

Prairie Island Net Zero Project Progress Report

July 1, 2022

Prepared For:

Minnesota Department of Commerce

Minnesota House of Representatives Climate and Energy Finance and Policy Committee

Minnesota Senate Energy and Utilities Finance and Policy Committee

Prepared By:

Prairie Island Indian Community





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1. Executive Summary

On May 27, 2020, Minnesota Governor Tim Walz signed House File 1842. As provided in the legislation, the "Prairie Island Net Zero Project is established with the goal of the Prairie Island Indian Community developing an energy system that results in net zero emissions" (Laws of Minnesota 2020, chapter 118, section 3, subdivision 1). Further, the law states, "The Prairie Island Indian Community must file a report with the commissioner of commerce and the legislative committees with jurisdiction over energy policy on July 1, 2022, and each July 1 thereafter until the project is complete, describing the progress made in implementing the project and the uses of expended funds" (Laws of Minnesota 2020, chapter 118, section 3, subdivision 4(b)).

This *Net Zero Progress Report* is filed with Minnesota Department of Commerce Commissioner Grace Arnold, the Honorable Dave Senjem, Chair of the Minnesota Senate Energy and Utilities Finance and Policy Committee, and the Honorable Jamie Long, Chair of Minnesota House of Representatives Climate and Energy Finance and Policy Committee. The report describes the progress made to-date in implementing the Prairie Island Net Zero Project (Project) and the uses of expended funds to-date.

Prairie Island Indian Community (PIIC) acknowledges the immense value this ground-breaking Project presents for PIIC and as a learning opportunity for the Minnesota community more broadly. In this report, PIIC reviews the strong progress made through Project Phase II and milestones achieved to-date. PIIC activities in the last year include refinement of the technical solutions identified in Phase I, technical solution costing, and the procurement of technical solution contractors.

PIIC has also developed governance frameworks to support Project implementation and long-term management. Finally, PIIC has conducted community engagement and supplementary fund-seeking activities, which are important to Project success.

PIIC expresses appreciation to the State for approving a deadline extension for PIIC to complete Project Phase II. The additional time received has been essential for PIIC to achieve the progress presented in this report. As a result, PIIC is on schedule to deliver a robust, cost-efficient Phase II *Certified Total Cost* by January 1, 2023 as required by law.

With continued State and stakeholder support, PIIC is optimistic that it will achieve the Project vision for a sustainable future for the next seven generations. In this report, PIIC is pleased to share work accomplished over the last year as well as a high-level preview of activities expected in the year ahead. Through all Project efforts, PIIC continues to focus on maximizing the value of the State funds expended and to achieve strong carbon emission reductions and community benefits with the available budget.

PIIC thanks the State and is willing to support any additional inquiries not addressed herein.

1. Project Implementation Progress

1.1. Summary

The Project was established through the Laws of Minnesota 2020, Chapter 118, sections 3 and 5¹ with the goal for PIIC to develop an energy system that results in net zero carbon emissions². PIIC aims to eliminate approximately 20 million pounds of carbon annually. The Project comprises three phases as shown in Figure 1, from planning through procurement, design, and construction of solutions. The Project is currently in Phase II. This is PIIC's first annual *Net Zero Progress Report* reviewing Project progress over the last 12 months, since the *Net Zero Project Plan* was completed in July 1, 2021.

¹ [Chapter 118 - MN Laws](#)

² The Prairie Island Net Zero Project aims to address Scope 1 and 2 emissions.



Figure 1. Prairie Island Net Zero Project – Three Phases

PHASE I: Net Zero Project Plan Development. *Completed July 1, 2021*

The PIIC Net Zero Team³ conducted a comprehensive assessment of source energy and end-use emissions to create an emissions baseline. Informed by the baseline assessment, technical analysis, and input from stakeholder engagement, the PIIC Tribal Council approved a comprehensive plan for the Project that maximizes carbon reduction through energy conservation, renewable energy generation, and deployment of innovative technologies. Per the Laws of Minnesota 2020, chapter 118, section 3, PIIC filed a comprehensive *Net Zero Project Plan*⁴ with the Commissioner of Commerce and legislative committees with jurisdiction over energy policy on July 1, 2021, describing the Project elements and implementation strategy.

PHASE II: Net Zero Project Costing and Vendor Selection. *July 2, 2021 through January 1, 2023*

The Project is currently in Phase II, which began July 2, 2021 with preliminary engineering to confirm the technical performance of the measures in the Phase I plan. The preliminary engineering also provides detail required to solicit contractor bids for technical solutions through competitive procurement processes. The results of this process will be used to develop a *Certified Total Cost* to be submitted to the State by January 1, 2023.

The *Certified Total Cost* had an original submission deadline to the State by January 1, 2022. However, PIIC requested additional time to complete Phase II, given new global realities, including increased material costs and labor shortages resulting from the COVID-19 pandemic. On March 24, 2022, Governor Walz signed House File 2875, which provided a *Certified Total Cost* deadline extension until January 1, 2023.

PHASE III: Net Zero Project Construction and Implementation. *January 2, 2023 through Commissioning*

The Net Zero Team will conduct Project engineering, construction, and implementation through Phase III to achieve net zero emissions. Annual *Net Zero Progress Reports* will be delivered to the State each July 1 through completion of the Project.

1.2. Reflections on Phase II Progress

Upon State acceptance of the Phase I *Net Zero Project Plan*, PIIC released a single, consolidated Request for Proposals (RFP) on October 1, 2021 that solicited contractor bids for all Project technical solution elements. PIIC quickly identified through the RFP process that supply chain and labor disruptions posed risk to the Project ability to meet the requested timelines, available budget, and grant requirement to secure multiple competitive bids. PIIC requested and the State granted PIIC a one-year extension for Project Phase II (including the completion of a *Certified Total Cost*) until January 1, 2023. With this extension, PIIC cancelled the consolidated RFP on November 12, 2021.

³ Net Zero Team comprises PIIC as well as Net Zero Project consultants.

⁴ <http://prairieisland.org/wp-content/uploads/2021/07/Phase1ReportforPIICNetZeroProject.pdf>



The Phase II extension has been essential to empower PIIC to make substantial progress towards Project objectives. Following the consolidated RFP cancellation, the Net Zero Team conducted market surveys to collect feedback from key stakeholders and develop an adjusted competitive sourcing approach that aims to overcome material price increases and labor shortages. The extension also gave PIIC additional time to develop necessary governance and operational structures to support the Project over the long-term.

Key accomplishments achieved to-date for Project Phase II are summarized in the sections below.

1.3. Project Technical Solutions

PIIC determined that it was preferable to pursue an adjusted sourcing approach to secure technical solution contractors who will engineer, construct, and implement Project elements. The Laws of Minnesota 2020, Chapter 118, sections 3 requires that PIIC “must obtain bids to construct the proposed project from no fewer than three separate contractors and must enter into one or more contract”. PIIC’s adjusted sourcing strategy complies with this requirement and the State’s desire for PIIC to secure the *Certified Total Cost* through a competitive bidding process. Additionally, PIIC has further refined the technical solutions it plans to implement towards Net Zero.

Figure 2 illustrates the adjusted sourcing and technical solution strategy:

- **Four Separate RFPs:** To secure contracts for the largest, most costly and complex Project elements, PIIC is issuing four separate Requests for Proposals⁵ (RFPs) for: 1) Commercial Solar Renewable Energy, 2) Commercial Electrification, 3) Commercial Energy Efficiency, and 4) Residential Solutions. The Commercial Solar Renewable Energy and the Commercial Electrification RFPs have been issued and at least three contractor bids have been received for each. Shortlisted bidders are currently being interviewed. The remaining two RFPs are planned for release in the third quarter of 2022.
- **Other Competitive Bid Solutions⁶:** PIIC determined that several Project elements with minimal cost and complexity are best served through an alternative, competitive bid process. These solutions include electrification of select PIIC vehicles, a water irrigation project, installation of a monitoring-based commissioning system, and behavioral energy reports.

COMMERCIAL SOLAR RENEWABLE ENERGY ~5.4MW ground-mount solar array, Mount Frontenac rooftop solar, EV charging	COMMERCIAL ELECTRIFICATION Geothermal wellfield, Central plant and equipment, Air source heat pumps, ERUs, Laundry, Solar thermal wall
RESIDENTIAL SOLUTIONS Solar, Energy efficiency, Appliance electrification	COMMERCIAL ENERGY EFFICIENCY Lighting, Water-Energy measures, Kitchen exhaust and controls, Stoves and ovens
OTHER COMPETITIVELY BID SOLUTIONS Fleet vehicle electrification, Irrigation, Monitoring-based commissioning, and Behavioral energy reports	

Figure 2. Adjusted Sourcing Approach for Net Zero Project

⁵ Requests for Proposals (RFPs) is a formal, competitive procurement process wherein PIIC issues solicitations (i.e., RFPs), hosts pre-bid meetings with prospective bidders, answers bidder questions through formal RFP addendums, and collects comprehensive technical solution and pricing bids through a secure, confidential process. Bids are fairly evaluated and scored by PIIC. Shortlist interviews are conducted with select bidders prior to award.

⁶ Other competitive bid solutions are being developed through an alternative process wherein PIIC collects multiple, competitive pricing quotes for the planned scope of work whenever possible to secure cost-efficient solutions.



The technical solutions proposed above represent PIIC's current plans based on the best information available today. Additional adjustments to these solutions may be required through Phase II.

The Project is currently on schedule to develop and deliver the Phase II Certified Total Cost to the State by January 1, 2023, including all Project elements defined above. Milestones accomplished towards this adjusted sourcing approach are provided in Table 1.

Table 1. Sourcing Accomplishments To-Date

Project Scope	Accomplishments
Overall Project	<ul style="list-style-type: none"> October 1, 2021 – Issued consolidated Round 1 RFP November 12, 2021 – Commitment from the State to extend the Phase II <i>Certified Total Cost</i> deadline one year to January 1, 2023 January 7, 2022 – Market surveys to inform adjusted sourcing approach January 27, 2022 – New sourcing strategy approved by PIIC Tribal Council March 24, 2022 – Governor Walz signed House File 2875, which provided a <i>Certified Total Cost</i> deadline extension until January 1, 2023 Other milestones to-be-determined.
Commercial Solar Renewable Energy RFP	<ul style="list-style-type: none"> March 17, 2022 – Completed RFP potential bidder outreach April 1, 2022 – Issued RFP May 13, 2022 – Bids received from contractors May 26, 2022 – PIIC Tribal Council decision to proceed with PPA and Interconnection Agreement negotiations May 16 - June 1, 2022 – Bid evaluation and shortlist of bidders June 23, 2022 – Bidder interviews complete Other milestones to-be-determined.
Commercial Electrification RFP	<ul style="list-style-type: none"> April 14, 2022 – Completed RFP potential bidder outreach April 15, 2022 – Issued RFP May 26, 2022 – Bids received from contractors May 26 – June 1, 2022 – Bid evaluation and shortlist of bidders June 10, 2022 – Bidder interviews complete Other milestones to-be-determined.
Commercial Energy Efficiency RFP	<ul style="list-style-type: none"> May 17, 2022 – Finalized RFP schedule June 24, 2022 – Developed lighting design and owner's requirements Other milestones to-be-determined.
Residential Solutions RFP	<ul style="list-style-type: none"> June 1, 2022 – Completed residential measure assessment June 27, 2022 – Developed measure list options Other milestones to-be-determined.
Other Competitive Bid Solutions	<ul style="list-style-type: none"> May 17, 2022 – Finalized draft electric vehicle acquisition plan June 22, 2022 – Finalized design of the water irrigation project Other milestones to-be-determined.

Table 2 provides an overview of anticipated carbon emission and cost reductions PIIC anticipates for these Project elements, as well as the associated budget needed for the solutions.



Table 2. Project Scope - Estimated Annual Cost Reduction and Emissions

Project Elements	Reduction of CO ₂ Emissions (Pounds)	Estimated Annual Cost Reduction	Budget
Commercial Solar Renewable Energy	551,144	\$327,708	\$10,062,000
Commercial Electrification	16,736,208	\$525,778	\$27,451,000
Commercial Energy Efficiency	1,062,685	\$226,842	\$1,059,000
Residential Solutions	664,435	\$33,346	\$2,235,000
Other Competitively Bid Solutions	411,593	\$123,616	\$1,732,000
TOTAL	19,426,065	\$1,237,290	\$42,539,000

1.3.1. Commercial Solar Renewable Energy

PIIC intends to replace fossil-fuel generated electricity with zero-carbon solar generation. The primary solar Project element is a turn-key, fixed-tilt, interconnected, ground-mounted ~5.4 MWDC solar photovoltaic ("PV") system located on PIIC tribal sovereign land. The PV size currently anticipates a Year-1 production target of 6,427,000 kWh. The scope also includes EV charging stations and a rooftop PV system at the Mt. Frontenac Golf Course as additive-alternates.

The current interconnection plan for the ~5.4 MWDC PV installation includes a 480V service that will feed into an existing feeder upstream of a 12.5 kV ring bus (that serves the Casino, Hotel, and multiple commercial buildings through breaker 66UB01). The selected contractor would be required to comply with the DIP-DEA interconnection standards and requirements and the DEA Interconnection Agreement, including the installation of an automatic curtailment system to ensure that exported PV energy complies with the DEA Interconnection Agreement and a Power Purchase Agreement.

The large ground-mounted PV system is planned for a site near the Treasure Island Resort and Casino. The Mount Frontenac clubhouse is planned to have rooftop solar and electric vehicle charging stations that will be located at the Treasure Island Resort and Casino Security as well as PIIC Transportation and Tribal Police buildings.

1.3.2. Commercial Electrification

Electrifying commercial equipment, shifting to renewable resources, and increasing the efficiency of existing systems are crucial to PIIC's efforts to achieve Net Zero as these strategies directly reduce natural gas consumption. The following solutions have been planned for PIIC commercial facilities:

Treasure Island Resort and Casino

- Heat Recovery Ground Source Heat Plant (HRGSHP) and geothermal well field
- Transpired Solar Thermal Wall
- Laundry Washer and Dryer
- Domestic Water Electrification
- Heating System

PIIC Public Safety, Community Center, and Tribal Administration buildings:

- **Domestic** Water Heater Electrification
- HVAC System Electrification

The final mix of technologies to achieve targeted carbon emission reductions through this RFP process will be defined by bidding contractors and PIIC, given the available budget. As part of PIIC plans to electrify its equipment, PIIC is relying on the electricity supply from Dakota Electric Association (DEA), which continues to decarbonize its generation sources, thereby reducing PIIC carbon emissions.



1.3.3. Commercial Energy Efficiency

PIIC intends to implement energy efficiency solutions at its commercial buildings to use less energy to accomplish the same output, thereby eliminating energy waste and reducing costs. Target measures for commercial buildings include the Treasure Island Resort and Casino, Public Safety building, Community Center, and the Tribal Administration building.

Measures that reduce PIIC energy consumption provide a direct corresponding reduction in carbon emissions. Planned measures include kitchen hood and controls upgrades, lighting and lighting controls upgrades, water-energy savings measures, and kitchen stoves and ovens.

1.3.4. Residential Solutions

PIIC has roughly 100 residential single-family homes within the geographic boundaries of this Project. Reducing carbon emissions among community residents comprises a three-pronged approach:

- **Energy Efficiency:** To reduce energy costs, residents will receive a variety of energy efficiency retrofits. Planned solutions include LED lighting, various low-cost water conservation measures, and other weatherization measures.
- **Solar:** PIIC plans to provide rooftop solar photovoltaic ("PV") systems.
- **Electrification:** Planned measures include high-efficiency air-source heat pumps, heat pump water heaters, electric stovetop and oven units, and electric heat pump tumble dryers. All associated electrical upgrades and circuits are included when replacing natural gas appliances.

Technologies will be offered to eligible on-reservation residents at no charge. PIIC forecasts that about half of the 100 residents will be interested in participating and have homes that meet technical requirements for solar and electrification measures. A greater number of residents will likely benefit from energy efficiency measures.

1.3.5. Other Competitive Bid Solutions

While the above solutions will deliver the vast majority for emission reductions towards PIIC's Net Zero goal, several additional solutions are planned to provide benefits. These elements are being considered and secured through an alternative competitive bid process. They include:

- **Water Irrigation:** PIIC will implement changes to water irrigation to reduce pumping and treatment requirements. This measure is anticipated to save approximately 58,000 kWh and 38 million gallons of potable water each year. The estimated cost of this measure is \$350,000.
- **Electric Vehicles:** Fossil fuel-powered PIIC vehicles are planned to be replaced with all-electric and hybrid vehicles. Vehicle electrification will eliminate emissions created by burning approximately 14,678 gallons of gasoline per year. The anticipated reduction of annual operating expenses is approximately \$24,750.
- **Monitoring Based Commissioning (MBCx):** An MBCx system will enable PIIC to perform ongoing analysis of commercial buildings and provide real-time equipment performance information to the building operators, enabling the site to track its energy consumption, detect faulty equipment operations, and identify unusual energy or power consumption patterns as they occur. MBCx is expected to reduce electric consumption by approximately 1,248,000 kWh with a corresponding reduction in operating expense of \$90,000 annually.
- **Residential Behavioral Program:** PIIC will provide residential customers with insights into their energy usage in connection with the overall Project. The implementation cost is an estimated \$100,000 but has the potential to reduce 22,000 lbs. of carbon emissions directly and could be used to encourage adoption of other energy savings and/or carbon-reducing technologies for additional future savings.



As discussed above, PIIC Project costs have been impacted by supply chain and labor disruptions, which continue to cause price escalations and delays. The Net Zero Team is focused on achieving the greatest amounts of carbon reductions with the budget available.

The technical solutions proposed above represent PIIC's current plans based on the best information available today. Additional adjustments to these solutions may be required through Phase II. Final proposed solutions and associated costs will be provided to the State in the *Certified Total Cost* by January 1, 2023.

1.4. Project Governance

PIIC identified the need for governance frameworks to support successful Project execution and long-term, sustainable operations. In addition to typical factors, this Project's location on PIIC sovereign land adds a layer of complexity to governance. Specifically, there are additional governance structure options available to Indian Tribes and it is imperative to consider the legal, financial, and contractual factors when making a governance decision. Further, the variety of Project elements and the differences in timelines for those elements adds to the complexity of this endeavor.

PIIC has undertaken activities to develop the necessary management structures, systems, and protocols that enable PIIC to oversee and operate the Net Zero investment over the long-term. Elements of Project governance currently in development by PIIC include:

- **Dedicated PIIC Project Management:** PIIC conducted a search for and hired an Energy Program Manager in March 2022 to provide ongoing oversight for the Project on behalf of PIIC. This resource provides on-the-ground, focused oversight for Project workstreams and serves as a cross-functional liaison across PIIC, the Net Zero Team, and State and industry stakeholders.
- **Tribal Community Ordinances:** Given the Project scale, PIIC determined that the Project could have far-reaching impacts on the community that may require changes to PIIC tribal ordinances. The Net Zero Team has conducted research on potentially relevant ordinances and is currently considering opportunities for improvements to tribal building code, tribal employment rights, and tax law that would best serve the community through Project development.
- **Internal PIIC Operations:** To support the long-term sustainability of the Project and PIIC's progress towards Net Zero, PIIC is exploring internal opportunities to update its policies and operations. For example, PIIC plans to establish a new policy to guide internal product and equipment purchasing to best support carbon reductions. Additionally, the Net Zero Team developed financial models and operation structures to help sustain and manage the Net Zero investment over time.
- **Special Purpose Vehicle:** PIIC evaluated Tribal governance structures it may want to implement for elements of the Project, including chartered corporations, chartered LLCs, a Tribal utility authority, Tribal department, and Section 17 corporations⁷. To support PIIC Tribal Council decision-making in this regard, the Net Zero Team provided strategic, legal, and financial guidance. Ultimately, based on financial modeling and future operating risks, the Tribal Council decided to pursue a Special Purpose Vehicle (SPV) in support of the Commercial Solar Renewable Energy technical solution. The exact legal structure, along with the operational details, are currently in development.

Further development of these and other governance efforts continues through Phase II.

⁷ Although Section 17 corporations are federally chartered, only tribes are able to own and operate this particular structure. Non-Tribal entities include state chartered corporations and state chartered LLCs. Any governance structure that is not organized directly under the Tribal Government is considered a Special Purpose Vehicle (SPV).



1.5. Community Engagement

1.5.1. PIIC Community Members

Community participation in and support for the Project is essential to its long-term success. To this end, PIIC community member engagement has been a priority through each phase of the Project. Although community engagement can be challenging due to the technical nature of the Project, PIIC has sought to use a well-rounded approach with a consistent message delivered via multiple channels.

Through Phase I, the Net Zero Team conducted extensive community engagement to inform development of the *Net Zero Project Plan* submitted to the State on July 1, 2021. Activities included community member surveys, community meetings, and stakeholder interviews. Community input was integrated into a SWOT analysis, values, vision, priority areas and strategic pathways for the Project.

In Phase II, the Net Zero Team has provided broad updates on Project progress and timelines during Community Quarterly Meetings that are hosted by PIIC Tribal Council. These updates provide an overview of actions that have taken place during the prior three months, across Project workstreams. Additionally, the meetings allow for community questions. These quarterly meetings have taken place in-person and via Zoom, for wider accessibility. Phase II quarterly meetings were held in July and October 2021 and January and April 2022. Additional meetings are planned for July and October 2022.

PIIC also hosted two in-person open house events at the Community Center to provide interested community members with more detailed information about the Project. Community members had the option to attend in-person or via Zoom. The meetings included a series of large presentation boards located throughout Tribal Council Chambers. Some community members gravitated towards the technical boards, while others took more interest in the boards that displayed information on meeting community needs. Members of the Net Zero Team were available to answer questions.

In addition to the above, PIIC has provided Project updates and topical energy education sessions to community members through other written and verbal channels. For example, PIIC's Energy Program Manager conducted a Net Zero & Climate education session with elementary and middle school students during PIIC Summer School in June 2022. Additionally, PIIC utility service providers Dakota Electric Association and Xcel Energy participated in the PIIC Public Safety Day in June 2022, sharing key energy safety information with community members. PIIC is also exploring new opportunities to communicate with PIIC community members around the Project.

1.5.2. Utility Service Providers

Dakota Electric Association and Great River Energy

The Net Zero Team collaborated with Dakota Electric Association (DEA) and Great River Energy (GRE) in Phase I to understand existing infrastructure, including the electric distribution network and locations of two substations that serve PIIC and to explore potential locations for utility- and community-scale solar projects. Both electric utilities confirmed their emissions factor anticipated 94% decrease by 2023. DEA and GRE provided key technical information regarding the 12kV ring bus, the NRG diesel generation sets interaction, interconnection processes within the MISO territory, available capacity on DEA's distribution lines and GRE's transmission lines at PIIC, and potential system upgrades. The system impact study that DEA facilitated through GRE was a critical component in understanding how much solar could be placed on the distribution network and location of the interconnection.

In Phase II, the Net Zero Team began discussions with DEA regarding potential interconnection scenarios of the proposed 5.4MW solar PV system. Meetings were held with DEA staff during September and October 2021 to discuss behind the meter (BTM) and front of the meter (FTM) interconnection scenarios. During these discussions, DEA also brought forward the idea of using a Power Purchase Agreement (PPA) structure to purchase the energy produced by the solar photovoltaic (PV) system. DEA and GRE provided a PPA draft contract in November 2021. PIIC intends to continue discussion and negotiations with the utilities for the interconnection agreement and PPA over the next several months.



Additionally through Phase II, DEA has worked with the Net Zero Team to identify and validate utility rebates and incentives that PIIC can leverage through the Project to reduce costs. DEA has been a responsive and supportive partner to PIIC through the Project and continues to participate in other energy related community events, such as the PIIC Public Safety Day on June 16, 2022.

Xcel Energy

In Phase I, the Net Zero Team met with Xcel Energy to expand the existing relationship, identify PIIC service territory and existing relevant utility infrastructure, and understand near- and long-term goals for the Prairie Island Nuclear Generating Plant. Xcel provided information regarding its decarbonization goals for its generation portfolio, its upcoming Hydrogen pilot project, interconnection processes within the MISO territory, available capacity on Xcel's transmission lines at PIIC, and future partnership opportunities in Xcel's regional utility-scale developments.

Through Phase II, Xcel continues to offer support as needed to PIIC around the Project and participates in select community events, such as the PIIC Public Safety Day on June 16, 2022. Additional opportunities to collaborate with Xcel for the Project may be identified through the remainder of Phase II.

1.6. Supplementary Funding

Due to increased technical solution costs caused by COVID-19 economic disruptions, PIIC is actively identifying and pursuing supplementary funding from public and private sources that may augment the Project funds provided by the State. The Net Zero Team has conducted extensive research on utility incentives and rebates, private programs, federal and state grant programs, and other funding sources. As these opportunities become available, PIIC is submitting grant requests and proposals in pursuit of the funds. As funds are secured, PIIC will provide updates through future reports to the State.

2. Summary of Funding Use

2.1. Funds Expended To-Date

Through the Laws of Minnesota 2020, Chapter 118, section 5, subdivision 2(c), the State has allocated \$46.2M to PIIC for the Project. As noted in subdivision 2(b), all funds become available to PIIC by Fiscal Year 2023. Table 3 identifies the Project funds requested by PIIC and delivered by the State to-date as well as the remaining funds balance.

Table 3. PIIC Funding Request from Grant To-Date

Grant Funding	Amounts
MN State Allocation	\$46,200,000.00
April 2021 Payment to PIIC	\$2,406,000.00
May 2022 Payment to PIIC	\$1,700,000.00
Remaining Balance (as of July 1, 2022)	\$42,094,000.00

Figure 3 illustrates the Project funds that PIIC has expended to-date. These funds have enabled PIIC to provide oversight for the Project and work with consultants who provide essential technical and legal expertise and capacity to support PIIC in developing a Project of this scale. PIIC and consultant activities using these funds include:

- **Phase I:** PIIC worked with technical consultants to develop a plan to achieve Net Zero. This included community stakeholder research, technical analysis and development of a carbon emissions baseline, and a comprehensive *Net Zero Project Plan* submitted to the State.



- Phase II (to-date)⁸:** PIIC is working with technical consultants to refine the technical solutions developed in Phase I and procure contractors to engineer, construct, and implement the solutions in Phase III. Additionally, PIIC is working with technical and legal consultants to develop tribal governance and operational structures to support the Project. Finally, PIIC is applying grant funds towards expenses related to the PIIC Energy Program Manager, as the Manager's primary function is oversight for the Project on behalf of PIIC.

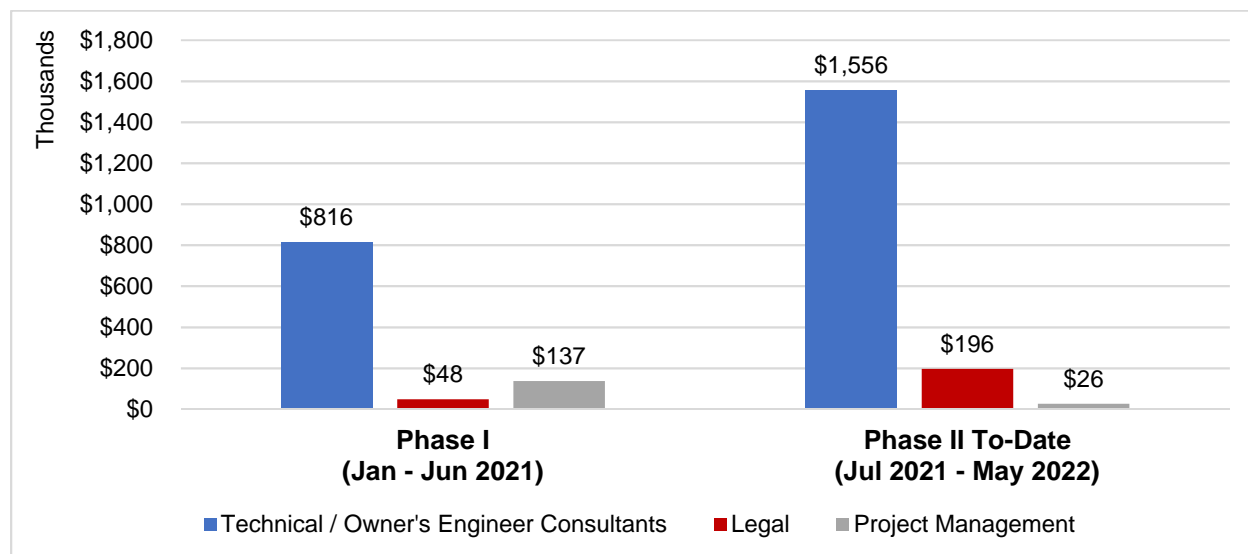


Figure 3. PIIC Expended Funds To-Date

PIIC continues to monitor its use of allocated funds through proactive PIIC-led project management, monthly review of funds expended, forecasting of future Project costs, and negotiation with consultants and contractors to optimize prices.

2.2. Funds Look Ahead

PIIC manages the total \$46.2M Project funds with the intention of directing as much of the funding as possible towards the engineering, construction, and implementation of technical solutions for carbon emission reduction. As shown in Figure 4, PIIC estimates that more than 90% of the allocated funding will be directed towards Project implementation. PIIC believes that greater funds spent on Project implementation translates to greater carbon reduction benefits for the community.

To preserve significant funds for Project implementation, PIIC takes active steps to manage up-front consulting costs and other expenses needed for Project planning and solution procurement as described above. PIIC estimates it will direct 9% of total Project funds towards consultants who provide the aforementioned technical and legal expertise as well as PIIC project management.

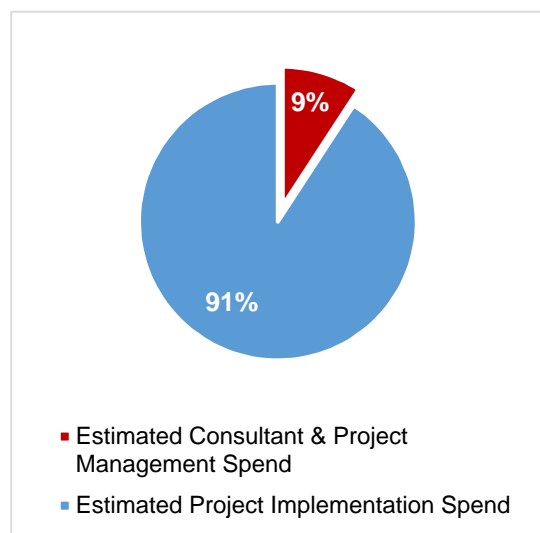


Figure 4. Anticipated Allocation of Total \$46.2M

⁸ The Phase II costs to-date presented in this report include July 2021 through May 2022 costs. June - December 2022 costs will be included in Phase II in the future, but are not available for this report.



Notably, material and labor costs associated with Project implementation of technical solutions have increased since PIIC developed the Phase I *Net Zero Project Plan* submitted to the State on July 1, 2021. Many of these increased costs are due to supply chain impacts and labor shortages related to the COVID-19 pandemic. PIIC continues to gather information on Project implementation costs through ongoing Phase II activities, reduce these costs where possible, and will provide final Project implementation costs within the *Certified Total Cost* to the State on January 1, 2023.

PIIC is actively seeking to maximize the emissions benefits for the community given the Project funds and cost increases. PIIC is also seeking supplementary funding from public and private sources that may augment the funds provided by the State. These additional funds are yet undetermined.

3. Plans for Year Ahead

In the year ahead—until PIIC's next annual progress report on July 1, 2023—PIIC will focus on completing Project Phase II and beginning Phase III. In Phase II, this includes procuring technical solution contractors, finalizing governance structures to support the Project, seeking additional Project funding sources, and submitting the *Certified Total Cost* to the State on January 1, 2023. In Phase III, this includes initiation of technical solution engineering, construction, and implementation. Community and stakeholder engagement will also continue through Phases II and III.

The Net Zero Team continues to focus on maximizing the value for funds expended in terms of achieving the greatest emission reductions and community benefits with the available budget.

Planned technical solutions for the year ahead include:

- **Commercial Solar Renewable Energy RFP** will result in an Engineering, Procurement and Construction (EPC) contract. Following the contract award, the successful supplier will conduct engineering and design for the remainder of 2022. Construction and implementation will take place in 2023 and likely be completed in late 2023. Commissioning of the new solar array is expected in late 2023 or early 2024.
- **Commercial Electrification RFP** will result in an iterative design-delivery contract. The contractor will conduct design activities through the remainder of 2022 in partnership with PIIC, and develop a Guaranteed Maximum Price (GMP) proposal for PIIC Tribal Council's approval. The successful firm will begin construction in 2023. Depending on the final design approved and the number of geothermal wells required, construction could extend through 2026.
- **Commercial Energy Efficiency RFP** will result in a direct installation agreement to be executed by the end of 2022. The measures in the scope of work will be installed and the project will be complete in 2023.
- **Residential Solutions RFP** will result in a contract to assess the feasibility of solar and electrification measures and identify the highest-impact energy efficiency measures within approved budget for each resident that chooses to participate in the Project. Residential improvements will continue through 2023.
- **Other Competitively Bid Solutions.** Planned solutions include changes to water irrigation that will reduce pumping and treatment requirements, a residential behavioral project that will provide residential customers insights into their energy usage and connection with the overall Project, purchases of PIIC electric vehicles, and a monitoring-based commissioning system that will reduce ongoing operational energy consumption. The implementation of these solutions will be ongoing throughout 2023.
- **Measurement & Verification.** As technical solutions are implemented, PIIC will measure and verify (M&V) their performance to meet expectations and carbon emission reduction goals. PIIC plans to use industry standards that comply with the International Performance Measurement & Verification Protocol.



Other planned Project activities for the year ahead includes:

- **Certified Total Cost:** Through the remainder of Phase II, PIIC will procure contractors for the technical solutions. Total costs for all Project elements will be included in the *Certified Total Cost* that PIIC will deliver to the State by January 1, 2023.
- **Governance Frameworks:** PIIC intends to finalize the governance frameworks needed to support Project implementation and ongoing operations. Frameworks are likely to include ordinances, a tribal special purpose vehicle, and internal PIIC operational policies and practices.
- **Supplementary Project Funding:** PIIC is actively pursuing supplementary funding to address increased Project costs. The Net Zero Team will continue identifying and submitting funding requests to public and private sources.
- **Community Engagement:** PIIC intends to expand its engagement of PIIC community members with the Project. PIIC will continue sharing Project updates at Quarterly Meetings hosted by PIIC Tribal Council as well as through other channels. PIIC is also exploring events and new communication channels to keep community members informed of Project progress and to build overall community interest in Net Zero, energy, and climate topics.
- **Knowledge-Sharing:** As PIIC gathers insights and lessons learned through the Project, PIIC looks forward to sharing this information with other tribes, communities, and State staff members. PIIC intends for the Project to serve as a demonstration for others across Minnesota and the U.S. PIIC will seek to work with the State and others to make these connections and share knowledge in the collective interest of achieving a decarbonized future.

The technical solutions and plans proposed in this report represent PIIC's current plans based on the best information available today. Additional adjustments to these solutions may be required through Phase II. Final proposed solutions and associated costs will be provided to the State in the *Certified Total Cost* by January 1, 2023.

PIIC acknowledges the benefits and challenges of this ground-breaking Project and is optimistic that with continued State and stakeholder support, PIIC will succeed in achieving its vision for a sustainable future for the next seven generations. To this end, PIIC is proud of the work accomplished to-date and continues to push forward with remaining activities in Project Phases II and III, seeking to maximize the benefits it can deliver to community members with the budget available.