

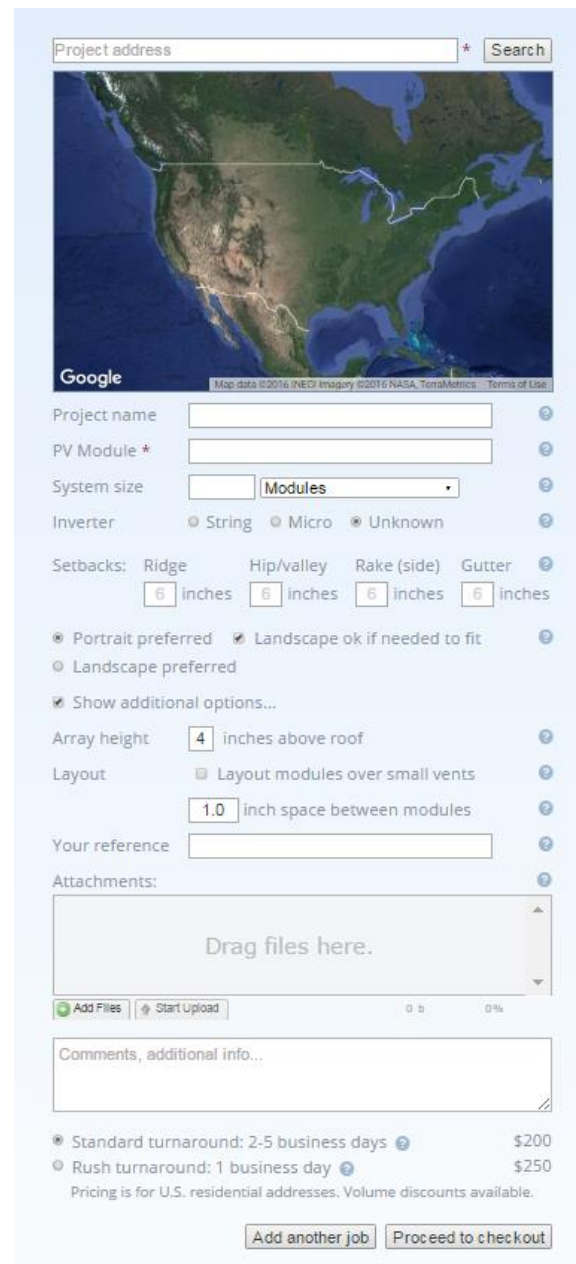
Bright Harvest – Creating a Solar Resource Assessment for Energy Trust Incentive Applications

Energy Trust requires that each incentive application include a solar resource assessment using an approved site analysis tool. Solar resource assessments evaluate the impact of shading and array tilt and orientation on the annual production of the solar electric system. For remote shade analysis tools such as Bright Harvest, Energy Trust requires that each individual array or roof plane on a site have a Total Solar Resource Fraction (TSRF) of 80% or greater to be eligible for Program incentives.

For more information: www.brightharvestsolar.com

Introductory webinar: Monday, November 14 from 1:00 – 2:00 p.m. - [Register for the webinar](#)

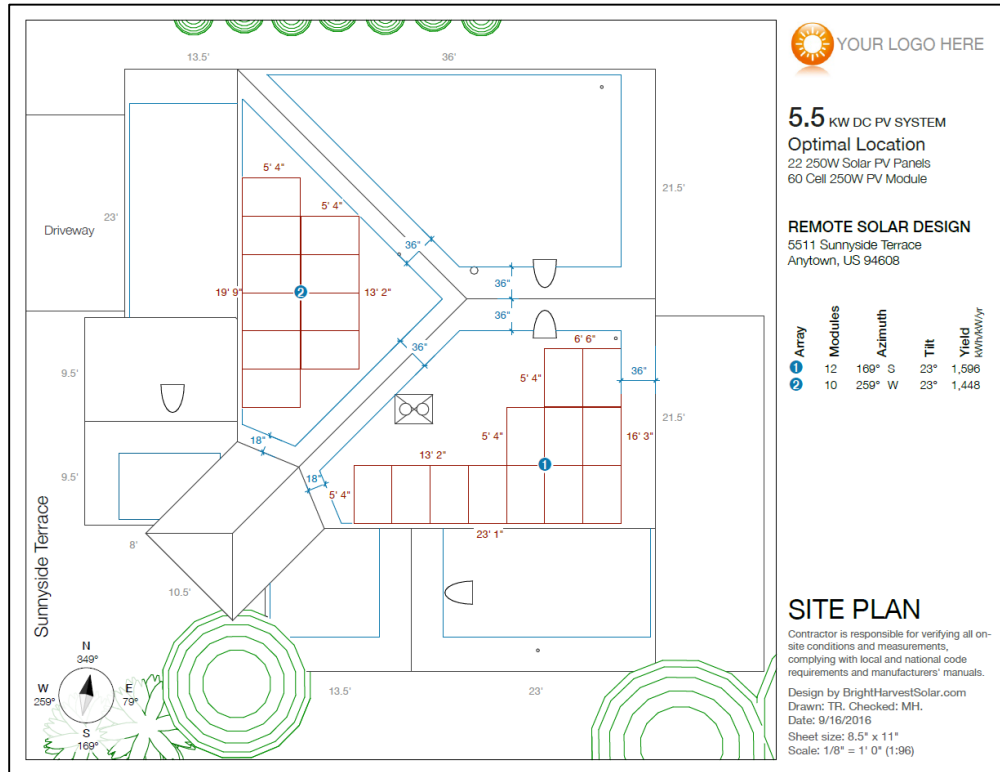
1. Collect all necessary customer information and complete Bright Harvest order form.
2. In the project notes clarify that each individual array or roof plane on a site must have a Total Solar Resource Fraction (TSRF) of 80% or greater.
3. Submit a report that details the final system design and shading analysis.
4. Enter either the annual TSRF for each individual array or the lowest overall annual TSRF value for any array into the PowerClerk incentive application.

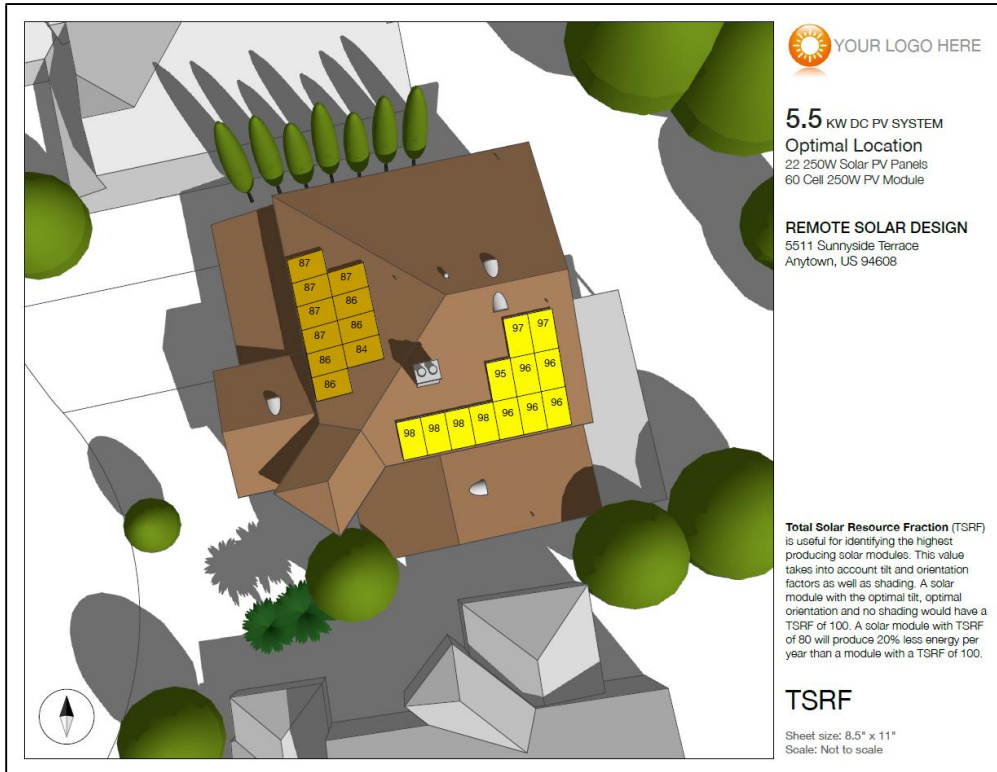


The screenshot shows the Bright Harvest software interface. At the top, there is a search bar for the project address. Below it is a map of the United States. The main form contains the following fields and options:

- Project name:** Text input field.
- PV Module *:** Text input field.
- System size:** Text input field and a dropdown menu set to "Modules".
- Inverter:** Radio buttons for "String", "Micro", and "Unknown".
- Setbacks:** Four input fields for "Ridge", "Hip/valley", "Rake (side)", and "Gutter", each with a value of "6 inches".
- Orientation:** Radio buttons for "Portrait preferred", "Landscape preferred", and "Landscape ok if needed to fit" (which is selected).
- Array height:** Input field with "4 inches above roof".
- Layout:** Checkboxes for "Layout modules over small vents" and "1.0 inch space between modules".
- Your reference:** Text input field.
- Attachments:** A drag-and-drop area with "Add Files" and "Start Upload" buttons.
- Comments, additional info...:** Text area for notes.
- Turnaround options:** Radio buttons for "Standard turnaround: 2-5 business days" (\$200) and "Rush turnaround: 1 business day" (\$250).

At the bottom, there are buttons for "Add another job" and "Proceed to checkout".





SHADING ANALYSIS

ARRAY	1	2	ALL	kWh
January	99	96	98%	561
February	99	96	98%	481
March	98	97	98%	736
April	98	97	98%	759
May	98	97	98%	841
June	98	98	98%	863
July	98	97	98%	875
August	98	97	98%	851
September	98	97	98%	753
October	99	97	98%	598
November	99	96	98%	558
December	99	97	98%	533
Summer	98	97	98%	4,781
Winter	99	97	98%	3,627
Annual SAV	98	97	98%	8,407
TSRF	97	86	92%	

PRODUCTION ESTIMATES

ARRAY	1	2	ALL
Yield (unshaded)	1,623	1,494	1,564 kWh/kW/yr
Shading derate	98	97	98%
Yield (shaded)	1,596	1,448	1,529 kWh/kW/yr
Azimuth	169°	259°	
Tilt	23°	23°	
Module count	12	10	22
System size	3	2.5	5.5 kW STC
Annual energy	4,788	3,619	8,407 kWh +/-10%

PVWatts derate factors	Default	Actual
Soiling	0.98	0.98
Shading	0.97	0.98
Snow	1.00	1.00
Mismatch	0.98	0.98
Wiring	0.98	0.98
Connections	0.995	0.995
Light-induced degradation	0.985	0.985
Nameplate rating	0.99	0.99
Availability	0.97	0.97
Overall system derate	0.86	0.868
Overall system losses	14%	13.2%
Inverter efficiency	96%	96%

PVWatts Data Set
Data: TMY3
Location ID: 722926
Latitude: 33.299999°
Longitude: -117.349998°
Elevation: 23 m

The TSRF value for each array or roof plane must be 80% or greater to qualify for the Energy Trust incentive.



5.5 KW DC PV SYSTEM
 Optimal Location
 22 250W Solar PV Panels
 60 Cell 250W PV Module

REMOTE SOLAR DESIGN
 5511 Sunnyside Terrace
 Anytown, US 94608

Production calculated using
PVWatts
 pvwatts.nrel.gov

SYSTEM PERFORMANCE

Sheet size: 8.5" x 11"
 Scale: Not to scale