

# Event Solar Power

Totally Silent Solar Power for Weddings, Parties, and Other Events



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**Q1: How do we arrange to rent the Solar Shuttle™?**

**A1:** The easiest way is to contact us by sending e-mail to us at: SolarShuttle@Ymail.com

Describe:

- 1) Your event type
- 2) Physical location/address of your event
- 3) Your event start and end hours
- 4) What you'd like powered
- 5) An estimate (best guess) of the power consumption of the equipment you'd like us to power.

More detail is better.

Please include your name, telephone number, and a date and time we can contact you. A phone call is typically worth several e-mail messages. We're often working events where the noise level prevents easy cell phone or other conversation, so it's frequently easier for us to get back to you.

**Q2: How much does it cost to rent the Solar Shuttle™ (and other equipment if needed)?**

**A2:** Rental rate is negotiated at the time of booking, and depends on the type, location, time, and duration of the event, among other things. The cost is frequently very competitive to what you'd pay for a gasoline or diesel generator of comparable power, especially when you include the price of fuel, plus your time and hassle of renting the generator, then either having it delivered and picked up (rental companies charge extra for this!), or YOU pick it up and take it back. (Generators can be incredibly heavy!)

The Solar Shuttle™ standard rental rate is \$75 per hour (in one-hour increments), with a four-hour minimum. The Shuttle Power Wagon™ rental rate is \$40 per hour (in 30 minute increments), with a one-hour minimum. The Shuttle Power Cart™ rental rate is \$25 per hour (in 30 minute increments), with a one-hour minimum. There is also a portal-to-portal (round-trip) transportation cost of one dollar per mile from Keller, Texas to your event or activity site. Keep in mind that for the stated rates, we:

- 1) Deliver all equipment to your event site;
- 2) Place and set up the equipment for you.
- 3) Have a trained operator stay with the equipment for the duration of your event to help ensure success of your event;
- 4) Pack up and return all equipment at the conclusion of your event.

There is substantial value to you in not having to deal with any of this. If you've ever rented a generator .. you understand what we mean.

**Q3: How far in advance of our event should we make rental arrangements?**

**A3:** As soon as possible! The Solar Shuttle™ is so popular, it's booked a year or more in advance by some events. Our busiest months tend to be April, June, September, and October.

**Q4: How do I/we make payment?**

**A4:** Payments can be sent to us via our website or US Mail. On our website, we accept credit and debit cards (VISA, Master Card, Discover, and American Express) via PayPal™. Via US Mail, we accept checks, Cashier's Checks, and money orders. Payment on site via cash or check the day of your event is accepted only from previously approved or established customers, and must be tendered prior to the start of your event. If you are a government agency, municipality, school district, or similar, an invoice will be issued and you may pay by check or credit card according to the terms of the invoice (which will be established in advance of your event in accordance with your standard payment terms). Otherwise, an advance invoice will be issued, and prepayment is required. Please mail your payment 10 or more calendar days in advance of your event date to allow time for your check to clear the bank. (Yes, sadly we've received bad checks over the years.)

**Q5: Will we have to pick up and return the Solar Shuttle™?**

**A5:** No. We have good news for you! Experienced personnel will bring the Solar Shuttle™ to your event location, set it up, and stay with it to ensure proper operation and power for the duration of your event. You've got many other things that require your attention. With our help, worrying about power for your event won't be one of them.

**Q6: What equipment do we need to provide?**

**A6:** It is best if you provide all of the power cords required. However, we realize this isn't always possible. Subsequently, we offer a limited number of extension cords for rent with the Solar Shuttle™ and our auxiliary power systems. We carry two different cord sizes and three different lengths of extension cords in our inventory. See our "Equipment Specification" page for details.

You (or someone working with you such as your event sound or equipment manager) will need to provide all other power cables of adequate length and size for the loads. Outlets in the Solar Shuttle™ are standard "NEMA-15" and "NEMA-20". These are an industrial-grade 20 amp outlet and will accommodate either 15 amp or 20 amp plugs, identical to what you use around your home or office.

For optimal safety and power stability, your event layout should allow the Solar Shuttle™ to be located within 100 feet or less from the loads it will power.

Important Note: You are responsible for proper layout and protection of all power cords (same as if you rented a generator). Our responsibility extends to but not beyond the outlets.

**Q7: We have more than one location on site that needs power. Do you have other solar equipment we can use in addition to the Solar Shuttle™?**

**A7:** Yes - to a point. If the power needs of your additional locations are low-to-modest, we may be able to help. Multiple sound stages or other large loads at separate locations cannot be accommodated at this time. For low-power and modest-power loads, we have a solar power wagon (a large garden wagon equipped with batteries, solar panel, and inverter) able to provide up to 1,100 watts. We also have a solar power cart for loads rated up to 250 watts (short term). These are light-duty power sources suitable for continuous loads up to 400 watts and 75 watts respectively. The solar wagon includes a 250 watt solar panel. The solar cart has a 180 watt solar panel. The portable power sources are available for an additional rental charge, and must be arranged in advance of your event date.

If your power needs are exceptionally large, or of long duration, a second solar trailer of similar capabilities to the Solar Shuttle™ may be available if arrangements are made sufficiently in advance. The rental rate for the second solar trailer would be similar to that of the Solar Shuttle™. You will be billed for both trailers delivered to your site, even if only one is used at a time.

**Q8: Are there any special parking requirements for the Solar Shuttle™?**

**A8:** To a point. If your event is held during the day, the solar panels must face south into the sun, where they may be tilted out, thus allowing them to generate the maximum possible electricity. If your event begins late in the afternoon, or takes place exclusively after sundown, the Solar Shuttle™ may face any direction. The Solar Shuttle™ location must also be reasonably level, on firm ground, and free of low-hanging branches or other objects. If your event is held during the day, the Solar Shuttle™ must also be free of shade.

The Solar Shuttle™ is heavy (due to the batteries inside). Care should be taken to avoid putting the Solar Shuttle™ in areas with underground sprinklers, pedestrian sidewalks, or other items that may be damaged by the weight. Curbs are also a consideration, and may require sandbags or other means to allow the Solar Shuttle™ to be towed over the curb if needed. Sufficient area must be available to allow maneuvering room for the Solar Shuttle™ and the tow vehicle, especially if your event is during the day and the Solar Shuttle™ must be parked with the solar panels facing south for maximum exposure to the sun.

If a platform such as a sound stage or other structure is to be provided for entertainers, or other obstacles will be present or erected on site in the vicinity of the Solar Shuttle™ (such as vendor tents, booths, displays, etc.), then this needs to be told to us ahead of time and made a part of your contract. We need to arrive at your site sufficiently in advance of your construction and/or assembly work so the Solar Shuttle™ can be properly oriented (and the tow vehicle disconnected and removed if necessary), without interfering with the setup for the other participants.

**Q9: How much area does the Solar Shuttle™ require?**

**A9:** The Solar Shuttle™ requires about the same area as two standard parking spaces side-by-side (approximately 20 feet by 20 feet). This allows room for the Solar Shuttle™, and a safety zone so the photovoltaic modules ("solar panels") can be tilted to face the sun. An additional space will be needed ahead of the Solar Shuttle™ if it remains connected to the tow vehicle. Allowing the Solar Shuttle™ to remain attached to the tow vehicle may reduce the rental cost, as it eliminates the added labor required to disconnect and reconnect the Solar Shuttle™.

**Q10: How much time is needed to set up the Solar Shuttle™ and get it operational?**

**A10:** In an open, level area, the Solar Shuttle™ can be completely set up and operational in approximately 20 minutes for daytime events. This allows time to orient the Solar Shuttle™'s solar panels for best exposure to the sun, and tilting and locking the solar panels into place. Protective traffic cones and "Caution" tape are installed to protect your guests and our equipment. If your event is at night, there's no need to orient the Solar Shuttle™ or deploy the solar panels, in which case setup time can be as little as is needed to park the Solar Shuttle™, and (if needed), unhitch and park the tow vehicle. Power is available almost immediately after arriving on site and parking the Solar Shuttle™, regardless of the time of your event.

Special consideration for navigating around, trees, water sprinklers, or other obstacles will add somewhat to the setup time. We strive to do our homework and be familiar with your site. We have even driven to an event location a few days in advance so that we may familiarize ourselves with the layout and possible obstructions. If we do this, it's done on our own time and at our own expense. We try to do everything we can to help ensure the success of your event.

**Q11: What type of equipment can the Solar Shuttle™ power?**

**A11:** The Solar Shuttle™ can power anything that plugs into a typical 120 volt household circuit. Most commonly, the Solar Shuttle™ provides power for sound stage amplifier and audio/video equipment, as well as totally silent power for wedding ceremonies and similar occasions. The electricity provided by the Solar Shuttle™ is true sine wave. It's cleaner and much more stable than anything you can get from a generator or the utility company. This also has numerous added advantages:

- When the band or DJ stops playing music, the equipment is absolutely quiet.
- No worry about running out of fuel, or having to refuel during your event.
- No concerns about mechanical failures, bad circuit breakers, or other common generator breakdowns.
- No generator noise or fumes to annoy you or your guests, or prevent you from hearing a nervous bride's "I do" during a wedding. (That's a moment in time you can NEVER get back!)

**Q12: Are there any types of devices for which you won't provide power?**

**A12:** Yes. We generally won't allow large, continuously operating loads such as air conditioners, electric cooking equipment, pumps, large spotlights, and other high-power consumption items that operate on a steady basis. However, that said, there may be exceptions. Loads of this nature need to be discussed on a case-by-case basis.

**Q13: Is the Solar Shuttle™ able to provide power for stage lighting?**

**A13:** Possibly, but this depends to a great extent on the type of lighting and how long it will be used. Incandescent spotlights, floodlights, and other incandescent lamps consume large amounts of energy on a continuous basis. After dark, batteries are the only source of energy in the Solar Shuttle™. Although the batteries store quite a bit of energy, it's not unlimited. The larger the loads (meaning the higher the wattage), the faster the battery energy gets depleted. If you are using "LED" lights, there's a good chance we can provide power for them for many hours. This has to be evaluated on a case-by-case basis.

If you're going to use incandescent stage lights, you may need to rent a generator just for the lights. The stage lights can be connected to the generator, while the audio amplifiers remain connected to the Solar Shuttle™. This is a win-win for you and your event. You can rent a smaller generator than would be needed for the lights and the stage audio combined. Powering the stage lights from a generator isolates dimmers, switching circuits, and other interference-producing sources from the audio mixers and amplifiers. You'll eliminate one BIG "noise" problem that often plagues audio equipment at concerts and other events.

**Q14: Will audio and other equipment work as well on the Solar Shuttle™ as it does from utility power?**

**A14:** Yes! In fact, even better! The Solar Shuttle™ has provided power for Grammy-award winning bands and performers. The sound engineers and performers from every group have said the power provided by the Solar Shuttle™ is "perfect!". The sound production engineer for "Brave Combo" (a multiple Grammy-award winning group) said power from the Solar Shuttle™ "is even cleaner and more stable than the electricity they have in their studio".

**Q15: What is the maximum power available from the Solar Shuttle™?**

**A15:** 120V at up to 100 amps ac (12,000 watts) for short periods of time, and up to 200 amps (25,000 watts) for a few seconds. These power levels are an absolute maximum, and are not recommended. Very high power consumption at these levels will rapidly discharge the batteries. On the other hand, the Solar Shuttle™ routinely provides power for bands consuming up to 10,000 watts of peak audio power all day on sunny days with complete success. However, "music" power is a very different and much easier load than "continuous" power in spite of its momentary very high demand. Power tools and other loads are limited to 20 amps per circuit, and up to 50 amps per inverter (two inverters). There are eight output circuits available inside the Solar Shuttle™ - four from each inverter. For reliability and backup purposes, only one main inverter is used at a time.

**Q16: Can the Solar Shuttle™ provide power on cloudy days?**

**A16:** Yes. Large batteries inside the Solar Shuttle™ store considerable (but not unlimited) backup power. If your event is held in the daytime on a sunny day, the sun will enhance the amount of power you can use without depleting the batteries. If it's cloudy on the day of your event, power consumption may need to be reduced to ensure the success of your event. Under such circumstances, our on-site staff will work closely with you to help manage your energy requirements.

**Q17: Our event begins in the afternoon and ends well after sundown. Is this a problem?**

**A17:** Generally not. During the day, on very sunny days, the solar panels can often generate sufficient power to keep up with fairly large bands and other loads. At night, power is exclusively from energy stored in the batteries, and your power consumption may need to be reduced to help ensure an adequate supply through the end of your event. It all depends on how much power is being consumed, and for how long.

**Q18: How long will the batteries last before they go dead?**

**A18:** There's no simple answer to this question. It all depends on whether the Solar Shuttle™ is being used during the day or at night (the solar panels contributed significant energy on very sunny days), what you're powering, how much energy it consumes, and for how long. Typically, on sunny days, the photovoltaic modules ("solar panels") on the Solar Shuttle™ will generally keep up with a sound stage that's sized for events up to 5,000 people or so, and provide power all day and into the evening. On the other hand, excessively large continuous loads such as a very big bounce house with multiple blowers might run the batteries dead in as little as two to four hours.

**Q19: We don't need very much power. Will you rent just the smaller systems by themselves, without the Solar Shuttle™?**

**A19:** No. Sorry. Everything comes as a package.

**Q20: How long have you been providing event power?**

**A20:** For more than 12 years in the Dallas / Fort Worth Metroplex, and more than 20 years in other parts of the country.

**Q21: We would like some references. For whom, or what events have you provided power?**

**A21:** The list is considerable. Here are but a few:

- City of Dallas Earth Days. (Since 2001).
- Ham Radio "Field Day", a simulated emergency exercise held annually each June. (Since 2001.)
- City of Irving Earth Days. (Since 2003.)
- Multiple booths at the Fort Worth May Fest. (2003 to 2010).
- First Responders during the Hurricane Katrina Rescue Effort (for six straight weeks, August and September, 2005).
- Fort Worth Prairie Fest - seven years (since 2007). Booked again in 2014.
- City of Fort Worth Earth Party (2013). Already booked for this event in 2014.
- Tarrant County Earth Day (2011, 2012, 2013). Already booked for this event in 2014.
- Earth Day Dallas (at the personal request of Trammel Crow) in 2013. Already requested for 2014.
- Construction sites for Habitat for Humanity (since 2002).
- Powered 44 exhibitors at the Midwest Renewable Energy Fair, Custer, Wisconsin (2010, 2011).
- Power for exhibitors at the City of Arlington, Texas "Eco Fest". (2010, 2011, 2012, and 2013). Already booked for 2014.
- University of Texas at Arlington - Educational Purposes on Campus for various Environmental and Architectural Classes.
- University of North Texas Earth Day in Denton, Texas. (2013)
- .. and MANY others.

The above are but a few of the events and locations where the Solar Shuttle™ and its predecessor systems have been utilized. There are literally hundreds of others.

**Q22: Do you / will you install solar energy equipment on my home/business?**

**A22:** No, we don't sell or install solar energy equipment, but we'll be glad to refer you to several companies in this area that are in the solar energy installation business.

**Q23: Would you build a solar trailer like the Solar Shuttle™ for me / us?**

**A23:** No. Sorry. It's not a matter of concern for competition .. it's a matter of sanity. It took 14 months of spare weekends to build the Solar Shuttle™. One more "Shuttle" and Dan's wife would have him committed. We will be glad to refer you to companies that build solar trailers. A word of warning: Be prepared for sticker shock. Prices can be upwards of \$82,000 for solar trailer models with capabilities similar to that of the Solar Shuttle™.

**Q24: How much did it cost to build the Solar Shuttle™?**

**A24:** The cost to build in 2009 was about \$65,000. This is a bit more than it would be today due to a decrease in the price of photovoltaic modules ("solar panels") in the past several years. However, there are other factors to consider. The Solar Shuttle™ has two or more of everything for reliability and backup purposes. In addition to providing solar power for events and activities, the Solar Shuttle™ is available for use by first responders such as Texas Task Force One. If something should fail to work during an emergency, lives could be lost. Fortunately, there have never been any failures in any of our equipment in more than 12 years, but it's a risk we can't afford to take - so we carry backups and spares of everything with us, and this adds to the cost.

**Q25: I didn't find my question asked here. How may I contact you to ask?**

**A25:** The easiest method is by e-mail to: **SolarShuttle@Ymail.com** ...

E-mail is easier for us too. We're often at functions that at times can be so noisy we don't hear the cell phones ring. Even if we did, the music or other audio volume is so loud we can't hear. We'd like to give you our fullest attention when we talk with you. It's often difficult to do this when we're on site at an event.