**Request for Proposal (RFP)**

**Supply and Delivery of Off-Grid, Stand-Alone Residential Solar Power Systems with Battery Storage**

**Issued by:** Energize Wind River
**Address:** P.O. Box 2001, Fort Washakie WY 82514
**Date of Issue:** 7/23, 2025
**Proposal Due Date:** 8/23, 2025

**Introduction**

Energize Wind River (EWR) invites qualified contractors to submit proposals to supply and deliver the components of off-grid stand-alone residential solar power systems for a minimum of 10 individual residences. This calls for proposals that cover all components, delivery and technical support as listed below. Proposals that don’t include all subjects will not be considered. These systems are intended for installation by EWR staff at individual residential homes across the Wind River Reservation in Wyoming. The supplied components must constitute a complete functioning stand-alone solar power system when assembled.

This project is in support of EWR's objectives to enhance energy independence, reliability, and sustainability for tribal residents. This project aims to employ and empower EWR staff to install and maintain off-grid solar systems. Proposals must articulate clear plans to fulfill the objectives stated throughout this document and provide robust power system components tailored specifically to remote residential applications.

**Project Overview**

This is a whole source supply and delivery of off-grid solar system components to EWR at the address provided in the RFP. These supplies will be installed and maintained by EWR staff at 10 residential homes on the Wind River Reservation in Wyoming. System components specifications have been identified and detailed below - all proposals shall include components that meet the specifications detailed in the RFP. (all specifications are minimums)

The purpose of this project is to empower EWR staff to gain skills in the energy sector by enabling them to assemble, install, maintain and operate PV systems. EWR will request onsite and remote support personnel from the awarded contractor in the occurrence of any technical difficulties for a period of one year following the contract award.

**Scope of Work**

Supply and delivery of components that meet the requirements listed below.

**PV Panel Mounting**

Provide 10 PV tracker mounts with the following specifications:

**Mounting Specifications**

* **Nameplate PV capacity per tracker:** 2.3 kW
* **Panel Specifications**
	+ **Peak Rated Power:** 575W (minimum)
	+ **Panel Type:** Bifacial
	+ **Module Efficiency:** 20.6% (minimum)
	+ **Bifaciality Factor:** 70 ± 5%
	+ **Maximum Power Voltage:** 43.17V
	+ **Maximum Power Current:** 9.93A
	+ **Solar Cells:** 156 Half Cut, M10x, PERC Cells
	+ **Junction Box:** IP-68 rated with 3 bypass diodes
	+ **UL Certification:** UL61215, UL61730, CSA C22.2 No. 61730
	+ **Operational Temperature:** -40°C to +85°C
	+ **Max System Voltage:** 1500V
	+ **Fire Type:** Type 1
* **Tracking type:** Astronomical (pre-programmed)
* **Mount type:** Single footing pole mounted dual axis tracking
* **Photovoltaic Voltage per Tracker (MPP):** 184 VDC
* **Photovoltaic Current Per Tracker (MPP):** 12 A

**Additional Equipment:** All proposals shall include necessary equipment for system interconnection for functionality, including but not limited to: controls, wiring, cabling, tools, etc.

**Inverters**

Provide 10 inverters with the following specifications:

**Input Data (PV)**

* **Max. Allowed PV Power (STC):** 19,500W
* **Rated MPPT Operating Voltage Range:** 175 - 425V
* **Max. DC Input Voltage:** 500V
* **No. of MPP Trackers:** 3
* **No. of PV Strings per MPPT:** 2
* **Max. AC Coupled Input:** 19,200W

**Output Data (AC)**

* **Nominal AC Voltage:** 120/240V, 120/208V, 220V
* **Grid Frequency:** 50 / 60Hz
* **Real Power, max continuous:** 15,000W
* **Max. Output Current:** 62.5A
* **Real Power, max continuous (batteries only, no PV):** 12,000W (50A @ 240V)
* **CEC Efficiency:** 96.5%
* **Max Efficiency:** 97.5%
* **Design (DC to AC):** Transformerless DC

**Battery Input Data (DC)**

* **Battery Technologies:** Lithium
* **Nominal DC Voltage:** 48V
* **Operating Voltage Range:** 43 - 63V
* **Capacity:** 50 – 9900Ah
* **External Battery Temperature Sensor (BTS):** Included
* **Automatic Generator Start (AGS):** 2 Wire Start - Integrated
* **BMS Communication:** CANBus & RS485 MODBUS

**General Data**

* **Enclosure:** IP65 / NEMA 3R
* **Ambient Temperature:** -25~55°C, > 45°C Derating
* **Idle Consumption - No Load:** 70W
* **Communication and Monitoring:** Wi-Fi & LAN Hardware Included

**Protection and Certifications**

* **Certifications and Listings:** UL1741-2010/2018, IEEE1547a 2003/2014, FCC 15 Class B, UL1741SB, CA Rule 21, HECO Rule 14H
* **Surge Protection:** DC Type II, AC Type II

**Additional Equipment:** All proposed inverters should include necessary equipment for full system connectivity and power distribution, including but not limited to: remote monitoring software/hardware, cabling, wiring, interconnection with fuel generator, tools, battery charge controller limiting DoD to manufacturer specifications, etc.

**Battery Storage**

Provide 10 battery solutions for indoor installation with the following specifications:

**Basic Parameters**

* **Cell Type:** LiFePO4 Lithium Iron Phosphate (LFP)
* **Minimum Battery System Capacity:** 15.9 kWh
* **Single Module Nominal Voltage:** 52 Vdc
* **Application:** Dual Voltage LV/HV

**Electrical Specifications**

* **Voltage Range:** 48.5-1000 Vdc
* **Net Capacity:** 110 Ah
* **Usable Capacity:** 100 Ah
* **Charge/Discharge Current:** 110 A / 110 A (LV)
* **Depth of Discharge:** Up to 100%
	+ **Note:** Programmable DOD to avoid 100% discharge

**Performance & Environment**

* **Operating Temperature:** +14°F to +131°F (-10°C to +55°C)
* **Expected Cycle Life:** Up to 7000 cycles

**Technical Features**

* **Communication Port:** RS485, CAN, RS232
* **HV String Modules:** Up to 16
* **Standards:** UL 1973, UL 9540A, IEC62619, CE, UN38.3

**Key Features**

* BMS with real time balancing
* Adaptive charge/discharge CAN logic
* 2xDI/DO programmable
* Mobile app for monitoring and remote control, update, debug, data save

**Current Ratings**

* **Charge/Discharge (Recommended):** 240 A
* **Current (Continuous):** 300 A
* **Current (Peak 15 sec):** 380 A
* **Current (Discharge Peak 5 sec):** 600 A

**Note:**

* Batteries must be scalable and proposed battery storage should have no less than 15.9kWh of rated battery capacity, please provide full scalability range for low voltage applications.
* For modular battery solutions provide the number of batteries per system in your proposal.

**Additional Equipment:** All proposed battery solutions should include all necessary equipment for integration with the proposed inverter, including but not limited to: bus bars, cabling, racking, tools, etc.

**Shipping**

All items listed in this RFP will be delivered to:
14567 Highway 287 Unit #2 Fort Washakie, WY 82514

**Warranty**

All equipment proposed should include factory warranty, specify coverage durations and have 1-year warranty period by contractor.

**Technical Support**

* **Onsite project manager:** Awarded contractor will provide 1040 hours of on-site support over the span of 1 year.
	+ **Qualifications:** Must hold at minimum an undergraduate degree in mechanical engineering or electrical engineering.
* **Remote support:** Full remote support within 24 hours’ notices for at least one year.
* **Purpose:** To provide onsite and remote technical assistance and problem solving in case any issues arise with equipment.

**Contractor Proposal Requirements**

Interested contractors must submit a detailed proposal addressing the following elements:

1. **Company Description (up to 4 pages):** Provide a detailed narrative on your company's history, solar energy experience, previous relevant projects including those involving tribal off grid energy systems and clearly indicate and provide qualifications of key personnel for this proposal. Project personnel must include one person who will be dedicated for onsite assistance.
2. **Proposed Solar System Components (No Page Limit):** Include detailed technical specifications, manufacturers cut sheets and manufacturer selection with history for proposed components.
3. **Costs:** Provide proposed total cost to fulfill the supply and delivery all components for 10 stand-alone solar power systems and components, inclusive of technical support costs as described above.

**Evaluation Criteria**

Proposals will be scored based on the following criteria:

1. **20 pts** - Contractor experience and onsite/remote assistance provided.
2. **20 pts** – Components proposed and their fit to our requested components.
3. **20 pts** - Proposed timeline, desired project closeout within 1-yr. of executed contract.
4. **10 pts** – Contractor history in tribal communities and their plan to participate in the community and attend events with the EWR team.
5. **20 pts** - Native Preference for companies owned by federally recognized tribal members or actively employing federally recognized tribal members who will be directly involved in executing this project. (% of Team)
6. **10 pts** - Equipment and Components Manufactured in the USA. Score based on the percentage of USA manufactured components.

**Submission Instructions**

All interested contractors shall submit proposals electronically by **8/23, 2025**, to:

**Energize Wind River Director**
Levi Purdum
**Email:** levi.purdum@energizewindriver.org

Submissions can also be mailed to:
**P.O. Box 2001, Fort Washakie WY 82514**

**Late submissions will not be considered.**

**Contact Information**

For additional questions or further information please contact:

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