

**BEFORE THE STATE OF NORTH DAKOTA
PUBLIC SERVICE COMMISSION**

**FLICKERTAIL SOLAR PROJECT, LLC
FLICKERTAIL SOLAR PROJECT – RICHLAND COUNTY
SITING APPLICATION**

CASE NO. PU-24-351

**PRE-FILED TESTIMONY OF NICHOLAS SCHULER
ON BEHALF OF FLICKERTAIL SOLAR PROJECT, LLC**

March 10, 2025

I. INTRODUCTION AND QUALIFICATIONS**Q. Please state your name, employer, and business address.**

A. My name is Nicholas (Nick) Schuler. I am employed by Savion, LLC (Savion) and my business address is 422 Admiral Boulevard, Kansas City, MO 64106.

Q. What is your position with Savion?

A. I am a Senior Director, Development and Regional Development Team Lead.

Q. Briefly describe your work history and education.

A. I have a bachelor's degree in energy management from the University of Oklahoma. I manage and lead a team of project developers and subject matter experts responsible for onshore development of utility-scale renewable power and energy storage projects across the Midwest/Upper Midwest, which includes North Dakota and many of the surrounding states. My responsibilities include training and managing a team of developers who are responsible for land origination and control, identifying and evaluating strategic sites for possible development, initiating and facilitating generation interconnection activities, and community and stakeholder outreach. I also manage real estate, environmental, engineering, and meteorological activities to deliver finance-quality projects on time and within budget and support the offtake, mergers and acquisitions, and transactions teams to explore for power purchasers, market acquisition, and sale opportunities. Prior to joining Savion (formerly the solar and storage team of Tradewind Energy) in 2017, I worked within the real estate and development teams of a utility-scale wind energy developer supporting late-stage development and initiating greenfield development of projects in Kansas, Oklahoma, and Texas. Before that, I worked in the oil and gas industry as a Landman focused on mineral title examination. Over the course of my career in renewable energy development, I have directly contributed to over two gigawatts (GW) of operational wind and solar energy projects, which equates to over \$2 billion in investment.

Q. What is your role with respect to the Flickertail Solar Project (Project)?

A. I am the lead developer for the Project.

Q. What is the relationship between Flickertail Solar Project, LLC (Flickertail) and Savion with respect to the Project?

A. Flickertail is a wholly owned subsidiary of Savion. Savion is assisting Flickertail with development of the Project.

Q. Please describe Savion's experience in the renewable energy industry.

A. Since its founding in 2019, Savion has become one of the largest, most technologically advanced utility-scale solar and energy storage project development companies in the United States. With a growing portfolio of more than 43.3 GW, Savion's diverse team provides comprehensive services at each phase of renewable energy project development, from conception through construction. As part of this full-service model, Savion manages all aspects of development for customers, partners, and project host communities. To date, Savion has successfully developed 1.8 GW of contracted, under-construction, and operating projects (comprising 17 projects in eight states). Savion's first owned and operating project came online in 2023, and Savion now owns 391 megawatts (MW) of operating solar energy assets comprising three projects.

Q. What proposed hearing exhibits are you sponsoring in your testimony?

A. I am sponsoring the following proposed hearing exhibits:

- **Exhibit 1**: Application for a Certificate of Site Compatibility
- **Exhibit 2**: Project Update Figure
- **Exhibit 3**: Updated Application Figures 1-10
- **Exhibit 5**: Additional Agency Correspondence
- **Exhibit 7**: Signed Certification Relating to Order Provisions – Solar Energy Conversion Facility Siting, with accompanying Tree and Shrub Mitigation Specifications
- **Exhibit 8**: Prefiled Testimony of Nick Schuler
- **Exhibit 8-A**: Schuler Resume

Q. What is the purpose of your Direct Testimony?

A. In my testimony, I provide an overview of the Project components and design, and discuss the Project's development history, including local coordination.

II. UPDATES AND CLARIFICATIONS TO THE APPLICATION

Q. Is proposed Exhibit 1 Flickertail's Application for Certificate of Site Compatibility for the Flickertail Solar Project (Application), which was filed with the North Dakota Public Service Commission (PSC) on October 8, 2024?

A. Yes.

Q. Since the Application was filed in October 2024, have there been any updates to the Application?

A. Yes. Based on coordination with the State Historical Society of North Dakota (SHSND), we made minor adjustments to collection line routes in the northwestern portion of the Project to avoid a drain. These minor adjustments are depicted in the Project Update Figure (proposed Exhibit 2).

Q. Since the Application was filed, have any additional or updated reports been completed?

A. Yes. Since the Application was filed, the Class III cultural resources inventory report (included as Appendix F to the Application) has been revised based on comments from the SHSND. Additionally, a Class III inventory of architectural resources has been completed. These inventories are discussed in the Prefiled Testimony of Christina Martens (proposed Exhibit 9).

Q. Is the layout shown on the updated Application Figures 1-10 (proposed Exhibit 3) the final layout?

A. Yes.

Q. Do you have a clarification to the statement in the Application that “[t]he estimated impacts for Project facilities are presented in Table 4.2 and represent a maximum build of approximately 360-MW AC, but only up to 300-MW AC will be constructed”?

A. Yes. The statement should have said that the estimated impacts for Project facilities are presented in Table 4.2 and represent a maximum build of approximately 300-MW alternating current (AC), and only up to 300-MW AC will be constructed.

Q. Will Flickertail limit the output of the Project delivered to the grid to up to 300-MW AC?

A. Yes.

III. DESCRIPTION OF THE PROJECT

Q. Could you provide a general description of the Project, including where it is located, its proposed output, and facilities?

A. The Project is located on approximately 3,464 acres (Project Area) north of Galchutt in Abercrombie Township, Richland County, North Dakota. The Project is an up to 300-MW AC solar energy conversion facility and associated facilities. The Project’s facilities include:

- photovoltaic (PV) solar panels and tracking racking systems;
- direct current (DC) electrical system;
- inverter skids (inverters, step-up transformers, and Supervisory Control and Data Acquisition (SCADA) system);
- underground and aboveground AC electrical collection system;
- security fencing, gates, and equipment;
- access roads;
- an operations and maintenance (O&M) facility;
- a collector substation;
- main power transformers;
- control house for protective relay panels and site controllers;

- meteorological (MET) equipment including, but not limited to, anemometer MET monitoring weather stations;
- stormwater basins and/or other stormwater/drainage measures, as needed; and
- additional temporary facilities, including: laydown yard(s), improvements to public roads and driveways for delivery of materials and equipment, as needed.

Q. Where will the Project interconnect to the grid?

A. The Project will interconnect to the grid via an approximately 530-foot long 230-kilovolt (kV) generation tie (gen-tie) line extending from the Project's collector substation to a new switching station that will connect to Minnkota Power Cooperative, Inc.'s (Minnkota) existing Frontier-Wahpeton 230-kV transmission line. The switching station will be permitted, constructed, and owned by Minnkota.

Q. Does the Project have an executed Generator Interconnection Agreement (GIA)?

A. Yes. Flickertail executed a large GIA with Minnkota on August 29, 2023, and a facility construction agreement with Minnkota on July 22, 2024.

Q. Were affected systems studies conducted, and if so, what is the status of those studies?

A. Yes. Ancillary to the system impact and facility studies Minnkota conducted as part of its GIA process, Midcontinent Independent System Operator (MISO) and Southwest Power Pool (SPP) were identified as potentially affected systems. MISO and SPP each conducted an affected systems study in 2021 and did not identify any necessary upgrades or associated costs. However, in late 2024, due to prior queued projects withdrawing from the interconnection queue, SPP determined that various interconnection positions, including Flickertail's, may need to be restudied as part of updated affected systems studies. If a restudy is required for the Project and upgrade costs are identified, Flickertail would bear the costs of those upgrades and would enter into an affected systems agreement with SPP. However, since no upgrades were

identified initially, it is not anticipated that SPP will identify upgrades in connection with a restudy.

Q. Has Flickertail entered into any commercial agreements regarding the Project?

A. Yes. Flickertail has entered into an agreement with Otter Tail Power Company (Otter Tail) pursuant to which Otter Tail will purchase the Project's development assets once permits and regulatory approvals are received and other contractual requirements are met.

Q. Following close on the purchase/sale agreement, would Otter Tail construct, own, and operate the Project?

A. Yes.

Q. What is the anticipated schedule for the construction and in-service of the Project?

A. Project construction is anticipated to begin as early as the First Quarter of 2026 and be completed in the Fourth Quarter of 2028. Full commercial operation is anticipated to occur by the end of 2028.

Q. What is the estimated total cost of the Project?

A. The total installed capital costs for the Project are estimated to be approximately \$375 million.

IV. PROJECT DEVELOPMENT, LOCAL OUTREACH, AND PROJECT AREA SELECTION

Q. Please provide an overview of the Project's development history and outreach with the local governments.

A. Flickertail began evaluating an area in Richland County as a potentially suitable location for a solar project in 2018. Flickertail consulted with landowners, the local community, environmental agencies, and other stakeholders to inform site selection.

Flickertail also conducted extensive community outreach throughout the development process, including group and individual outreach since 2018, hosting a solar information forum at Galchutt Seed in September 2022, and hosting a community open house in August 2023.

Additionally, Flickertail began coordinating with Richland County and Abercrombie Township early in the development process. Flickertail gave presentations to the Abercrombie Township Zoning Commission and Board of Supervisors to provide information on the Project and answer questions. Flickertail also worked with Abercrombie Township to amend the township zoning ordinance to address solar energy. Flickertail also participated in joint public meetings of the Abercrombie Township Zoning Commission and Board of Supervisors in January 2023, February 2023, September 2023, and lastly November 2023.

Further, between 2022 and 2024, Flickertail conducted various environmental studies and surveys. These efforts over the past six years have resulted in the proposed Project Area. The history is outlined in more detail in Section 1.2.6 of the Application (proposed **Exhibit 1**).

Q. What factors make the Project site a good site for solar development?

A. Flickertail selected the specific Project Area because of strong landowner and local stakeholder support, its strong solar resource, viable transmission capacity, an accessible point of interconnection within the Project Area, consistency with existing land uses, constructability, and minimal potential impact to human and environmental resources.

Q. Has Flickertail obtained the necessary property rights to construct the Project within the proposed Project Area?

A. Yes. Flickertail has entered into 24 lease agreements and one purchase option covering the entirety of the Project Area.

Q. Will Flickertail coordinate with all applicable road authorities?

A. Yes. Flickertail will negotiate a road use and maintenance agreement with Abercrombie Township and, as needed, Richland County.

V. PROJECT LAYOUT AND DESIGN

Q. Please describe the factors considered when developing the Project layout.

A. The Project has been designed to optimize electrical generation and efficiency while complying with applicable PSC and Abercrombie Township setbacks and minimizing and/or avoiding potential impacts to the land and environmental features. Environmental considerations are addressed in the Prefiled Testimony of Christina Martens (proposed Exhibit 9).

Q. Please describe the solar panels that will be used for the Project.

A. The Project will utilize PV panels with tempered glass that are approximately eight feet long, four feet wide, and two inches thick. The panels will be installed on a linear access tracking rack system (described below). On the tracking system, panels will be approximately 17 feet in height from the ground to the top of the panels when at a maximum tilt angle and approximately seven feet when horizontal to the ground. To limit reflection, solar PV panels are constructed of dark, light-absorbing materials. Today's panels reflect as little as two percent of the incoming sunlight depending on the angle of the sun, when using anti-reflective coatings, which are anticipated to be used for the Project.

Q. Please describe the layout and movement of the tracking racks within the site.

A. A linear axis tracking system tracks the solar resource throughout the day. Each tracking rack will contain multiple panels. The racks of panels are generally aligned in rows north and south. The tracking rack system will tilt the panels so that they face east in the morning, upwards (perpendicular to the ground) during mid-day, and then west in the afternoon. The tracking rack system will be installed using steel and/or aluminum piles for the foundations and a frame with a motor that allows the racking to

rotate the panels to slowly track the sun throughout the day. The tracking rack system, along with the SCADA system, allows for the panels to be stowed at an angle in order to limit any potential damage during a wind or hail event.

Q. Please describe the Project's DC electrical system, inverter skids (inverters, transformers, and SCADA System), and AC electrical collection system.

A. The DC electrical system carries the DC power from the PV panels to the inverters. Portions of the DC electrical system will be buried underground, at a depth of at least four feet below grade. Other portions of the DC electrical system may be placed aboveground on the underside of the tracking system.

The inverters are placed on inverter skids and integrated with a medium voltage step-up transformer (which the inverters will feed electricity to) and the SCADA system. The inverters will convert the power from DC to AC. The step-up transformers then step up the inverter output AC voltage (approximately 0.645 kV depending on the inverter) to an intermediate voltage of 34.5 kV. The inverter skids will be located within the interior of the fenced areas of the Project Area. An example of an inverter and skid is shown on page 22 of the Application (proposed **Exhibit 1**).

Once stepped up to 34.5 kV, the AC electrical collection system then brings the AC power to the Project's collector substation. The AC electrical collection system will be placed underground, where possible, at a depth of at least four feet below grade. Portions of the AC electrical collection system may be located aboveground, depending on final design.

Q. Please describe the Project's collector substation.

A. The Project's collector substation will be a 34.5/230-kV step-up substation with metering and switching equipment required to connect to the transmission grid. The collector substation is anticipated to include a control house for protective relay panels and site controllers, as well as main power transformers. The substation will be located on approximately five acres adjacent to the point of interconnection. The fence around

the substation will be seven feet above grade and will comply with National Electrical Code (NEC) requirements.

Q. Have the locations and number of MET stations been determined?

A. No. The locations and number of MET stations will be determined following final engineering. All MET stations will be located within fenced perimeters and comply with all applicable PSC and Abercrombie Township requirements.

Q. Is Flickertail planning to construct an O&M facility?

A. Flickertail plans to construct an O&M facility to provide workspace, storage, and parking for Project maintenance and operations personnel. It would be located on approximately two acres within the Project Area, and is anticipated to be located near or adjacent to the collector substation and point of interconnect switching station.

Q. Please describe the fencing that will be installed along the perimeters of the solar arrays.

A. Permanent security fencing will be installed along the perimeters of the solar arrays. This perimeter fencing will be approximately seven-foot-tall agricultural-style fences (non-chain link, without barbed wire) around the solar arrays. All access points will have gates.

VI. PROJECT CONSTRUCTION

Q. Discuss the personnel that will be involved in construction of the Project.

A. The Project will require approximately 300 construction personnel during the approximately 18 to 24-month construction period.

Q. Please provide an overview of Project construction.

A. After the necessary permits are received, construction will begin with site preparation work, including removal of vegetation and grading of the substation site and other portions of the Project, as needed. Access driveways, if needed, internal access

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roads, and staging/laydown yards would be constructed to prepare the site for facility installation.

Once grading activities are complete, the solar arrays and electrical collection system will be installed. The solar facilities will be constructed in blocks, and multiple blocks could be constructed simultaneously. Construction of the arrays will include: pre-positioning and driving piles; mounting the tracker system to the piles; pre-positioning panel pallets; mounting panels to the tracker system; the completion of electrical connections, terminations, and grounding; and installation of the DC electrical system.

Construction of the Project collector substation will occur in parallel with solar installation activities. Substation construction will include: grading; road access installation; pad preparation; installation of underground utilities; construction of foundations; installation of aboveground equipment infrastructure; testing/commissioning; and energization.

Following completion of construction, disturbed areas not intended for permanent aboveground Project facilities will be restored, and the Project will undergo inspection, testing, and commissioning. Construction is typically broken up into five phases which can overlap across the site: Phase 1 (civil works), Phase 2 (piling), Phase 3 (underground collection and inverters), Phase 4 (racking and modules), Phase 5 (commissioning). The phases of construction are further discussed in more detail in Section 5.1 of the Application (proposed **Exhibit 1**).

Q. Will the Project participate in the North Dakota One-Call program, both prior to construction and as a facility owner once the Project is constructed?

A. Yes.

VII. PROJECT OPERATION AND MAINTENANCE

Q. Discuss the personnel that will be involved in the operation and maintenance of the Project.

A. Operations and maintenance of the Project will require up to three full-time personnel consisting of one site manager and two technicians.

Q. Will there be routine, scheduled inspections of the Project to ensure it is operating appropriately?

A. Yes. Following construction, the Project will undergo detailed inspection and testing procedures before becoming operational. Once operational, the Project will undergo routine inspections consistent with industry standards. For more information on these routine inspections, see Section 5.2.5 of the Application (proposed **Exhibit 1**).

Q. How will the Project be monitored between inspections?

A. The Project will be monitored by operations staff via a SCADA system. The SCADA system allows 24/7 monitoring of the Project and provides data on solar generation and production, availability, meteorology, and communications. Permanent operations staff will perform maintenance and service of the Project with the aid of this system.

Q. Will the Project be designed, constructed, and operated in compliance with all applicable federal, state, and local regulations?

A. Yes.

VIII. DECOMMISSIONING AND RESTORATION OF PROJECT AREA

Q. What is the estimated life of the Project?

A. The expected service life of the Project is 35 years; however, the Project may operate beyond this timeframe through equipment replacement/upgrades, in coordination with landowners and stakeholders.

Q. Please discuss Flickertail's plans for decommissioning and restoration of the Project site.

A. In accordance with the PSC's decommissioning rules, Flickertail will file a decommissioning plan with the PSC for review prior to the commencement of operations and will comply with the applicable financial assurance provisions during construction and operation of the Project. When the Project is decommissioned, Flickertail will restore the site in accordance with the PSC's decommissioning requirements.

IX. PROJECT BENEFITS

Q. What are some of the benefits of the proposed Project?

A. In addition to providing an additional generation source, the Project will provide a number of economic benefits. The Project will generate enough energy to power up to approximately 59,000 homes annually. The Project provides participating landowners with an additional, steady income source, allowing these landowners to diversify their agricultural operations. The Project will also provide temporary and long-term employment opportunities. The Project will require up to approximately 300 workers, both skilled and unskilled, at the peak of Project construction, and up to three full-time operations and maintenance personnel. Additionally, the Project is anticipated to increase spending/revenue in the vicinity of the Project due to increased demand for lodging, food services, fuel, and general supplies.

Further, the Project will generate significant direct economic benefits in the form of payments in lieu of property taxes paid to state and local taxing authorities. Based on the current statutory formula, the Project would pay approximately \$681,400 to state and local taxing authorities annually; over the life of the Project, the Project would pay approximately \$23.8 million to state and local taxing authorities, which includes:

- approximately \$10.6 million to the Richland School District,¹
- approximately \$9 million to Richland County,
- approximately \$3.1 million to Abercrombie Township,
- approximately \$780,500 to the Abercrombie Fire District, and
- approximately \$286,800 to the State of North Dakota.

X. PERMITS AND APPROVALS

Q. Are other permits besides the Certificate of Site Compatibility required for this Project?

A. Yes. Potential permits and approvals for the Project were identified in Table 7.1 of the Application (proposed **Exhibit 1**).

Q. Does the Project need to obtain a local zoning permit from Abercrombie Township?

A. Yes. Abercrombie Township issued a conditional use permit to Flickertail on November 20, 2023 for the Project and the gen-tie line. A copy of the conditional use permit is provided in Appendix B to the Application (proposed **Exhibit 1**). Additionally, Abercrombie Township issued the building permit for the Project on March 19, 2024.

Q. Has Flickertail committed to obtaining all necessary federal, state, county, and township permits?

A. Yes.

¹ See page 10 of the Application (proposed **Exhibit 1**) for an explanation of tax revenue paid to school districts.

**XI. CERTIFICATION RELATING TO ORDER PROVISIONS FOR SOLAR ENERGY
CONVERSION FACILITY SITING**

**Q. Has Flickertail provided a signed Certification Relating to Order Provisions for
Solar Energy Conversion Facility Siting, with accompanying Tree and Shrub
Mitigation Specifications?**

A. Yes. Proposed Exhibit 7 is the Certification, signed by Scott Zeimetz on behalf of
Flickertail. Scott has the authority to bind Flickertail with respect to adhering to the
Certification.

**Q. Please discuss the changes Flickertail is proposing to paragraph 20 of the
Certification.**

A. Flickertail has included proposed changes to paragraph 20 of the Certification to clarify
the provision. These changes are consistent with certifications in prior siting dockets.

**Q. With respect to tree and shrub clearing, is Flickertail requesting the ability to
clear an area wider than 50 feet in some locations within the Project Area?**

A. Yes. Flickertail will comply with the PSC tree and shrub mitigation specifications, but
is requesting to clear certain areas wider than 50 feet in order to allow continuous
installation of PV panels (see Figure 9 in proposed Exhibit 3).

XII. CONCLUSION

**Q. Based on the studies and analyses conducted, and the testimony you have
presented today, what are some of the conclusions Flickertail has reached
regarding the proposed Project?**

A. Flickertail has sited the Project to comply with applicable local zoning and the PSC's
siting requirements, as well as to minimize potential impacts to existing land uses,
cultural resources, natural resources, and existing infrastructure. The Project also has
strong landowner and community support and will provide significant benefits to the

450 local community and the state. Therefore, Flickertail respectfully requests that the
451 PSC issue a Certificate of Site Compatibility for the Project.

452

453 **Q. Does this conclude your Testimony?**

454 A. Yes.

455