Jay Schulte
Innovative Renewables, LLC
701-400-8089
jay@innovativerenewables.com
Bismarck, ND 58501

March 1, 2024

North Dakota Industrial Commission
Attention: Renewable Energy Program
State Capitol – 14th Floor
600 East Boulevard Ave Dept 405
Bismarck, ND 58505-0840

To whom it may concern,

Attached is the application for the proposed Twin Solar Complex that aims to investigate the additional investment costs and return on investment of a net-zero home built using passive home building techniques versus a traditionally built house that follows the city of Bismarck's building code.

The proposed investigation will construct two (2) homes with identical floorplans on the same city lot located in Bismarck, ND but built to different building standards. Each home will utilize photovoltaics paired with battery storage systems to generate and store electricity with the goal of each home to be net-zero. Upon completion of the two (2) homes, an energy assessment will be conducted to estimate the overall efficiency of each home. The electrical energy consumption and production of each home will be monitored for one (1) year and analyzed to develop baseline information for a home built using passive home building techniques. The data collected and knowledge developed through this investigation will be shared with the state of North Dakota in both the public and private sectors.

Thank you for considering this investigation to develop baseline information to better understand how a net-zero passively built home will function in the state of North Dakota. If any questions arise while reviewing this application, please feel free to contact me. I look forward to hearing back from the North Dakota Industrial Commission on this project.

Sincerely,

Jay Schulte
Innovative Renewables, LLC

APPLICATION CHECKLIST

Use this checklist as a tool to ensure that you have all of the components of the application package. Please note, this checklist is for your use only and does not need to be included in the package.

☒	Application
☒	Transmittal Letter
☒	$100 Application Fee
☒	Tax Liability Statement
☐	Letters of Support (If Applicable)
☒	Other Appendices (If Applicable)

When the package is completed, send an electronic version to the Industrial Commission at ndicgrants@nd.gov. Send payment to:

North Dakota Industrial Commission
Attention: Renewable Energy Program
State Capitol – 14th Floor
600 East Boulevard Ave Dept 405
Bismarck, ND 58505-0840

For more information on the application process please visit:
https://www.ndic.nd.gov/renewable-energy-program/rep-applicant-council-information

Questions can be addressed by calling 701-328-3722.

Renewable Energy Program

North Dakota Industrial Commission

Application

Project Title: TWIN SOLAR COMPLEX

Applicant: INNOVATIVE RENEWABLES, LLC

Principal Investigator: JAY SCHULTE

Date of Application: 2-29-24

Amount of Request: $378,185

Total Amount of Proposed Project: $756,370

Duration of Project: 1.5 YEARS

Point of Contact (POC): JAY SCHULTE

POC Telephone: 701-400-8089

POC Email: JAY@INNOVATIVERENEWABLES.COM

POC Address: 1016 CRESCENT LANE
BISMARCK, ND 58501

TABLE OF CONTENTS

Please use this table to fill in the correct corresponding page number.

ABSTRACT

Objective:

Innovative Renewables, LLC and Plain View Design + Build are working together to investigate the additional investment costs and the return on investment (ROI) of a stick-built home that applies passive home building techniques versus a traditional stick-built house that follows the city of Bismarck's building code. This investigation will construct two (2) homes with identical floorplans on the same city lot located in Bismarck, ND but built to different building standards. Each home will utilize photovoltaics (PV) paired with battery storage systems to generate and store electricity with the goal to be net-zero homes. As part of this investigation, Innovative Renewables, LLC will monitor the electrical energy consumption and production of each home for one (1) year and document the findings. Upon completion of the homes, Plain View Design + Build will conduct an energy assessment, i.e., blower door test, to estimate the overall efficiency of each home. After a year of data collecting, any findings or knowledge developed will be shared with the state of North Dakota and North Dakota's home builder associations. Another goal of this investigation is to develop renewable energy careers in the state of North Dakota through educational channels, both public and private, and a digital marketing campaign of this project.

Expected Results:

The expected results of this investigation are that the home built using passive home building techniques will be more energy efficient than the traditionally built home. Electrical energy consumption is expected to be greater in the traditionally built home but will also be impacted by the end-user and their daily lifestyle. The energy produced at each home is going to vary only by a small margin as each home's PV system is going to be identical. The initial investment to make one home more efficient is going to take several years to see an ROI. The ROI of that investment is going to be determined through our investigation.

Duration:

After the grant is accepted through the North Dakota Renewable Energy Program, the Planned Unit Development (PUD) process will need to begin with the city of Bismarck. The entire PUD process is likely to take 6 months to ensure proper permitting and documentation. Once approved by the city of Bismarck, construction will begin and be completed within one (1) year. Overall, the project completion process will take 18 months and then data collection will begin.

Total Project Cost:

The total cost of this project is $756,370. The cost of the two (2) homes is estimated at $668,520 ($270 per square foot) and the PV equipment and installation is estimated at $72,850. Plain View Design + Build's services will cost $15,000.

SEE APPENDIX A FOR INITIAL ESTIMATES

Participants:

Innovative Renewables, LLC

Innovative Renewables, LLC specializes in residential and commercial PV installations. They have been installing PV systems in the state of North Dakota since 2014 with over 150kW of installed PV capacity. Innovative Renewables brings years of renewable energy experience to the community and has worked on a variety of projects throughout the state of North Dakota.

Whether it is residential systems with or without backup power, off-grid hunting cabins, flat commercial roofs, ground mounts, or a decorative piece at North Dakota's Gateway to Science, Innovative Renewables has delivered innovative PV solutions to a diverse set of clients.

Plain View Design + Build

Plain View Design + Build is a residential home design and construction team that focuses on high end custom homes and large-scale remodels. Every project they take on is executed with intense commitment to meaningful designs intentionally built. Never satisfied with the status quo or good enough, their goal is to create spaces that meet our clients' unique needs, conserve resources, contribute to the community and demonstrate design excellence.

As a design + build company, Plain View's services include everything from the first sketch to the final nail. Their process is transparent, efficient and effective and always customer focused; it's the reason they created the company in 2013.

Plain View entered the market to meet the need for intentional design and construction. They were committed to creating a company that catered to clients who wanted to really think through their design decisions; clients concerned about construction impacts, opportunities and unimaginable possibilities.

Too often people settle for solutions that are within immediate reach and fall short of their true desires. They want to be known as the company that challenges clients to be bold. They are forward thinkers with an intentional approach to design. This means they are selective about the projects they accept and lean into work that gives them the best opportunity to be creative for the clients who demand it.

PROJECT DESCRIPTION

Objectives:

- Build two (2) net-zero homes with identical floor plans on the same property in Bismarck, ND that incorporate PV and battery storage and are net-zero.
    - One (1) home will be built to the city of Bismarck's building code.
    - One (1) home will be built using passive home building techniques.
- Compare differences in construction costs and determine an ROI of the cost difference for the home built using passive home building techniques versus the traditionally built home.
- Conduct an energy efficiency audit to predict expected ROI of the cost differences between the two homes.
- Install PV and battery storage systems on both homes and monitor electrical energy consumption and generation for one (1) year.
- Market this project to North Dakota's home builder associations and other trades.
- Provide access to PV and battery storage equipment for public education and private viewings.
- Develop baseline information to better understand how a passive home build will perform in the state of North Dakota.

Methodology:

Innovative Renewables, LLC and Plain View Design + Build will work together to design and build two (2) sustainable, net-zero homes that investigate passive home building techniques that also incorporates PV and battery storage technologies. One of the two homes will be built to the city of Bismarck's building code and the other home will be built using passive home building techniques. The cost differences and building techniques between the two homes will be documented. A ROI of that cost difference will both be estimated and calculated using an energy efficiency audit and monitoring electrical energy consumption and generation for one (1) year. The data collected and knowledge developed will be shared with the state of North Dakota and North Dakota's home builder associations. Access to the PV and battery storage technology would also be provided to the public education sector as well as the private sector. A digital marketing campaign would help expand the reach of this project throughout the state of North Dakota.

Anticipated Results:

The anticipated results are that this project will generate interest and create careers in the renewable energy sector within our community. This investigation will help home builders and their clients to make well-informed decisions about implementing passive home building techniques and renewable energy technology into their homes.

Facilities:

The facility in which this investigation will take place is located at 1310 E. Bowen Ave., Bismarck, ND. This location is an empty lot in Bismarck, ND that is 25' deep (N-S) and 150' wide (E-W) for a total of 3,750 ft^2. Two (2) identical homes will be built on the lot with the same floorplan but built to different building standards. Each home will contain a utility room for the PV and battery storage technology that will also collect data for the electrical energy consumption and generation monitoring.

SEE APPENDIX A FOR INITIAL BUILDING CONCEPT AND DESIGN

Resources:

Innovative Renewables, LLC has been a residential and commercial PV installer in the community since 2014. Innovative Renewables sources PV equipment from throughout the Midwest region and seldomly from the West Coast. Innovative Renewables installs the PV components and sources local electricians to ensure PV systems meet National Electrical Code (NEC) requirements.

Plain View Design + Build has been designing and building, as well as remodeling, homes and businesses in the community since 2013. Plain View employs North Dakota's only Certified Passive Home Builder and will serve as the project manager during the entire duration of the project. Plain View has great working relationships with local contractors from all trades that will ensure goals and timelines are met.

Techniques to Be Used, Their Availability and Capability:

Innovative Renewables, LLC will design and install a PV and battery storage system that will be sized appropriately for each of the two (2) homes. Product availability in the PV sector has not been an issue in the past and the PV systems will be able to manage the full electrical load of each of the two (2) homes. Innovative Renewables is located in Bismarck, ND and available year-round.

Plain View Design + Build will apply passive home building techniques as well as their decade of experience to this project. Plain View will function as the project manager to schedule and coordinate all trades involved during the construction process of the two (2) homes. Plain View is located in Bismarck, ND and available year-round.

Environmental and Economic Impacts while Project is Underway:

Environmental and economic impacts of the project will be small as most material and equipment needed during the construction process will be sourced locally or from the Midwest region.

Ultimate Technological and Economic Impacts:

Over the last decade, the installed PV and battery storage capacity in the United States has seen an exponential increase. The PV industry has developed technology that is suited for most, if not all, electrical power generation cases. The cost of PV and battery storage is often too expensive to justify the significant investment of the end user. If PV technology is incorporated into thoughtful building design and sustainable building practices, the technology may be more economical for home and business owners. The goal of this investigation is to quantify the potential savings from both an economical and environmental standpoint and determine the investment required to construct a net-zero home.

Why the Project is Needed:

The project is needed to develop baseline information that would be valuable to North Dakota's home builders as well as city and state planning divisions. The project would quantify the ROI of an investment into a passive home build versus a traditionally built home. This baseline information could be used across a variety of industries within the state of North Dakota and provide educational value to students of any age.

STANDARDS OF SUCCESS

Standards of Success should include: The measurable deliverables of the project that will determine whether it is a success; The value to North Dakota; An explanation of what parts of the public and private sector will likely make use of the project's results, and when and in what way; The potential that commercial use will be made of the project's results; How the project will enhance the education, research, development and marketing of North Dakota's renewable energy resources; How it will preserve existing jobs and create new ones; How it will otherwise satisfy the purposes established in the mission of the Program.

The measurable deliverable in this project are two (2) newly constructed homes with identical floorplans that incorporate different building techniques. The two (2) homes will both have PV and battery storage systems that will monitor electrical energy consumption and production. This investigation will establish baseline information to help North Dakota's home builders and their clients to make well-informed decisions about implementing passive home building techniques and renewable energy technology into their homes. The use of renewable energy technology and passive home building techniques will reduce the use of natural resources found in North Dakota.

Both public and private sectors will benefit from this project's results. The public education sector will be granted access to the homes to view how PV technology is incorporated into residential buildings. A digital marketing campaign is planned to generate interest and develop an understanding of PV technology and its capabilities. The private sector will also be granted access to the homes to view the PV technology and to better understand how to implement PV technology into their projects. This project is intended so that residential and commercial use of PV technology is adopted across the state of North Dakota.

The project will expose students of all ages to the project to educate them on one of the many renewable energy resources in the state of North Dakota. As mentioned throughout this application, this project is primarily focused on investigating the ROI of investing into PV technology and passive home building techniques as well as how to increase a home's energy efficiency. Baseline information is to be established after one (1) year of monitoring the electrical energy consumption and production of each home.

To go along with North Dakota's Renewable Energy Program, a major milestone of this project is to create new careers in the renewable energy sector and this project has many potential avenues to do that. The idea is that once baseline information is established, PV technology will be more widely adopted by both the residential and commercial sectors in the state of North Dakota.

BACKGROUND/QUALIFICIATIONS

Please provide a summary of prior work related to the project conducted by the applicant and other participants as well as by other organizations. ***This should also include summary of the experience and qualifications pertinent to the project of the applicant, principal investigator, and other participants in the project.***

Innovative Renewables, LLC

Innovative Renewables, LLC is owned and operated by Jay Schulte. Jay is a licensed professional electrical engineer in the state of North Dakota. Jay has a Bachelor of Science degree in electrical engineering from North Dakota State University and a Master of Science degree in renewable energy systems from Appalachian State University. Jay has held careers in the electrical design industry at Prairie Engineering, P.C., the power transmission sector at Basin Electric Power Cooperative, and in electric vehicle design at Doosan Bobcat NA. Jay has also been installing PV systems in the state of North Dakota since 2014 as a side business and also had a 1.5-year stint of installing PV systems full-time.

Innovative Renewables' first PV system was installed in Bismarck, ND in August of 2014 and was rated at 2kW. Since the first PV installation in 2014, Innovative Renewables has installed PV systems on many residential homes with and without backup power, off-grid hunting cabins, flat commercial roofs, ground mounts, and the latest was a decorative piece at North Dakota's Gateway to Science building. The largest PV system that Innovative Renewables has installed is rated at 30.4kW. Innovative Renewables approaches solutions with costs, performance, and clients' expectations in mind while also designing systems that will allow for expansion in the future.

Plain View Design + Build

Plain View Design + Build is owned and operated by Tanner Reidman and Logan Hauff. Tanner began his career in the construction industry which then led him to pursue an Architectural Drafting and Estimating degree from North Dakota State College of Science. Logan recently joined Plain View as a past University of Mary graduate with construction and commercial property risk management experience. Logan is also North Dakota's only Certified Passive House Builder and enjoys building science and optimal building practices. The combination of Tanner and Logan at Plain View Design + Build is a perfect fit for this project.

Plain View Design + Build has worked on many remodels and custom new construction builds in both the residential and commercial sector throughout the state of North Dakota. From whole home transformations, kitchen and bathroom remodels, modern farmhouses, ranch houses, or commercial restorations, Plain View's portfolio covers a variety of applications. The latest addition to Plain View's portfolio is a five-flex, referred to as the Sweet Row, located on the same city block as this proposed project. Plain View has also worked on several multi-family urban infill projects, such as the Sweet Row, throughout the city of Bismarck and has experience working with the city of Bismarck.

MANAGEMENT

*A description of **how** the applicant will manage and oversee the project to ensure it is being carried out on schedule and in a manner that best ensures its objectives will be met, **and a description of the evaluation points to be used** during the course of the project.*

Innovative Renewables, LLC is hiring Plain View Design + Build to serve as the project manager of this project. The two companies will work in conjunction during the design and planning phase of the project. Once the construction phase begins, Plain View will oversee material acquisitions and scheduling contractors to keep the project on schedule.

Plain View Design + Build will follow an established timeline after a grant is approved for this project from the North Dakota Renewable Energy Program. Plain View is currently estimating that it will take 6 months to finalize designs and complete the PUD process with the city of Bismarck. Assuming no major setbacks occur, construction will begin at the completion of the PUD process. The construction phase will follow a strict schedule with contractors lined up to ensure the project progresses at an acceptable rate. The construction timeline is expected to take one (1) year. Updates of the project's progress will be reported on a monthly basis between Innovative Renewables and Plain View. Updates will be provided to the North Dakota Renewable Energy Program as required.

TIMETABLE

Please provide a project schedule setting forth the starting and completion dates, dates for completing major project activities, and proposed dates upon which the interim reports will be submitted.

As mentioned throughout this application, the timeline for completion of this project is expected to be 1.5-years after a grant is approved. The first 6 months of the 18-month timeline will involve finalizing designs and completing the PUD process with the city of Bismarck. Construction of the Twin Solar Complex will begin at the completion of the PUD process and take one (1) year to complete. Innovative Renewables, LLC and Plain View Design + Build will meet on a monthly basis during the construction phase and interim reports will be provided to the North Dakota Renewable Energy Program as requested. Data collecting will begin upon completion of construction and will be evaluated after one (1) year.

BUDGET

*Please use the table below to provide an **itemized list** of the project's capital costs; direct operating costs, including salaries; and indirect costs; and an explanation of which of these costs will be supported by the grant and in what amount. The budget should identify all other committed and prospective funding sources and the amount of funding from each source. **Please feel free to add columns and rows as needed.** Higher priority will be given to those projects have matching private industry investment equal to at least 50% or more of total cost.*

Project Associated Expense	NDIC's Share	Applicant's Share (Cash)	Applicant's Share (In-Kind)	Other Project Sponsor's Share
Construction	$334,260	$334,260	$0	$0
Plain View	$7,500	$7,500	$0	$0
Inn. Renewables	$36,425	$36,425	$0	$0
Total	$378,185	$378,185	$0	$0

Please use the space below to justify project associated expenses and discuss if less funding is available than that requested, whether the project's objectives will be unattainable or delayed.

Less funding would be acceptable but will cause the project's objectives to be less economical. The estimated cost of construction on the Twin Solar Complex will be revisited and finalized if this project receives a grant from the North Dakota Renewable Energy Program. Innovative Renewables, LLC and Plain View Design + Build have put together initial estimation costs of construction, but those costs will go into more detail as the project progresses. The goal is to bring the construction costs of the Twin Solar Complex down to $500,000 to make this project more economical. A reduction of square footage as well as reworking the floorplans of the complex will be evaluated.

CONFIDENTIAL INFORMATION

A person or entity may file a request with the Commission to have material(s) designated as confidential. By law, the request is confidential. The request for confidentiality should be strictly limited to information that meets the criteria to be identified as trade secrets or commercial, financial, or proprietary information. The Commission shall examine the request and determine whether the information meets the criteria. Until such time as the Commission meets and reviews the request for confidentiality, the portions of the application for which confidentiality is being requested shall be held, on a provisional basis, as confidential.

If the confidentiality request is denied, the Commission shall notify the requester and the requester may ask for the return of the information and the request within 10 days of the notice. If no return is sought, the information and request are public record.

Note: Information wished to be considered as confidential should be placed in separate appendices along with the confidentiality request. The appendices must be clearly labeled as confidential. If you plan to request confidentiality for ***reports*** *if the proposal is successful, a request must still be provided.*

To request confidentiality, please use the template available at https://www.ndic.nd.gov/renewable-energy-program/rep-applicant-council-information.

If you are not requesting confidentiality, please note that below.

N/A

PATENTS/RIGHTS TO TECHNICAL DATA

Any patents or rights that the applicant wishes to reserve must be identified in the application. If this does not apply to your proposal, please note that below.

N/A

STATE PROGRAMS AND INCENTIVES

Any programs or incentives from the State that the applicant has participated in within the last five years should be listed below, along with the timeframe and value.

N/A

Appendix

PLAIN VIEW
DESIGN + BUILD

Printed: Feb 29, 2024
212 West Main Avenue, Bismarck, ND 58501
Phone: 7014260895

Specification

Job: 2403_SCHULTE TWIN HOME
Address: 1310 East Bowen Avenue, Bismarck, ND 58501

Preliminary Project Brief

Based on Schematic Design Set 01 dated: Feb 2024

Project Brief: Residential Twin Home Infill Project

Project Title: 13th St. and Bowen Ave. Twin Home Infill

Project Overview: The 13th St. and Bowen Ave. Twin Home Infill project entails the development of two residential units on a corner lot located in Bismarck. The project aims to address the need for quality housing in the area while maximizing land use efficiency through the construction of twin homes. Each unit will feature a two-story slab-on-grade structure, offering comfortable and modern living spaces for prospective residents.

Project Location: The project site is situated at the intersection of 13th St. and Bowen Ave. in Bismarck, North Dakota. The corner lot provides an ideal location for residential development, offering convenient access to amenities, transportation routes, and neighborhood services.

Each Unit: 1238 sq. ft. of conditions space

- (1) Bed
- (2) Bath
- (1.5) off street parking

Project Scope:

1. Construction of two identical twin homes on the designated corner lot.
2. Each unit will comprise 1238 sq. ft. of conditioned living space distributed across two stories.
3. Design and implementation of modern architectural elements and landscaping to enhance curb appeal and neighborhood aesthetics.
4. Integration of energy-efficient features and sustainable building practices to promote environmental responsibility and reduce long-term operating costs.
5. Provision of essential amenities, including parking spaces, outdoor living areas, and landscaping, to ensure a high quality of life for residents.
6. Compliance with local building codes, zoning regulations, and permit requirements throughout all phases of the project.

Key Project Objectives:

1. Provide high-quality, modern residential housing options in the Bismarck area.
2. Maximize land use efficiency through the development of twin homes on the corner lot.
3. Create aesthetically pleasing and functional living spaces that enhance the surrounding neighborhood.
4. Incorporate sustainable design principles to minimize environmental impact and promote energy efficiency.
5. Ensure compliance with all relevant building codes, regulations, and permit requirements.
6. Deliver the project within the established timeline and budget constraints while meeting or exceeding quality standards.

Budget: The project budget will be allocated for various aspects, including, design and engineering, construction materials and labor, permits and approvals, landscaping, and contingencies. A detailed budget breakdown will be provided upon project commencement, with periodic updates throughout the project lifecycle to ensure financial transparency and accountability.

Stakeholders:

1. Project Owner/Developer
2. Design and Engineering Team
3. Construction Contractor
4. Local Government Authorities (Permitting and Zoning Departments)
5. Neighborhood Residents and Community Stakeholders

Preliminary Cost Estimate: Based on our past experience for projects like this we would start preliminary cost estimate range below.

Estimated Range:

1. (2) units @ 1238 sq. ft. = **$680,900 @ $270/ sq.ft.**
2. (2) units @ 1238 sq. ft. = **$792,300 @ $320/ sq.ft.**

Project Challenges:

1. **Site Constraints - Small Lot Size:** The limited size of the corner lot presents a significant challenge in designing and constructing two residential units with adequate living space and amenities. Maximizing land use efficiency while adhering to setback requirements and zoning regulations will require careful planning and innovative design solutions.
2. **Utilities and Infrastructure Integration:** Integrating utilities such as water, sewer, electricity, and gas into the existing infrastructure while minimizing disruption to surrounding properties and infrastructure presents a technical challenge. Coordination with utility providers and adherence to local regulations are essential to ensure seamless integration and functionality.
3. **Construction Logistics:** The proximity of neighboring properties and the limited space available for construction activities pose challenges in terms of site logistics, material deliveries, and worker access. Implementing efficient construction methodologies and scheduling to minimize disruptions to the surrounding neighborhood will be imperative.
4. **Community Engagement and Acceptance:** Engaging with the local community to address concerns, gather feedback, and ensure acceptance of the project is crucial for its success. Communicating the benefits of the twin home infill project and addressing any potential objections or misconceptions will require proactive outreach and transparent communication channels.

Addressing these challenges will require a collaborative approach involving all stakeholders, including the project owner, design and engineering team, construction contractor, local government authorities, and the surrounding community. By proactively identifying and mitigating potential challenges, the project can proceed smoothly and achieve its objectives effectively.

Conclusion: The 13th St. and Bowen Ave. Twin Home Infill project represents an opportunity to meet the demand for quality residential housing in Bismarck while revitalizing an underutilized corner lot. By adhering to modern design standards, sustainable practices, and community engagement principles, the project aims to create a vibrant and sustainable living environment for current and future residents.

1310 E. BOWEN AVE

1310 E BOWEN - PRELIIMINARY

TWIN SOLAR

Project No. #PV
Copyright 2020 PLAIN VIEW LLC

SCHULTE
02.08.24

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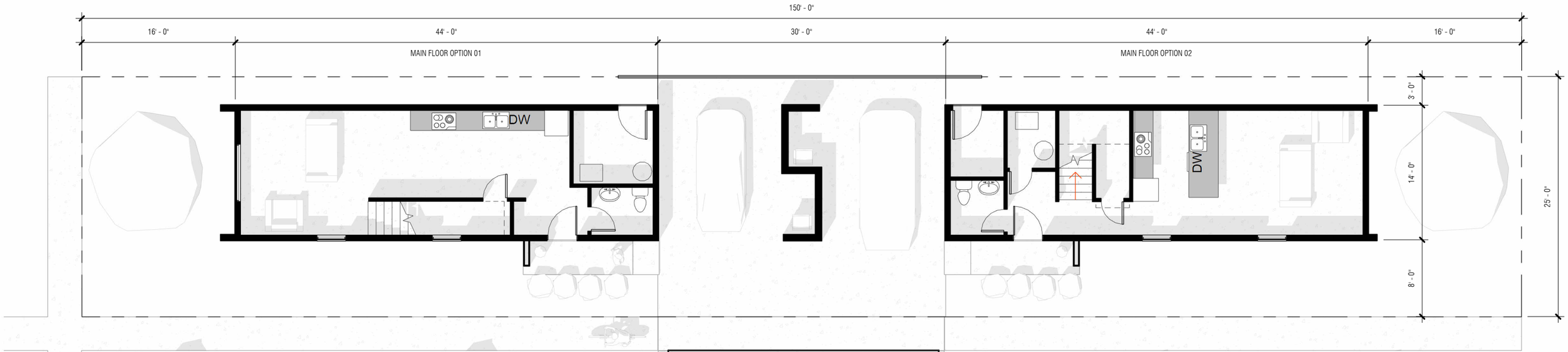
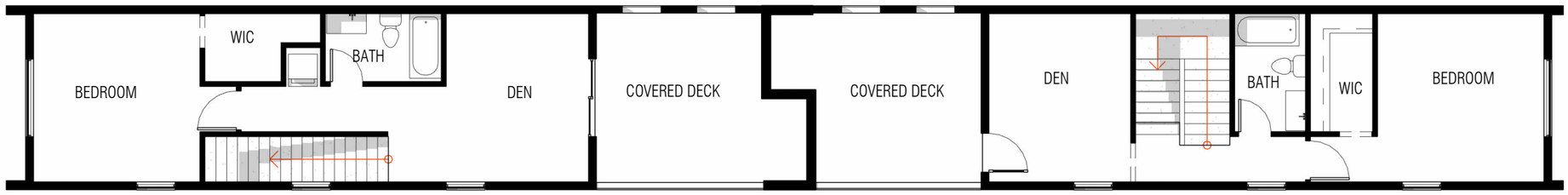


1 **01-MAIN FLOOR PLAN - SD**

Scale: 1" = 10'-0"

BUILDING AREA SCHEDULE

NAME	AREA
MAIN T.O. SUBFLOOR	
COVERED CARPORT	418 SF
UNIT A-MAIN FLOOR	616 SF
UNIT B MAIN FLOOR	616 SF



4 **02-UPPER FLOOR PLAN - SD**

Scale: 1" = 10'-0"

BUILDING AREA SCHEDULE

NAME	AREA
UPPER T.O. SUBFLOOR	
COVERED DECK	420 SF
UNIT A UPPER FLOOR	566 SF
UNIT B UPPER FLOOR	554 SF

PROJECT NOTES:

1. (1) BEDROOM PER UNIT
2. (2) BATH PER UNIT
3. 2x6 EXTERIOR MAIN FLOOR WALLS 9' 1-1/8" TALL
4. 2x6 EXTERIOR SECOND FLOOR WALLS @ 8' 1 1/8" TALL
5. SLAB ON GRADE

FLOOR PLANS

TWIN SOLAR

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ELEVATIONS

TWIN SOLAR

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1310 E BOWEN - PRELIMINARY

TWIN SOLAR

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SCHULTE
02.08.24

QUOTATION

1016 Crescent Lane
Bismarck, ND 58501
(701) 400-8089

DATE: March 1, 2024
INVOICE # -

SEND TO:
Innovative Renewables, LLC
1016 Crescent Lane
Bismarck, ND 58501
(701) 400-8089

FOR: Twin Solar Complex
5.92kW Solar Install
with Battery Backup
on Each Unit

DESCRIPTION	QTY	RATE	AMOUNT
Silfab Solar, 370 Watt Panel	32.00	$ 272.88	$ 8,732.00
Sol-Ark, 15kW Hybrid Inverter, 120/240V	2.00	$ 8,437.50	$ 16,875.00
APS, Module Rapid Shutdown	32.00	$ 43.19	$ 1,382.00
APS, Single Core Transmitter	2.00	$ 184.36	$ 368.73
Fortress Power, eVault Max 18.5kWh Battery	2.00	$ 12,500.00	$ 25,000.00
PV Wire - #10 Black - 250'	1.00	$ 218.75	$ 218.75
PV Wire - #10 Red - 250'	1.00	$ 209.38	$ 209.38
Male and Female MC4 Connectors	8.00	$ 1.98	$ 15.80
Grounding Wire - #10 at 100'	1.00	$ 103.20	$ 103.20
IronRidge, XR100 Rail 17' (XR-100-204B)	14.00	$ 75.04	$ 1,050.53
IronRidge, XR100 BOSS Splice (XR100-BOSS-01-M1)	14.00	$ 9.30	$ 130.20
IronRidge, Universal Module Clamp (UFO-CL-01-B1)	68.00	$ 4.20	$ 285.60
IronRidge, Stopper Sleeve (UFO-STP-35MM-B1)	8.00	$ 0.96	$ 7.70
IronRidge, Grounding Lug (XR-LUG-03-A1)	1.00	$ 7.73	$ 7.73
IronRidge, FlashFoot2 (FF2-02-B2)	57.00	$ 15.93	$ 907.73
IronRidge, Bonding Hardware (BHW-SQ-02-A1)	57.00	$ 3.16	$ 180.26
IronRidge, XR100 End Cap (XR-100-CAP)	1.00	$ 13.63	$ 13.63
IronRidge, Microinverter Bonding Hardware (BHW-MI-01-A1)	32.00	$ 1.73	$ 55.20
IronRidge, Contour Rails (CTR-TR84-01)	16.00	$ 38.23	$ 611.60
IronRidge, Contour Hardware (CTR-CL-01)	48.00	$ 8.03	$ 385.20
Hourly Installation and Commissioning	120.00	$ 75.00	$ 9,000.00
Man Lift, 1 Week	1.00	$ 750.00	$ 750.00
Electrical Work by Electrical Contractor	1.00	-	-
		SUBTOTAL	$ 66,290.21
		TAX RATE	7.00%
		TAXABLE MATERIALS	$ 4,063.04
		ESTIMATED SHIPPING	$ 2,500.00
		TOTAL	$ 72,853.25
		TOTAL PRICE/WATT	$ 6.15
		TOTAL AFTER 2024 TAX INCENTIVE (30%)	$ 50,997.28
		TOTAL PRICE/WATT AFTER 2024 TAX INCENTIVE (30%)	$ 4.31

PROPOSAL IS VALID FOR 30 DAYS

THANK YOU FOR YOUR BUSINESS!

Industrial Commission

Tax Liability Statement

Applicant:

Innovative Renewables, LLC
1016 Crescent Lane
Bismarck, ND 58501

Application Title:

Twin Solar Complex

Program:

- ☐ Lignite Research, Development and Marketing Program
- ☑ Renewable Energy Program
- ☐ Oil & Gas Research Program
- ☐ Clean Sustainable Energy Authority

Certification:

I hereby certify that the applicant listed above does not have any outstanding tax liability owed to the State of North Dakota or any of its political subdivisions.

Signature

Owner

Title

3/1/24

Date