

*Use this document to detail specifications/requirements for an item and/or ancillary services.*



## TITLE: Long-life Standby Batteries

Requesting Lab/Division/Group: PML/Time and Frequency/Time Realization and Distribution (688.40)

## General Statement of Need

NIST operates several atomic clocks, measurement devices, synthesizers, and signal distribution amplifiers to create the continuously operational NIST time scale, an official source of time and 1124 V DC power sources simultaneously in order to maximize the ability to function continuously through utility power outages, or when moving equipment. To replace existing standby 24V battery banks that have exceeded their service life, NIST requires several long-life standby batteries to store energy and supply the standby backup power source at 24 V. The batteries will be arranged in several independent series strings of 24 V (nominal) each, and deployed in two NIST buildings, as detailed in the list of requirements below.

## Ancillary Services

Item 1: 12 V, 210 Ah long life sealed lead-acid battery

Quantity: 32

Specifications:

Specification 1.1: Rated capacity for constant current discharge of at least 11.4 Amperes for 20 hours at 25°C and 1.80V/cell endpoint voltage. Equivalently, a capacity rating of at least 228 Ampere-hours (Ah) over 20 hours to a 1.80V/cell endpoint.

Specification 1.2: Designed to accept a float charging voltage of between 13.5 V and 13.8 V.

Specification 1.3: Design life under standby, floating charged, 25°C conditions is 20 years, defined as a reduction of rated capacity of no more than 20%.

Specification 1.4: Battery complies with IEC 60890 standards.

Specification 1.5: Battery container (or "jar") and any cover is flame-retardant to at least UL94 V-0 standard.

Specification 1.6: Total height of battery less than 13 inches (331 mm).

Specification 1.7: Other than height, largest physical dimension less than 23 inches (584 mm).

Specification 1.8: Battery type must be sealed type (e.g. absorbed gel matt, AGM) and free from fluid-level or chemical maintenance.

Specification 1.9: Battery must accept a charging current of at least 20 A. Batteries, when delivered, must be less than one year old from the date of original manufacture.

Separately Priced Options and Services:

Item 2: OPTIONAL: Metal rack appropriate for batteries

Quantity: 2

Specifications:

Specification 2.1: Metal racks sized for supporting at least 24 batteries each as specified above, to allow spacing between batteries and future expansion.



Specification 2.2: Racks can support batteries on either two or three horizontal tiers (layers).

Specification 2.3: Rack weight limit is sufficient to support quantity 24 batteries as specified above.

Specification 2.4: If assembly is required, all required fasteners and hardware are included.

[List any other item(s) or service requirements here using the same format above.]

## Service Requirements / Item Specifications

Section 	Requirements/Specifications 
<b>Planning Considerations</b> <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> List any visits required to allow potential vendors to see site specific constraints. [Explain requirement here] <input type="checkbox"/> US citizen required on-site (foreign nationals require preregistration 30 days prior) <input type="checkbox"/> Vendor rep on-site more than three days <input type="checkbox"/> Other considerations: [List other considerations to ensure an accurate quote]
<b>Shipping &amp; Delivery</b> <input type="checkbox"/> N/A	[Enter shipping and delivery information by item here.] <b>Shipping criteria:</b> <input type="checkbox"/> Partial delivery acceptable <input type="checkbox"/> Direct delivery to building required [Explain need for requirement here] Building has: <input type="checkbox"/> Loading dock <input type="checkbox"/> Containerization preference: [Choose container] Other requirements: [List any other requirements here] <b>Delivery date criteria:</b> <input checked="" type="checkbox"/> Delivery of goods, installation, and training shall be completed no later than: <b>16 weeks ARO</b> <input type="checkbox"/> Deliver no earlier than: [Insert date here] <input type="checkbox"/> Other: [List other shipping, delivery, or specil requirements]
<b>Electronic Media</b> <input checked="" type="checkbox"/> N/A	[Enter electronic media requirements by item here.] <input type="checkbox"/> Software <input type="checkbox"/> Electronic manuals <input type="checkbox"/> License Key <input type="checkbox"/> Other: [List any other Electronic Media requirements here] [Enter email address for software delivery here]
<b>Installation</b> <input checked="" type="checkbox"/> N/A	[Enter installation requirements by item here.] <input type="checkbox"/> Vendor technician on site <input type="checkbox"/> Rigging <input type="checkbox"/> Uncrating / Unpackaging <input type="checkbox"/> Removal of packaging material <input type="checkbox"/> Equipment set up <input type="checkbox"/> Start-up services <input type="checkbox"/> Turn key installation <input type="checkbox"/> Other [Enter details here.] Note: When installation is required, TPOC or COR shall be the coordination point.
<b>Facility / Utility Considerations</b> <input checked="" type="checkbox"/> N/A	[List site specific utility considerations by item here.] <input type="checkbox"/> OFPM Work Order Number(s) [List any Work Order Number(s) here]

- ☐ Power available  
Voltage: [Enter voltage here] (V)  
Max Current: [Enter max current draw here] (A)  
Phase: [Choose phase]  
Frequency: [Typically 60Hz] (Hz)  
NEMA Plug Type: [Enter plug type here] (i.e.: NEMA L5-20P)  
Environment: [Choose environment]  
Other power consideration: [List any other power considerations here]
- ☐ Utility connections: [List relevant available utilities, pressure(s), and flowrate(s)]
- ☐ Other considerations: [List other considerations to ensure an accurate quote]

### Warranty ⓘ

☒ N/A

Base Manufacturer Warranty is acceptable  
[If you require an Extended Manufacturer Warranty, describe the warranty requirements per item here.]  
What is included?  
☐ Labor      ☐ Parts      ☐ Travel      ☐ Cost and liability for returns  
☐ Other: [Enter other requirements here]  
☐ Warranty length: [Enter warranty length here]  
Period Length:[Ex. month, 6 month, year etc.]

### Training

☒ N/A

[Training requirements (who, when, what, where) here. If on-site, is travel necessary?]  
☐ On-site  
☐ Off-site location: [Enter location(s) here]  
☐ Number of trainees: [Enter number of trainees here]  
Scope of training:  
☐ Operations      ☐ Maintenance      ☐ Troubleshooting      ☐ Safety  
☐ Other: [Enter other scope requirements here]  
☐ Training materials to be provided: [Describe requirement here]  
☐ Other: [Enter other training requirements here]  
Note: When training is required, TPOC or COR shall be the coordination point.

### Inspection and Acceptance

☐ N/A

[Enter inspection requirements per item here]  
☒ Planned government acceptance testing (7 business days)  
☐ Gov't acceptance expected to take longer than 7 business days: [Duration]  
☐ Inspection and acceptance plan: [Explain here]  
☐ Other: [Enter other requirements here]

### Maintenance ⓘ

☒ N/A

[Describe your maintenance requirements per item here]  
Period Length: [Ex. month, 6 month, year etc.]  
What is included?

- ☐ Labor
☐ Spare parts
☐ Consumables
☐ Travel  
☐ Cost and liability for returns
☐ Software updates
☐ Manuals  
☐ Service plan length: [Enter service plan length here]  
☐ Other: [Enter other requirements here]  
☐ Requirements: [Enter requirements here] (i.e.: onsite within 72 hours, etc.)  
☐ Option Period 1
☐ Option Period 2  
☐ Option Period 3
☐ Option Period 4

**Government  
Furnished  
Material /  
Equipment**  
☒ N/A

- [List any government furnished material/equipment per item here]  
☐ Samples for testing  
☐ Government equipment which will leave gov't site (TPOC must coordinate with division property custodian)  
Serial Number: [Enter Serial Number here]  
Description: [Enter description here]  
NIST property number: [Enter NIST property number here]  
☐ Other: [Enter other details here]

**Travel**  
☒ N/A

- [Describe any travel requirements per item here]  
☐ Explain: [Explain here]  
☐ Other: [Enter other requirements here]  
*Vendor: To the maximum extent possible, include as part of appropriate sections above (maintenance, repair, etc.). Otherwise, it will be a separate line item, reimbursable per the Federal Travel Regulation.*

Provide suggestions to improve this form by clicking [here](#).