



https://bit.ly/nst-home

## **About National Solar Technologies** Renewable Energy Systems and Energy Efficiency Solutions

**National Solar** 

**Off-Grid Systems & Capabilities** 

#### Technologies

manufactures, integrates and installs solar energy systems and solar lighting systems for commercial and government customers worldwide.

NST has been chosen as the prime contract holder on million-dollar plus contracts for our both solar energy systems and commercial grade solar lighting systems. However, NST also works on small projects as well.

We have been a pioneer in the solar industry dating back to 1997 when we began manufacturing portable solar generators and solar powered lighting systems. Today we offer the most diverse range of solar energy systems to commercial, government, and military customers. This includes both Off-Grid and Grid-Connected systems. NST holds both Federal and State Contracts to supply our systems to a wide range of government agencies and all branches of the US Military.

- Complete engineering, design and manufacturing of solar lighting systems and off-grid solar energy systems
- Pole mounted, stand-alone solar lighting
- Building/structure mounted stand-alone solar lighting
- Portable solar lighting
- Trailer mounted solar light towers
- Hybrid solar/generator trailer mounted solar light towers
- Custom solar lighting systems
- Stationary, solar energy systems
- Tower site solar energy systems
- Portable solar energy systems
- Transportable solar energy systems
- Trailer mounted solar energy systems
- Skid mounted solar energy systems
- Pole mounted solar energy systems
- Hybrid solar/generator solar energy systems
- <u>Custom b</u>uild-to-spec off-grid solar energy systems

#### Systems

Currently NST has over 10,000 systems deployed in 20+ countries.

## **Reliable Technology**

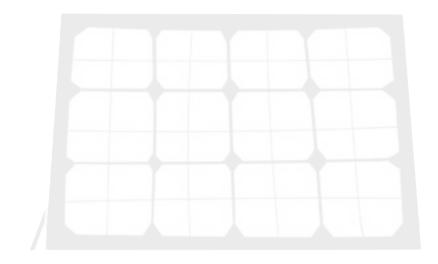
National Solar Technologies knows how important it is to our customers to have reliable technology that will last well beyond warranty periods. We offer lifetime technical support to our customers to ensure the systems we supply will continue to operate as specified into the distant future.

#### Grid Tied Systems & Capabilities

- Complete engineering, design and building of grid-connected solar energy systems.
- Grid-Connected, pitched roof commercial solar energy systems
- Grid-Connected, flat roof commercial solar energy systems
- Grid-Connected, small ground mount solar energy systems
- Grid-Connected, utility scale ground mount solar energy systems
- Grid-Connected solar energy systems with battery backup
- Customer specific Grid-Connected solar energy systems

## Why National Solar Technologies?

NST believes that making sure our customers are supplied with the most reliable system is the #1 priority. We go to great lengths to ensure that the systems we provide meet customers' expectations for reliability and quality. NST engineers all of our solar power solutions and solar powered lighting solutions using state of the art power modeling software and real-world solar data. We believe that every system that we produce should be reliable, innovative and of the highest quality. Go with the experience and reliability of National Solar Technologies to ensure that your project is a success.



NATIONAL SOLAR TECHNOLOGIES 166 Taylor Dr., Buffalo, NY 14043 Toll Free: (800) 310-7413 Local / Int'l: (716) 683-2505 Email: info@NSTsolar.com





https://bit.ly/nst-grid-tied-solar

## **Grid Connected Solar Electric Power Systems** Manufactured for Commercial and Business Needs

Applications



- Commercial rooftops
- Pitched rooftops
- Ground mounted
- Carports/Parking Garage Canopy

#### **Standard Features**

- Highest quality, code compliant inverters
- High efficiency solar modules
- Pre-engineered solar module racking
- Complete system including AC/DC disconnects, panelboards, circuit breakers, cabling/conduit, system safety labels, stamped structural and electrical drawings.
- Complete balance of systems parts



#### Benefits

- Reduce or eliminate your electric bill
- Federal tax credits to offset taxes owed to the Federal government
- Accelerated depreciation
- NY State cash rebate
- As the cost of electric power goes up, you can save even more since your solar power system is a fixed cost power generator for 25+ years.
- You are doing something good for the environment and reducing your carbon footprint.

#### **Options for Non-Profits**

• There are options available for non-profits through third party system ownership to get a portion of the Federal tax credit applied as a discount to the system cost. Contact NST



#### for more information.

#### NATIONAL SOLAR TECHNOLOGIES

## **Grid Connected Solar Electric Power Systems** Manufactured for Commercial and Business Needs

#### Standard Solar Module Technology

- Monocrystalline technology
- Up to 22% efficiency
- Anti-glare coating
- Wind, hail, and twist tested for ruggedness

#### **Standard Warranties**



- 25-Year solar module power output warranty
- 10-Year solar module workmanship warranty
- 10-Year inverter warranty
- 5-Year parts and labor warranty when utilizing the NY-SUN rebate through NST
- Lifetime system technical support

## Options

- Extended warranty options available
- Energy storage options available
- Power Purchase Agreements Available
- Community Solar options available

#### **Contact Us**

Contact NST for additional assistance and to specify the correct system for your project.

info@NSTsolar.com or (800) 310-7413



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https://bit.ly/large-scale-solar

# Large Scale Solar Energy Solutions

When it comes to large scale solar projects such as Power Purchase Agreements (PPAs) and Community Solar, National Solar Technologies has a dedicated, trusted team ready to execute a successful project from initial development through system commissioning. Partial or complete EPC of a project is available based on customer requirements. National Solar Technologies offers a wide range of turn-key solutions for large scale ground mount and rooftop PV systems.



#### Applications

- Large commercial ballasted rooftop systems
- Ground mount fixed tilt
- Ballasted fixed tilt ground mount
- Ground mount single axis tracker
- Ballasted single axis tracker
- Landfill/Brownfield sites



- Carports/Parking Garage Canopy
- Solar + Energy Storage

#### What NST Offers

- Partial or Complete EPC
- Project development/Co-Development
- Working with land owners on lease agreement/land purchase
- Interconnection application and review with electric utility
- State incentive application and submittals
- Complete engineering and environmental review
- System commissioning
- Assistance with system off-takers/anchor subscribers



#### NATIONAL SOLAR TECHNOLOGIES





https://bit.ly/floodlight-cart

# **Portable Solar Powered LED Floodlight Cart**

Standard Features

• High-efficiency LED luminaire

Solar Modules

- Adjustable and rotatable LED floodlight
- Best in class solar electric power generation unit.
- Maintenance-free, AGM energy storage.
- Tool-less setup
- Never flat wheels
- Heavy duty handle for tilting back and moving unit around on extra wide rubber wheels
- Extends to 10', folds to 6'
- 3 days battery autonomy
- Beige finish (other finishes available)
- 25-year solar module power warranty
- 5-year system electronics warranty
- 2-year battery warranty
- Lifetime product support

#### LED Luminaries

• High-efficiency, long life LED technology with up to 150,000 hours of operation (20+ Years) • Standard 25-Watt LED luminaire • Standard 3000 Lumens • Standard 5700K • Standard 70CRI • Luminaire style is floodlight • Light distribution is 40° beam

• Solar module power rating is engineered for the installation location based on solar radiation data, luminaire wattage, and luminaire run-time per night. NST uses data gathered by NASA for thousands of locations around the world which allows for pinpoint accuracy when engineering/sizing our solar lighting systems.

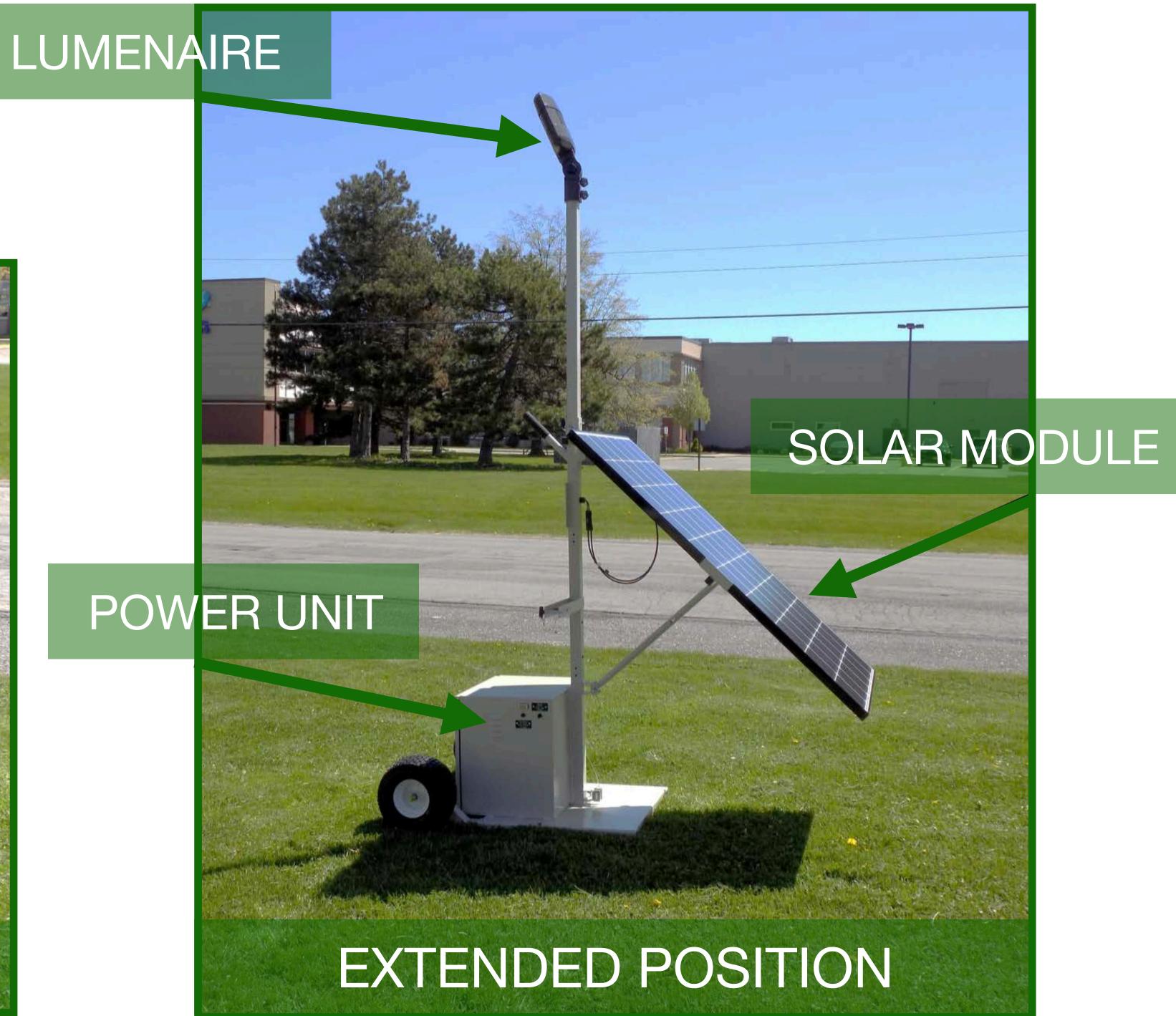
## Energy Storage

- Batteries used in NST solar lighting systems are heavy-duty internal plate design, sealed, deep cycle, AGM battery technology.
- Standard 3-day battery autonomy

#### System Controls

- MPPT solar charging regulation
- Automatic dusk to dawn operation or programmed timed ON/OFF operation
- Circuit breaker protection





#### NATIONAL SOLAR TECHNOLOGIES





https://bit.ly/pole-mounted-solar

# Wood Utility Pole Solar Powered LED Lighting

#### Standard Features

• High-efficiency LED luminaire

#### NST Standard System Models

• Pole mount, solar powered LED streetlight, 32 Watts Item No. SLS-LED-32W-10-5A • Pole mount, solar powered LED area/parking lot light, 45 Watts Item No. APS-LED-45W-10-5A • Pole mount, solar powered LED floodlight, 45 Watts Item No. FLS-LED-45W-10-5A

- Best in class solar electric power generation unit.
- Maintenance-free, AGM energy storage.
- 5 days battery autonomy
- Light grey finish (other finishes available)
- 25-year solar module power warranty
- 5-year system electronics warranty
- 2-year battery warranty
- Lifetime product support

#### LED Luminaries

- High-efficiency, long life LED technology with up to 150,000 hours of operation (20+ Years)
- Standard 32-Watt or 45-Watt LED luminaire
- Up to 5400+ Lumens
- Standard 5700K, Available in 4000K
- Standard 70CRI
- Luminaire styles available are area light, streetlight, and floodlight • Light distributions available are Area, Streetlight: Type I, II, III, IV, V Flood: 25°, 40°, 70°

## Options

- Wood Pole Option, Item No. WP
- 4' Mast arm, Item No. FMA-4
- 6' Mast arm, Item No. FMA-6
- 8' Mast arm, Item No. FMA-8
- Floodlight bullhorn bracket, Item No. BHA-1



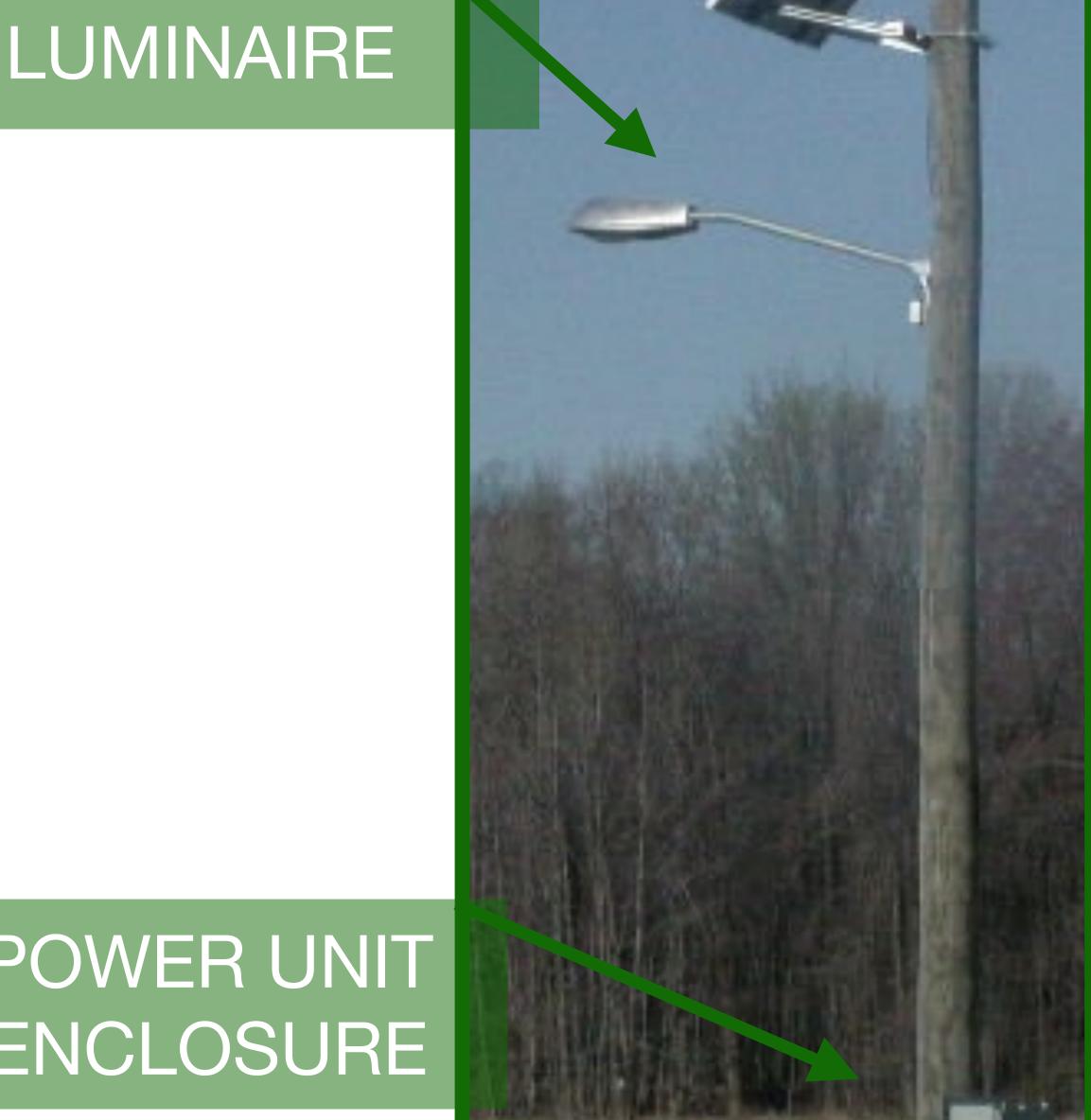
#### Solar Modules

• Solar module power rating is engineered for the installation location based on solar radiation data, luminaire wattage, and luminaire run-time per night. NST uses data gathered by NASA for thousands of locations around the world which allows for pin-point accuracy when engineering/sizing our solar lighting systems.

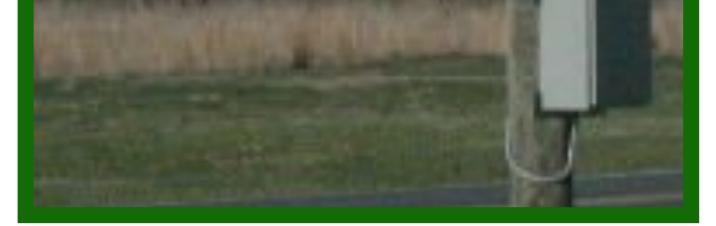
#### Options

• Luminaire integrated motion-dimming sensor • Wireless ON/OFF

#### **POWER UNIT** ENCLOSURE



#### • Wood utility pole mounting option available



#### NATIONAL SOLAR TECHNOLOGIES





https://bit.ly/solar-light-tower

# **Solar Electric Light Tower (SELT)**

Applications

## LED Technology

Remote and temporary sites

Long life LEDs with up to 100,000 hours of operation (LM70)
High-efficiency lumens per watt LED light fixtures technology
Standard fixture has an adjustable bracket for aiming luminaires
Light color temperature of 3000K-4000K

- Military bases, FOBs, checkpoints
- Construction sites
- Security lighting
- Outdoor events

## **Standard Features**

- Quiet operation
- Dusk to dawn lighting operation or timed ON/OFF
- Ultra-bright LED floodlights (4) with adjustable mounts
- Light output of up to 60,000+ lumens
- Efficient operating voltage of 48VDC
- Maximum Power Point Tracking (MPPT) battery charging
- High efficiency monocrystalline solar modules
- Backup battery charger for connection to AC grid or AC generator power
- Sealed absorbed glass mat (AGM) maintenance free deep cycle batteries for solar energy storage
  Light mast is rotatable and locking for easy aiming of floodlights, extended to 30 ft.
  Outrigger supports with leveling jacks for full system stability
  Forklift pockets
  DOT certified trailer, AWS certified, each trailer has its own VIN number.
  5-year system electronics warranty
  2-year battery warranty
  Lifetime product support

## Solar Module Technology

- Up to 22% efficiency
- Anti-glare coating
- Wind, hail, and twist tested for ruggedness

#### Benefits

- No fossil fuels required
- Quiet, no noise operation
- No exhaust fumes
- Easy to operate with no routine maintenance needed





#### NATIONAL SOLAR TECHNOLOGIES

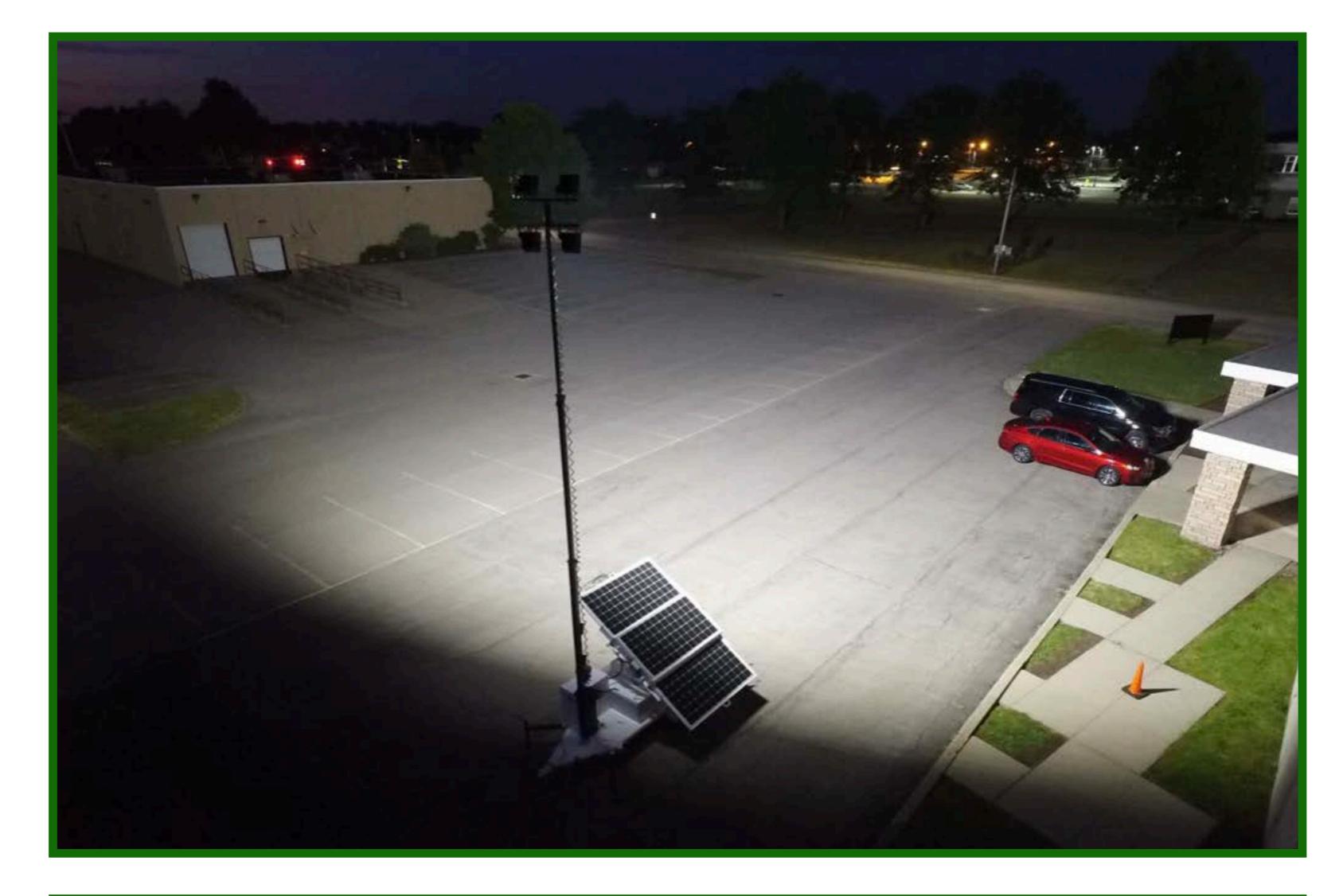
# Solar Electric Light Tower (SELT)

#### **Battery Technology**

- Sealed, maintenance free AGM
- Heavy duty internal battery plate design
- Non-spillable, registered as non-hazardous for ground, air, and sea shipping/transport.

#### System Enclosures

- Lockable enclosures
- Special finish for low solar gain to keep system



electronics and batteries at a lower temperature

#### **Built-In System Protections**

- Circuit breaker protection for solar charging, batteries, and floodlight luminaires
- Protection for solar array overload, short circuit, and high voltage.
- Battery high temperature protection
- Lightning and transient surge protection
- Reverse current protection at night

#### System Quality and Integrity

• Quality assurance standards adhered to throughout the manufacturing, assembly, and testing process



- Each system is 100% factory tested
- Tool-less setup
- 25 year limited solar panel power warranty
- 5-year electronics warranty / 2-year battery warranty

## **Options and Customizations**

- 400W wind turbine
- Back-up diesel generator with auto start
- Back-up gas generator with auto start
- Back-up LP generator with auto start
- 120VAC power with AC receptacles

#### NST Solar Light Tower Series

The standard model number is shown, however, other systems and options are available based on your project requirements.

Contact NST for additional assistance and to specify the correct system for your project.

info@NSTsolar.com or (800) 310-7413

Model No. SELT-1200-48VDC





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https://bit.ly/building-solar-lights

## **Solar Power and Lighting Solutions** Manufactured for Off–Grid Buildings and Structures





- Remote buildings
- DOT/Commercial Salt Sheds
- Cold Storage Buildings
- Covered Walkways
- All Buildings/Structure Perimeter Lighting Needs

#### **Standard Features**

- Power capacity and output voltage(s) are engineered based on your requirements. NST can assist you with determining what system will work best for your application.
- Available with AC and DC voltages
- Photometric layouts can be preformed to ensure you meet your lighting level requirements.
- High efficiency solar modules
- MPPT solar charge controller(s)
- 25-year solar module power warranty
- 5-year system electronics warranty
- 2-year battery warranty
- Lifetime product support

#### **LED Luminaries**



- High-efficiency, long life LED technology with up to 150,000 hours of operation (20+ Years)
- Standard Up to 50-Watt LED luminaire
- Standard Up to 7500 Lumens
- Standard 5700K or 4000K
- Standard 70CRI
- Luminaire styles of floodlight, wall pack, area light
- Dusk to dawn, timed ON/OFF, or motion activated

#### **Solar Modules**

- High efficiency monocrystalline
- Up to 22% efficiency
- Anti-glare coating
- Wind, hail, and twist tested for ruggedness

#### **Energy Storage**

- Batteries used in NST solar lighting systems are heavy-duty internal plate design, sealed, deep cycle, AGM battery technology.
- Minimum 5-day battery autonomy



#### Benefits

- No need to run wires and conduits
- Reduce or eliminate the use of generators
- No routine maintenance required
- No electric bill

#### NATIONAL SOLAR TECHNOLOGIES 166 Taylor Dr., Buffalo, NY 14043 Toll Free: (800) 310-7413 Local / Int'l: (716) 683-2505 Email: info@NSTsolar.com





https://bit.ly/2-man-transportable

# **Two-man Transportable Solar Electric Power** Source

**Standard Features** 

**Solar Modules** 

- Standard 120VAC outlets with 5VDC /3A USB ports, and binding posts for 24VDC output.
- Tool-Less assembly/Captive corded hardware
- Plug and Play design
- Mounting frame material is lightweight aluminum
- Self-ballasted design
- Padded cases for solar modules, mounting platform/brackets, and cable kit.
- Best in class solar electric power generation unit.
- Maintenance-free, AGM energy storage.
- Finish is desert sand, other finishes available
- 25-year solar module power warranty
- 5-year system electronics warranty
- 2-year battery warranty
- Lifetime product support

- High-efficiency, monocrystalline solar modules • Solar module power rating is engineered for the installation location based on solar radiation data, load wattage/amperage, and load run-time per day.
- NST uses data gathered by NASA for thousands of locations around the world which allows for pin-point accuracy when engineering/sizing our off-grid solar electric power sources.

## **Energy Storage**

- Standard batteries used in NST off-grid solar electric power sources are heavy-duty internal plate design, sealed, deep cycle, AGM battery technology.
- Lithium battery options are available

#### **Solar Module Technology**

#### System Power Output

- AC/DC or AC only/DC only power output
- Power capacity and output voltage(s) are engineered based on customer requirements
- Available with AC and or multiple DC voltage outputs
- System is field expandable, connect up to 6+ units together (Contact NST for details).

- Up to 22% efficiency
- Anti-glare coating
- Wind, hail, and twist tested for ruggedness

#### **Benefits**

- No fossil fuels required
- Quiet, no noise operation
- No exhaust fumes
- Easy to operate with no routine maintenance needed

#### NATIONAL SOLAR TECHNOLOGIES

# **Two-man Transportable Solar Electric Power** Source

#### **Options (Typically for System Expansion**)

#### **Item No. TMT-400-2B**

• Two Man Transportable Solar Power Source, Complete Unit Less Power Center Enclosure, Includes solar modules set with padded case, mounting platform



bracket kit with padded case, complete sealed AGM battery enclosure set (2), and system interconnection cable kit with padded bag.

#### Item No. TMT-400-BATT

• Two Man Transportable Solar Power Source, Single Battery Unit Only, includes single battery enclosure with batteries.

Item No. TMT-400-CK

• Two Man Transportable Solar Power Source, Cable Kit, Includes complete cable kit with padded carrying bag.

#### Item No. TMT-400-HUB



• Two Man Transportable Solar Power Source, Expansion Hub, Allows for the expansion of 3+, up to 6, Two Man Units to be combined into one larger system. Allows for the increase of solar charging capacity and battery capacity.

#### **Contact Us**

Contact NST for additional assistance and to specify the correct system for your project.

info@NSTsolar.com or (800) 310-7413







#### NATIONAL SOLAR TECHNOLOGIES





https://bit.ly/solar-telecom-tower

# **Off-Grid Telecom-Tower Site**

#### Solar Electric Power Source

Applications

Solar Module Technology

- Border Surveillance/Camera Tower Sites
- Telecom Sites
- Repeater sites
- General Remote Site Power

### **Standard Features**

- Quiet operation
- Power capacity and output voltage(s) are engineered for your requirements. NST can assist you with determining what system will work best for your application.
- Available with both AC and DC voltage outputs
- Pure sine wave AC power output is standard
- Battery voltage ranges available 12-48VDC
- Maximum Power Point Tracking (MPPT) battery charging
- High efficiency monocrystalline solar modules
  Sealed absorbed glass mat (AGM) maintenance free deep cycle batteries for solar energy storage
  Heavy duty construction, engineered for rough use austere environments
  Galvanized steel construction
  Self-ballasted construction, NO concrete pad required
  25-year solar panel power output warranty
  5-year system electronics warranty
  2-year battery warranty
  Lifetime product support

- Up to 22% efficiency
- Anti-glare coating
- Wind, hail, and twist tested for ruggedness

#### Benefits

- No fossil fuels required
- Quiet, no noise operation
- No exhaust fumes
- Easy to operate with no routine maintenance needed





#### NATIONAL SOLAR TECHNOLOGIES

## **Off-Grid Telecom-Tower Site** Solar Electric Power Source

#### **Battery Technology**

- Sealed, maintenance free AGM
- Heavy duty internal battery plate design
- Non-spillable, registered as non-hazardous for ground, air, and sea shipping/transport.

#### System Enclosures

• Lockable enclosures



• Special finish for low solar gain to keep system electronics and batteries at a lower temperature

#### **Built-In System Protections**

- Circuit breaker protection for solar charging, batteries, and floodlight luminaires
- Protection for solar array overload, short circuit, and high voltage.
- Battery high temperature protection
- Lightning and transient surge protection
- Reverse current protection at night

#### System Quality and Integrity

• Quality assurance standards adhered to throughout the

- manufacturing, assembly, and testing process
- Each system is 100% factory tested
- Tool-less setup
- 25 year limited solar panel power warranty
- 5-year electronics warranty / 2-year battery warranty

## **Options and Customizations**

- Backup battery charger for connection to AC grid or AC generator power
- Back-up diesel generator with auto start
- Back-up gas generator with auto start
- Back-up LP generator with auto start
- Lithium battery option available

#### **Contact Us**

There are many configurations available. Please contact NST for your model number based on the configuration required for your application.

Contact NST for additional assistance and to specify the correct system for your project.

info@NSTsolar.com or (800) 310-7413

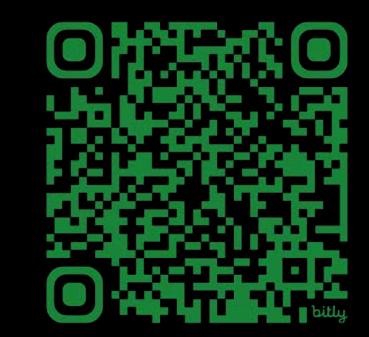




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NATIONAL SOLAR ΤΕ C Η N O L O G I E S



https://bit.ly/skid-mounted-solar

# **Skid Mounted Off-Grid Solar Electric Power**

Applications

Benefits of Solar

- Remote and temporary sites
- Military bases, FOBs, checkpoints
- Construction sites
- Emergency Power
- Outdoor events
- Anywhere you need power

## Standard Features

- Quiet operation
- Power capacity and output voltage(s) are engineered for your requirements. NST can assist you with determining what system will work best for your application.
- Available with both AC and DC voltage outputs
- Pure sine wave AC power output is standard
- Battery voltage ranges available 12–48VDC

- Reduce or eliminate the use of fossil fuel
- No noise, completely quiet operation
- No harmful exhaust, zero carbon footprint
- No routine maintenance
- No special skills required to operate

## Solar Module Technology

- Monocrystalline technology
- Up to 22% efficiency
- Anti-glare coating
- Wind, hail, and twist tested for ruggedness



- Maximum Power Point Tracking (MPPT) battery charging
- High efficiency monocrystalline solar modules
- Sealed absorbed glass mat (AGM) maintenance free deep cycle batteries for solar energy storage. Gel batteries are available if specified.
- Heavy duty construction, engineered for rough use austere environments
- Aluminum or galvanized steel construction
- 25-year solar panel power output warranty
- 5-year system warranty
- Lifetime product support



#### NATIONAL SOLAR TECHNOLOGIES

# Skid Mounted Off-Grid Solar Electric Power

#### **Standard Battery Technology**

- Sealed, maintenance free AGM
- Heavy duty internal battery plate design
- Non-spillable, registered as non-hazardous for ground, air, and sea shipping/transport.

#### System Enclosures

- Lockable enclosures
- Special finish for low solar gain to keep system electronics and batteries at a lower temperature



## **Built-In System Protections**

- Circuit breaker protection for solar charging, batteries, and floodlight luminaires
- Protection for solar array overload, short circuit, and high voltage.
- Battery high temperature protection
- Lightning and transient surge protection
- Reverse current protection at night

## System Quality and Integrity

• Quality assurance standards adhered to throughout the manufacturing, assembly, and testing process



- Each system is 100% factory tested
- Tool-less setup
- 25 year limited solar panel power warranty
- 5-year electronics warranty / 2-year battery warranty

## **Options and Customizations**

- Backup battery charger for connection to AC grid or AC generator power
- Back-up diesel generator with auto start
- Back-up gas generator with auto start
- Back-up LP generator with auto start
- Lithium battery option available

#### **Configurations & Sales**

- There are many configurations available. Please contact NST for your model number based on the configuration required for your application.
- Contact NST for additional assistance and to specify the correct system for your project.

info@NSTsolar.com or (800) 310-7413



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https://bit.ly/trailer-mounted-solar

# **Trailer Mounted Off-Grid Solar Electric Power**

Applications

Solar Module Technology

- Remote and temporary sites
- Military bases, FOBs, checkpoints
- Construction sites
- Emergency Power
- Outdoor events
- Anywhere you need power

## Standard Features

- Quiet operation
- Power capacity and output voltage(s) are engineered for your requirements. NST can assist you with determining what system will work best for your application.
- Available with both AC and DC voltage outputs
- Pure sine wave AC power output is standard
- Battery voltage ranges available 12–48VDC • Maximum Power Point Tracking (MPPT) battery charging

- Monocrystalline technology
- Up to 22% efficiency
- Anti-glare coating
- Wind, hail, and twist tested for ruggedness



- High efficiency monocrystalline solar modules
- Sealed absorbed glass mat (AGM) maintenance free deep cycle batteries for solar energy storage. Gel batteries are available if specified.
- Heavy duty construction, engineered for rough use austere environments
- Aluminum or galvanized steel construction
- 25-year solar panel power output warranty
- 5-year system warranty
- Lifetime product support

Benefits of Solar

• Reduce or eliminate the use of fossil fuel



- No noise, completely quiet operation
- No harmful exhaust, zero carbon footprint
- No routine maintenance
- No special skills required to operate

#### NATIONAL SOLAR TECHNOLOGIES

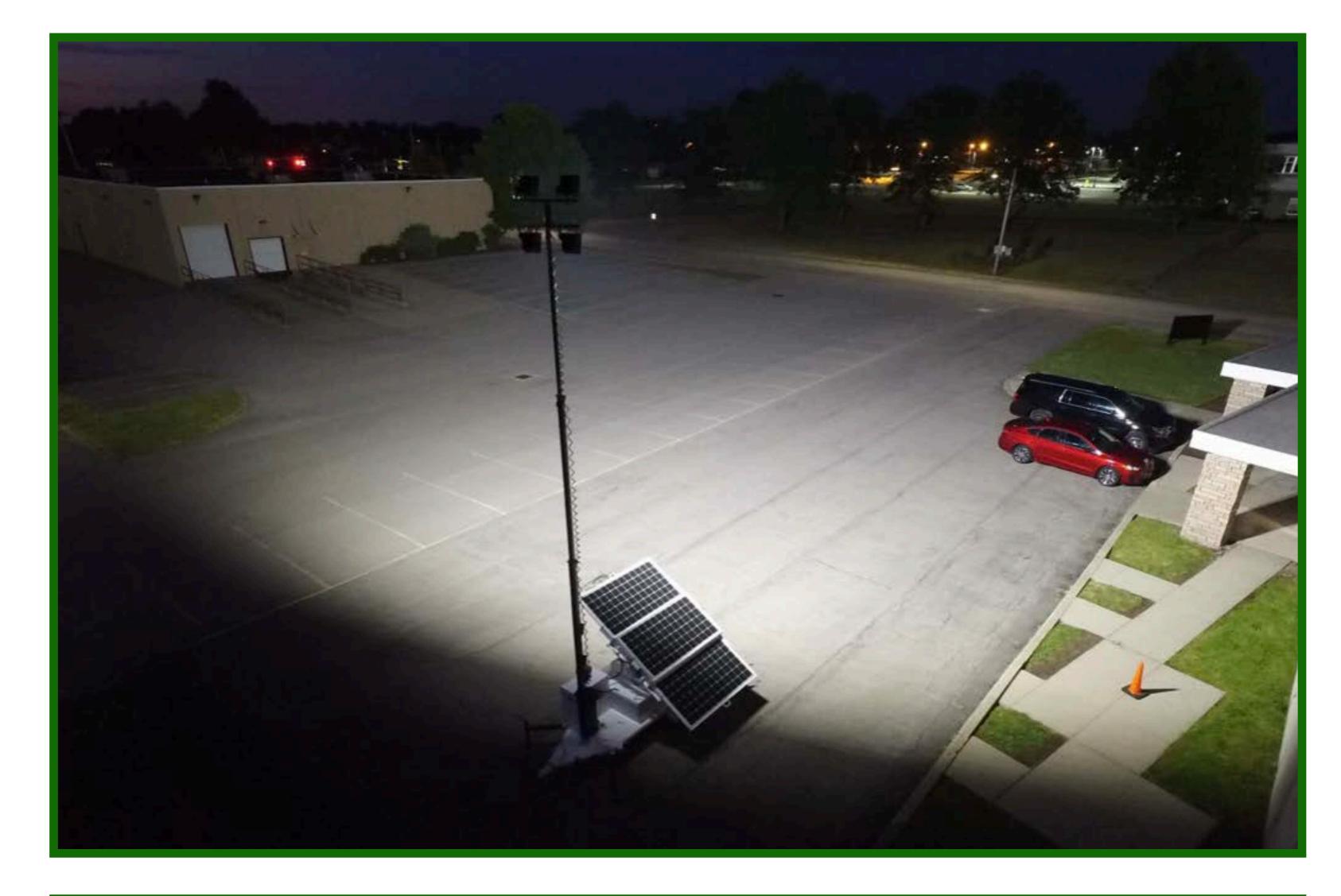
# **Trailer Mounted Off-Grid Solar Electric Power**

## **Standard Battery Technology**

- Sealed, maintenance free AGM
- Heavy duty internal battery plate design
- Non-spillable, registered as non-hazardous for ground, air, and sea shipping/transport.

#### System Enclosures

- Lockable enclosures
- Special finish for low solar gain to keep system



electronics and batteries at a lower temperature

#### **Built-In System Protections**

- Circuit breaker protection for solar charging, batteries, and floodlight luminaires
- Protection for solar array overload, short circuit, and high voltage.
- Battery high temperature protection
- Lightning and transient surge protection
- Reverse current protection at night

## System Quality and Integrity

• Quality assurance standards adhered to throughout the manufacturing, assembly, and testing process



- Each system is 100% factory tested
- Tool-less setup
- 25 year limited solar panel power warranty
- 5-year electronics warranty / 2-year battery warranty

#### **Options and Customizations**

- Enclosed trailers available
- Backup battery charger for connection to AC grid or AC generator power
- Back-up diesel generator with auto start
- Back-up gas generator with auto start
- Back-up LP generator with auto start
- Lithium battery option available

#### **Configurations & Sales**

The standard model number is shown, however, other systems and There are many configurations available. Please contact NST for your model number based on the configuration required for your application.

Contact NST for additional assistance and to specify the correct system for your project.

info@NSTsolar.com or (800) 310-7413



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https://bit.ly/pole-mount-solar

# Pole Mounted Off-Grid Solar Power Systems

#### Applications

- Remote Site Power
- Construction Site Power



- Communications Site Power
- Backup Power
- Base Camp Power
- Oil/Gas Drill Site Power
- Anywhere You Need Power

#### **Standard Features**

- Quiet operation
- Power capacity and output voltage(s) are engineered for your requirements. NST can assist you with determining what system will work best for your application.
- Available with both AC and DC voltage outputs
- Pure sine wave AC power output is standard
- Battery voltage ranges available 12-48VDC
- Maximum Power Point Tracking (MPPT) battery charging
- High efficiency monocrystalline solar modules
- Sealed absorbed glass mat (AGM) maintenance free deep cycle batteries for solar energy storage
- Available with heavy duty galvanized steel pole or powder coated steel pole.
  Heavy duty construction, engineered for rough use austere environments
  Aluminum/Galvanized steel construction
  Top or side of pole mounting
  25-year solar panel power output warranty
  5-year system electronics warranty
  2-year battery warranty
  Lifetime product support



#### **Benefits of Solar Energy**

- Reduce or eliminate the use of fossil fuel
- No noise, completely quiet operation
- No harmful exhaust, zero carbon footprint
- No routine maintenance
- No special skills required to operate

#### Solar Module Technology

- Mono-crystalline technology
  Up to 22% efficiency
  Anti-glare coating
- Wind, hail, and twist tested for ruggedness

#### NATIONAL SOLAR TECHNOLOGIES





https://bit.ly/solar-wifi-access

# **Portable Wireless Access Point Solar Cart**

#### Standard Features

- 100% Solar Powered
- Extendable mast up to 20 ft.
  PoE power output
  Cat5e cable pre-connected to power unit
  Best in class solar electric power generation unit.

#### Solar Modules

• Solar module power rating is engineered for the installation location based on solar radiation data, luminaire wattage, and

- Maintenance-free, AGM energy storage.
- Never flat wheels
- Heavy duty handle for tilting back and moving unit around on extra wide rubber wheels
- Outrigger supports
- Extends to 20<sup>7</sup>, folds to 6<sup>7</sup>
- Minimum of 3 days battery autonomy
- Beige finish (other finishes available)
- 25-year solar module power warranty
- 5-year system electronics warranty
- 2-year battery warranty
- Lifetime product support

#### Power Over Ethernet Output

luminaire valtage, and luminaire run-time per night. NST uses data gathered by NASA for thousands of locations around the world which allows for pinpoint accuracy when engineering/sizing our solar lighting systems.

## Energy Storage

- Batteries used in NST solar lighting systems are heavy-duty internal plate design, sealed, deep cycle, AGM battery technology.
- Standard 3-day battery autonomy

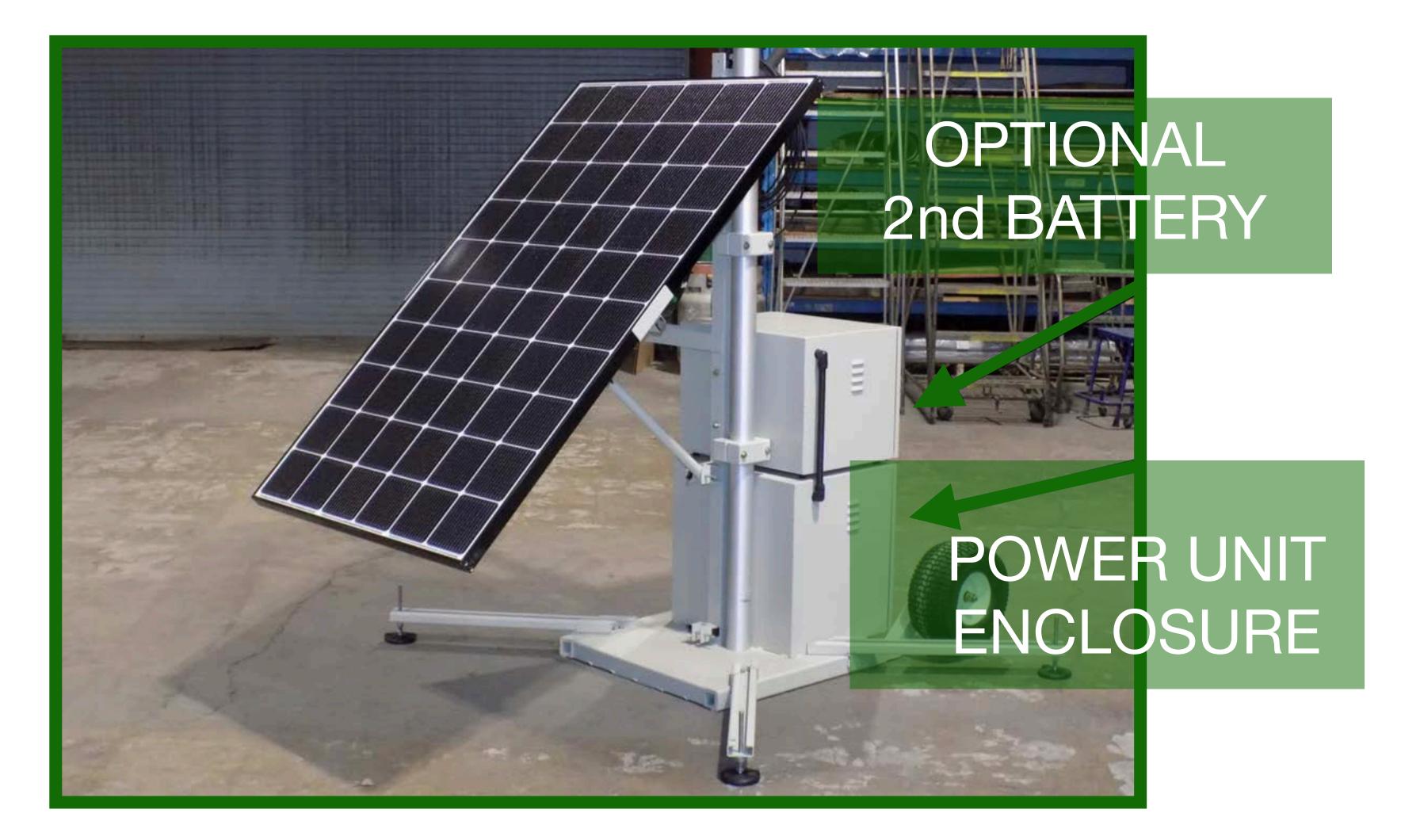
#### System Controls

- MPPT solar charging regulation
- Circuit breaker protection
- External digital battery voltage display
- Lightning/surge protection
- PoE outputs available are 12VDC, 24VDC and 48VDC
- Standard base battery voltage output of 12VDC available without PoE.



#### NST Standard System Model

- Portable Wireless Access Point Solar Cart (Single Enclosure) Item No. PWAP-SEPS-02-20HD
- Portable Wireless Access Point Solar Cart (Dual Enclosures-Battery Expansion)
   Item No. PWAP-SEPS-02-20HD-XL



#### NATIONAL SOLAR TECHNOLOGIES