.com/rea/news/article/2004/12/kansas-governor-halts-wind-power-in-tallgrass-prairies-19425>.

104. Steve Fry, *Couple Donates 10,000 Acres to Nature Conservancy*, TOPEKA CAPITAL-J., Sept. 2, 2006, *available at* [http://cjonline.com/stories/090206/kan\\_flinthills.shtml](http://cjonline.com/stories/090206/kan_flinthills.shtml).

105. *Id.*

106. The Nature Conservancy, Conservation Easement Increases Amount of Protected Land in the Flint Hills, <http://www.nature.org/wherewework/northamerica/states/kansas/press/press3714.html> (last visited Oct. 6, 2009).

107. *Zimmerman v. Bd. of County Comm'r*, 2009 WL 3491015 (Kan. 2009).

of Kansas,<sup>108</sup> and the ordinance states, in part, wind farms “would be incompatible with the rural, agricultural, and scenic character of the county.”<sup>109</sup> The State Supreme Court decision was unanimous and held a county-wide ban on all commercial wind farms is not unreasonable.<sup>110</sup>

Although there has been opposition to wind development in Kansas, other activity indicates an effort by the State and others to strike a balance between preservation and development. For example, the State formed the Kansas Wind Working Group to “[o]ptimize wind energy utilization in Kansas.”<sup>111</sup> The Kansas Energy Council has issued the Wind Energy Siting Handbook (Siting Handbook), which provides advisory guidelines for project development to stakeholders and directs the reader to applicable mandatory county guidelines.<sup>112</sup> Finally, the Southwest Kansas Royalty Owners Association has created Guidelines for Landowners in Negotiating Wind Energy Leases.<sup>113</sup>

### 1. Wind Lease Regulation

In addition to the guidelines contained in the above-described reports, Kansas has passed legislation formally regulating wind development. Among those statutes is section 58-2272, which requires “every instrument that conveys any interest created by any lease or easement involving wind resources and technologies to produce and generate electricity [to] include a description of the real property subject to the easement and a description of the real property benefiting from the wind lease or easement.”<sup>114</sup> Compliance with this section at the outset of project development would presumably be difficult because it is typically undecided at that stage which properties benefit from an easement or lease. In addition, given that a wind project is an integrated system, arguably all tracts included in a project would benefit each other and would need to be recorded with each lease or easement. Given the nature of a wind project development, the authors suggest that a developer agree to attach a graphic depiction of the entire project area to the lease or easement agreement once construction of the project is complete.

Section 58-2272(b) likewise imposes a requirement that cannot be fulfilled at the lease-signing stage of project development. It requires

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108. *Id.* at 3.

109. *Id.* at 5.

110. *Id.* at 18.

111. Kan. Exec. Order No. 08-01 (Jan. 7, 2008), available at [http://www.governor.ks.gov/executive/Orders/exec\\_order0801.htm](http://www.governor.ks.gov/executive/Orders/exec_order0801.htm).

112. KAN. ENERGY COUNCIL, WIND ENERGY SITING HANDBOOK: GUIDELINE OPTIONS FOR KANSAS CITIES AND COUNTIES (2005), available at [http://www.kansasenergy.org/Kansas\\_Siting\\_Guidelines.PDF](http://www.kansasenergy.org/Kansas_Siting_Guidelines.PDF).

113. Bernard E. Nordling, SWKROA Assistant Executive Secretary, 55th Annual Meeting of the Southwest Kansas Royalty Owners Association in Hugoton, Kansas (Apr. 26, 2003), available at <http://www.swkroa.com/formspublications.html>.

114. KAN. STAT. ANN. § 58-2272(a) (2005).

that a wind lease or easement include “a description of the vertical and horizontal angles, expressed in degrees, and distances from the site of the wind power system in which an obstruction to the wind is prohibited or limited.”<sup>115</sup> In the authors’ experience, it is common practice for a wind developer to include in its wind lease restrictions on the placement of structures or trees on the property that will interfere with wind speeds. This typically takes the form of a non-obstruct easement or non-interference clause (Non-Obstruct Clause). Typically, however, the Non-Obstruct Clause is stated in broader terms, such as, “no structures shall be placed within five hundred feet of a wind turbine.” Although the language of section 58-2272(b) requires more precision in describing the Non-Obstruct Clause, it does not provide more clarity. For most landowners and developers it is easier to determine a distance of five hundred feet when out in the field than it is to determine the distance as described under the statute without the aid of a ground survey. In addition, it is unclear from the language of the statute if a “wind power system” refers to an individual turbine or the entire wind project.<sup>116</sup> The safer approach would be to include a description that accords with the statute of all areas subject to a Non-Obstruct Clause and attach it to the lease upon completion of the entire project.

## 2. Incentives

In 2009, Kansas established an RPS mandating utilities acquire 20% of their electricity from renewable energy by 2020.<sup>117</sup> Unfortunately, section 3(c) of House Bill 2369, which establishes the State’s RPS goals, diminishes its own requirement by allowing each MW installed after January 1, 2000, to count as 1.10 MW.<sup>118</sup> As a result, the Kansas Corporation Commission (KCC) must now undertake the task of promulgating rules to implement the State’s RPS requirements. The Kansas Legislature has given the KCC broad discretion in determining penalties for non-compliance by allowing penalties to be set at a level that will “promote compliance” with the RPS.<sup>119</sup>

The eleventh paragraph of section 79-201 provides a tax exemption “from all property or ad valorem taxes levied by the law of the state of Kansas” to renewable energy resources or technologies used.<sup>120</sup> The tax exemption applies to all property “actually and regularly used predomi-

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115. *Id.* § 58-2272(b).

116. *Id.*

117. H.B. 2369, Kan. Reg. Sess. (2009).

118. *Id.* § 3(c).

119. *Id.* § 6(a).

120. KAN. STAT. ANN. § 79-201 (Supp. 2008). “[R]enewable energy resources or technologies shall include wind, solar, photovoltaic, biomass, hydropower, geothermal and landfill gas resources or technologies.” *Id.* § 79-201 *Eleventh*.

nantly to produce and generate electricity.”<sup>121</sup>

### 3. Local Regulations

Many Kansas counties require a county-issued permit in order to operate a wind project. The above-referenced Siting Handbook illustrates general project guidelines using examples from four Kansas counties that have considered zoning regulations.<sup>122</sup> The Siting Handbook also contains templates for use by local governments in drafting county regulations.<sup>123</sup> Consequently, a search for local permitting guidelines should be done at the outset of project development, because county guidelines could potentially impact project design.

#### F. Minnesota

Minnesota currently has an installed wind generation capacity of 1,804 MW. It is ranked fourth nationally, and it has the potential to develop 75,000 MW.<sup>124</sup> The majority of Minnesota’s development has taken place in the southwest corner of the state in Lincoln, Pipestone, and Murray counties.<sup>125</sup> Minnesota’s success has come without the use of financial incentives utilized by other states.<sup>126</sup> Minnesota’s success is attributable to its aggressive RPS.<sup>127</sup>

Looking forward, Minnesota is approaching a development crossroads. As the State continues to attract large wind developers, utilities are planning for expensive additions to its transmission infrastructure.<sup>128</sup> Last April, Minnesota utility companies obtained a Certificate of Need for the CapX 2020 project,<sup>129</sup> which would add over 600 miles of transmission lines at an estimated cost of up to \$1.7 billion.<sup>130</sup> Recent discussions, however, have challenged the need for the substantial transmission investment.<sup>131</sup> People opposing the CapX 2020 project claim that sufficient infrastructure already exists to add an estimated 3,500 MW of

121. *Id.*

122. See KAN. ENERGY COUNCIL, *supra* note 112. The counties are Butler, Geary, Riley, and Wabaunsee. *Id.*

123. See *id.* at “III. APPLICATION TEMPLATES.”

124. AWEA, *supra* note 2 (then follow “MN” on map).

125. DEP’T OF ADMIN. LAND MGMT. INFO. CTR., WIND TURBINES IN MINNESOTA (2009), available at [http://www.state.mn.us/mn/externalDocs/Commerce/Map\\_Wind\\_Turbine\\_Locations\\_022409111000\\_WindTurbineMap.pdf](http://www.state.mn.us/mn/externalDocs/Commerce/Map_Wind_Turbine_Locations_022409111000_WindTurbineMap.pdf).

126. See *supra* Part II.D.2.

127. Cameron Macht, *Something in the Wind*, MINN. ECON. TRENDS, Mar. 2009, at 2.

128. Business Wire, *Upper Midwest Utilities Identify Electric Transmission Upgrades to Meet Renewable Energy Standard Milestones*, REUTERS, Apr. 2, 2009, <http://www.reuters.com/article/pressRelease/idUS144532+03-Apr-2009+BW20090403>.

129. Press Release, Great River Energy, CapX2020 Granted Certificate of Need for 345-kilovolt Projects in Minnesota (Apr. 16, 2009), available at <http://www.reuters.com/article/pressRelease/idUS206762+16-Apr-2009+BW20090416>.

130. JOHN BAILEY ET AL., MEETING MINNESOTA’S RENEWABLE ENERGY STANDARD USING THE EXISTING TRANSMISSION SYSTEM 5 (2008).

131. *Id.* at 6-7.

renewable energy through strategically placed “dispersed wind generation.”<sup>132</sup> This plan proposes the pursuit of small developments known as community-based energy developments that can plug into the grid using existing low-voltage utility lines at a fraction of the cost of CapX 2020, which would add only 1,050 MW after the first phase.<sup>133</sup> Minnesota is the nation’s leading producer of locally owned wind power and has long been a proponent of community development.<sup>134</sup> Yet, large-scale transmission development may have a greater overall benefit to Minnesota’s economy by enabling wind-generated power to be sold across state lines.<sup>135</sup>

### 1. Renewable Portfolio Standard

Minnesota has two different RPS requirements: It has a higher standard for utilities that owned a nuclear generating facility as of January 1, 2007,<sup>136</sup> and a somewhat lower standard for other utilities in the state.<sup>137</sup> The lower RPS requires a gradually increasing percentage of renewable energy by the year 2025, with 12% by 2012, 17% by 2016, 20% by 2020, and 25% by 2025.<sup>138</sup> The higher RPS percentages for nuclear facilities are 15% by 2010, 18% by 2012, 25% by 2016, and 30% by 2020.<sup>139</sup> The higher nuclear RPS also contains a unique provision mandating that at least 25% of the 30% year 2020 requirement come from wind energy plants.<sup>140</sup>

### 2. Incentives

In lieu of a personal-property tax, Minnesota wind generators are required to pay a production tax of 0.012 cents to 0.12 cents per kWh—depending on the size of the project—unless the facility is located within a job opportunity building zone (JOBZ).<sup>141</sup> Launched in 2004, the JOBZ initiative is a stimulus program created to encourage “economic

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132. *Id.* at 9-10.

133. *See id.* at 10.

134. Macht, *supra* note 127, at 2.

135. BAILEY, *supra* note 130, at 14 (arguing that the CapX 2020 project is designed to meet regional power needs).

136. U.S. Energy Information Administration, Prairie Island Nuclear Plant, Minnesota [http://www.eia.doe.gov/cneaf/nuclear/page/at\\_a\\_glance/reactors/prairieisland.html](http://www.eia.doe.gov/cneaf/nuclear/page/at_a_glance/reactors/prairieisland.html) (last visited Oct. 6, 2009); U.S. Energy Information Administration, Monticello Nuclear Power Plant, Minnesota [http://www.eia.doe.gov/cneaf/nuclear/page/at\\_a\\_glance/reactors/monticello.html](http://www.eia.doe.gov/cneaf/nuclear/page/at_a_glance/reactors/monticello.html) (last visited Oct. 6, 2009).

137. MINN. STAT. § 216B.1691.2a (Supp. 2009).

138. *Id.* § 216B.1691.2a(a).

139. *Id.* § 216B.1691.2a(b).

140. *Id.*

141. MINN. STAT. § 272.029.3(a)(1), (b) (Supp. 2009). Facilities producing more than 0.25 MW, but no more than 2 MW, pay 0.012 cents per kWh; facilities producing more than 2 MW, but no more than 12 MW, pay 0.036 per kWh; and facilities producing more than 12 MW pay 0.12 cents per kWh. *Id.* § 272.029.3(a)(1)-(3).

development in rural Minnesota by providing local and state tax exemptions to companies that start up or expand in targeted areas.”<sup>142</sup> “The exemptions begin on the date they sign a business subsidy agreement and lasts until the program expires on December 31, 2015.”<sup>143</sup>

For taxing purposes, Minnesota values wind facilities as it would undeveloped land, and additions of personal property to the land for the purpose of wind energy production are not considered improvements when it comes to property taxation.<sup>144</sup> However, like Iowa, Minnesota exempts materials used in the construction of the facility from sales and use taxes.<sup>145</sup>

### 3. Siting and Permitting

Minnesota is unique in that a permit from the Minnesota Public Utility Commission (PUC) preempts and replaces all local regulations and zoning ordinances for wind developments generating 5 MW or more.<sup>146</sup> Therefore, large-scale wind developers must only worry about obtaining a permit from the PUC.<sup>147</sup> The law, however, allows counties to assume the task of permitting under the supervision of the PUC for projects less than 25 MW in size.<sup>148</sup> In early 2008, the PUC adopted a standard set of siting rules for projects in the 5-25 MW size.<sup>149</sup> The siting standards include rules regarding setbacks from the property lines of non-participating landowners, internal project turbine spacing rules, noise standards, and minimum setbacks from residences.<sup>150</sup> While these standards technically only apply to projects that are between 5 and 25 MW in size, a review of a permit for a larger facility demonstrates that the PUC tends to follow the same standards in reviewing and approving projects greater than 25 MW.<sup>151</sup> More recently, the PUC sought comment on whether to impose additional wind project siting and permitting standards in response to certain health issues examined in a White Paper published by the Minnesota Department of Health.<sup>152</sup> Initial comments were due by September 16, 2009, and reply comments were

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142. See Minn. Dep’t of Employment and Econ. Dev., What is JOBZ?, <http://www.positivelyminnesota.com/bizdev/jobzwhat.htm> (last visited Oct. 6, 2009).

143. *Id.*

144. See MINN. STAT. § 272.027.9(a) (Supp. 2009).

145. MINN. STAT. § 297A.68.12 (Supp. 2009).

146. MINN. STAT. §§ 216F.01.2, 216F.07 (Supp. 2009).

147. *Id.* §§ 216F.01.2, 216F.07.

148. MINN. STAT. § 216F.08(a) (Supp. 2009).

149. See Order Establishing General Wind Permit Standards, Docket No. E,G-999/M-07-1102 (Minn. Pub. Util. Comm’n, Jan. 11, 2008), available at <http://www.windaction.org/documents/14797>.

150. *Id.*

151. See Minn. Pub. Utils. Comm’n, Large Wind Energy Conversion System Site Permit for Ecoharmony West Wind Project in Fillmore County PUC Docket No. IP-6688/WS-08-973, at 6 (2009), available at <http://energyfacilities.puc.state.mn.us/documents/19910/Commission%20Order%20Accepting%20Site%20Permit%20Application-Draft%20Site%20Permit.pdf>.

152. Minn. Pub. Utils. Comm’n, Notice of Comment Period PUC Docket No. E-999/CI-09-845, (2009).

due October 14, 2009.<sup>153</sup>

### G. Missouri

This year, Iberdrola Renewables finished installation of a 146 MW wind facility, bringing Missouri's total installed capacity to 308 MW.<sup>154</sup> Wind Capital Group is also building a project that will add another 150 MW to the state's portfolio.<sup>155</sup> Both of these facilities are located in the northwest corner of the state,<sup>156</sup> where Missouri's wind resources are richest.<sup>157</sup>

According to the American Wind Energy Association (AWEA), the state's total potential wind generation capacity is 5,960 MW.<sup>158</sup> Moreover, if Missouri were to exploit the entire resource, it could accommodate 25% of the state's current 23,000 MW-load.<sup>159</sup> Nevertheless, proponents of Missouri wind development must compete with neighboring Iowa, and its generous incentive program.<sup>160</sup> The Missouri RPS law permits wind purchased from out-of-state to count toward a utility's required renewable energy portfolio.<sup>161</sup> In fact, it seems uncertain whether the out-of-state power must be consumed in Missouri in order to qualify as RPS power.<sup>162</sup> If permitted to sell RECs to Missouri utilities without selling the energy to Missouri customers, an Iowa wind facility could sell energy to Iowa customers, availing itself of Iowa's tax

153. *Id.*

154. AWEA, *supra* note 2 (then follow "MO" on map).

155. *Id.* (then change "Status" dropdown box to "Under Construction").

156. *Id.* (indicating that the Iberdrola development is in Atchinson County); Wind Capital Group: News Archive, [http://www.windcapitalgroup.com/News/SingleNews/09-04-17/vice\\_president\\_biden\\_to\\_join\\_wind\\_capital\\_group\\_associated\\_electric\\_cooperative\\_abb\\_ge\\_energy\\_uaw\\_and\\_rmt\\_to\\_announce\\_wind\\_farm\\_to\\_be\\_developed\\_as\\_a\\_result\\_of\\_federal\\_stimulus.aspx](http://www.windcapitalgroup.com/News/SingleNews/09-04-17/vice_president_biden_to_join_wind_capital_group_associated_electric_cooperative_abb_ge_energy_uaw_and_rmt_to_announce_wind_farm_to_be_developed_as_a_result_of_federal_stimulus.aspx) (indicating that the Lost Creek development is located in DeKalb County).

157. U.S. Dep't of Energy, Nat'l Renewable Energy Lab., Mo. 50 m Wind Power (2005), [http://www.windpoweringamerica.gov/images/windmaps/mo\\_50m\\_800.jpg](http://www.windpoweringamerica.gov/images/windmaps/mo_50m_800.jpg) (last visited Oct. 6, 2009).

158. AWEA, *supra* note 2 (then follow "MO" on map).

159. See JEFF DAVIS, COMM'R, MO. PUB. SERV. COMM'N, THE DEMAND CHALLENGE: MEETING MISSOURI'S DEMAND FOR ENERGY GROWTH IN AN ENVIRONMENTALLY RESPONSIBLE MANNER 5 (2009), available at <http://www.semowired.org/files/energy-conf-presentation-by-jeff-davis-3-09.pdf>. Missouri's wind generation capacity is 5,960 MW, and the total load is 23,000 MW. Dividing the total load by the wind generation capacity indicates a total of 25.9%.

160. See *supra* Part II.D.

161. MO. REV. STAT. § 393.1030.1 (Supp. 2009).

162. The Missouri Public Service Commission (PSC) is currently drafting rules to implement the RPS law. A debate exists as to whether REC must represent energy that is consumed by a utility's customers in Missouri. The most recent draft states that "[c]ompliance may be achieved through the prudent purchase and retirement of RECs . . . that are not associated with electrical energy delivered to the utility's Missouri retail customers." MO. CODE REGS. ANN. tit. 4 § 240-20.XXX(2) (proposed rev. 11, Jun. 22, 2009), available at <https://www.efis.psc.mo.gov/mpsc/commoncomponents/viewdocument.asp?DocId=935400568>. Wind Capital Group has opposed portions of the current rule revisions and asked for a requirement that REC "to be counted towards the RES requirements only if the generation facility for the renewable energy resource is either located in Missouri or, if located outside of Missouri, the renewable energy resource is delivered to Missouri electric energy retail customers." WIND CAPITAL GROUP, COMMENTS REGARDING GEOGRAPHIC SOURCING – GENERATED IN OR DELIVERED INTO MO 3-4 (Jun. 30, 2009), available at <https://www.efis.psc.mo.gov/mpsc/commoncomponents/viewdocument.asp?DocId=935401876>.

credit, and meanwhile, sell RECs to a Missouri utility.<sup>163</sup> As a counteractive incentive, renewable power purchased from Missouri facilities currently gives utilities 25% more credit than out-of-state power, providing wind energy companies that develop in-state projects with a competitive advantage.<sup>164</sup>

### 1. Renewable Portfolio Standards

Missouri has a goal for utility corporations to reach a 2% renewables portfolio by 2011 and 15% by the beginning of 2021.<sup>165</sup> As mentioned above, to encourage in-state development, renewable energy units purchased from within Missouri are worth 1.25 RECs—25% more than out-of-state energy units.<sup>166</sup> For non-complying utilities, the State imposes a penalty “of at least twice the average market value of renewable-energy credits for the compliance period.”<sup>167</sup> As an added incentive, a utility generating renewable energy equal to 15% or more of its fossil fuel generation is not required to pay customers rebates or subsidies for customer-generated solar energy.<sup>168</sup> These utilities are also exempt from the solar requirement imposed by the RPS law.<sup>169</sup>

### 2. Siting and Permitting

Missouri has very few laws governing the installation of wind power facilities. The Missouri Public Service Commission does not currently require wind energy developers to obtain a certificate before beginning construction of a wind project. Likewise, the Missouri Department of Natural Resources does not require developers to obtain a siting permit, nor has the department published guidelines for the developer to follow. Furthermore, most local governments do not have the authority to regulate wind developments. Under Missouri law, counties are classified by their assessed value,<sup>170</sup> and only “first-class” counties are authorized to establish zoning ordinances or restrict land use.<sup>171</sup> Because the wind-rich counties of Atchison, Holt, Nodaway, and DeKalb are not first-class counties, current Missouri wind projects are

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163. See MO. REV. STAT. § 393.1030.1 (permitting a qualifying renewable energy generator to sell credits to a Missouri utility company); see also *Horizon Wind Energy*, *supra* note 78 (noting that Iowa wind facilities sell REC to utilities in other states).

164. MO. REV. STAT. § 393.1030.1.

165. *Id.*

166. *Id.*

167. *Id.* § 393.1030.2. The statutory language is not completely clear as to which renewable energy credits the penalty applies. The authors presume, however, that the legislature intended the penalty to apply to only the remaining segment of the minimum level of REC that the applicable utility did not achieve in the given time period.

168. MO. REV. STAT. § 393.1050 (Supp. 2009).

169. *Id.*

170. MO. REV. STAT. § 48.020 (Supp. 2009).

171. MO. REV. STAT. § 64.010 (2007).

largely unregulated.

### H. New Mexico

The State of New Mexico has an online wind generation capacity of 497 MW with a 100 MW facility under construction.<sup>172</sup> Although the state's development has not been as rapid as other states, New Mexico recently implemented some new policies and programs that are likely to attract new development. New Mexico wind generators are eligible for a production-based tax credit against state income tax up to \$4 million annually for ten years—a lifetime value of \$40 million.<sup>173</sup> New Mexico has also established the Renewable Energy Transmission Authority (RETA) to “focus[] entirely on developing new transmission projects . . . to promote development of renewable energy.”<sup>174</sup> RETA has been delegated broad power from the state, including the power to buy, sell, and lease land, enter into partnerships, issue bonds, and even exercise eminent domain power.<sup>175</sup> RETA is currently helping to finance the 460-mile SunZia transmission project, which would carry power into Arizona and add another 3,000 MW of capacity, but the project is facing opposition from environmental groups.<sup>176</sup> The SunZia project also highlights another hurdle for developers in New Mexico: With so much of the land in the western United States owned by the federal government, permits from the Bureau of Land Management are often required either for the facility itself or for transmission access.<sup>177</sup>

#### 1. Renewable Portfolio Standards

Public utilities are required to generate 20% of their total retail sales from renewable energy resources by 2020, with interim standards of 10% by 2011 and 15% by 2015.<sup>178</sup> Rural electric cooperatives are required to achieve 5% renewable production by 2015, with a 1% increase each year thereafter until 2020—an aggregate total of 10%.<sup>179</sup>

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172. AWEA, *supra* note 2 (then follow “NM” on map).

173. See N.M. STAT. § 7-2-18.18(C) (Supp. 2008).

174. Joanna Prukop, Cabinet Sec’y, N.M. Energy, Minerals and Natural Res. Dep’t, Presentation at Western States State Energy Program Conference: Approaches for Responsible Energy Development, (Apr. 15, 2009); see also N.M. STAT. § 62-16A-4 (Supp. 2008).

175. See N.M. STAT. § 62-16A-4.

176. See Juliet Eilperin & Steven Mufson, *Renewable Energy’s Environmental Paradox: Wind and Solar Projects May Carry Costs for Wildlife*, WASHINGTON POST, Apr. 16, 2009, available at <http://www.washingtonpost.com/wp-dyn/content/article/2009/04/15/AR2009041503622.html>.

177. *Id.* (“The agency has already authorized 206 wind projects . . . and at least 200 more awaiting approval.”).

178. S.B. 418, 48th Leg., 1st Sess. (N.M. 2007).

179. N.M. STAT. § 62-15-34(A)(1)-(2) (Supp. 2008).

## 2. Incentives

Owners of wind facilities installed prior to 2018 can receive a production tax credit of \$0.01 per kWh of energy produced for the first 400,000 MWh of generation per year for ten years.<sup>180</sup> The amount of the credit is based on a varying amount per unit of electricity generated, multiplied by the number of units generated in the applicable period.<sup>181</sup> Any amount of the credit exceeding the taxpayer's liability may be carried forward for up to five years.<sup>182</sup>

## 3. Siting and Permitting

The New Mexico Public Regulations Commission requires that state-level certificates be obtained for any facility that has a generation capacity of 300 MW or more.<sup>183</sup> There is no similar state-level permitting requirement for facilities with capacities less than 300 MW. Yet, such facilities may still be subject to local governmental regulations. The New Mexico Game and Fish Department has issued wildlife impact guidelines for developments similar to those discussed in other states.<sup>184</sup> The guidelines recommend that developers: (1) avoid placing turbines at or around ridge passes and prairie-dog colonies where raptors might be found; (2) orient turbines in rows parallel to bird migration paths to avoid avian collisions; (3) “implement appropriate storm water management practices that do not create attractions for birds”; (4) avoid fragmenting habitats and building near endangered and sensitive species, including prairie chickens; and (5) monitor mortality rates after development.<sup>185</sup>

### I. New York

With 1,263 MW of installed wind capacity, New York ranks seventh in installed capacity.<sup>186</sup> New York's wind energy portfolio seems poised for continued growth as the State takes steps to be a leader in reducing carbon emissions. On August 6, 2009, Governor David Paterson signed Executive Order No. 24, creating a Climate Change Action Council responsible for developing a plan to reduce carbon emissions 80% by 2050.<sup>187</sup> The order provides specific instructions for the Council

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180. N.M. STAT. § 7-2-18.18(C) (Supp. 2008).

181. *See id.*

182. *Id.* § 7-2-18.18(L)(1).

183. N.M. CODE R. § 17.9.592.7, 17.9.592.9 (Weil 2004).

184. N.M. GAME AND FISH DEP'T, IMPACTS OF WIND ENERGY DEVELOPMENT ON WILDLIFE 6 (2004). *See* discussion *infra* regarding environmental impact guidelines for California and Colorado.

185. *Id.*

186. AWEA, *supra* note 2 (then follow “NY” on map).

187. N.Y. Exec. Order No. 24 (Aug. 6, 2009), *available at* [http://www.state.ny.us/governor/executive\\_orders/xeorders/pdf/eo\\_24.pdf](http://www.state.ny.us/governor/executive_orders/xeorders/pdf/eo_24.pdf).

to assess how to reduce emissions in the energy production sector.<sup>188</sup> With these aggressive policies and room to grow, it seems likely that New York will expand its wind portfolio.<sup>189</sup>

### 1. Renewable Portfolio Standards

In 2005, New York imposed an RPS goal to increase its then current renewable energy percentage from 19% to 24% by 2013 with the use of state incentive programs.<sup>190</sup> New York encourages utilities to provide 25% of their energy from a renewable source by 2013, with the hope that voluntary markets for renewable energy will provide at least an additional 1% to the existing RPS.<sup>191</sup> The entire program is incentive-based, and the State does not impose penalties for non-compliance.<sup>192</sup> The New York State Energy Research and Development Authority (NYSERDA) administers the incentive programs. NYSERDA collects a surcharge from utility companies and uses the proceeds to help fund renewable-energy facilities.<sup>193</sup>

### 2. Incentives

New York further incentivizes new project development by providing relief from certain real-property taxes during the early years of a new project. Increases in real-property value from the addition of wind energy systems constructed between January 1, 1991, and January 1, 2011, are exempt from property taxation for fifteen years.<sup>194</sup> A county, city, township, village, or school district may, however, choose not to provide this exemption.<sup>195</sup> A list of local bodies that have opted not to provide this exemption can be found at the State of New York's Office of Real Property Services.<sup>196</sup> In the alternative, a local body may allow the developer to enter into a contract to make payments in lieu of taxes in an amount not to exceed the amount payable without the exemption.<sup>197</sup>

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188. *Id.*

189. AWEA *supra* note 2 (then follow "NY" on map) (stating that New York has 7,080 MW in potential capacity).

190. N.Y. STATE PUB. SERV. COMM'N, Case No. 03-E-0188, PROCEEDING ON THE MOTION OF THE COMMISSION REGARDING A RETAIL RENEWABLE PORTFOLIO STANDARD 4 (2004).

191. *Id.*

192. *Id.* at 5.

193. N.Y. STATE ENERGY RESEARCH & DEV. AUTH., REQUEST FOR PROPOSALS NO. 916 2 (2004), available at [http://www.nysesda.org/wms/docs\\_funding/916RFP.pdf](http://www.nysesda.org/wms/docs_funding/916RFP.pdf).

194. N.Y. REAL PROP. TAX LAW § 487.2, .5 (McKinney 2008).

195. *Id.* § 487.8. A few school districts are not permitted to disallow this exemption. *Id.*

196. Office of Real Prop. Servs. Solar and Wind Energy Exemption (RPTL, Section 487) Opt Out, [www.orps.state.ny.us/legal/localop/487opt.htm](http://www.orps.state.ny.us/legal/localop/487opt.htm) (last visited Oct. 6, 2009).

197. N.Y. REAL PROP. TAX LAW § 487.9(a).

### 3. Siting and Permitting

Any electric-generation facility exceeding 80 MW in capacity is required to obtain a certificate from the New York Public Service Commission prior to construction.<sup>198</sup> Among other things, applications for a certificate must include an environmental-impact study<sup>199</sup> and a statement demonstrating the facility's construction is "reasonably consistent" with the state's energy plan.<sup>200</sup> The NYSERDA has published a series of guidelines for mitigating environmental and wildlife impacts in design and construction.<sup>201</sup> The New York Department of Environmental Conservation has also issued guidelines for conducting surveys to monitor a facility's impact on bats.<sup>202</sup>

### 4. Code of Conduct

In response to allegations of "improper relationships between Wind Companies and local officials," the New York Attorney General issued a voluntary code of conduct to "promote public integrity" in the development of wind farms.<sup>203</sup> Since its publication, seventeen developers comprising "virtually the entire wind industry" in New York have become signatories to the code.<sup>204</sup> Developers who sign the code agree not to offer any kind of benefit to the officer or her associates, including gifts of more than \$10, employment or promises of employment, or honors.<sup>205</sup> Municipal officers cannot be involved in the wind projects as lessors.<sup>206</sup> Developers must also publicly disclose any financial interest that the municipal officer or her relative has in the project.<sup>207</sup> Additionally, within sixty days of signing the code, the developer is required to train all employees with regard to compliance with the code.<sup>208</sup> Participating developers who violate the code are subject to a civil penalty of up to \$50,000 for the first violation and up to \$100,000 for any subse-

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198. N.Y. PUB. SERV. LAW § 68 (McKinney 2000).

199. N.Y. COMP. CODES R. & REGS. tit. 16, § 1001.3(a) (2009).

200. *Id.* § 1001.5(a).

201. *See generally* N.Y. State Energy Research & Dev. Auth., Wind Development – Wind Energy Toolkit, <http://www.powernaturally.org/programs/wind/toolkit.asp> (last visited Oct. 6, 2009) (listing a series of guidelines under the "Environmental" subheading).

202. N.Y. STATE DEP'T OF ENVTL. CONSERVATION DIV. OF FISH, WILDLIFE AND MARINE RES., GUIDELINES FOR CONDUCTING BIRD AND BAT STUDIES AT COMMERCIAL WIND ENERGY PROJECTS 2 (2009).

203. ANDREW M. CUOMO, ATTORNEY GENERAL, STATE OF N.Y., CODE OF CONDUCT AGREEMENT 1 (2008), *available at* [http://www.oag.state.ny.us/media\\_center/2008/oct/WindCODE%20FINAL.pdf](http://www.oag.state.ny.us/media_center/2008/oct/WindCODE%20FINAL.pdf).

204. Andrew M. Cuomo, Attorney General, State of N.Y., Statement Regarding Reunion Power's Decision to Adopt His Wind Industry Ethics Code (July 29, 2009), [http://www.oag.state.ny.us/media\\_center/2009/july/july29b\\_09.html](http://www.oag.state.ny.us/media_center/2009/july/july29b_09.html).

205. CUOMO, *supra* note 203, at 1-2.

206. *Id.* at 2.

207. *Id.* at 2-3.

208. *Id.* at 5.

quent violation.<sup>209</sup>

### *J. North Dakota*

North Dakota has 714 MW of operating wind capacity with another 345 MW under construction.<sup>210</sup> North Dakota is the most wind rich state in the nation, with the potential capacity to produce 138,400 MW of wind.<sup>211</sup> The State's wind energy developers enjoy generous incentives, including a tax credit with a twenty-year life.<sup>212</sup> Yet, developers in North Dakota are also subject to some unique rules and regulations.

Developers are required to obtain a permit from the state within five years of entering into a lease agreement or the lease is automatically invalidated.<sup>213</sup> Presumably, this law is designed to discourage prospective developers from locking landowners into long-term commitments to participate in developments that never materialize. The requirement to obtain a permit within five years is a significant change from the previous North Dakota law that required developers to produce wind power within five years.<sup>214</sup> Regulations such as the repealed statute are potentially fatal for projects that face development obstacles taking more than five years to resolve. The new requirement is more flexible in that it only requires certain permits to be obtained within the initial five-year period.<sup>215</sup>

With its electricity demand being relatively small, North Dakota's success in wind development depends on its ability to transport energy to highly populated areas outside the state.<sup>216</sup> North Dakota is currently working collaboratively with neighboring states to resolve this issue,<sup>217</sup> and a transmission initiative known as the Green Power Express that would add 12,000 MW of capacity between North Dakota, South Da-

209. *Id.* at 6.

210. AWEA, *supra* note 2 (then follow "ND" on map).

211. *Id.*

212. S.B. 2033, 61st Legis. Assem., Reg. Sess. (N.D. 2009) (stating that the twenty-year life only applies to wind energy devices installed after Sept. 30, 2008 and before Jan. 1, 2012). The Governor signed the bill on March 19, 2009.

213. N.D. CENT. CODE § 17-04-05 (Supp. 2009). The Governor signed the bill on April 8, 2009.

214. *Id.*

215. *Id.*

216. Jerry Lein, Pub. Util. Analyst, N.D. Pub. Serv. Comm'n, North Dakota Transmission Strategies (May 13, 2005), *available at* [http://www.ferc.gov/EventCalendar/Files/20050627131854-Lein\\_North\\_Dakota\\_PSC.pdf](http://www.ferc.gov/EventCalendar/Files/20050627131854-Lein_North_Dakota_PSC.pdf). ("[North Dakota relies] on transmission export capability to out-of-state load centers located to the south and east. Present export capacity is limited to about 2,000 MW and is fully subscribed. Approximately 2/3 of the energy now produced in ND is exported – primarily into Minnesota.")

217. Letter from the Members of the Upper Midwest Transmission Development Initiative, to Jon Wellinghoff, Acting Chairman, Federal Energy Regulatory Commission (Mar. 6, 2009), *available at* [http://www.misostates.org/UMTDI\\_final-LettertoFERC\\_Mar609.pdf](http://www.misostates.org/UMTDI_final-LettertoFERC_Mar609.pdf). ("Led by our Governors, the states of Minnesota, North Dakota, South Dakota, Iowa and Wisconsin have formed the Upper Midwest Transmission Development Initiative (UMTDI) to coordinate sub-regional electric transmission planning and related cost allocation issues.")

kota, and Minnesota is in the development stage.<sup>218</sup>

### 1. Renewable Portfolio Standards

North Dakota has adopted a program known as the 25x25 initiative, with a goal to produce 25% of all energy used in agricultural production—“food, feed, and fiber”—from renewable sources by the year 2025.<sup>219</sup> The state also has a general RPS objective of 10% by 2015.<sup>220</sup> The North Dakota RPS is “voluntary and there is no penalty or sanction for a retail provider of electricity that fails to meet this objective.”<sup>221</sup>

### 2. Incentives

North Dakota also offers a tax credit “for the cost of a . . . wind energy . . . device installed before January 1, 2015 . . . on property owned or leased by the taxpayer in North Dakota.”<sup>222</sup> For devices installed before January 1, 2001, the credit must be in an amount equal to 5% of the cost of the device per year for three years, and for devices installed after December 31, 2000, the credit must be in an amount equal to 3% per year for five years.<sup>223</sup> The tax credit cannot exceed the taxpayer’s liability for any given year, but it may be carried forward for up to twenty years.<sup>224</sup> A 2007 legislative amendment prohibits wind developers from transferring the tax credit to subsequent purchasers of the wind turbine.<sup>225</sup> The State also exempts wind developers from sales and use taxes on all materials and equipment used to construct the facility.<sup>226</sup> Wind turbines are exempt from locally assessed property taxes for the first five years of operation.<sup>227</sup>

### 3. Local Regulation

In addition to obtaining a general permit from the State Public Service Commission (PSC), developers in North Dakota must also comply with local zoning regulations.<sup>228</sup> The zoning requirements vary by jurisdiction. For example, Elden Township in Dickey County imposes a set-

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218. ITC Holdings Corp., The Green Power Express, <http://www.itctransco.com/projects/the-greenpowerexpress.html> [hereinafter Green Power Express] (last visited Oct. 6, 2009); *see also* ITC Holdings Corp., Conceptual Map, <http://www.itctransco.com/projects/thegreenpowerexpress/the-greenpowerexpress-map.html> (last visited Oct. 6, 2009).

219. N.D. CENT. CODE § 17-01-01 (Supp. 2009).

220. N.D. CENT. CODE § 49-02-28 (Supp. 2009).

221. *Id.*

222. N.D. CENT. CODE § 57-38-01.8.1 (Supp. 2009).

223. *Id.*

224. *Id.* § 57-38-01.8.6 (twenty-year carry forward only applies to wind devices).

225. *Id.* § 57-38-01.8.7.

226. N.D. CENT. CODE §§ 57-39.2-04.2, 57-40.2-04.2 (Supp. 2009).

227. *Id.* § 57-02-08.27.

228. N.D. CENT. CODE § 49-22-16.2 (1999).

back requirement of five times the rotor diameter of the subject turbine from the property line of a non-participating landowner.<sup>229</sup> Neighboring Logan County's siting requirements are identical to Dickey County's, except that its setback requirement is 2.5 times the turbine's rotor diameter.<sup>230</sup>

#### 4. Wind Lease Regulation

During the 2009 legislative session, North Dakota passed House Bill 1509, which contains several new requirements for wind lease and easement agreements.<sup>231</sup> Every wind lease provided to a landowner must include the following statement on the cover page of the lease in sixteen-point font:

Special message to property owners

This is an important agreement our lawyers have drafted that will bind you and your land for up to \_\_\_\_\_ years. We will give you enough time to study and thoroughly understand it. We strongly encourage you to hire a lawyer to explain this agreement to you. You may talk with your neighbors about the wind project and find out if they also received a proposed contract. You and your neighbors may choose to hire the same attorney to review the agreement and negotiate changes on your behalf.<sup>232</sup>

The statute further prohibits requiring that either party maintain confidentiality but allows the parties to mutually agree to do so.<sup>233</sup> The statute also contains various other requirements for wind leases, many of which are, in the authors' experience, standard clauses included in a wind lease, such as minimum payment clauses, insurance requirements, preservation of certain rights by the landowner, indemnity clauses, and compliance with state and local laws.<sup>234</sup> If the wind lease does not comply with the requirements imposed by the statute, a court may reform the lease, void the lease, or order any relief allowed by law.<sup>235</sup>

In addition, landowners cannot sever their wind rights from the surface property.<sup>236</sup> Landowners can choose to terminate their lease agreements "if the wind energy facility has not operated for a period of at least three years unless the property owner receives normal minimum lease payments that would have occurred if the wind energy facility had been operating during that time."<sup>237</sup> Finally, North Dakota law renders any wind lease void if a permit from the state has not been obtained

229. ELDEN TOWNSHIP, N.D., ZONING REGS. § 6.11.4.2 (2007).

230. LOGAN COUNTY, N.D., ZONING REGS. § 6.11.4.2 (2006).

231. H.B. 1509, 61st Legis. Assem., Reg. Sess. (N.D. 2009) (codified at N.D. CENT. CODE § 17-04-06).

232. N.D. CENT. CODE § 17-04-06.1.a (Supp. 2009).

233. *Id.* § 17-04-06.1.c.

234. *Id.* § 17-04-06.1.d-i.

235. *Id.* § 17-04-06.3.

236. N.D. CENT. CODE § 17-04-04 (Supp. 2009).

237. *Id.* § 17-04-06.1.h.

within five years.<sup>238</sup>

North Dakota has one of the most comprehensive sets of wind-lease-related regulations, and there could be more on the horizon. During the 2009-2010 legislative interim, the legislative council aims to further study wind leases, including consideration of confidentiality clauses, the liability of each party for damages and taxes, instrument provisions relating to insurance, and the need for insurance.<sup>239</sup> The legislative council is to report its findings and recommendations, together with any legislation required to implement the recommendations, to the sixty-second legislative assembly.<sup>240</sup>

### K. Ohio

Ohio has 7 MW of installed capacity with no additional projects under construction.<sup>241</sup> Two applications for projects have been submitted to the Ohio PUC that could add up to 475 MW to Ohio's portfolio by the end of 2011.<sup>242</sup> Ohio's primary source of potential wind power lies in offshore locations along Lake Erie.<sup>243</sup> Offshore wind energy projects have been slow to develop in the United States.<sup>244</sup> Nevertheless, Ohio's recent passage of a substantial RPS requirement suggests the state expects the Lake Erie offshore wind energy potential to soon be realized through new wind energy projects.<sup>245</sup>

#### 1. Renewable Portfolio Standards

Ohio's RPS require utilities to provide 25% of their electricity from "alternative energy resources" by 2025.<sup>246</sup> Half of this percentage

238. N.D. CENT. CODE § 17-04-05.1 (Supp. 2009). The statute originally required "development to produce energy from wind power" within five years. See S.B. 2245, 61st Legis. Assem., Reg. Sess. (N.D. 2009) (striking the original language of § 17-04-05.1). The bill as originally introduced would have changed the law by requiring the developer to construct at least one turbine within five years. S.B. 2245, 61st Legis. Assem., Reg. Sess. (N.D. 2009). The final language requiring the developer to obtain a "certificate of site compatibility or conditional use permit" within five years is unambiguous and places a smaller time constraint upon the developer. See N.D. CENT. CODE § 17-04-05.1.

239. H.B. 1509, 61st Legis. Assem., Reg. Sess. § 2 (N.D. 2009).

240. *Id.*

241. AWEA, *supra* note 2 (then follow "OH" on map).

242. Ohio Wind Working Group, Ohio Wind Projects, <http://www.ohiowind.org/Ohio-Wind-Projects.cms.aspx> (last visited Oct. 6, 2009). The Buckeye Wind Project will have a capacity of 125-175 MW, and the Hardin Wind Energy Development will have a capacity of 300 MW. *Id.*

243. See U.S. Dep't of Energy, Nat'l Renewable Energy Lab., Ohio 50m Wind Power, [http://www.windpoweringamerica.gov/images/windmaps/oh\\_50m\\_800.jpg](http://www.windpoweringamerica.gov/images/windmaps/oh_50m_800.jpg).

244. Windustry & Great Plains Windustry Project, Offshore Wind Potential in the United States, <http://www.windustry.com/news/offshore-wind-potential-in-the-united-states> (last visited Oct. 6, 2009).

245. The RPS bill was very specific in including certain categories of energy generation as being eligible renewable energy resources for purposes of the RPS. One of the specific categories mentioned in the bill, added to the applicable statute, is a "wind turbine located in the state's territorial waters of Lake Erie." S.B. 221, 127th Gen. Assem. § 1 (Ohio 2008) (adding section 4928.01(A)(35) to the Ohio Revised Code).

246. OHIO REV. CODE ANN. § 4928.64(B) (West Supp. 2009).

(12.5%) must come from “renewable energy resources” while the remaining half may come from “advanced energy resources.”<sup>247</sup> These advanced energy resources include resources that produce thermal energy as a byproduct, technologies that increase energy production without increasing carbon emissions, chemically altered substances that reduce carbon emissions (clean coal), and advanced nuclear technology.<sup>248</sup> Of the 12.5% that must come from renewable energy resources, half of that energy must be produced from within the state.<sup>249</sup> Any energy produced from outside the state must be “deliverable into” Ohio.<sup>250</sup> Each year that a utility fails to comply with the RPS, it is penalized “not less than forty-five dollars” multiplied by the amount of RECs the utility is deficient.<sup>251</sup> However, the PUC will not impose a penalty for deficiencies caused by circumstances beyond a utility’s control, including shortages in qualifying energy.<sup>252</sup>

## 2. Incentives

Wind developments in Ohio may be eligible for tax exemptions as an exempt “Energy Conversion Facility” under sections 5709.20 to 5709.27 of the Ohio Tax Code.<sup>253</sup> Exempt facilities approved by the tax commissioner receive an exemption certificate<sup>254</sup> that exempts them from state sales and use taxes and personal property tax.<sup>255</sup> Any development of the real property for the exempt facility is not considered an improvement for property tax purposes.<sup>256</sup>

## 3. Siting and Permitting

Ohio has a streamlined permitting process for wind energy projects. Wind facilities producing 5 MW or more of energy are required to obtain a certificate from the State PUC.<sup>257</sup> A certificate from the PUC satisfies all siting and permitting requirements for state agencies and local governments.<sup>258</sup> The certification provides comprehensive regulations for the developer to follow, including setback requirements of 1.1 times the height of the turbine from non-participating property lines and

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247. *Id.*

248. OHIO REV. CODE ANN. § 4928.01(A)(34) (West Supp. 2009).

249. *Id.* § 4928.64(B)(3).

250. *Id.*

251. *Id.* § 4928.64(C)(2)(b). Separate penalties are imposed for failing to comply with solar energy benchmarks. *Id.* § 4928.64(C)(2)(a).

252. *Id.* § 4928.64(C)(4)(c).

253. OHIO REV. CODE ANN. § 5709.20 (West 2007); OHIO REV. CODE ANN. § 5709.27 (West 2007).

254. OHIO REV. CODE ANN. § 5709.21(B) (West 2007).

255. OHIO REV. CODE ANN. § 5709.25(A) (West 2007).

256. *Id.* § 5709.25(B).

257. OHIO ADMIN. CODE § 4906-17-01(A) (2009).

258. OHIO REV. CODE ANN. § 4906.13(B) (West 2009).

750 feet from residences.<sup>259</sup>

The developer must also document and report the facility's impacts on wildlife,<sup>260</sup> for which, the Ohio Department of Natural Resources (ODNR) has published a set of guidelines for the developer to follow.<sup>261</sup> These guidelines advise the developer to conduct pre-construction surveys, including bird migration-path surveys, raptor nest searching and monitoring, and bat monitoring.<sup>262</sup> If the wind farm is located in a more wildlife-sensitive area (wetland and forest areas or within three miles of Lake Erie), more extensive surveys should be performed.<sup>263</sup> The guidelines establish typical impact mitigation practices including minimizing lighting and perches.<sup>264</sup> The ODNR also advises developers to conduct post-construction surveys to monitor the facility's continuing impact on wildlife.<sup>265</sup>

### L. Oklahoma

Oklahoma has relatively few laws directly targeted at wind energy projects, but it has several economic incentives, goals, and programs aimed at growing the wind energy business in the state. Oklahoma currently ranks eleventh nationally for installed wind power generating capacity; it ranks eighth for wind power generating potential.<sup>266</sup> With more than 82,000 MW of estimated wind energy generating potential and just under 1,000 MW of installed projects, Oklahoma will likely see substantial growth in new wind energy projects.<sup>267</sup> Oklahoma Gas & Electric recently notified the Oklahoma PUC that it is in the final stages of negotiations on three new wind energy projects that will add more than 300MW to the installed capacity of the state.<sup>268</sup> In 2007, Oklahoma passed a law to “undertake a study to evaluate the transmission requirements needed for the reasonable development of renewable energy resources” by creating the Oklahoma Electric Power Transmission Task Force.<sup>269</sup> The Task Force published its draft report in December

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259. OHIO ADMIN. CODE § 4906-17-08(C)(1)(c) (2009).

260. OHIO REV. CODE ANN. § 4906.06(A)(2) (West 2009).

261. OHIO DEP'T. OF NAT. RES., ON-SHORE BIRD AND BAT PRE- AND POST-CONSTRUCTION MONITORING PROTOCOL FOR COMMERCIAL WIND ENERGY FACILITIES IN OHIO: AN ADDENDUM TO THE OHIO DEPARTMENT OF NATURAL RESOURCE'S VOLUNTARY COOPERATIVE AGREEMENT 1 (2009).

262. *Id.* at 2-4.

263. *Id.* at 1-2, 4-9.

264. *Id.* at 9-10.

265. *Id.* at 10-15.

266. AWEA, *supra* note 2 (then follow “OK” on map).

267. *See id.*

268. Letter from Kim Morphis, Manager – Power Operations, Okla. Gas & Elec. Co., to Brandy Wreath, Chief of Auditing & Fin. Analyst, Pub. Utils. Div., Okla. Corp. Comm'n (June 8, 2009), available at [http://www.oge.com/about/DoingBusinessWithOGE/RFPs/Documents/OGE\\_Wind\\_RFP\\_Notification.pdf](http://www.oge.com/about/DoingBusinessWithOGE/RFPs/Documents/OGE_Wind_RFP_Notification.pdf).

269. H.B. 1764, 51st Leg., Reg. Sess. § 2.A (Okla. 2007).

2007<sup>270</sup> and completed it in March 2008.<sup>271</sup> In February 2008, the Southwest Power Pool (SPP) Board of Directors approved the SPP Transmission Expansion Plan (STEP).<sup>272</sup> If fully implemented, the STEP will expand Oklahoma transmission lines for renewable energy with the construction of a 140-mile 345-kilovolt (kV) line to connect the Comanche Switching Station to Mooreland in southwest Kansas and northwest Oklahoma and a 240-mile 345kV line to connect Mooreland to Potter County Interchange in northwest Oklahoma and northwest Texas.<sup>273</sup> Most recently, Oklahoma's 2009 legislative session included a bill creating the new Oklahoma Clean Energy Independence Commission—a Commission charged with analyzing and reporting on how the state can further the aim of clean independent energy.<sup>274</sup>

Announcements earlier this year by Oklahoma's largest utility also seem to indicate that wind energy will see extended growth during the next ten years. OGE Energy Corp. released a statement in February saying it plans to delay "construction of an additional natural gas or coal power plant until at least 2020."<sup>275</sup> Accordingly, wind energy would seem to be a prime candidate to supply additional electricity generating capacity needed by the state over the next ten years.

### 1. Renewable Portfolio Standards

Oklahoma does not require its utility companies to generate a minimum percentage of their electric power from wind or other renewable energy sources. The Oklahoma Department of Commerce, however, has listed wind energy as one of four target industries for growth in the state,<sup>276</sup> and there are several state incentive laws that encourage wind energy project development.<sup>277</sup>

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270. SW. POWER POOL, OKLAHOMA ELECTRIC POWER TRANSMISSION TASK FORCE (OEPTTF) STUDY PROPOSAL (2007), available at [http://www.spp.org/publications/OEPTTF\\_Study\\_Proposal\\_Draft\\_12-18-07.pdf](http://www.spp.org/publications/OEPTTF_Study_Proposal_Draft_12-18-07.pdf).

271. SW. POWER POOL, OKLAHOMA ELECTRIC POWER TRANSMISSION TASK FORCE (OEPTTF) STUDY (2008), available at [http://www.spp.org/publications/OEPTTF\\_Report\\_FINAL\\_4\\_22\\_08\\_updated.pdf](http://www.spp.org/publications/OEPTTF_Report_FINAL_4_22_08_updated.pdf).

272. SW. POWER POOL, THE ORG REPORT (Feb. 2008), available at [http://www.spp.org/publications/2008\\_02\\_February\\_Org\\_Report.pdf](http://www.spp.org/publications/2008_02_February_Org_Report.pdf); see also SW. POWER POOL, SPP TRANSMISSION EXPANSION PLAN 2008-2017 (2008) [hereinafter SPP TRANSMISSION EXPANSION PLAN], available at [http://www.spp.org/publications/2007\\_SPP\\_Transmission\\_Expansion\\_Plan\\_20080131\\_BOD\\_Public.pdf](http://www.spp.org/publications/2007_SPP_Transmission_Expansion_Plan_20080131_BOD_Public.pdf).

273. SPP TRANSMISSION EXPANSION PLAN, *supra* note 272, at 5.

274. S.B. 953, 52d Leg., Reg. Sess. § 1.A-B (Okla. 2009).

275. Press release, OG&E Energy Corp., OG&E Selects Norman as First Positive Energy(R) Community (Feb. 27, 2009), available at <http://www.oge.com/Pages/News.aspx> (follow "OG&E Selects Norman as First Positive Energy(R) Community" hyperlink).

276. Okla. Dep't of Commerce, An Overview Of Oklahoma's Target Industries, [http://www.okcommerce.gov/index.php?option=com\\_content&task=view&id=302&Itemid=383](http://www.okcommerce.gov/index.php?option=com_content&task=view&id=302&Itemid=383) (last visited Oct. 6, 2009).

277. See *infra* Part II.L.2.

## 2. Incentives

### *a. State Tax Implications*

Oklahoma has a state-level income-tax credit that applies to the first ten years of a wind energy project's operation.<sup>278</sup> The unused portion of the tax credit is transferrable at any time during the ten-year period; if the credit exceeds the taxpayer's state tax for a particular tax year, it may be carried forward for up to ten years.<sup>279</sup> For facilities placed in operation after January 1, 2007, and before January 1, 2016, the allowed credit is equal to \$0.0050 for each kWh of electricity generated.<sup>280</sup> Additionally, Oklahoma also exempts wind energy companies from ad valorem taxes on much of their operating equipment during the first five years of operations.<sup>281</sup>

### *b. Other New Laws Regarding Wind Energy Project Development*

One other pertinent 2009 wind energy law was enacted in the 52nd Legislative Session. It allows tractor-trailers and other hauling vehicles excess length—up to 110 feet—to transport turbine blades for wind projects; such vehicles, however, must first obtain a permit for these long loads before transporting the blades in the state.<sup>282</sup>

## *M. Oregon*

Oregon has 1,407 MW of installed wind energy generating capacity, placing it sixth overall nationally, already reaching 29% of its measured potential capacity of 4,870 MW.<sup>283</sup> Although Oregon does not possess the vast wind resources of Texas and South Dakota, it does have favorable wind policies and an established transmission infrastructure. The State has an aggressive RPS that imposes financial penalties upon utilities that do not comply.<sup>284</sup> Oregon also gives facility owners a tax credit of up to \$10 million amortized over a period of up to eight years.<sup>285</sup>

Prior to the 2009 legislative session, the tax credit was more generous in that it did not have a \$10 million cap and developers could claim a credit of up to 50% of the facility's cost.<sup>286</sup> Included in the 2009 legislative changes, wind energy project developers must have “applied for all

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278. OKLA. STAT. tit. 68, § 2357.32A (2008).

279. *Id.*

280. *Id.*

281. OKLA. STAT. tit. 68, § 2902 (Supp. 2009).

282. S.B. 1184, 52d Leg., Reg. Sess. § 2.A.1-.9 (Okla. 2009).

283. AWEA, *supra* note 2 (then follow “OR” on map).

284. OR. REV. STAT. § 469A.200 (2007).

285. H.B. 2472, 75th Legis. Assem., Reg. Sess. § 7(6) (Or. 2009); OR. REV. STAT. § 469.200(1)(C) (Supp. 2009).

286. OR. REV. STAT. § 315.354 (2007).

licenses and permits required by state or local law for the facility” before they are approved for the tax credit.<sup>287</sup> With a long and expensive permitting process, many developers prefer to know that a proposed project qualifies for the applicable tax incentives before expending the funds involved in the remainder of the development process. Transmission does not appear to be a major impediment to growth of wind energy development in Oregon; the state has been able to provide immediate transmission access for most projects to date,<sup>288</sup> and Oregon has plans to expand transmission by 2012.<sup>289</sup>

### 1. Renewable Portfolio Standards

Large Oregon utilities are required to achieve a 5% renewable portfolio by 2011 and 25% by 2025.<sup>290</sup> Small utilities are required to have a renewable portfolio of 5% or 10% by 2025, depending on their market share.<sup>291</sup> The law instructs the Oregon PUC to establish alternative compliance rates that utilities may pay instead of complying with the RPS.<sup>292</sup> The alternative compliance rate should be set high enough “to provide an adequate incentive” for the utility to participate.<sup>293</sup> In addition to requiring utilities to pay these rates, the Oregon PUC reserves the right to impose an additional penalty upon non-complying utilities.<sup>294</sup>

### 2. Incentives

Oregon provides a tax credit for wind facilities of up to 35% of the eligible project cost of the facility, but the maximum credit is capped at \$10 million.<sup>295</sup> The credit is amortizable over five years, with the taxpayer redeeming 10% of the cost of facility in the first two years and 5% each year for the next three years.<sup>296</sup> The amount of the credit cannot exceed the taxpayer’s annual liability.<sup>297</sup> If any amount of the credit is

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287. See H.B. 2472 § 2(5).

288. See Eric Florip, *Just Barely Tapped*, E. OREGONIAN, July 11, 2009 (reporting that Oregon’s success in wind development is attributable to a combination of good policy and transmission access).

289. The Bonneville Power Administration is currently developing a seventy-five mile transmission line along the Oregon-Washington border, scheduled for completion in late 2012. Bonneville Power Admin., Transmission Projects, [http://www.transmission.bpa.gov/PlanProj/Transmission\\_Projects/default.cfm?page=MJD](http://www.transmission.bpa.gov/PlanProj/Transmission_Projects/default.cfm?page=MJD) (last visited Oct. 6, 2009).

290. OR. REV. STAT. § 469A.052 (2007).

291. OR. REV. STAT. § 469A.055 (2007) (stating small utilities that provide electricity for less than 0.5% of Oregon consumers are subject to the 5% RPS, while the 10% RPS requirement applies to small utilities producing between 0.5% and 1%).

292. OR. REV. STAT. § 469A.180 (2007).

293. *Id.*

294. OR. REV. STAT. § 469A.200 (2007).

295. H.B. 2472, 75th Legis. Assem., Reg. Sess. § 7(4)(d) (Or. 2009).

296. *Id.*

297. *Id.*

unused in any year, it may be carried forward for up to eight years.<sup>298</sup> If ownership of the facility changes, the tax credit is not directly transferable; the new owner, however, can re-apply for the remaining credit.<sup>299</sup>

Qualified renewable-energy facilities<sup>300</sup> installed in areas approved as “Rural Renewable Energy Development Zones” (RREDZ)<sup>301</sup> are exempt from ad valorem property taxation for a period of up to five years.<sup>302</sup> The exemption amount allows for up to \$250 million of installed facilities for each approved RREDZ.<sup>303</sup>

### 3. Siting and Permitting

The Oregon PUC has formulated statewide siting requirements for wind energy facilities, including the following: use existing roads whenever possible; combine and consolidate underground transmission lines and substations with existing facilities; design the facility to reduce the risk of injury to raptors and bats; and minimize adverse visual features, including use of minimal lighting.<sup>304</sup> The Oregon Department of Fish and Wildlife has also established some environmental guidelines for wind developments in a five-county region in northern Oregon.<sup>305</sup> Some of the report’s unique guidelines include: engaging stakeholders with wildlife expertise; placing developments on agricultural land where wildlife and environmental impact will be smallest; performing environmental training for employees during both construction and maintenance; controlling weeds during construction; and developing a fire prevention plan.<sup>306</sup> The State leaves the rest of wind regulation to local governments, but encourages them to “prescribe [zoning] limitations designed to encourage and protect the installation and use of solar and wind energy systems.”<sup>307</sup>

### 4. Easements

Oregon wind easements must be recorded in order to be valid.<sup>308</sup> Wind leases, however, do not have to be recorded.<sup>309</sup>

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298. *Id.*

299. *Id.* § 5(2).

300. OR. REV. STAT. § 285C.359 (2007).

301. OR. REV. STAT. § 285C.353 (2007).

302. OR. REV. STAT. § 285C.362 (2007). For a statutory description of a rural renewable energy development zone, see section 285C.353.

303. *Id.* § 285C.353.

304. See OR. ADMIN. R. 345-024-0015 (2009).

305. See OR. DEP’T OF FISH AND WILDLIFE, OREGON COLUMBIA PLATEAU ECOREGION WIND ENERGY SITING AND PERMITTING GUIDELINES (2008).

306. *Id.* at 10-17.

307. OR. REV. STAT. § 215.110 (2007).

308. OR. REV. STAT. § 105.910 (2007).

309. OR. REV. STAT. § 105.915 (2007).

### N. Pennsylvania

Pennsylvania has been a leading eastern state in encouraging renewable energy development, second only to New York in total installed electricity generating capacity.<sup>310</sup> It currently has 462 MW of installed generating capacity, with 355 MW under construction.<sup>311</sup>

#### 1. Renewable Portfolio Standards

Pennsylvania's Alternative Energy Portfolio Standards Act requires that utilities meet 18% of the state's electric needs from renewable-energy sources by the year 2020.<sup>312</sup> The State's RPS also includes specific requirements regarding a portion of the renewable energy mandated to come from solar-energy sources.<sup>313</sup>

#### 2. Incentives

Pennsylvania wind facilities may qualify for a production tax credit equal to 15% of development, equipment, and construction costs up to \$1 million per qualifying taxpayer.<sup>314</sup> The credit is assignable and can be carried over until exhausted.<sup>315</sup> The tax credit expires at the end of 2016.<sup>316</sup> Property taxes for Pennsylvania wind farms are calculated using an income capitalization approach to value.<sup>317</sup> The valuation is determined using a nonproprietary lease and lease income information provided by the wind lessor or lessee.<sup>318</sup>

#### 3. Local Ordinances

Developers should research local requirements for wind project development. A working group organized by the Governor's Office has developed and published a model ordinance for wind energy facilities in Pennsylvania.<sup>319</sup> The ordinance was published in 2006 and is referenced and linked on the State Office of Energy and Technology Deployment's website.<sup>320</sup> Several local governments in Pennsylvania have adopted, or are in the process of developing, various versions of the model wind or-

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310. AWEA, *supra* note 2 (then follow "PA" on map).

311. *Id.*

312. See 73 PA. CONS. STAT. §§ 1648.1 to 1648.8 (2008).

313. *Id.* § 1648.3(b)(2).

314. 73 PA. CONS. STAT. § 1649.704 (2008).

315. 73 PA. CONS. STAT. § 1649.705 (2008).

316. 73 PA. CONS. STAT. § 1649.709 (2008).

317. 72 PA. CONS. STAT. § 5453.602(d) (Supp. 2009).

318. *Id.*

319. Press Release, State of Pa., Governor Rendell Unveils Model Ordinance to Help Local Governments, Wind Energy Developers (April 24, 2006), *available at* <http://www.state.pa.us/power/cwp/view.asp?A=11&Q=452084>.

320. Pa. Dep't of Env'tl. Prot., Wind Energy: A Cost-Effective, Fuel-Free Resource, <http://www.depweb.state.pa.us/energy/cwp/view.asp?a=1370&Q=485761> (last visited Oct. 6, 2009).

dinance.<sup>321</sup> The model ordinance and other resources are also referenced and published in Pennsylvania's wind trade organization: The Pennsylvania Wind Working Group.<sup>322</sup> Notably, a municipality's zoning ordinance takes precedence over a county's zoning ordinance.<sup>323</sup>

### O. South Dakota

Notwithstanding having over 100,000 MW of potential wind capacity, South Dakota only has 288 MW of installed wind capacity with 25 MW under construction.<sup>324</sup> According to the South Dakota PUC, the State's lack of wind energy development is simply due to a lack of statewide demand.<sup>325</sup> South Dakota's small population is "very reliably and economically served" by a combination of coal and hydropower.<sup>326</sup> With a total peak demand of fewer than 3,000 MW, wind power cannot substantially contribute to the South Dakota power grid.<sup>327</sup> Compare South Dakota's energy needs with Texas's peak demand of nearly 63,000 MW,<sup>328</sup> and it becomes evident why Texas has developed so many wind energy projects.<sup>329</sup> As similar to North Dakota, transmitting South Dakota wind power to out-of-state population centers seems to be the key to any future increase in wind energy development. With most of South Dakota located on the western edge of the Eastern Interconnection System,<sup>330</sup> running transmission lines to wind facilities in the rural portions of the state will be very expensive, and it is unclear when or if South Dakota will establish the substantial transmission capacity needed to send electricity to higher load regions.<sup>331</sup>

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321. See, e.g., Crystal Ola, *North Strabane Develops Draft to Regulate Wind Turbines*, PITTSBURGH POST-GAZETTE, Aug. 19, 2009, available at <http://www.post-gazette.com/pg/09231/991821-100.stm?cmpid=latest.xml>.

322. See Pa. Wind Working Group, *Breaking News!*, <http://www.pawindenergynow.org/> (last visited Oct. 6, 2009).

323. Pa. Municipalities Planning Code Act of 1968, 53 PA. CONS. STAT. § 10602 (2008).

324. AWEA, *supra* note 2 (then follow "SD" on map).

325. E-mail from Tim Binder, Staff Analyst, S.D. PUC, to Brent Stahl (July 9, 2009, 9:42 CST) (on file with author) ("The simple answer to why South Dakota, with its great resources, has less than 300 MW installed is load: South Dakota has less than a million people.").

326. *Id.*

327. *Id.* "The current peak load in South Dakota is less than 3,000 MW . . ." *Id.*

328. Press Release, The Elec. Reliability Council of Tex., ERCOT Sets New Record for Electricity Demand (July 08, 2009), available at [http://www.ercot.com/news/press\\_releases/2009/nr-07-08-09\\_B](http://www.ercot.com/news/press_releases/2009/nr-07-08-09_B). On July 8, 2009, ERCOT's peak demand reached a record 62,786 MW. *Id.*

329. THE ELEC. RELIABILITY COUNCIL OF TEX., ERCOT QUICK FACTS (2009), available at <http://www.ercot.com/about/profile> (then follow "ERCOT Quick Facts May 2009"). The installed wind generation in Texas is 8,000 MW. *Id.*

330. Binder, *supra* note 325; see also N. Am. Elec. Reliability Corp., NERC Interconnections, [http://www.nerc.com/fileUploads/File/AboutNERC/maps/NERC\\_Interconnections\\_color.jpg](http://www.nerc.com/fileUploads/File/AboutNERC/maps/NERC_Interconnections_color.jpg) (last visited Oct. 6, 2009).

331. See, e.g., Green Power Express, *supra* note 218 (estimating the cost of the Green Power Express transmission project to be between \$10 and \$12 billion).

### 1. Renewable Portfolio Standards

South Dakota's RPS promulgate a goal to produce 10% of retail energy from renewable sources by 2015.<sup>332</sup> This is a voluntary objective, and retailers are not penalized or sanctioned for failing to meet the RPS goal.<sup>333</sup>

### 2. Incentives

Instead of paying a property tax on all personal property used in operating a wind facility, the facility must pay an annual tax "equal to three dollars multiplied by the nameplate capacity of the wind farm."<sup>334</sup> Wind facility owners must also pay an annual tax of 2% of their annual gross receipts.<sup>335</sup> These two taxes are in lieu of all other state and local taxes.<sup>336</sup>

"Any company requiring transmission lines or wind farm collector systems or both in South Dakota for a wind farm" may receive a tax rebate equal to 50% of the cost of the transmission lines or collector system.<sup>337</sup> The rebate applies to the tax on gross receipts described above and can cover up to 90% of the generator's annual tax liability for the first five years and 50% for the next five years.<sup>338</sup>

### 3. Siting

South Dakota has taken a unique regulatory approach for wind facility siting. As of the 2009 Legislative Session, South Dakota, like Minnesota, retains the responsibility of imposing setback requirements rather than leaving the issue to local governments.<sup>339</sup> South Dakota, however, has gone a step further by codifying its setback requirements rather than evaluating them on a case-by-case basis.<sup>340</sup> Wind turbines taller than seventy-five feet must be stationed at a distance from any surrounding property line of 1.1 times their height or 500 feet, whichever is greater.<sup>341</sup> Turbines seventy-five feet and shorter have the same 1.1 ratio setback requirement but without the minimum distance requirement of 500 feet.<sup>342</sup> These statewide regulations could avoid overly restrictive rules and ordinances from being imposed by local govern-

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332. S.D. CODIFIED LAWS § 49-34A-101 (Supp. 2009).

333. *Id.*

334. S.D. CODIFIED LAWS § 10-35-18 (Supp. 2009).

335. S.D. CODIFIED LAWS § 10-35-19 (Supp. 2009).

336. S.D. CODIFIED LAWS § 10-35-17 (Supp. 2009).

337. S.D. CODIFIED LAWS § 10-35-22 (Supp. 2009).

338. *Id.*

339. S.B. 141, 84th Legis. Assem., Reg. Sess. (S.D. 2009).

340. *Id.*

341. *Id.*

342. *Id.*

ments.<sup>343</sup>

#### 4. Easements

South Dakota law authorizes developers to create easements to ensure adequate exposure to wind, but they must be recorded.<sup>344</sup> The term of the easement cannot exceed fifty years, and it becomes “void if no development of the potential to produce energy from wind power” has occurred within five years after the easement’s effective date.<sup>345</sup> Other restrictions include the following: the developer/owner must compensate the landowner on an annual basis;<sup>346</sup> wind rights may not be severed from the surface estate;<sup>347</sup> and the easement must include a statement that the easement holder may encumber the easement, but such encumbrances shall not attach to the land itself.<sup>348</sup>

#### 5. Accommodation

South Dakota has a very specific statute requiring holders “of wind easements, wind leases, or easements for essential services to accommodate the reasonable development of another holder of any wind easement, wind lease, or easement for essential services *except for competing developers of wind energy projects.*”<sup>349</sup> The original proposed Senate Bill 184 did not contain the above-emphasized exception clause.<sup>350</sup> Because of the exception for competing wind projects, adjacent wind energy projects will face great difficulty in trying to use the new accommodation statute to obtain crossing rights over land held exclusively by other wind energy companies.

#### 6. Decommissioning

As part of the permit application, developers must provide a plan for the decommissioning of the facility after its useful life.<sup>351</sup> Depending upon the applicant’s financial condition, and the project’s size and location, the PUC may require the developer to post a bond for the cost of decommissioning the wind facilities.<sup>352</sup>

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343. Binder, *supra* note 325 (explaining that the South Dakota setback law was passed in order to discourage “onerous” or “detrimental” setback requirements on the local level).

344. S.D. CODIFIED LAWS § 43-13-17 (Supp. 2009).

345. *Id.*

346. *Id.*

347. S.D. CODIFIED LAWS § 43-13-19 (Supp. 2009).

348. H.B. 1112, 84th Legis. Assem., Reg. Sess. (S.D. 2009).

349. S.D. CODIFIED LAWS § 43-13-20 (Supp. 2009) (emphasis added). “For purposes of this section, the term, essential services, includes any electric transmission and distribution lines and associated facilities, telecommunications facilities, and rural water systems.” *Id.*

350. S.B. 184, 84th Legis. Assem., Reg. Sess. (S.D. 2009).

351. S.D. ADMIN. R. § 20:10:22:33.01 (2009).

352. *Id.*

*P. Texas*

The State of Texas has installed over 8,000 MW of wind energy generating capacity, making it the nation's leader in wind production by a large margin.<sup>353</sup> The coupling of Texas's substantial wind resources with its friendly regulatory environment has resulted in Texas surpassing its RPS goal of 5,880 MW of installed renewable-energy capacity by January 1, 2015, well ahead of schedule.<sup>354</sup> Texas's explosive growth has provided a case study of the need for better transmission planning in order to integrate an energy source that is typically not located in proximity to a state's load center. The rate of new wind installations in West Texas—most notably in the McCamey and Sweetwater regions—quickly consumed the level of transmission capacity available to bring that electricity to consumers in Houston, Dallas, and San Antonio.

### 1. Competitive Renewable Energy Zones

In response to the lack of adequate transmission for wind projects, the Texas legislature enacted Senate Bill 20 (S.B. 20) in 2005.<sup>355</sup> S.B. 20 created a process by which the Texas PUC (Commission) would designate areas of the state with the best renewable energy resources as "Competitive Renewable Energy Zones" (CREZs).<sup>356</sup> S.B. 20 contemplated that after the CREZs were identified, the Commission would develop a plan to construct the transmission necessary to deliver the electricity generated by the CREZs to customers.<sup>357</sup> The objective behind S.B. 20 was to coordinate the build-out of renewable-energy projects and transmission and avoid the transmission constraints experienced by the McCamey region by building transmission in anticipation of renewable energy projects being installed in the CREZs.<sup>358</sup> S.B. 20 conditioned CREZ designations on a showing of financial commitments by renewable-energy generators to build projects in the CREZs.

In order to identify the CREZs, the Commission directed the Electric Reliability Council of Texas (ERCOT) to prepare a study that would identify the areas of the state that were best suited for develop-

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353. AWEA, *supra* note 2 (then follow "TX" on map). According to AWEA, as of June 27, 2009, Texas had 8,361 installed MW followed by Iowa with 3,063 installed MW. *Id.*

354. *See* TEX. UTIL. CODE ANN. § 39.904(a) (Vernon Supp. 2008).

355. S.B. 20, 79th Leg., 1st Called Sess. (Tex. 2005).

356. *Id.*

357. *Id.*

358. State Energy Conservation Office, Wind Energy Transmission, [http://www.seco.cpa.state.tx.us/re\\_wind-transmission.htm](http://www.seco.cpa.state.tx.us/re_wind-transmission.htm) (last visited Oct. 6, 2009).

In order to effectively increase and implement the RPS goals, SB 20 includes a transmission plan for remote regions such as McCamey in West Texas that are handicapped by lack of sufficient transmission infrastructure, the goal being to increase transmission capacity to get clean energy (especially wind) from remote areas of the state to the cities.

*Id.*

ment of renewable-energy projects.<sup>359</sup> ERCOT filed its study with the Commission in December 2006, whereby it identified twenty-five geographic areas enclosing the best wind resources in Texas.<sup>360</sup> Following a contested case proceeding of the twenty-five areas identified in the ERCOT Report, the Commission designated five areas as CREZs: McCamey, Central, and Central West—each located in the western part of the state—and Panhandle A and Panhandle B.<sup>361</sup>

Once the CREZs were designated, the Commission initiated further proceedings to determine the set of transmission facilities needed to deliver energy from the CREZs “in a manner that is most beneficial and cost-effective to the customers.”<sup>362</sup> Ultimately, the Commission approved a transmission plan that will accommodate 18,456 MW of wind generation.<sup>363</sup>

A complex issue, unresolved by the above-described proceedings was whether the generators who made financial commitments would receive dispatch or other priority access to the transmission in the event of excess development of projects in a CREZ. A competing policy consideration was the goal of maintaining an open access transmission system that fostered competition in generation.

The Commission rule adopted at the outset of the CREZ proceedings contemplated the possibility of establishing a priority transmission access mechanism. In October 2009, however, the rule was amended to clarify that the Commission would not consider such a mechanism unless it first determined that the traditional tool of security-constrained economic dispatch was insufficient to resolve congestion caused by excess development.

The issue of dispatch priority for wind is complex for a number of reasons and is beyond the scope of this paper. At its core, however, the discussion of dispatch priority for Texas wind centers has created tension between the goals of providing an open-access transmission system while protecting against the development of excess wind.

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359. See Steve Baron, *Texas Competitive Renewable Energy Zones: A Progress Report*, UNIV. OF TEX. SCH. OF LAW WIND ENERGY INST., Jan. 21-22, 2009, at 4; ERCOT, ANALYSIS OF TRANSMISSION ALTERNATIVES FOR COMPETITIVE RENEWABLE ENERGY ZONES IN TEXAS, ATTACHMENT A (2006), [http://www.ercot.com/content/news/presentations/2006/ATTCH\\_A\\_CREZ\\_Analysis\\_Report.pdf](http://www.ercot.com/content/news/presentations/2006/ATTCH_A_CREZ_Analysis_Report.pdf).

360. Baron, *supra* note 359, at 4; ERCOT, *supra* note 359, at ES-2.

361. Baron, *supra* note 359, at 4; ERCOT, *supra* note 359, at 31-45. The CREZs were originally known by the number assigned to them in the ERCOT report. McCamey was CREZ 5; Central was CREZs 9 and 10, which included an additional adjacent area; Central West was CREZ 19, Panhandle A was CREZ 2A, and Panhandle B was CREZ 4.

362. TEX. UTIL. CODE ANN. § 39.904(g)(2) (Vernon Supp. 2008).

363. PUB. UTIL. COMM’N OF TEX., Docket No. 33672, COMMISSION STAFF’S PETITION FOR DESIGNATION OF COMPETITIVE RENEWABLE ENERGY ZONES (2008).

## 2. Renewable Portfolio Standards

The Texas RPS require that electric retail suppliers gradually increase the portion of electricity they provide from renewable resources. Texas's first RPS was passed in 1999, and it required electricity providers to generate 2,000 MW of new renewable energy by 2009.<sup>364</sup> Texas amended its RPS in 2005 to increase the total renewable-energy requirement to 5,880 MW by 2015 and included a goal of 10,000 MW by 2025.<sup>365</sup> Part of Texas's RPS success is attributable to its Renewable Energy Credits (REC) system. The REC program gives Texas utilities the flexibility to meet RPS requirements by either generating their own renewable energy or by buying qualifying REC.<sup>366</sup> Under the Texas REC system, one REC is equal to one megawatt hour of qualified renewable energy that is generated in Texas.<sup>367</sup> With more than 8,000 MW of currently installed renewable energy capacity,<sup>368</sup> Texas will likely meet its 2025 RPS target within the next few years. The success of the Texas wind energy industry has attracted other renewable-energy sectors to the state, and the legislature has encouraged a small amount of diversification away from wind. For example, in the 2005 amendment to Texas's RPS, the legislature added a provision requiring 500 MW of the 2025 10,000 MW target from renewable-energy sources other than wind.<sup>369</sup>

## 3. Incentives

In its most recent session, the Texas Legislature passed a bill to amend the Texas Tax Code regarding tax abatements for equipment used in renewable-energy projects.<sup>370</sup> Uncertainty regarding the prior version of the statute arose under a Texas Attorney General's Opinion in early 2008.<sup>371</sup> Additional uncertainty arose around the renewable-energy tax abatement provision in April 2008 when a lawsuit was filed regarding language in the prior statute.<sup>372</sup> Passage of House Bill 3676 in 2009 resolves the uncertainty created by the Texas Attorney General opinion and the Taylor County lawsuit. Wind energy developers have

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364. S.B. 7, 76th Leg., 1st Called Sess. (Tex. 1999).

365. S.B. 20, 79th Leg., 1st Called Sess. (Tex. 2005).

366. 16 TEX. ADMIN. CODE § 25.173(g) (2000).

367. *Id.* § 25.173(c)(12).

368. AWEA, *supra* note 2 (then follow "TX" on map).

369. Tex. S.B. 20.

370. H.B. 3676, 81st Leg., 1st Called Sess. (Tex. 2009).

371. *See* Op. Att'y Gen. GA-0600 (Tex. 2008), *available at* <http://www.oag.state.tx.us/opinions/opinions/50abbott/op/2008/pdf/ga0600.pdf>.

372. *See Rankin v. Comm'rs Court of Taylor County, Texas*, 350th Judicial District, District Court, Taylor County, Texas, Cause No. 8387-D; *see also* Daralyn Schoenewald, *Tuscola Man Drops Wind Farm Lawsuit, Says He Plans to Refile*, ABILENE REP. NEWS, July 31, 2008, *available at* <http://www.reporternews.com/news/2008/jul/31/tuscola-man-drops-wind-farm-lawsuit-says-he-to>.

long utilized the available tax-abatement incentives for new projects.<sup>373</sup> With the 2009 legislative amendments to the tax-abatement statutes, wind energy developers can once again plan their projects with applicable property tax abatements as a reliable portion of the state's available incentives.

For a business that invests in a solar or wind energy device, the company's liability under the Texas franchise tax may be reduced by "10 percent of the amortized cost of a *solar* energy device."<sup>374</sup> Although the statute only describes "solar" energy devices specifically as a qualifying technology, the administrative rules on this matter clarify that qualifying technology also includes wind energy devices.<sup>375</sup>

### Q. Wyoming

Wyoming ranks seventh in the country for potential wind capacity.<sup>376</sup> As of the end of the second quarter of 2009, Wyoming had 816 MW—ranked 12th nationally—of installed wind generation capacity, with another 268 MW under construction.<sup>377</sup> Of the state's installed capacity, 525 MW have come online since 2008.<sup>378</sup> Despite more than doubling its wind power generation over the past two years, Wyoming continues to take a passive regulatory and incentives approach.<sup>379</sup> Like Oklahoma, Wyoming does not have an RPS, and the only financial incentive for developers is a sales tax exemption for equipment purchases.<sup>380</sup> Also, the state permitting process for wind facilities is the same for all other power generation facilities.<sup>381</sup> In lieu of state regulation, county governments have assumed the responsibility of overseeing wind facility siting.<sup>382</sup> As discussed below, the counties have taken a reasonable approach, generally refraining from overregulation.<sup>383</sup>

Thus far, Wyoming has attracted wind development without providing an RPS or other incentives. Change may be on the horizon, how-

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373. See TEX. TAX CODE ANN. §§ 312.001 to 312.403 (Vernon 2008).

374. TEX. TAX CODE ANN. § 171.107 (Vernon 2008) (emphasis added).

375. State Energy Conservation Office, Texas Tax Code Incentives for Renewable Energy, [http://www.seco.cpa.state.tx.us/re\\_incentives-taxcode-statutes.htm#171107](http://www.seco.cpa.state.tx.us/re_incentives-taxcode-statutes.htm#171107) (last visited Oct. 6, 2009). "[W]ind energy continues to qualify under the term 'solar energy' for the exemption and deduction" under section 171.107. *Id.*

376. AWEA, *supra* note 2 (then follow "WY" on map).

377. *Id.*

378. *Id.*

379. During the 2009 legislative session, three of four proposed wind energy bills failed to pass. The law that did pass, HB 0215, amended the sales and use tax exemption to include only small and non-commercial wind developments. See *infra* note 380; see also Wyoming Legislative Service Office, 2009 General Session 60th Legislature: House Bills Index / Senate Files Index, <http://legisweb.state.wy.us/2009/billindex/BillCrossRef.aspx?type=ALL> (last visited Oct. 6, 2009) (listing 2009 legislative bills).

380. H.B. 0215, 60th Leg., Gen. Sess. (Wyo. 2009).

381. See WYO. STAT. ANN. § 37-2-205(a) (2009).

382. See *infra* Part II.Q.4.

383. *Id.*

ever, because the lack of transmission has begun to chill development interest in the state.<sup>384</sup> In 2004, the State created the Wyoming Infrastructure Authority (WIA) to facilitate transmission development.<sup>385</sup> However, it remains to be seen whether the WIA will be able to provide sufficient transmission access for developers.<sup>386</sup> Regardless, Wyoming's recent success shows that a State can take a laissez-faire approach to wind development so long as it provides developers with transmission access.

### 1. Permitting

In addition to obtaining a certificate from the Wyoming Public Service Commission,<sup>387</sup> all industrial facilities that cost \$96.9 million or more to construct require a siting permit from the Wyoming Department of Environmental Quality.<sup>388</sup>

### 2. Incentives

Equipment purchased for generating renewable energy is exempt from the state sales tax.<sup>389</sup> The tax-exemption period expires at the end of 2011.<sup>390</sup>

### 3. Accommodation

Like South Dakota, Wyoming has a law that requires wind developers to accommodate holders of other easements. Construction and operation of a wind facility cannot "unnecessarily inconvenience the public [or] . . . prevent interference with the service furnished by other utilities."<sup>391</sup> Unlike the South Dakota law, however, Wyoming's accommodation statute is not reciprocal for wind developers.

### 4. Local Regulations

Six counties statewide currently have zoning rules in place to regulate wind energy project development.<sup>392</sup> In a recent symposium, State officials and others discussed whether more counties or the State should

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384. See Dustin Bleizeffer, *Lack of Transmission Capacity Stymies Deals with Wind Developers*, CASPER STAR-TRIB., July 1, 2009, available at <http://www.trib.com/articles/2009/07/01/news/wyoming/79bf4e23cb6aa484872575e5007fc443.txt>.

385. WYO. STAT. ANN. § 37-5-303(a) (2009).

386. See Bleizeffer, *supra* note 384.

387. WYO. STAT. ANN. § 37-2-205(a) (2009).

388. WYO. STAT. ANN. §§ 35-12-102(a)(vii), 35-12-106(a) (2009).

389. WYO. STAT. ANN. § 39-15-105(a)(viii)(N) (2009).

390. See H.B. 0215, 60th Leg., Gen. Sess. (Wyo. 2009).

391. 023 WYO. CODE R. § 237 (Weil 2009).

392. Matt Joyce, *Wyoming Mulls Wind Rules: Task Force Calls for State Law to Create County Regulations*, TRIB.COM, August 15, 2009, <http://www.trib.com/articles/2009/08/15/news/wyoming/2d1e222d350bfc5a872576130001c0e3.txt>.

implement additional rules regulating wind energy project development.<sup>393</sup> Time will tell if the state joins others in passing wind energy project siting or similar laws. For now, developers in Wyoming must review local rules to determine whether applicable counties or cities have ordinances regulating wind energy projects.<sup>394</sup>

### III. CONCLUSION

In researching various state laws and rules relating to wind energy project development, it is intriguing to see industry growth occurring in many states and under different conditions. While economic incentives and RPS requirements seem to be influential in growing a state's wind energy base, some states' laissez faire approach to the industry seems equally important in fostering increased development of new wind projects. As the wind energy industry grows, additional regulations are inevitable as interest groups press local and state governments to more closely regulate the development of new wind projects. The authors of this article have observed two divergent effects of increased regulation. The first is that compliance with specific siting rules could provide a level of regulatory certainty to developers. Second, when the regulatory environment becomes too complex it chills the development process. If recent trends continue, more rules and regulations will be enacted in most states, and as wind energy developers expand their operations into new states, they will need to examine carefully each state's regulatory framework in order to comply with the required local standards.<sup>395</sup>

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393. *Id.*

394. For example, Carbon County does not have comprehensive wind regulations, but it does have a relatively lenient setback requirement. Carbon County Res. 2004-02, Carbon County Planning & Zoning Commission, at 40 (2004).

395. See U.S. DEP'T OF ENERGY, ANNUAL REPORT ON U.S. WIND POWER INSTALLATION, COST, AND PERFORMANCE TRENDS: 2007 4-9 (2009) (reporting on the development of wind energy in the last ten years).

