Docket Number:	15-MISC-04
Project Title:	Fuels and Transportation Merit Review
TN #:	211222
Document Title:	David Greenfader Comments: DC Fast Charging Solar Tree - 100% Off Grid
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Comment Received From: David Greenfader

Submitted On: 4/24/2016 Docket Number: 15-MISC-04

DC Fast Charging Solar Tree - 100% Off Grid

Additional submitted attachment is included below.

Solar Tree®





Driving on Sunshine

What is a **Solar Tree** ?

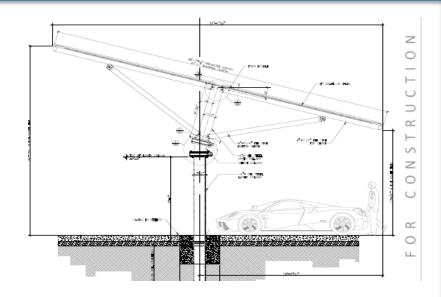
Envision Solar's Solar Tree Arrays are the highest quality, fastest deployed and most attractive photovoltaic parking shade systems in the industry.

An anchored Solar Tree® structure shades six to eight standard car parking spaces and simultaneously produces enough clean energy to fully charge six electric vehicles or power six family homes per day. The energy produced can be used to reduce your utility bill, charge EVs, be stored for use in an emergency or all of the above.

Dimensionally, the Solar Tree® consists of a 35′ by 35′ square, 60 module PV canopy mounted atop a single column. There is a 10′ standard minimum clearance from the lowest point on the array even when it is tracking the sun. This comfortably and safely allows for shaded parking beneath the array.

Solar Tree® arrays are the ideal combination of form, function and sustainability.







EnvisionTrak[™]

Proprietary Sun-Tracking Technology

Increases solar production by 18% to 25% over conventional fixed arrays.

EnvisionTrak™ is specifically designed for parking environments. Tracking array avoids drive aisle obstructions by maintaining lineal alignment over parking area.

EnvisionTrak™ allows the Solar Tree® to find the sun from any direction. Doesn't require east-west southern azimuth orientation.

EnvisionTrak™ has been described as the most reliable,
most robust and most efficient tracking technology
in the industry by
San Diego Gas and Electric.





Naval Base Coronado, Berth Lima Coronado, CA



^{*} All dimensions, cost capacity and production numbers are approximate. Please ask about discounts for volume.

EnvisionTrak™ Time-Lapse Video

Click on photo





The Industry's Highest Standards



- Our products are architecturally accretive and pass entitlement more easily than others.
- ✓ Our products adhere to extremely stringent engineering standards.
- Our products are rated for any and all conditions in the US.
- Our products are **Made in the USA**.





Drag and Drop™ Design

Modular design of highest quality components

Reduced assembly & installation time from weeks to days – industry best

Kit of engineered parts reduces field labor and risks to a minimum



Day 1



Day 2



Days 3/4



Day 5



Day 6



Day 7



Solar Tree[®] Model: HVLC™

Standard Features:

- ☐ 17.1 kW / 25,000 to 35,000 kWh/year*
- ☐ 60 PV (280w) 35'X35' canopy, 8 parking spaces
- ☐ 14" cylindrical steel column
- ☐ 120 mph wind resistance
- ☐ 7 day install
- ☐ Grid tied system
- ☐ Customized foundation design

Optional Features Available



Kohl's Department Store Company Dallas, Texas



Solar Tree® Model: DCFC™

Standard features *

- □ 17.1 kW (60 PV @ 280w)
- 60 PV panel array 35' x 35' (1225 sq. ft.)
- 8.5 ft. Customized tapered column
- Column Integrated DC Fast Charging
- 10' standard minimum vertical clearance
- ☐ Truss-integrated LED lights (4)
- ARC ™ Power Storage Technology
 - (<200 kWhs capacity)
- Color of your choice Paint or Powder-coat finish
- Branded valance and badging
- ☐ Turn-key installation 7 days or less







Solar Tree[®] Model: HVBA™

Standard Features:

- ☐ 17.1 kW / 25,000 to 35,000 kWh/year*
- ☐ 60 PV panel array 35' x 35' (1225 sq. ft.)
- ☐ 8 ft. Tapered Column
- ☐ 60 PV panel array 35' x 35' (1225 sq. ft.)
- ☐ Exclusive EnvisionTrak[™] Tracking Technology
- ☐ SunCharge[™] EV Charging / 1-6 L2 (240V) EVSE
- ☐ Aluminum composite tile ceiling
- ☐ Custom branding:
 - ➤ Aluminum branding valance with lettering
 - ➤ Chrome EVSE charging belt and accent
 - > Custom Color powder coat (corrosion resistant)
 - ➤ Anti-graffiti proof tile column or finish of choice



Fremont Cadillac Fremont, CA

Many Optional Features Available



Solar Tree[®] Model: Socket™

Standard Features:

- ☐ 3.4 kW (12 PV @ 280w)
- ☐ 14" cylindrical steel column
- ☐ 7 day install
- ☐ Grid, buffered or off-grid

Optional Features (at additional cost):

Listed below





Optional Features – Customizable and Dynamic

Solar Trees* are excellent mounting assets for any device that enhances your campus, commercial or residential parking lot or parking garage.

- 8 ft. Tapered Support Column
- CCTV cameras
- Kiosk interoperability
- Digital outdoor screen for messaging advertising or business directory
- USB ports
- 120V outlets
- Wireless Access Point
- Loud speakers















Solar Tree - Optional Features

Models: HVLC1, HVBA1, Socket™	VALUE / BENEFIT
8.5' Tapered Column	Allows for expandable functionality and design (Required on Models: HVBA, DCFC, CIP)
EnvisionTrak™ Exclusive sun-tracking technology	Can increase power capture by 18%-25% and help find sun in any orientation
Perforated Aluminum Panels	Ventilated anti-corrosive aluminum perforated ceiling
EVSE Charge Belt	Provides customized
Electrical	
AC and USB Outlets**	1 gang box include 2 USB + 1 120V outlet. A parklet amenity ,e.g. cell phone, laptop wheelchair
Standard Charging Plug - Level-2	J1772 240V (non-networked)
Lighting	LED lighting
Networked Charging	Chargepoint™ or similar as selected by customer
DC Fast Charger*	TBD
ARC Battery storage* technology	Can store up to 120 kWhs batteries for grid-buffered, standalone or DCFC
CCTV Camera	Added security, expand surveillance capabilities
Branding	
60" Outdoor Digital Screen	Allows user to deliver digital content wirelessly to an outdoor screen
47" Outdoor Digital Screen	Allows user to deliver digital content wirelessly to an outdoor screen
Custom Colors and Branding	Choose your own color scheme and add logos and branding

^{*} Requires Tapered Column / ** Current limited while EV is charging

Envision Solar Customers





























A Member of the Roche Group









Call and take advantage of the tax credits and other generous incentives available today!





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