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GSA Contract No. GS07F-0108J

Applications

- General Bus Stops
- Bench Bus Stops
- Sheltered Bus Stops
- Shuttle Stops
- Water Taxi Stops

Standard Features

- Engineered To Outlast The Competition
- High Efficiency Solar Panels
- System Circuit Protections
- LED Illumination
- Up to 25 Year Solar Panel Warranty
- 5 Year Controller Warranty
- 2 Year Battery Warranty

Battery Technology

- Sealed Battery(s)
- Maintenance Free, Non-Spillable
- Long Life of up to 7+ Years

Benefits

- No Trenching For Power Cables
- No Utility Bills
- Not Affected By Power Outages
- Low Voltage DC Power
- Increased Rider Safety
- Increase In Riders

N S T
NATIONAL SOLAR TECHNOLOGIES

“World Leader in Solar Power Sources and Solar Lighting Systems”

Bus Stop Lighting Systems



- Pole Mounted Bus Stop Lighting System With Illuminated Schedule Holder



- Pole Mounted Bus Stop Lighting System With On-Demand Push Button



- Nighttime Glimpse of The Pole Mounted Solar Bus Stop Light



- Bus Shelter Mounted Solar Lighting Systems Nighttime View



- Bus Shelter Mounted Solar Lighting System

Flexibility of NST Solar Powered Bus Stop Lighting Systems

- On-demand push button with LED for easy locating at night, virtually indestructible, 5, 10 or 15 minute operation cycle when push button is pressed.
- Dusk to dawn operation or specific timed ON/OFF cycles available
- Optional push button activated illuminated bus stop schedule holder
- Adaptable retrofit bus shelter model, able to mount to a variety of bus stops

Standard Solar Panel Specifications

- Tempered glass / tedlar construction for light weight, durable capsule for solar cells
- Multicrystalline or Monocrystalline solar cells/dark blue solar cell color
- Rigid aluminum frame
- Completely sealed from moisture
- Up to 25 Year warranty on power output/5 Year warranty on workmanship

Standard Battery Specifications

- Sealed lead acid battery(s)
- Maintenance free, non-spillable
- Superior battery technology for extreme climates and high vibration areas
- Amp hours vary depending on system
- Built in battery reserve capacity for cloudy / low sun days
- Typical battery operating life of up to 7+ years

Standard Controller Specifications

- Solid state solar controller with load (lighting) control- Dusk to Dawn
- Pulse width modulation (PWM) charging
- Low voltage disconnect
- High voltage reconnect
- Regulates battery charging from the solar panel
- 12 Volt DC regulation (some systems can regulate 24VDC)
- Typical operating life 15 years

Standard Battery Enclosure Specifications

- Steel, powder coated, corrosion resistant enclosure
- Available in aluminum and stainless steel
- Available in most RAL color
- Vented for airflow and heat dissipation
- Pole mount bracket.
- Houses battery(s) and controls
- Life expectancy 25+ years

Circuit Protection

- Fuse block which fuses the solar power input, battery power and light fixture
- System must be fused to protect components from short circuit or surge

Lamp Options

- Cool white or warm white outdoor LEDs
- Cool white or warm white outdoor fluorescent

Wires and Hardware

- Connecting wire harnesses for the battery, solar and light fixture
- Mounting hardware

Light Fixture Options

- National Solar Technologies uses high light output, ultra efficient LED light fixtures and compact fluorescent light fixtures in its bus stop lighting systems. Depending on the customer requirement, NST can utilize either lamp technology to achieve the illumination the customer desires.

Frequently Asked Questions

HOW DOES AN NST SOLAR LIGHT WORK?

Solar energy (Direct Current-DC) is collected via the solar panel(s) and is transferred to the power system. The power system stores the energy in a gel battery(s) for use during the night. The power system turns the light on/off automatically by sensing different voltages from the solar panel(s). For instance, when the sun goes down the solar panel produces low to no voltage, which informs the system to activate the light. When the sun rises the solar panel produces a higher voltage, which in turn deactivates the light. There are various settings and options available for operating the light at different times throughout the night.

WILL IT BE POSSIBLE TO USE A SOLAR LIGHT IN AREAS THAT HAVE WINTER CLIMATES DURING PART OF THE YEAR?

Yes, National Solar Technologies manufactures a variety of lighting systems that can operate in winter climates. We also design lighting systems to your geographical location so that all variables are calculated to make sure you are provided a properly engineered solar light designed for your location.

WHAT IF A PERIOD OF OVERCAST WEATHER OCCURS?

All systems are engineered with at least five days of battery reserve, unless otherwise requested by the customer. This amount of reserve has been found sufficient for normal system operations.

WHAT PARTS OF THE LIGHTING SYSTEMS WILL REQUIRE MAINTENANCE?

Replaceable parts include: battery(s) which typically last up to 7+ years, conventional lamp and ballast which typically last two to three years, LED lamps can last up to 10+ years. National Solar Technologies only use the best components with all of its systems so that maintenance is an issue that will not be required for a long time after purchase.