

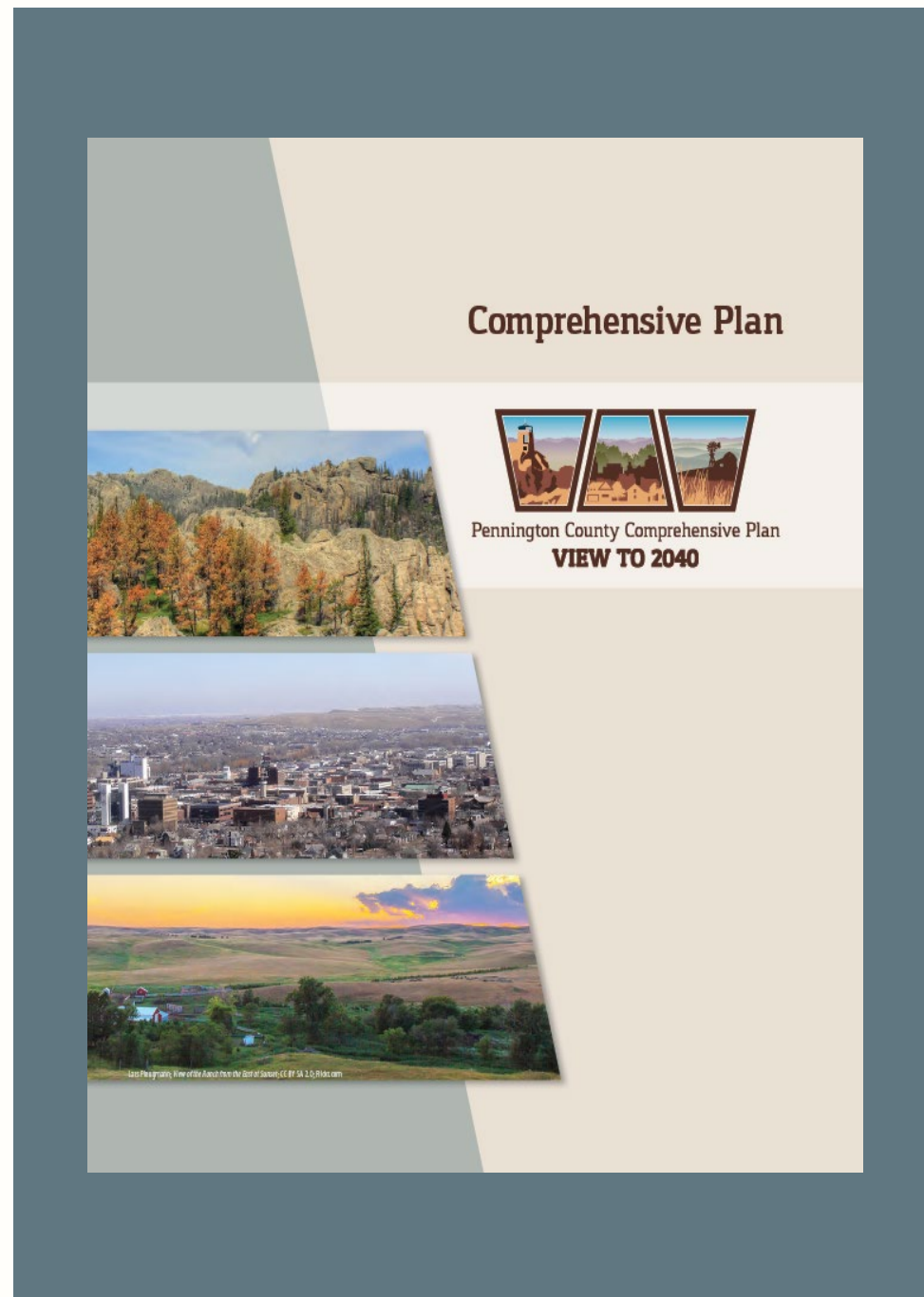


ALTERNATIVE ENERGY IN PENNINGTON COUNTY

APRIL 14, 2025

Comprehensive Plan – View to 2040

- Adopted on May 5, 2020
- Currently, the Planning Department is proposing changes to the Land Use & Housing Element Section.
 - Public meetings are scheduled in Hill City and Rapid City.
- 8 Elements within the Plan
 - Alternative Energy is addressed in the Land Use & Housing Element
 - Goal LUH-8.3 of the Comprehensive Plan states: “the County should support efforts, **when appropriately sited**, for the development and use of alternative energy resources, including wind, solar, geothermal, bio-fuels and co-generation”.
 - Agriculture is addressed as a separate Element.



Agriculture – View to 2040

Maintaining a viable agricultural land use base is an important component to maintaining the county’s heritage and economy. The single designation in the Comprehensive Plan will allow greater flexibility in the use of land. This consolidation to a single designation does not impact tax advantages for productive agriculture parcels.

ELEMENT 5 – AGRICULTURE

In total, 52.3% of the county’s land area, or 893,090 acres, is designated Agriculture in the future land use map.

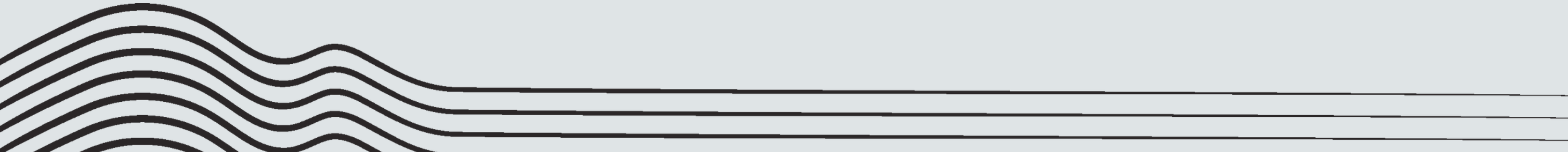
COMPATIBILITY

Agriculture is a dominant land use in the county, making it important to consider the effects that future development can have on agriculture and its associated operations.

Agricultural land can become fragmented if non-agricultural developments become scattered throughout an agricultural area. While some residential, commercial, and Agricultural land in the Eastern Plains should be planned to prevent incompatible encroachment of urbanization. (p.5-2)

GOAL

Pennington County promotes the long-term preservation of productive and potentially-productive agricultural lands and to accommodate agricultural-support services and agriculturally-related activities that support the viability of agriculture and further the county’s economic development goals.





Zoning District Criteria in Comprehensive Plan

Each zoning district has purpose and application with recommended uses.

Table 3-1 Land Use Designations				
Designation	Code/Color	Land Use Description	Maximum Density	Minimum Lot Size
Agricultural Designations				
Agriculture Compatible Zoning: A-1, A-2	AG	Purpose and Application The Agriculture designation denotes areas that have large tracts of land dedicated to agricultural uses or resource utilization uses. Allowed Uses <ul style="list-style-type: none">▶ All agricultural uses, including grazing, field crops, haying, animal production, or similar, and associated support facilities▶ Mining and forestry production and processing▶ Single family, large lot residential▶ Single family attached dwellings▶ Accessory secondary dwelling units▶ Ranch hand residence	1 du / 10 ac (.1 du/ac)	10 ac
Designation	Code/Color	Land Use Description	Maximum Density	Minimum Lot Size
Industrial Designations				
Light Industrial Compatible Zoning: LI	LI	Purpose and Application The Light Industrial designation denotes areas of industrial development that do not create compatibility issues with neighboring land uses. These areas should have adequate transportation and services infrastructure to support development. Allowed Uses <ul style="list-style-type: none">▶ Industrial uses▶ Retail uses▶ Personal services and offices▶ Public and quasi-public uses▶ Research and development▶ Wholesaling, warehousing, distribution▶ Light motor vehicle repair and sales▶ Indoor storage and warehousing▶ Utilities	n/a	20,000 sf
Heavy Industrial Compatible Zoning: HI	HI	Purpose and Application The Heavy Industrial designation denotes areas of industrial development that require isolation from other types of land uses. The uses in this district are generally of a higher intensity than those in the Light Industrial designation. Allowed Uses <ul style="list-style-type: none">▶ Industrial uses (requiring yard storage and fabrication)▶ Wholesaling (requiring yard storage and assembly)▶ Warehousing (requiring yard storage), bulk storage▶ Mining activities and processing▶ Public and quasi-public uses▶ Research and development▶ Wholesaling, warehousing, distribution▶ Heavy motor vehicle repair▶ Utilities	n/a	20,000 sf

Section 317 of PCZO – Alternative Energy Systems

Purpose

The purpose of Alternative Energy is to encourage the development of alternative sources of energy, while protecting the health, safety, and welfare of the public.

Types

The Ordinance addresses mainly solar and wind and includes utility-scale systems.

Conditional Use Permit Requirements – Alternative Energy

SDCL 11-2-17.3 Conditional Use of Real Property

A county zoning ordinance adopted under this chapter that authorizes a conditional use of real property shall specify the approving authority, each category of conditional use requiring approval, the zoning districts in which a conditional use is available, the criteria for evaluating each conditional use, and any procedures for certifying approval of certain conditional uses. The approving authority shall consider the stated criteria, the objectives of the comprehensive plan, and the purpose of the zoning ordinance and the relevant zoning districts when making a decision to approve or disapprove a conditional use request. Approval of a conditional use request requires the affirmative majority vote of the members of the approving authority who are present and voting.

Notice Requirements

The applicant must notify all property owners (including recorded Contract for Deed buyers) of land located within 500 feet, inclusive of any right-of-way, of the outer boundaries of the subject property of the pending CUP application. Notice must be by registered or certified mail at least 10 days prior to the public hearing on the application. The applicant must use “Notice of Hearing” letters provided by the Planning Department.

Hearing Requirements

The Planning Commission must hold a public hearing on the application. Notice of time and place of hearing must be given at least 10 days in advance by publication in the legal newspapers of the County.

Zoning Districts for Large-Scale Alternative Energy Systems

A Distributed Wind Energy System shall require a Conditional Use Permit on parcels of one-half (1.5) acre or larger in all zoning districts or a Minor PUD Amendment in a Planned Unit Development Zoning District. Utility-Scale Solar Energy Systems are prohibited in SRD. A Conditional Use Permit is required in General Agriculture, Limited Agriculture, General Commercial, Highway Service (on 20 acres or more), Light Industrial, and Heavy Industrial Zoning Districts; and, a Planned Unit Development Amendment in a Planned Unit Development Zoning District.

Conditional Use Permit

Criteria – PCZO § 510

Criteria used for all CUPs.

Solar and Wind Systems have additional criteria under PCZO §317 that are also considered. These include:

- Noise
- Setbacks
- Minimum Lot Size
- Lighting
- Utility Permits (i.e. PUC)
- Building Permits
- Decommission Surety

Criteria
1. Will the establishment, maintenance or operation of the conditional use be detrimental to or endanger the public health, safety, or general welfare?
2. Will the establishment, maintenance or operation of the conditional use, in any foreseeable manner, substantially impair or diminish the uses, values or enjoyment of other property in the neighborhood for purposes already permitted?
3. Will the establishment of the conditional use impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district?
4. Are adequate utilities, access roads, drainage and other necessary site improvements provided?
5. Have adequate measures been, or will measures be, taken to provide ingress and egress so designed as to minimize traffic congestion in the public streets?
6. Will the Conditional Use conform to all applicable regulations of the district in which it is located?
7. Is the Conditional Use consistent with the adopted County Comprehensive Plan?

Alternative Energy in United States

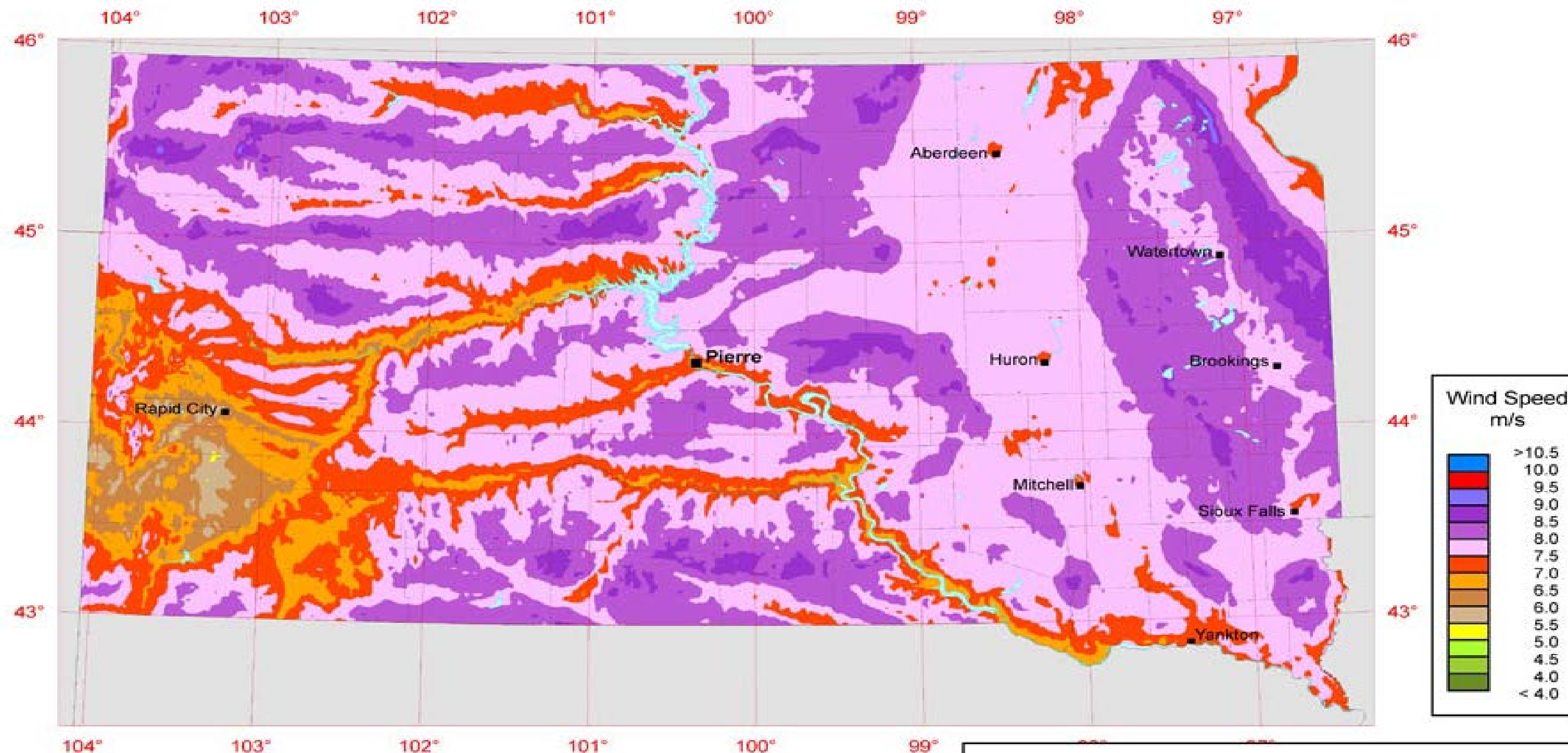
Solar

The National Renewable Energy Laboratory (NREL) reports that solar energy provided for about 5.6% of total U.S. electricity generation in 2023 and made up approximately 54% of new U.S. electric generation capacity additions during the year. Based on generator interconnection requests to the transmission system, solar energy is forecasted to make up a considerable portion of future generation connected to the electric grid.

Wind

The National Renewable Energy Laboratory (NREL) reports that around 10% of the total electricity in the U.S. is generated by wind, specifically land-based wind.

South Dakota - Annual Average Wind Speed at 80 m



Source: Wind resource estimates developed by AWS Truepower, LLC for windNavigator®. Web: <http://www.windnavigator.com> | <http://www.awstruepower.com>. Spatial resolution of wind resource data: 2.5 km. Projection: Lambert Equal Area Azimuthal WGS84.



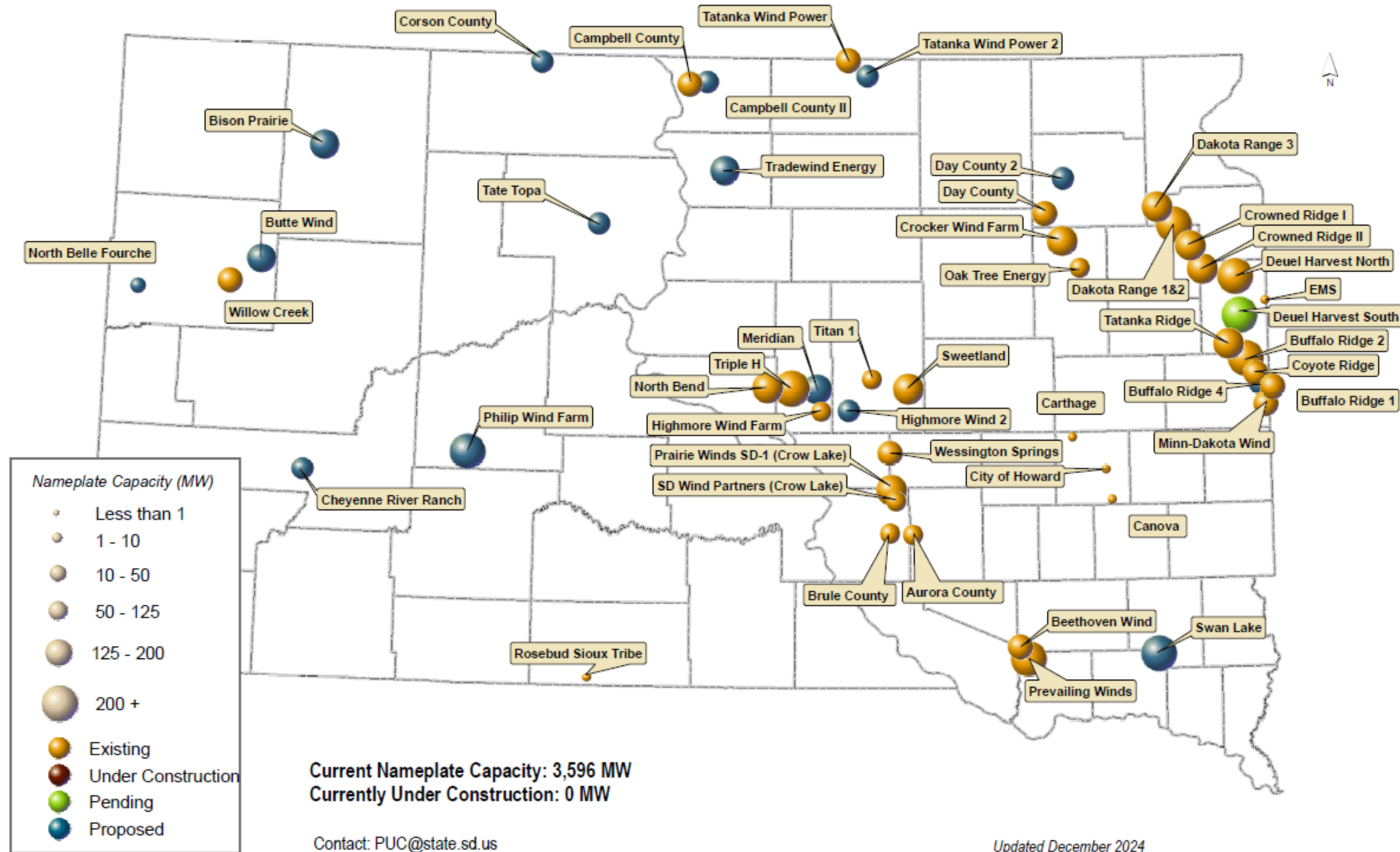
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Where science delivers performance.



NREL
NATIONAL RENEWABLE ENERGY LABORATORY

South Dakota Wind Energy Development

by Capacity and Status



South Dakota Solar Energy Development

Pierre Solar Project

Located in Hughes County, has a capacity of 1 MW and began operation in October of 2016. The City of Pierre hosts the array on approximately 8.9 acres at the Pierre Regional Airport. The project was developed by Geronimo Energy and Missouri River Energy Services purchases the energy generated by the project.



Wild Springs Solar Project

The Wild Springs Solar Project is a 128 megawatt (MW) solar project located in Pennington County, South Dakota in the Southern Power Pool market, and is connected to the New Underwood Substation.



