MEPNN Supplier Scouting Opportunity Synopsis

Section 1: General Information

Scouting Number	2024-304
Item to be Scouted	Weather Station
Days to be scouted	30
Response Due By	11/08/2024
Description	A weather station -similar to this link https://shop.tempest.earth/products/tempest?srsltid=AfmBOoqIB-_B1mVYGlsCLK5GyKoViS9m_RMn-sfzVFWuJ8IXJRAqwHX- That can integrate with the Weather Flow-Tempest reporting tool (https://weatherflow.github.io/Tempest/#:~:text=Overview,weather%20data%20and%20improved%20forecasts.)
Notify Requester Immediately	
State item to be used in	Montana

Section 2: Technical Information

Type of supplier being sought	Manufacturer
Reason	BABA
Describe the manufacturing processes (elaborate to provide as much detail as possible)	Electronic Assembly
Provide dimensions / size / tolerances / performance specifications for the item	Weather station similar in form, fit, and function to Tempest Weather Station (https://cdn.shopify.com/s/files/1/0012/8512/8294/files/Tempest_Spec_Sheet_220301-web-view_b9e8f3ce-caed-4d67-a0ac-8fa190e61084.pdf?v=1719888884- Needed to integrate with the Weather Flow-Tempest reporting tool (https://weatherflow.github.io/Tempest/#:~:text=Overview,weather%20data%20and%20improved%20forecasts.)
List required materials needed to make the product, including materials of product components	Solution dependent. Must equivalent in performance to Tempest Weather Station (https://cdn.shopify.com/s/files/1/0012/8512/8294/files/Tempest_Spec_Sheet_220301-web-view_b9e8f3ce-caed-4d67-a0ac-8fa190e61084.pdf?v=1719888884-)
Are there applicable certification requirements?	No
Are there applicable regulations?	No
Are there any other stndards, requirements, etc.?	No
NAICS 1	541620 Environmental Consulting Services
NAICS 2	
Additional Technical Comments	The Weatherflow-Tempest Reporting Tool is a proprietary tool and will only integrate with the Tempest weather monitoring station. We are looking for weather stations that can integrate with the weatherflow-tempest reporting tool - (https://weatherflow.github.io/Tempest/#:~:text=Overview,weather%20data%20and%20improved%20forecasts.)

Section 4: Business Information

Estimated potential business volume	One-time purchase of 31 Weather Stations
Estimated target price / unit cost information (if unavailable explain)	Approximately $389 each
When is it needed by?	6 Months from submittal of the scouting report request.
Describe packaging requirements	No requirements, must be delivered undamaged.
Where will this item be shipped?	Montana

Additional Comments

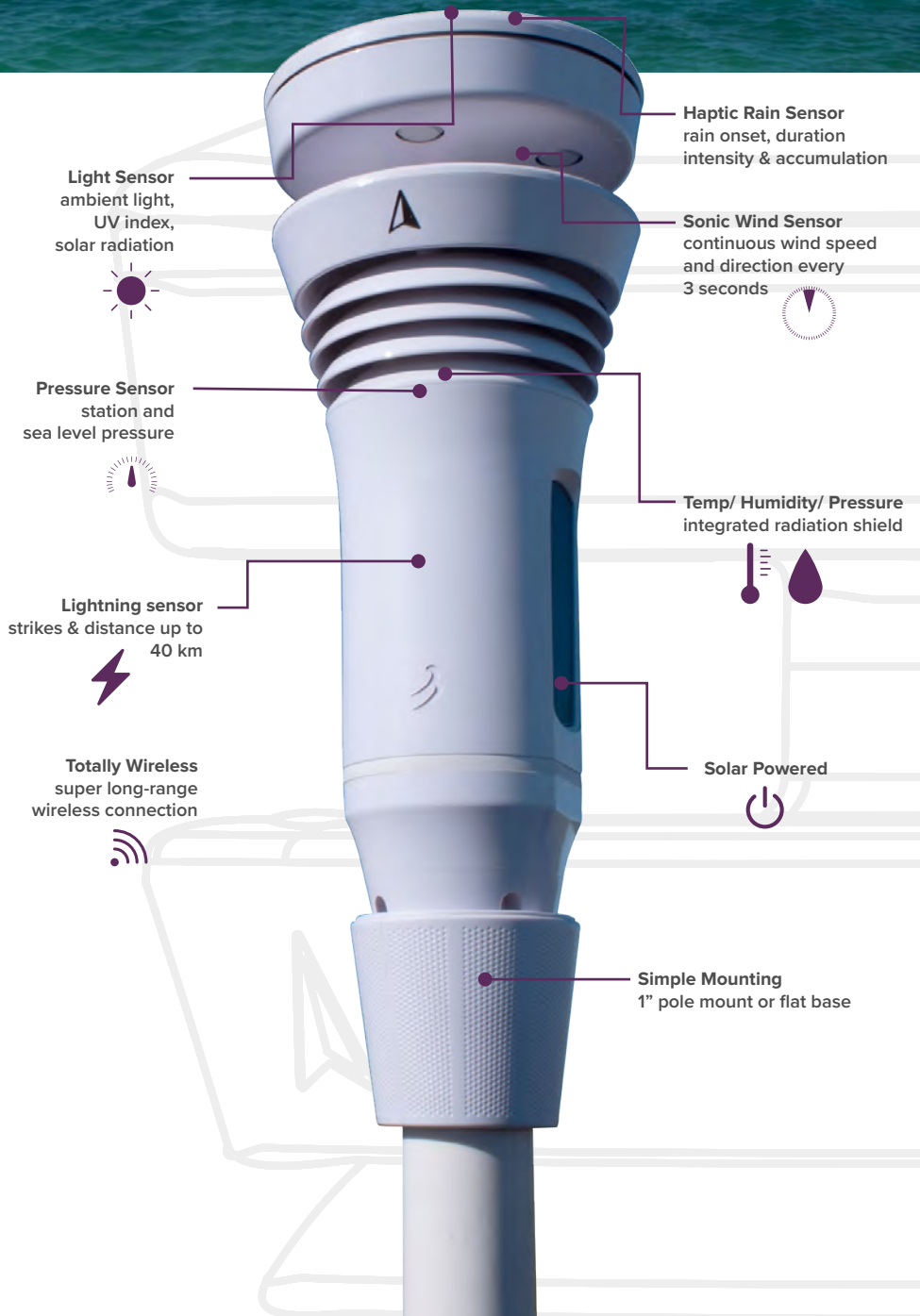|	
Is there other information you would like to include?	For all inquiries regarding BABA compliance please contact: DOE/ NETL - Energy Delivery and Security Directorate (EDSD) Lucas Bond (Lucas.Bond@netl.doe.gov)/ Maryum Pirzada (Maryum.pirzada@netl.doe.gov) Will need to work with The Daily Situational Awareness Tool (DSAT) and the Weatherflow-Tempest Reporting tool. Agency: Energy, U.S. Department of / National Energy Technology Laboratory (NETL)/Energy Delivery and Security Division (EDSD)

Tempest°

WeatherFlow-Tempest's team of atmospheric scientists, forecasters, and developers specialize in weather networks, data science, and forecast modeling. Our weather technology is used by the National Weather Service, Coast Guard, Defense Threat Reduction Agency, and thousands of satisfied consumers around the globe.

While weather apps abound, the Tempest app leverages real-time data, advanced forecast modeling and the over-sight of in-house meteorologists. Data from each Tempest is processed with advanced machine learning which checks the information for accuracy, allowing us to apply daily calibrations and ultimately improve your forecast over time.

A revolutionary design with no moving parts, nearly zero maintenance, instant online data, a free personal web-page, and a rich API powering a growing list of third-party applications. Install the Tempest home weather system in less than five minutes and it will do the rest!

Light Sensor
ambient light,
UV index,
solar radiation

Pressure Sensor
station and
sea level pressure

Lightning sensor
strikes & distance up to
40 km

Totally Wireless
super long-range
wireless connection

Haptic Rain Sensor
rain onset, duration
intensity & accumulation

Sonic Wind Sensor
continuous wind speed
and direction every
3 seconds

Temp/ Humidity/ Pressure
integrated radiation shield

Solar Powered

Simple Mounting
1" pole mount or flat base

More than hardware. The Tempest System continuously learns and improves over time. The result is the most relevant real-time weather data and a guaranteed better forecast*
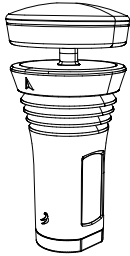
tempest.earth

Specifications

Measurement	Range	Sampling Interval	Accuracy*	Resolution
Air Temperature	-40°C to 60°C (-40°F to 140°F)	1 minute	± 0.2° C	0.1° C
Relative Humidity	0 to 100%	1 minute	± 2%	1%
Barometric Pressure	300 to 1100 mbar	1 minute	± 1 mbar	0.1 mbar
Lightning Activity	0 to 40 km (25 miles)	Event Based	± 2 km	1 km
Wind Speed	0 to 45 m/s (100 mph)	3 Seconds	greater of ± 0.5 mph or ± 2%	0.04 m/s (0.1 mph)
Wind Direction	0 to 359°	3 Seconds	± 5°	1°
Ambient Light	1 to 128,000 Lux	1 minute	± 100 Lux	1 Lux
UV Index	0 to 14 UVI	1 minute	± 0.5 UVI	0.1 UVI
Solar Radiation	0 to 1900 W/m2	1 minute	± 5%	1 W/m2
Rain Rate	0 to 400 mm/hour (0-15.7"/hour)	1 minute	± 10%	0.1 mm / hr
Rain Accumulation	Unlimited	1 minute	± 10%	0.1 mm
Rain Duration	Unlimited	1 minute	± 2 minutes	1 minute
Rain Intensity	Very Light to Extreme	1 minute		
Rain Start	Low to High Sensitivity	Event Based		

Derived Parameters

- Dew Point
- Temperature
- Pressure Trend
- Heat Index Temperature
- Wind Chill Temperature
- Delta T
- Neighborhood Rain Accumulation
- Air Density
- Feels Like Temperature
- Vapor Pressure
- Sea Level Pressure
- Wet Bulb Temperature
- Wet Bulb Globe Temperature

*** all accuracy specifications are relative to professional-grade, co-located instrumentation under controlled conditions designed to mimic WMO siting standards and may vary due to local siting and installation specifics.*

Calibration:
All devices are factory calibrated. Automated field calibrations are applied as needed. Manual field calibration and factory re-calibration are available in rare cases. See more at http://tempe.st/calibration

Wind:
Nominal cut-in speed is 0.3 m/s (0.7 mph). Wind accuracy can be impacted at temperatures below -30°C (-22F). Obstructions in the wind sampling section can also affect accuracy. Winds greater than 45m/s (100mph) can be measured but with limited sampling integrity.

Rain:
The haptic rain sensor measures rain by sensing the vibration caused by impacting rain drop. It does not report snow, sleet, graupel, hail, fog, dew or extremelly light rain/mist. Errant sources of vibration may affect readings. For more details on rain, please see http://tempe.st/rain

Environmental:
The Tempest is designed for harsh outdoor environments with marine-grade, UV-resistant materials, conformal coating of all electronics and an ingress protection rating of IP66. The Tempest's operating range is -40°C to 60°C (-40°F to 140°F) , 0-100% relative humidity and winds up to 120 mph.
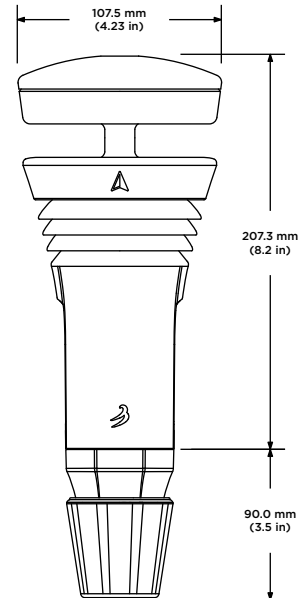
Power:
The Tempest is powered by four vertical solar panels that operate at any latitude as long as they receive at least 4 hours of sunlight every two weeks. Energy is stored in a 1300 mWh lithium titanate (LTO) battery that never needs replacing. For installations where the solar panels do not receive enough sunlight, an auxiliarly power source accessory is available.

Mounting:
The Tempest can be mounted to a flat horizontal surface or to the top of a pole or mast. Installation kits are available to suit most installation options. More siting & installation tips can be found at *http://tempe.st/siting*

Wireless:
Tempest transmits data to the Hub via low-power, sub-GHz radio (915Mhz in the US, 868MHz in Europe, 920MHz in Australia & New Zealand). The nominal range from the Tempest device to the Hub is 300 m (1000 ft) in clear line-of-sight. That will vary depending on obstacles (walls, buildings).

107.5 mm (4.23 in)

207.3 mm (8.2 in)

90.0 mm (3.5 in)

Hub (Base Station):
The Hub connects Tempest to your local network via Wi-Fi, your smart phone or tablet via Bluetooth (BLE), and the Internet. It is powered by a 5V USB power supply. If the Hub loses connection to the Internet it will store approximately seven days of data. A battery backup is available for the Hub which allows uninterrupted operation. Supports WPA and WPA2 personal networks.

Warranty & Guarantees:
WeatherFlow offers a 60 Day Money Back Guarantee, a Better Forecast Gaurantee, a 2 Year Limited Warranty and a 10-Year Legacy Discount. See *http://tempe.st/guarantee* and *http://tempe.st/warranty* for details.

Customer Service: Visit *http://tempe.st/help* or email *support@tempest.earth*