

July 1, 2022

VIA E-MAIL AND FEDERAL EXPRESS

Mr. Steven Kahl
Executive Secretary
North Dakota Public Service Commission
600 E. Boulevard, Dept. 408
Bismarck, ND 58505-0480

**RE: Harmony Solar ND, LLC's Ten Year Plan for 2022-2032
Case No. PU-22-_____**

**Harmony Solar ND 2, LLC's Ten Year Plan for 2022-2032
Case No. PU-22-_____**

Dear Mr. Kahl:

Enclosed for filing are two copies of the following documents:

1. Harmony Solar ND, LLC's Ten Year Plan: 2022-2032;
2. Notice of Filing Ten Year Plan (Harmony Solar ND, LLC): 2022-2032;
3. Harmony Solar ND 2, LLC's Ten Year Plan: 2022-2032;
4. Notice of Filing Ten Year Plan (Harmony Solar ND 2, LLC): 2022-2032;
and
5. Certificate of Service.

Electronic versions of the above-referenced documents and this letter were filed with the Commission today via e-mail.

If you have any questions, please let me know.

Sincerely,



MOLLIE M. SMITH

MMS/bd/76339524
Enclosures

1 PU-22-297 Filed 07/01/2022 Pages: 14
2022 - 2032 Ten Year Plan
Harmony Solar ND 2, LLC
Mollie Smith, Fredrikson&Byron, P.A.

cc: Melissa Schmit (w/ encls. via e-mail)

STATE OF NORTH DAKOTA

PUBLIC SERVICE COMMISSION

IN THE MATTER OF THE FILING OF A
TEN YEAR PLAN BY HARMONY SOLAR
ND, LLC

Case No. PU-22-____

IN THE MATTER OF THE FILING OF A
TEN YEAR PLAN BY HARMONY SOLAR
ND 2, LLC

Case No. PU-22-____

CERTIFICATE OF SERVICE

Mollie M. Smith, being first duly sworn, does depose and state that on July 1, 2022, she served the following documents:

Harmony Solar ND, LLC's Ten Year Plan: 2022-2032
Harmony Solar ND 2, LLC's Ten Year Plan: 2022-2032

by placing true and correct copies of said documents in an envelope addressed as follows:

Brandy Madrigga
Cass County Auditor
P.O. Box 2806
Fargo, ND 58108-2806

and depositing the same, with postage prepaid, in the United States mail at Minneapolis, Minnesota.



Mollie M. Smith

TEN YEAR PLAN: 2022-2032
Harmony Solar ND 2, LLC

July 2022

In accordance with N.D.C.C. § 49-22-04 and N.D.A.C. Ch. 69-06-02, Harmony Solar ND 2, LLC (“Harmony Solar 2”), submits the following Ten Year Plan for years 2022 through 2032.

- (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.*

Harmony Solar 2 is proposing to develop and construct an up to 200 MW solar energy conversion facility known as the Harmony Solar 2 Project (“Project”). The Project will be located 15 miles west of Fargo in Cass County, North Dakota. The Project will consist of solar arrays, inverters, access roads, an electrical collection system, an O&M building and a project step-up substation. The Project will be fully enclosed within a safety fence.

Other than the proposed Project, Harmony Solar 2 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, Harmony Solar 2 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 electric energy conversion facilities and the tentative location of all electric 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.*

The Project will be located west of Fargo, North Dakota approximately 4 miles northeast of Casselton in eastern Cass County. A map of the proposed site for the Project is provided in **Exhibit A**, attached hereto. The Project will be designed so as to comply with the exclusion and avoidance areas referenced in N.D.C.C. § 49-22-05.1 and identified in N.D.A.C. Ch. 69-06-08.

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

Harmony Solar 2 is in the process of identifying an offtaker for the Project’s output. Energy produced by the Project may help local or regional utilities to meet applicable renewable energy needs.

Throughout the development of the Project, Harmony Solar 2 has and will continue to engage and coordinate with the Midcontinent Independent Transmission System Operator (“MISO”), the local transmission owner, Xcel Energy, and the local electrical cooperatives regarding the Project. Harmony Solar 2 plans to submit an interconnection application to MISO

for 200 MW of solar generation at the Bison Substation. Harmony Solar 2's Interconnection Application will be filed per the MISO Business Practice Manual 015 for Generator Interconnection.

- (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.*

Harmony Solar 2 has utilized internal environmental personnel, as well as external environmental consultants, to conduct studies and analyses of the Project to ensure it will comply with the siting criteria set forth in N.D.C.C. Ch. 49-22, as well as N.D.A.C. Ch. 69-06-08.

Additionally, Harmony Solar 2 has consulted and will continue to consult with applicable state and federal agencies to avoid, minimize, and/or mitigate any impacts to the environment from the construction and operation of the Project. Harmony Solar 2 has been and will continue to work with Cass County and Harmony Township to ensure conformance with local land use regulations.

- (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, Harmony Solar 2 is in the process of identifying an offtaker for the Project's output. Harmony Solar 2 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"), or the Project could be owned directly by a utility. Harmony Solar 2 is proposing to construct this facility to sell energy, capacity and renewable energy credits ("RECs"), either bundled or unbundled, to one or more electric utilities and/or commercial customers. As an independent power producer, Harmony Solar 2 is able to bid into a variety of markets. For example, over the past year Harmony Solar 2 was eligible to bid into multiple corporate/industrial power supply proposal requests in the region. Utilities and other customers seeking to diversify and build their energy generation portfolios are attracted to solar energy projects because of long-term, fixed, competitive pricing, high capacity value, 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 2021, the North Dakota Legislature enacted a statutory provision adopting a low-emission technology initiative, which establishes a goal that the "agricultural, forestry, natural resources, and working land of the United States should provide energy from low-emission technology and continue to produce safe, abundant, and affordable food, fuel, feed, and fiber."¹ As used in this initiative, low-emission technology includes, among others, solar. Additional renewable resources will be needed to meet the low-emission technology initiative.

¹ See N.D.C.C. § 17-01-01.

A need also exists for renewable energy produced in North Dakota to meet state renewable portfolio standards. Eleven of the Midcontinent Independent System Operator (“MISO”) states currently have either mandated or voluntary renewable portfolio standards or policies.² Under current state standards, total United States renewable portfolio standard demand will increase from 310 terawatt hours (“TWh”) in 2019³ to 630 TWh in 2030.⁴ Given existing renewable energy capacity, an additional 250 TWh increase in renewable resources will be required to meet demand through 2030.⁵ In addition, the regional transmission grid is being expanded to deliver renewable energy generation in a cost-effective manner.⁶ North Dakota’s available land and good insolation, along with newly constructed transmission lines, create an ideal environment for solar energy projects to meet regional renewable and solar standards or policies.

With improving technology and falling costs, utilities are beginning to include solar projects in their resource plans as long-term economic energy and capacity resources. In North Dakota, peak solar generation has a high correlation with the MISO’s coincident peak, which determines the reserve margins MISO utilities must maintain for reliability and reserve sharing purposes. Recent solar pricing has shown that utility scale solar provides electricity during daylight hours at a cost per MW-hour on par, or less than, many gas-fired electric generators. New solar energy facilities are less expensive to construct than new conventional energy sources, even without government subsidies.⁷ In general, alternative energy sources provide lower costs per MW-hour than conventional sources.⁸

In addition to traditional local and regional utility demand for solar 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

² National Conference of State Legislatures, State Renewable Portfolio Standards and Goals (Aug. 13, 2021), <https://www.ncsl.org/research/energy/renewable-portfolio-standards.aspx>; MTEP18 MISO Transmission Enhancement Plan, at 182. Accessed online June 17, 2022. Retrieved from <https://cdn.misoenergy.org/MTEP18%20Full%20Report264900.pdf>.

³ See Lawrence Berkeley National Laboratory, U.S. Renewable Portfolio Standards 2019 Annual Status Report (July 2019), at 24. Retrieved from https://eta-publications.lbl.gov/sites/default/files/rps_annual_status_update-2019_edition.pdf.

⁴ Lawrence Berkeley National Laboratory, U.S. Renewable Portfolio Standards, 2021 Status Update (February 2021), at 25. Retrieved from https://eta-publications.lbl.gov/sites/default/files/rps_status_update-2021_early_release.pdf.

⁵ Lawrence Berkeley National Laboratory, U.S. Renewable Portfolio Standards, 2021 Status Update (February 2021), at 27.

⁶ MTEP 18 MISO Transmission Enhancement Plan, at 42.

⁷ Lazard, *Lazard’s Levelized Cost of Energy Analysis – Version 15.0* (October 2021), at 2. Accessed online June 17, 2022. Retrieved from <https://www.lazard.com/media/451905/lazards-levelized-cost-of-energy-version-150-vf.pdf>.

⁸ Lazard, *Lazard’s Levelized Cost of Energy Analysis – Version 15.0* (October 2021), at 2. Accessed online June 17, 2022. Retrieved from <https://www.lazard.com/media/451905/lazards-levelized-cost-of-energy-version-150-vf.pdf>.

virtual PPAs. In addition, many utilities are creating “green tariffs,” which allow customers to purchase up to 100 percent renewable energy from the utility.⁹

Beyond the growing demand from utilities, corporations such as Apple, Google and Facebook, along with many others, have recently set goals to obtain 100 percent of their energy from renewables. These clean energy goals fuel the demand for corporate renewables procurement and subsequent PPAs. According to Wood Mackenzie’s report titled an “*Analysis of Commercial and Industrial Wind Energy Demand in the United States*,” the United States is “at the beginning stage of a corporate renewables procurement boom,” with approximately “85 gigawatts of renewable energy demand” from the “largest U.S. companies” alone through 2030.¹⁰ Another Wood Mackenzie report titled “*US Corporate Procurement of Wind and Solar 2020*” lists 2019 as “the largest year for megawatts of annual wind and solar [commercial and industrial (“C&I”)] capacity additions and the largest year on record for new wind and solar C&I PPAs signed.” These growth trends are expected to continue, and 2020-2021 saw an immense demand for C&I renewable energy PPAs.¹¹ Similarly, according to a 2019 research report, corporate contracts accounted for 22 percent of 2018 PPAs for renewables in the United States.¹² Further, the buyers are not just large corporations; smaller companies are entering into aggregated purchasing models and further driving additional market expansion.¹³

In summary, the renewable energy produced by Harmony Solar 2’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.

⁹ U.S. Environmental Protection Agency – Green Power Partnership. Guide to Purchasing Green Power. Chapter 4. Accessed online June 17, 2022. Retrieved from https://www.epa.gov/sites/default/files/2016-01/documents/purchasing_guide_for_web.pdf.

¹⁰ Wood Mackenzie, *Corporates usher in new wave of US wind and solar growth* (Aug. 20, 2019). Accessed online June 17, 2022. Retrieved from <https://www.woodmac.com/our-expertise/focus/Power--Renewables/corporates-usher-in-new-wave-of-u.s.-wind-and-solar-growth/>.





¹¹ See, e.g., Jared Anderson, *US Corporate Renewable Power Buyers Procure 10.6 GW of Capacity in 2020* (Feb. 10, 2021). Accessed online June 17, 2022. Retrieved from <https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/coal/021021-us-corporate-renewable-power-buyers-procure-106-gw-of-capacity-in-2020>; Michael Copley, *Corporate Renewable Energy Deals Soared in 2021, Smashing Previous Record* (Jan. 31, 2022). Accessed online June 17, 2022. Retrieved from <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/corporate-renewable-energy-deals-soared-in-2021-smashing-previous-record-68659987>.

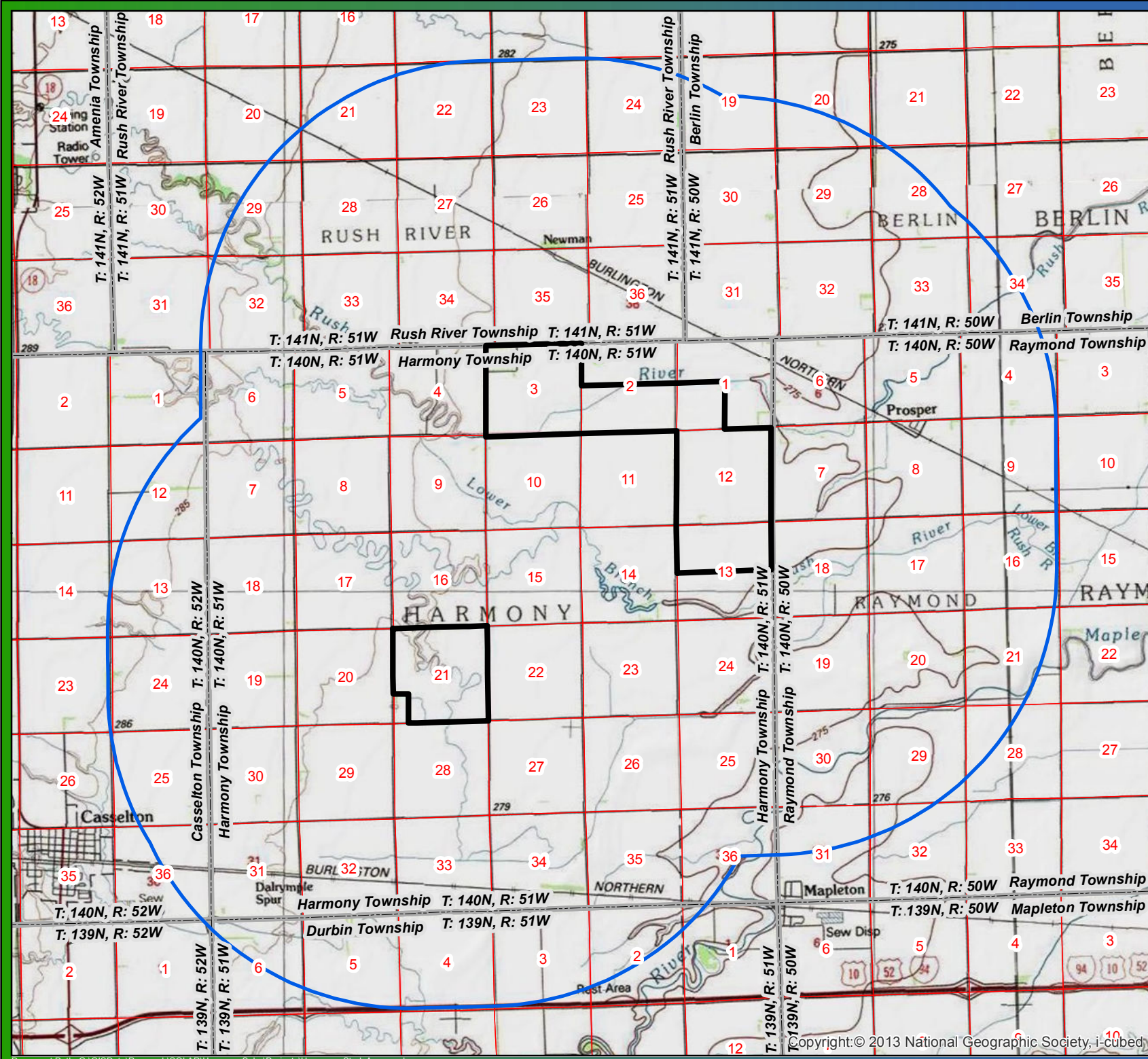
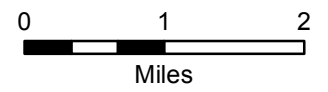
¹² Emma Foehringer Merchant, *Corporate Renewables Procurement Accounted for Nearly a Quarter of All Deals in 2018* (Feb. 5, 2019). Accessed online June 17, 2022. Retrieved from <https://www.greentechmedia.com/articles/read/corporate-renewables-procurements-quarter-ppa-2018>.

¹³ See Emma Foehringer Merchant, *2018 Was Record Year for Corporate Clean Energy Contracts* (Jan. 31, 2019). Accessed online June 17, 2022. Retrieved from <https://www.greentechmedia.com/articles/read/reports-confirm-a-record-year-for-corporate-clean-energy-contracts#gs.nxat51>.

Exhibit A

**Harmony Solar 2
Cass County, SD
Project &
Study Area**

-  Harmony Solar 2 Study Area (3mi)
-  Harmony Solar Project Area
-  Township/Range
-  Sections



STATE OF NORTH DAKOTA
PUBLIC SERVICE COMMISSION

**IN THE MATTER OF THE FILING OF A
TEN YEAR PLAN BY HARMONY
SOLAR ND 2, LLC**

Case No. PU-22-___

**NOTICE OF FILING TEN YEAR PLAN
2022-2032**

PLEASE TAKE NOTICE that Harmony Solar ND 2, LLC, in accordance with N.D.C.C. § 49-22-04 and N.D.A.C. Ch. 69-06-02, filed a Ten Year Plan for the years 2022 through 2032 with the North Dakota Public Service Commission on July 1, 2022, and the Cass County Auditor on July 1, 2022.

Dated this 1st day of July, 2022.

FREDRIKSON & BYRON, P.A.



By _____

MOLLIE M. SMITH, ND Bar #06714
Attorney for Harmony Solar ND 2, LLC
200 South Sixth Street, Suite 4000
Minneapolis, MN 55402-1425
(612) 492-7270

CERTIFICATE OF SERVICE

I, the undersigned, hereby certify that a true and correct copy of the following document:

NOTICE OF FILING TEN-YEAR PLAN: 2022-2032

was served on the 1st day of July, 2022 by placing the same in the United States mail, postage prepaid, properly addressed to the following:

North Dakota Aeronautics Commission
P.O. Box 5020
Bismarck, ND 58502-5020

North Dakota Office of Attorney General
600 E. Boulevard Ave.
Dept. 125
Bismarck, ND 58505

North Dakota Department of Agriculture
600 E. Boulevard Ave.
Dept. 602
Bismarck, ND 58505-0020

North Dakota Department of Health
600 E. Boulevard Ave.
Bismarck, ND 58505-0200

North Dakota Department of Human Services
600 E. Boulevard Ave.
Dept. 325
Bismarck, ND 58505-0250

North Dakota Department of Labor and Human Rights
600 E. Boulevard Ave.
Dept. 406
Bismarck, ND 58505-0340

North Dakota Department of Career and Technical Education
State Capitol, 15th Floor
600 E. Boulevard Ave., Dept. 270
Bismarck, ND 58505-0610

North Dakota Department of Commerce
1600 E. Century Ave., Suite 2
P.O. Box 2057
Bismarck, ND 58503

Energy Infrastructure and Impact Office
North Dakota Department of Trust Lands
1707 North 9th Street
P.O. Box 5523
Bismarck, ND 58506-5523

North Dakota Game and Fish Department
100 N. Bismarck Expressway
Bismarck, ND 58501-5095

North Dakota Industrial Commission
State Capitol, 14th Floor
600 East Boulevard Ave., Dept. 405
Bismarck, ND 58505-0840

Office of Governor Doug Burgum
State of North Dakota
600 E. Boulevard Ave.
Bismarck, ND 58505-0001

North Dakota Department of Transportation
608 E. Boulevard Ave.
Bismarck, ND 58505-0700

State Historical Society of North Dakota
612 E. Boulevard Ave.
Bismarck, ND 58505-0830

North Dakota Indian Affairs Commission
State Capitol Building
600 E. Boulevard Ave.
1st Floor - Judicial Wing, Rm. #117
Bismarck, ND 58505-0300

Job Service North Dakota
P.O. Box 5507
Bismarck, ND 58506-5507

North Dakota Department of Trust Lands
1707 North 9th Street
P.O. Box 5523
Bismarck, ND 58506-5523

North Dakota Parks and Recreation Department
Century Center
1600 E. Century Ave., Suite 3
PO Box 5594
Bismarck, ND 58506-5594

Natural Resources Conservation Service
North Dakota NRCS State Office
220 East Rosser Avenue
Federal Building, Room 270
Bismarck, ND 58501

North Dakota State Water Commission
900 E. Boulevard Ave., Dept. 770
Bismarck, ND 58505-0850

United States Department of Defense
1400 Defense Pentagon
Washington, DC 20301-1400

United States Fish and Wildlife Service
North Dakota Field Office
3425 Miriam Avenue
Bismarck, ND 58501-7926

United States Army Corps of Engineers
North Dakota Regulatory Office
3319 University Drive
Bismarck, ND 58504

Federal Aviation Administration
United States Department of Transportation
800 Independence Ave. SW
Washington, DC 20591

North Dakota Transmission Authority
c/o North Dakota Industrial Commission
State Capitol 14th Floor
600 E. Boulevard Ave. Dept. 405
Bismarck, ND 58505-0840

North Dakota Pipeline Authority
c/o North Dakota Industrial Commission
State Capitol 14th Floor
600 E. Boulevard Ave. Dept. 405
Bismarck, ND 58505-0840

North Dakota Department of Environmental Quality
4201 Normandy Street
Bismarck, ND 58503-1324

North Dakota Geological Survey
600 East Boulevard Avenue,
Bismarck ND 58505-0840

North Dakota Forest Service
State Headquarters - Molberg Center
307 - 1st Street East
Bottineau ND 58318-1100

Federal Bureau of Land Management
Montana/Dakotas State Office
5001 Southgate Drive
Billings, MT 59101

Military Aviation and Installation Assurance Siting Clearinghouse
3400 Defense Pentagon, Room 5C646
Washington, DC 20301 – 3400

20th Airforce 91st Missile Wing
c/o Colonel Christopher Menuey
Minot AFB, ND 58705-5006

Minot Air Force Base
c/o Laura E. Seabeneck, Community Planner
445 Peacekeeper Place
Minot AFB, ND 58705-5006

Grand Forks Air Force Base
319th Air Base Wing Public Affairs Office
701 Eielson St, Bldg 607 Rm 211
GFAFB ND 58204

Cass County Board of Commissioners
P.O. Box 2806
Fargo, ND 58108-2806

A handwritten signature in cursive script that reads "Mollie M. Smith".

MOLLIE M. SMITH