

ANNUAL REPORT ON SMALL WIND INNOVATION ZONES

Annual Report to the Iowa General Assembly

December 2021

Iowa Utilities Board

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I. Introduction

The General Assembly enacted Iowa Code § 476.48, the Small Wind Innovation Zone statute, in 2009. Iowa Code § 476.48(6) requires the Utilities Board (Board) to provide an annual report to the Legislature as follows:

6. REPORTING REQUIREMENTS. The division shall prepare a report summarizing the number of applications received from political subdivisions seeking to be designated a small wind innovation zone, the number of applications granted, the number of small wind energy systems generating electricity within each small wind innovation zone, and the amount of wind energy produced, and shall submit the report to the members of the general assembly by January 1 annually.

To be designated as a “small wind innovation zone,” an area must be:

a political subdivision of this state, including but not limited to a city, county, township, school district, community college, area education agency, institution under the control of the state board of regents, or any other local commission, association, or tribal council which adopts, or is encompassed within a local government which adopts, the **model ordinance** (Iowa Code § 476.48(1)(c), emphasis added).

The Small Wind Innovation Zone model ordinance was jointly developed by the Iowa League of Cities, the Iowa State Association of Counties, the Iowa Environmental Council, the Iowa Wind Energy Association, and representatives from the utility industry. The model ordinance was completed in March 2010 and is attached to this report.

In addition to adopting the model ordinance, an area seeking to be designated as a Small Wind Innovation Zone must be served by an electric utility that has agreed to use the Board’s model interconnection agreement. The Board’s model interconnection agreement was developed in a rule-making proceeding (Board Docket No. RMU-2009-0008). The Board’s order adopting final rules was issued May 26, 2010.¹

¹ [Order Adopting Rules \(Docket No. RMU-2009-0008\)](#).

The Board also developed rules to implement the small wind innovation zone statute in a proceeding (Board Docket No. RMU-2009-0010). The Board's order adopting final rules was issued on July 7, 2010.²

II. Annual Report

Designation of Small Wind Innovation Zones

In 2012, the Board designated three Small Wind Innovation Zones under Iowa Code § 476.48 and 199 Iowa Administrative Code (IAC) 15.22. On March 14, 2012, the Board issued orders approving Floyd and Johnson counties' applications to designate unincorporated areas as Small Wind Innovation Zones.³ Additionally, on May 10, 2012, the Board approved Linn County's application for designation of its unincorporated areas as a Small Wind Innovation Zone.⁴ In its approval of these applications, the Board found that the counties were in substantial compliance with the model ordinance and were served by one or more electric utilities that utilize the Board's model interconnection agreement (199 IAC 45). No additional applications have been received by the Board.

Small wind energy systems

Board subrule 199 IAC 15.22(4) requires utilities to annually report information regarding the small wind energy systems with a nameplate capacity of 100 kW or less that produced electricity and are located in Small Wind Innovation Zones in their service territories. Each utility is required to file the report by April 1 for the previous calendar year.

Utilities serving the three counties designated as Small Wind Innovation Zones filed reports with the Board. Reports were filed by MidAmerican Energy Company, Interstate Power and Light Company, Butler County Rural Electric Cooperative, Heartland Power Cooperative, and Linn County Rural Electric Cooperative. Each utility reported the nameplate capacity of small wind energy systems that were interconnected to their electric systems in 2020. In total, approximately 193 kW are interconnected. The following table provides nameplate capacity details in each of the three Small Wind Innovation Zones (counties).

² [Order Adopting Rules \(Docket No. RMU-2009-0010\)](#).

³ See [Floyd County Order \(Docket No. IAC-2012-1522\)](#) and [Johnson County Order \(Docket No. IAC-2012-1522\)](#).

⁴ See [Linn County Order \(Docket No. IAC-2012-1522\)](#).

Small Wind Innovation Zone	Small Wind Energy Systems	Nameplate KW Capacity
Floyd County	5	49.4
Johnson County	4	43.6
Linn County	8	100.0
TOTAL	17	193.0

During 2020, there was a reduction in the total number of small wind energy systems from 18 systems in 2019 to 17 systems in 2020 because one of the wind energy systems in Johnson County was taken out of service. The reduction in the number of wind energy systems also resulted in a reduction in the total nameplate capacity from 203 kW in 2019 to 193 kW in 2020.

Small Wind Innovation Zone Model Ordinance

Section 1. Purpose. The purpose of this regulation is to promote the safe, effective, and efficient use of small wind energy systems installed to reduce the on-site consumption of utility-supplied electricity.

Section 2. Findings. The [city or county] finds that wind energy is an abundant, renewable, and nonpolluting energy resource and that its conversion to electricity will reduce our dependence on nonrenewable energy resources and decrease the air and water pollution that results from the use of nonrenewable energy sources. Distributed small wind energy systems will help diversify the state's energy portfolio. Small wind energy systems also make the electricity supply market more competitive by promoting customer choice. The State of Iowa has enacted a number of laws and programs to encourage the use of small-scale renewable energy systems, including net metering, sales tax exemptions, property tax exemptions, production tax credits, and the Small Wind Innovation Zone program.

Section 3. Definitions.

Small Wind Energy System. A wind energy conversion system consisting of a wind turbine, a tower, and associated control or conversion electronics, which has a rated capacity of not more than 100 kilowatts (kW) and which is intended to primarily reduce on-site consumption of utility-supplied electricity.

Tower Height. The height above grade of the fixed portion of the tower, excluding the wind turbine itself.

Total Extended Height. The height above grade to a blade tip at its highest point.

Section 4. Permitted Use. Small wind energy systems shall be a permitted use in all zoning classifications where structures of any sort are allowed, subject to certain requirements as set forth below. The [city or county] may require the installer of the small wind energy system, or the owner of the property upon which the system will be installed, to obtain a building permit for the system, if required by [city or county] code.

4.1 Tower height and setback. The base of the small wind energy system tower shall be set back from all property lines, public right of ways, and above ground public utility lines at a distance no less than 115 percent of the total extended height of the tower. Towers shall be allowed closer to a property line than its total extended height if the abutting property owner(s) grants written permission, provided that the tower installation complies with the other applicable setbacks herein provided. As long as the total extended height meets the setback requirements in this section, there shall be no specific height limitation, except as imposed by Federal Aviation Administration regulations as stated in section 4.3.

4.2 Requirement for engineered drawings/approval and soil studies.

A small wind energy system of greater than 20 kW, or a small wind energy system mounted on a structure other than a free-standing tower, shall not be erected in the [city or county] of _____, unless the plans and specifications for the system have received the stamped approval of an Iowa registered engineer. In lieu of obtaining the stamped approval of an Iowa registered engineer for each small wind energy system of 20 kW or less mounted on a free-standing tower, a manufacturer may submit its standard plans and specifications for a 20 kW system on a free-standing tower, including its soils study and foundation plans for such system, for a one-time review and stamped approval by an Iowa registered engineer as suitable for construction in any soil condition that exists in the State of Iowa. If such one-time stamped approval is obtained, that manufacturer may thereafter construct such small wind energy systems of 20 kW or less in the [city or county] of _____, utilizing the approved soils study and foundation plans for the 20 kW small wind energy system, without obtaining and presenting the stamped approval of an Iowa registered engineer for each such installation.

4.3 Compliance with Federal Aviation Administration Regulations (FAA). No small wind energy system shall be constructed, altered, or maintained so as to project above any of the imaginary airspace surfaces described in FAR Part 77 of the FAA guidance on airspace protection.

4.4 Safety. Any climbing foot pegs or rungs below 12 feet of a free-standing tower shall be removed to prevent unauthorized climbing. For lattice or guyed towers, sheets of metal or wood may be fastened to the bottom tower section such that it cannot readily be climbed.

4.5 Sound. Sound produced by the small wind energy system under normal operating conditions, as measured at the property line, shall: a) not produce sound at a level that would constitute a nuisance; and b) comply with any local ordinance regulating the volume of sound as a nuisance, if applicable. Sound levels, however, may be exceeded during short-term events out of anyone's control, such as utility outages and/or severe wind storms.

4.6 Compliance with National Electric Code. Building permit applications for small wind energy systems shall be accompanied by a line drawing of the electrical components, as supplied by the manufacturer, in sufficient detail to allow for a determination that the design and manner of installation conforms to the state National Electrical Code.

4.7 Utility Notification. No small wind energy system shall be installed until evidence has been given that the utility company has authorized interconnection of the small wind energy system to its electric distribution or transmission, under an agreement approved by and subject to regulation adopted by the Iowa Utilities Board. Properties not connected the public utility system shall be exempt from this requirement.

4.8 Insurance. A person seeking a building permit to erect a small wind energy system shall provide evidence, in the form of a certificate of insurance satisfactory to the [city or county], showing general liability insurance coverage for the installation and operation of the system under a standard homeowner's or standard business owner's insurance policy, separate and distinct from any insurance requirements of a public utility.

4.9 Abandonment. If a wind turbine is inoperable for six consecutive months, the owner shall be notified that they must, within six months of receiving the notice, restore the small wind energy system to operating condition. If the owner fails to restore the system to operating condition within the six-month time frame, it shall be considered abandoned and the owner shall be required, at owner's expense, to remove the small wind energy system. A small wind energy system that has been abandoned may be abated as a public nuisance.

4.10 Signage. No signs, other than appropriate warning signs or standard manufacturer's or installer's identification signage, shall be displayed on a wind generator, tower, building, or other structure associated with a small wind energy system, subject to local sign regulation if any.

4.11 Lighting. No illumination of the turbine or tower shall be allowed unless required by the FAA or unless allowed by applicable [city or county] ordinance.