

Appendix B

Bowman Wind, LLC's Ten-Year Plan

TEN YEAR PLAN: 2020-2030

Bowman Wind, LLC

July 2020

In accordance with N.D.C.C. § 49-22-04 and N.D.A.C. Ch. 69-06-02, Bowman Wind, LLC (“Bowman Wind”), submits the following Ten Year Plan for years 2020 through 2030.

- (1) *A description of the general location, size, and type of all facilities to be owned or operated by the utility during the ensuing ten years, as well as those facilities to be removed from service during the ten-year period.*

Bowman Wind is a Delaware limited liability company, authorized to do business in the State of North Dakota. Bowman Wind is constructing an up to 200.1 megawatt (“MW”) wind energy conversion facility known as the Bowman Wind Project (the “Project”). The Project will be located southwest of the City of Bowman in Bowman County, North Dakota. The Project will interconnect to the grid at the Basin Electric Power Cooperative (“Basin Electric”) Rhame 230 kilovolt (“kV”) Substation, located in Bowman County, North Dakota. To interconnect the Project to the grid, Bowman Wind will construct a 230 kV generation interconnection line between the Project substation and the Rhame 230 kV Substation. The generation interconnection line will be less than one mile long and, therefore, will not be subject to the jurisdiction of the North Dakota Public Service Commission (“Commission”) as a “transmission facility.”

Bowman Wind plans to submit a Conditional Use Permit application to Bowman County and a Certificate of Site Compatibility application to the Commission 2020. Bowman Wind plans to begin constructing the Project in 2021, and plans for the Project to be commercially operational by the end of 2022.

Other than the proposed Project, Bowman Wind does not have any transmission or generation facilities located in North Dakota. The Project will have an estimated life of greater than 10 years. As such, Bowman Wind does not have any plans to decommission any transmission or generation facilities within the timeframe of this plan.

- (2) *An identification of the location of the tentative preferred site for all energy conversion facilities and the tentative location of all transmission facilities on which construction is intended to be commenced within the ensuing five years and such other information as may be required by the commission. The site and corridor identification shall be made in compliance with the criteria published by the commission pursuant to section 49-22-05.1.*

As noted above, Bowman Wind is developing the above-referenced Project, and proposes to have the Project in-service by the end of 2022. The proposed Project footprint is located southwest of the City of Bowman in Bowman County, North Dakota. The Project will interconnect at Basin Electric’s existing Rhame 230 kV Substation, located in Bowman County, North Dakota.

Bowman Wind has retained qualified environmental consulting firms to evaluate the proposed Project site to ensure compliance with the Commission's siting criteria, including the exclusion and avoidance area criteria referenced in N.D.C.C. § 49-22-05.1 and identified in N.D.A.C. Section 69-06-08-01. A map depicting the study area for the Project is attached as **Exhibit A**.

- (3) *A description of the efforts by the utility to coordinate the plan with other utilities to provide a coordinated regional plan for meeting the utility needs of the region.*

Bowman Wind is in the process of identifying an offtaker for the Project's output. Energy produced by the Project may help local utilities to meet applicable renewable energy needs. Additionally, Bowman Wind and the Southwest Power Pool ("SPP") are in the process of completing studies for the potential interconnection of the Project at the Rhame 230 kV Substation. Bowman Wind is in discussions with both SPP and Basin Electric regarding the proposed interconnection and plans to enter into a generator interconnection agreement with these parties to facilitate Project interconnection to the grid.

- (4) *A description of the efforts to involve environmental protection and land-use planning agencies in the planning process, as well as other efforts to identify and minimize environmental problems at the earliest possible stage in the planning process.*

Bowman Wind has engaged the services of qualified environmental consulting firms to study and identify avoidance and exclusion areas within the proposed Project site, in accordance with N.D.C.C. Ch. 49-22 and N.D.A.C. Section 69-06-08-01. As discussed above, Bowman Wind plans to submit a Conditional Use Permit application for the Project to Bowman County and a Certificate of Site Compatibility to the Commission in 2020.

Additionally, Bowman Wind has consulted with applicable local, state, and federal agencies and entities in connection with siting and development of the Project, including the United States Fish and Wildlife Service, the Federal Aviation Administration, the North Dakota Game and Fish Department, the State Historical Society of North Dakota, and Bowman County. Bowman Wind will continue to coordinate with agencies and entities, as appropriate, throughout the development, construction, and operation of the Project.

- (5) *A statement of the projected demand for the service rendered by the utility for the ensuing ten years and the underlying assumptions for the projection, with that information being as geographically specific as possible, and a description of the manner and extent to which the utility will meet the projected demands.*

As discussed above, Bowman Wind is in the process of identifying an offtaker for the Project's output. Bowman Wind is actively marketing the Project to a number of potential off-takers and may sell the power in the form of a power purchase agreement ("PPA"), directly on the merchant market, or the Project could be owned directly by a utility. As an independent power producer, Bowman Wind is able to bid into a variety of markets. Utilities and other customers seeking to diversify and build their energy generation portfolios are attracted to wind energy projects because of long-term, fixed, competitive pricing, environmental benefits and

existing and potential renewable energy policies. Thus, the Project could help satisfy local, regional, or even national renewable energy demands.

Locally, in 2007, the North Dakota Legislature enacted a statutory provision adopting the national “25x‘25” initiative, which establishes a goal of having not less than twenty-five percent of the total energy consumed within the United States come from renewable resources by January 1, 2025.¹ Additional renewable resources will be needed to meet the 25x‘25 initiative.

Also, in 2010, the North Dakota Department of Commerce, EmPower ND Commission, published the Comprehensive State Energy Policy 2010-2025, which recommended a capacity of wind generation up to 5,000 MW by 2020.² The state had a total of 3,155 MW of installed wind capacity at the end of 2018.³ With improving technology and falling costs, utilities are beginning to include renewable energy projects in their resource plans as long-term economic energy and capacity resources. In North Dakota, excellent wind resources create high capacity factor generation, reducing the cost/megawatt hour (“MWh”). In general, alternative energy sources provide lower costs per MW-hour than conventional sources.⁴

In addition to traditional local and regional utility demand for wind energy, a growing number of corporations are turning to renewable energy to save money on energy and meet sustainability goals. Corporate customers either purchase renewable energy directly or obtain renewable benefits and cost savings through financially settled contracts, sometimes called virtual PPAs. In addition, many utilities are creating “green tariffs,” which allow customers to purchase up to 100% renewable energy from the utility.

Beyond the growing demand from utilities, corporations such as Apple, Google and Facebook, along with many others, have recently set goals to obtain 100% of their energy from renewables. These clean energy goals fuel the demand for corporate renewables procurement and subsequent PPAs. In fact, over 6.53 gigawatts (“GW”) of renewable energy have been purchased by non-utilities as of the end of 2018.⁵ That compares to 2.78 GW procured by non-utilities in 2017 and approximately 1.73 GW in 2016. These growth trends are expected to continue, and 2020 has already seen an immense demand for C&I renewable energy PPAs. United States’ corporate PPA volumes in SPP have steadily increased each of the past five years, and North Dakota is in the range of 50-500 MW of cumulative operational and in-development C&I capacity, which indicates the trend of offsite C&I projects expanding to more states. These

¹ See N.D.C.C. § 17-01-01.

² North Dakota Department of Commerce. Undated. EmPower North Dakota. Comprehensive State Energy Policy 2010-2025. Accessed online June 1, 2020. Retrieved from <https://commerce.nd.gov/>.

³ U.S. Department of Energy. 2018. 2018 Wind Technologies Market Report. Accessed online June 1, 2020. Retrieved from <https://www.energy.gov/eere/wind/downloads/2018-wind-technologies-market-report>.

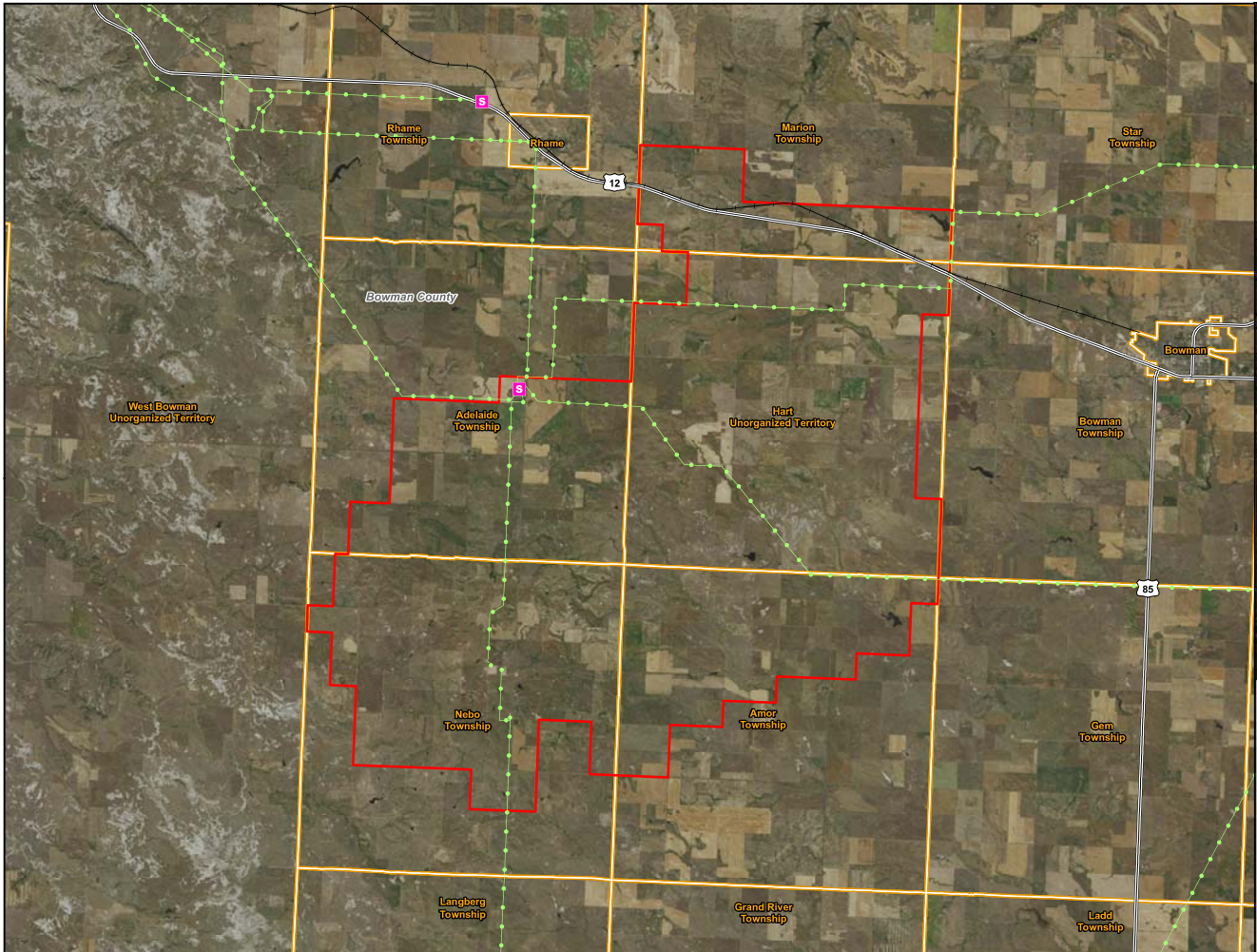
⁴ Lazard, *Lazard’s Levelized Cost of Energy Analysis – Version 13.0* (November 2019), at 2.

⁵ Advanced Energy Economy, *Corporate Renewable Deals 2014-2018*, available at <https://businessrenewables.org/corporate-transactions/>.

businesses have a rapidly growing appetite for affordable clean energy, and North Dakota wind is poised to help meet that demand.

In summary, the renewable energy produced by Bowman Wind's proposed Project will be positioned to help meet local renewable energy initiatives/goals, the regional need for renewable energy, or national C&I customer demand.

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Data Source: Apx, US Census, ND GIS Hub, ESRI
Imagery: ND GIS 2018

- Existing Substation
- Existing Transmission Line
- City/Township
- Preliminary Project Boundary

EXHIBIT A
Preliminary Project Area
Bowman Wind Project
Bowman County, North Dakota



For Environmental Review Purposes Only