

# Des Moines County Emergency Management Agency

Burlington, Iowa

Specifications For

## One (1) Mobile Solar Power Generator Trailer

Grant-Funded Procurement | CERP/SEP Award

Specification Version 1.5 | Issued: April 2026

Minimum specifications for the Mobile Solar Power Generator Trailer unit have been developed to meet the job requirements and adopted service levels. Individual unit minimum specifications are provided below. All units shall be a current model under standard production by the manufacturer. All units are to be furnished completely with standard equipment and accessories as listed in the manufacturer's printed literature, plus the additional items specified herein. All equipment and options must be factory-installed where possible. All items installed by the dealer or subcontractor to the bidder must be noted by the bidder. Subcontractors and their scope of work shall be disclosed in the bid documents.

Each bidder shall complete every space in the Bidder's Proposal column and indicate the item being proposed to meet each minimum specification. A check in the YES column indicates the specified item is being provided. Bidders taking exception by selecting NO to any item shall clearly state the exception and reason in the Information/Notes column. Incomplete submissions may be deemed non-responsive. The County reserves the right to reject any bid due to unclear proposals and to award bids in the best interest of the County.

**Quantity:** 1 EA    **Description:** Mobile Solar Power Generator Trailer    **Department:** Des Moines County EMA

**Note:** These specifications are aligned with the approved CERP/SEP grant application (Iowa Energy Office, FY2026), which budgets for 3–4 kW solar capacity and 20–40 kWh of battery storage. Bidders are encouraged to propose systems that maximize capability within these parameters.

MINIMUM SPECIFICATIONS	YES	NO	INFORMATION / NOTES
<b>GENERAL REQUIREMENTS</b>			
MAKE: All qualified brands			
MODEL: Current production model			
YEAR: New only — order or stock			
Solar Capacity: 3–4 kW DC; state total wattage			
The Battery System shall meet the requirements listed in the Battery System Section.			
Output Configuration: 120/240V split-phase			
<b>TRAILER</b>			
Nominal Size: 7 ft wide × 14 ft long enclosed cargo trailer (or equivalent square footage)			
Interior Height: 6.5 ft minimum			
Exterior Finish: White or light-colored			
GVWR: Adequately rated for proposed payload; bidder to state GVWR and available payload			
Axles: Tandem (two axles)			
Electric Brakes: On both axles			

MINIMUM SPECIFICATIONS	YES	NO	INFORMATION / NOTES
<p>Coupler: 2-5/16" ball coupler or lunette ring/pintle; bidder to state type</p> <p>Safety Chains: Meets trailer rating with compliant retaining hooks</p> <p>Trailer Connection: 7-pin RV type plug</p> <p>Tongue Jack: Swing-down, hand crank, with jockey wheel</p> <p>Stabilizer Jacks: Rear stabilizer jacks included</p>			
Leveling: Bubble level or equivalent on trailer			
Tires: Highway-rated, appropriate for GVWR; state size			
Spare Tire: One (1) mounted spare tire included			
Lights: Weatherproof — stop, tail, turn			
<p>Doors: Rear ramp door or double barn doors</p> <p>Side Door: Passenger-side access door</p> <p>Roof: Continuous surface suitable for solar panel mounting</p> <p>Roof Crossmember Spacing: State spacing and structural capacity for solar mounting</p> <p>Frame: Powder-coated or painted steel</p>			
<b>SOLAR PANELS</b>			
<p>Solar Charge Architecture: Describe charging architecture (dedicated MPPT or inverter-integrated). Provide make/model and rated PV input capacity.</p> <p>Panel Quantity and Wattage: State number and wattage per panel</p>			
Mounting: Fixed roof mount, tilt-up, fold-out, or deployable ground array; describe deployment method and transport locking mechanism			
<p>Angle/Configuration: State fixed or adjustable tilt configuration</p> <p>Equipment Listing: UL-listed or ETL-listed</p> <p>Panel Warranty: State the manufacturer's power output warranty period</p>			
<b>BATTERY SYSTEM</b>			
Usable Capacity: 20–40 kWh; state actual usable capacity			
Chemistry: Lithium Iron Phosphate (LFP) preferred; state type			

MINIMUM SPECIFICATIONS	YES	NO	INFORMATION / NOTES
<p>Battery Management System (BMS): Integrated BMS included</p> <p>Low-Temperature Charging Protection: Integrated low-temp charging protection</p> <p>Thermal Management: Active or passive thermal management included</p> <p>Component Listing: UL 1973-listed batteries strongly preferred; if not listed, provide third-party safety certification</p> <p>System-Level Listing: UL 9540-listed system preferred; if not, bidder shall state reason and provide equivalent documentation</p>			
<p>System shall be designed in accordance with applicable electrical and battery safety standards. Vendor shall identify relevant codes and certifications.</p> <p>Thermal Runaway Propagation: Provide UL 9540A test data or equivalent documentation</p>			
<p>Thermal Runaway Off-Gas Venting: Battery enclosure shall include appropriate ventilation for chemistry and enclosure design</p> <p>Battery Warranty: State the manufacturer's warranty period and coverage</p>			
<b>INVERTER / CHARGER</b>			
<p>Type: Inverter/charger — combined unit capable of shore power charging</p> <p>Continuous Output: Bidder shall state rated continuous output; it must be appropriately sized for the proposed battery and solar capacity</p> <p>Output Voltage: 120/240V split-phase, 60 Hz</p> <p>Waveform: Pure sine wave output</p>			
<p>Shore Power Input: AC-input capable for battery charging from the grid or generator</p> <p>Digital Display / Monitoring Interface: Included; state model</p>			
<p>Equipment Listing: UL-listed or ETL-listed</p>			
<p>Inverter Warranty: State the manufacturer's warranty period</p>			
<b>AC DISTRIBUTION</b>			
<p>Interior AC Load Center / Breaker Panel: Included</p>			
<p>Exterior 120V Receptacles: Min of 2 on driver and passenger sides; GFCI-protected;</p>			

MINIMUM SPECIFICATIONS	YES	NO	INFORMATION / NOTES
weatherproof covers; state quantity and placement  120/240V Output: One exterior generator-class receptacle (30A minimum or equivalent)  Shore Power Inlet: One (1) inlet for grid or generator charging  Circuit Labeling: All circuits and outlets clearly labeled  Overcurrent Protection: Dedicated breaker per exterior circuit			
<b>MONITORING SYSTEM</b>			
Battery State of Charge Display: Real-time, locally viewable			
Solar Production Monitoring: Included			
Inverter Output Monitoring: Included			
Load Monitoring: Included			
Fault / Error Notifications: Included			
Remote Access: Capable of remote monitoring when the internet is available; state platform/app			
<b>VENTILATION &amp; THERMAL MANAGEMENT</b>			
Power Electronics Ventilation: Active ventilation for inverter/electronics bay			
Ventilation Control: Thermostatic or automatic control			
All vents: Weatherproof, louvered or hooded, rain-shielded			
Battery Thermal Management: Manufacturer-recommended thermal management included			
Off-Gas Emergency Ventilation: Bidder shall describe the approach for normal thermal management and battery off-gas scenarios			
<b>MOBILE &amp; ENVIRONMENTAL DURABILITY</b>			
All equipment is rated for mobile application (vibration, shock loads during towing)			
All equipment is suitable for Iowa's seasonal operating conditions			
Wiring: Protected using conduit, strain relief, and abrasion protection			
Component Mounting: Vibration-resistant hardware throughout			

MINIMUM SPECIFICATIONS	YES	NO	INFORMATION / NOTES
Loaded Trailer Weight: State estimated fully loaded weight; must not exceed GVWR			
<b>SAFETY &amp; FIRE CODE COMPLIANCE</b>			
Fire Detection: Battery/electronics compartment shall include smoke and/or heat detection with an audible alarm			
Fire Suppression: State whether integrated automatic fire suppression is available or included			
Emergency DC Disconnect: Clearly labeled, accessible exterior disconnect; first responders able to de-energize without opening the unit			
Exterior Hazard Signage: Hazard identification indicating battery system presence and emergency contact information			
AHJ Documentation Package: UL listings, NFPA 855 compliance letter, system one-line diagram, and UL 9540A test data			
Iowa Electrical Code Compliance: All electrical work shall comply with the currently adopted Iowa Electrical Code (NFPA 70 / NEC with Iowa amendments)			
DOT Transport Compliance: System shall be designed to allow safe highway transport of installed battery systems			
<b>OPTIONAL ITEMS</b>			
Light Tower: Telescoping adjustable-height tower to 20 ft minimum; LED flood lights			
Backup Generator: State make/model if available as an add-on option			
Quick-Deploy Array System: Motorized or push-button solar array deployment			

**Operating Condition:** The successful bidder shall provide a fully functional unit upon delivery, ready to go into service, including a commissioning demonstration and operator training.

**Questions about the bid process or federal requirements:**

Brittini Rahmus, Southeast Iowa Regional Planning Commission  
319-753-4307; [brahmus@seirpc.com](mailto:brahmus@seirpc.com)

**Questions about specifications:**

Kenny Oleson, Des Moines County Energy District  
309-297-1889; [thekennyoleson@gmail.com](mailto:thekennyoleson@gmail.com)

MINIMUM SPECIFICATIONS	BIDDER'S PROPOSAL
<p>Warranty — Coverage: 100% parts, labor, and shipping for all warranty items during the warranty period.</p> <p>Warranty period shall be a minimum of 12 months from the in-service date.</p> <p>Warranty Comments: (Must state OEM warranty coverages and periods)</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>Delayed Start: Warranty shall begin on Des Moines County's official in-service date.</p> <p>Manuals: One (1) owner's manual provided.</p> <p>Training: Factory-authorized operation, safety, and maintenance training on-site at Des Moines County. Minimum four (4) contact hours, including: towing and deployment, solar array operation, battery monitoring and load management, electrical safety overview, and emergency troubleshooting. Trainer's cost per hour: \$_____ / HR</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/> In-service date: _____</p> <p>Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>Delivery: FOB Destination — Des Moines County Emergency Management, 13700 Washington Rd, West Burlington, Iowa 52655. Delivery by or before: June 30, 2026.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>Inspection, Acceptance &amp; Payment: Unit inspected on receipt. Payment within 30 days of the accepted unit invoice.</p>	

SUPPLIER INFORMATION	
<b>Company Name:</b>	
<b>Contact Name:</b>	
<b>Address:</b>  <b>Phone:</b>  <b>Email:</b>  <b>Estimated Lead Time (days after receipt of order):</b>  <b>Alternate Specification (attach if applicable):</b>	
<p><b>Supplier Certification:</b></p> <p>The undersigned bidder certifies that this bid is made in good faith without collusion or connection with any other person or persons bidding on this work, and that this bid is made in conformity with the specifications. In the event of discrepancies between this bid and the specifications, the specifications shall prevail.</p> <p>Print Name: _____ Signature: _____</p> <p>Title: _____ Date: _____</p>	