

FEDERAL UTILITY PARTNERSHIP WORKING GROUP SEMINAR

November 7-8, 2018
Herndon, VA

Installing a car charging station using UESC contracting vehicle

Hosted by:



Prior experience with Pepco and UESC

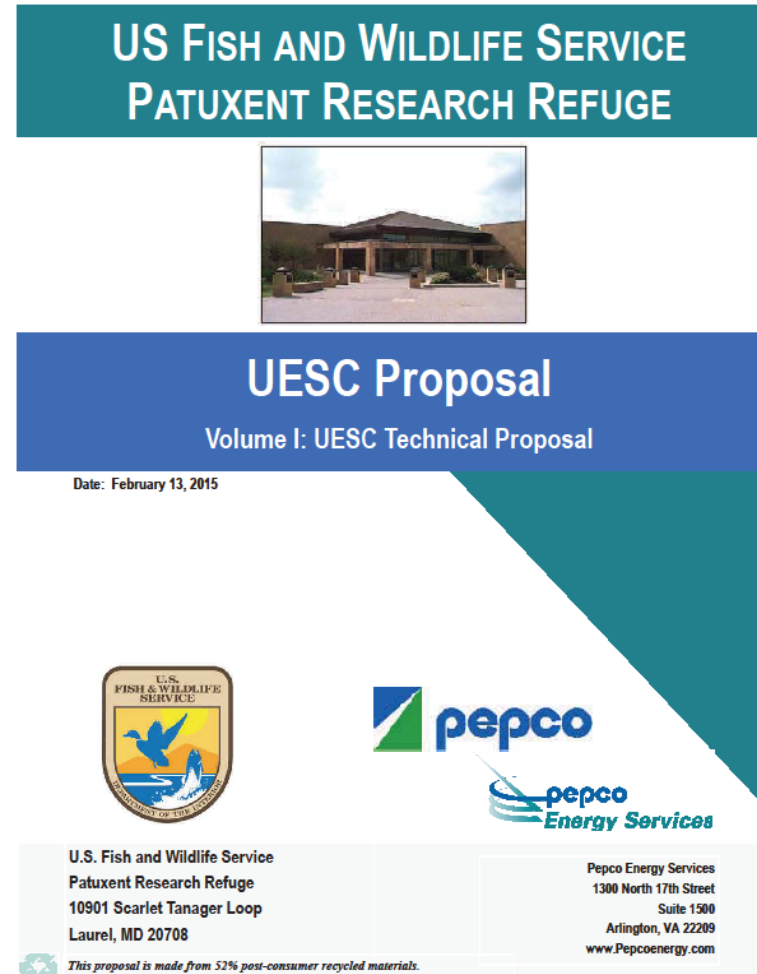
- Phase 1 of National Wildlife Visitor Center, HVAC systems renovation- NOT UESC
- Phase 2 of HVAC renovations- GOV used contractor to write specification. Poorly done with no emphasis on sustainability or energy conservation or using innovative equipment. GOV COR recommended to CO that we use UESC contracting vehicle but “compete” bids on specification with award based on best value to the GOV. Pepco Energy Services (PES) and Wash Gas Energy Services both competed. Awarded to PES.

Phase 3-NWVC Roof and Solar

- PES prepared proposal for roof replacement, covering roof with solar PV. Options included constructing carport, with EV charger and solar thermal water heating.
- PES awarded roof replacement and rooftop solar to RCS Roofing/ RCS energy services. Best value to government and having one responsible contractor primary sub reduced finger pointing.
- Project awarded fall 2015. Roof replaced October 2015- Nov 2015. Carport constructed November 2015. Roof solar and car charger operational by May 2016.

Phase 3-NWVC Roof and Solar

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Project Scope & Costs

ECM	ECM Description	Electricity (kWh)	Electricity (kWh) \$	Total Savings	Costs
1	Roof Upgrade		\$0	\$0	\$448,191
2	Roof Mounted Array, 179.3 kW	190,414	\$22,345	\$22,345	\$591,074
3	Carport Mounted Array, 71.3 kW	81,957	\$9,618	\$9,618	\$441,227
TOTAL PROJECT		272,371	\$31,963	\$31,963	\$1,480,492

Project Benefits

ECM	ECM Description	Total Energy Production, MWh	Total Savings (Year 1)	Percent of Savings	Post Construction Verification Activities
1	New ENERGY STAR roof	0	\$0	0%	No savings claimed
2	Solar PV – Roof	190.41	\$22,345	70%	PES will provide commissioning documentation for the new solar PV system installation
3	Solar PV – Carport	81.96	\$9,618	30%	PES will provide commissioning documentation for the new solar PV system installation
Total		272.37	\$31,963	100%	

“Before” Roof and Solar

- National Wildlife Visitor Center roof was black EPDM, vintage 1992, ballasted with stone. Building had leaks, multiple old repairs, bad coping metal, but good insulation.



DURING



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AFTER



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Carport During Construction



Carport Completed



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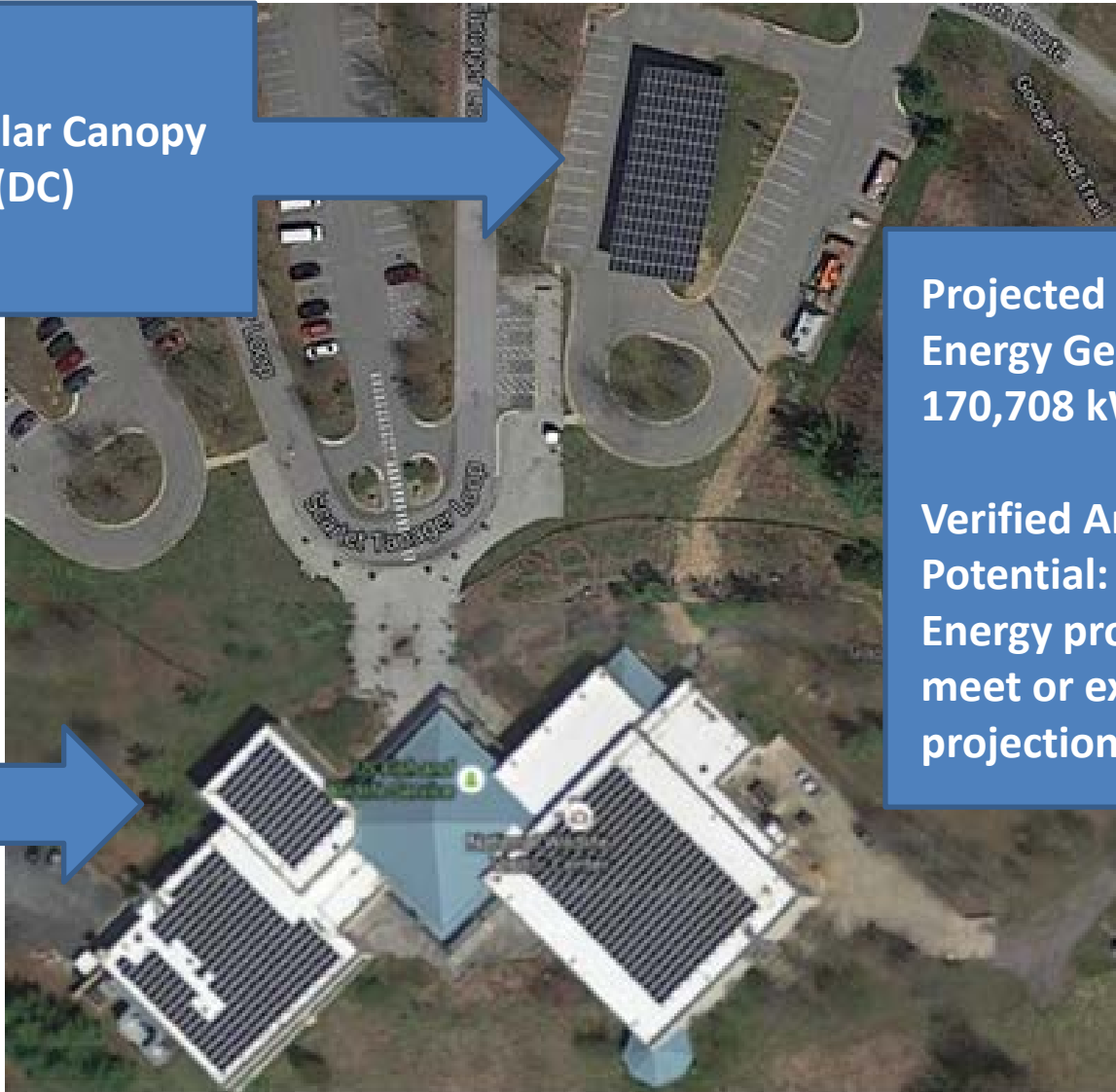
Total Project

Parking Lot Solar Canopy
71 kW (DC)

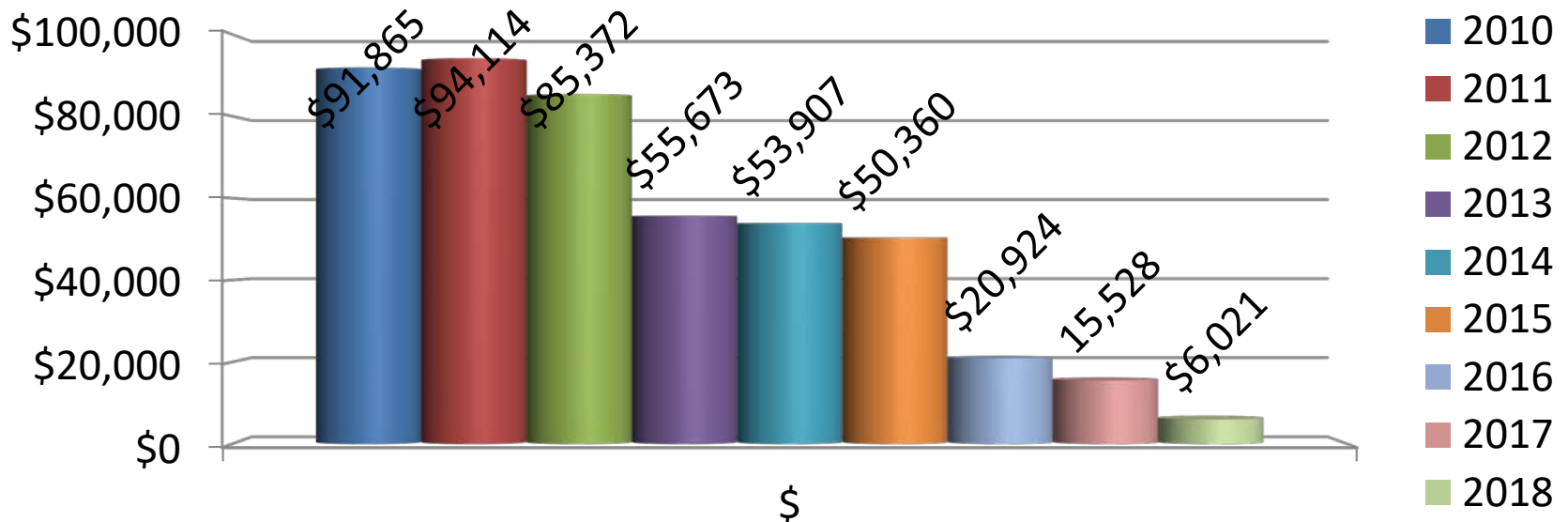
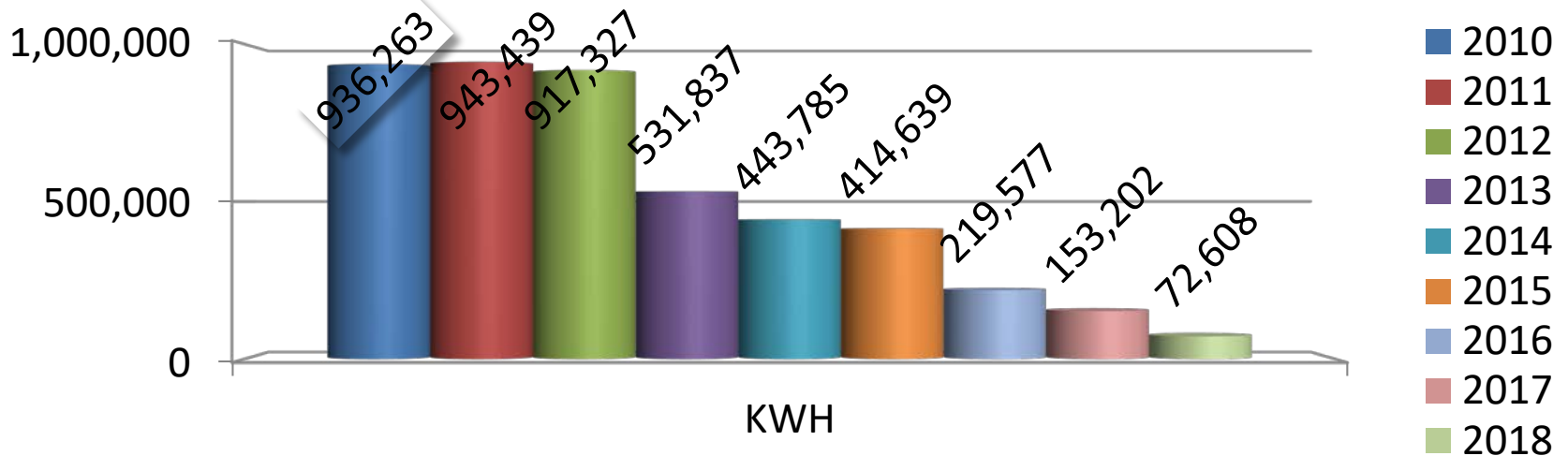
Rooftop
172 kW (DC)

**Projected Annual
Energy Generation:**
170,708 kWh

**Verified Annual
Potential:**
**Energy production will
meet or exceed original
projection**



NWVC electricity use 2010-2018



Oh, By the way, we got a Car Charging Station



www.chargepoint.com

← → ↻ 🏠 https://na.chargepoint.com/charge_point 🔍 ☆ ⌵ 🌐

Apps Northeast Region Na Hillmann & Carr | Me B BrightSign :: XT1143 patuxent Visitor List Patuxent Outside Fil R5 Safety and Occup Lumber Smith Sawm Mont Belvieu, TX Pro Weekly U.S. Weekly NWVC HVAC Control InsideFWS : R5

📍 Dashboard 📊 My Stats 🗨 My Account ⚙ Connections

I want to charge near 🔍

Status

Available ☐

Price

Free ☐

Show Est. Fee >

Connector Type

Level 1 ☐

Level 2 - J1772 ☐

Level 2 - NEMA 14-50 ☐

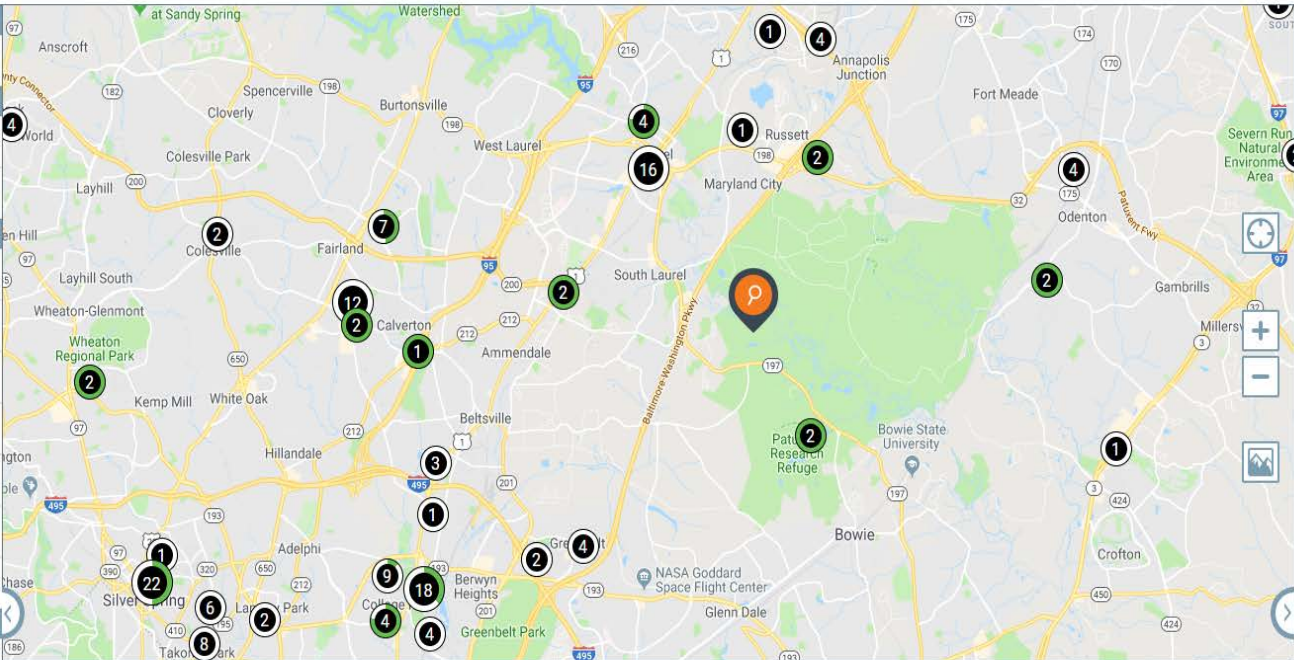
Level 2 - Tesla ☐

DC - CHAdeMO ☐

DC - Combo ☐

Supercharger - Tesla ☐

Network



📍 Charge Spots 🔄 Recent 📍 My Spots

Sort by Distance ▾

USFWS- PATUXENT NAT WL VIS CEN.

Level 2: 2

10901 Scarlet Tanager Loop
Laurel, MD
2.13 mi to Montpelier, MD 20708, USA.

Estimated Fee: \$2.00

OURISMAN VW VW_409150_A

Level 2: 2

3363-3393 Laurel Fort Meade Rd
Maryland City, MD
2.89 mi to Montpelier, MD 20708, USA.

Tischer Nissan

Level 2: 1

3510 Ft Meade Rd
Laurel, MD
3.20 mi to Montpelier, MD 20708, USA.

Towne Center at

Relationship Development

- Invite eligible UESC provider to survey your property.
- Prepare a list of your needs that may be eligible for completion via UESC. (Windows, doors, HVAC's, Lighting Retrofits, HVAC controls, insulation, Solar PV, Solar Hot Water, Variable speed drives for pumps, pump controls/ timing, Electric Car Charging Stations.
- Host UESC and Contractor Site Visits.
- Expect RFI's
- Receive Proposals. Evaluate. Resolve issues.
- Task Order Issuance

Next Steps



US Fish & Wildlife Service (USFWS)

Patuxent Research Refuge:
Proposal for UESC Phase II Project
May 26, 2017

OPTIONS!!

USFWS Patuxent Phase-II									Savings			
ECM Descriptions	Project Cost Components											
	Sub-Contractor Note-1	Construct. Mgmt. Note-2	Perf. Veri. Note-3	Contingency Note-4	Sub-Total	Over-head	Profit	Total	Elec. kWh	Fuel Oil gals	Pro-pane gals	Annual Cost Savings
<i>Constellation requests that USFWS select Option-1 or Option-2, in order to minimize Management time.</i>												
Option-1: Merriam Labs, Building #45												
ECM-1 Window Replacement												
New Windows	\$ 270,155	\$ 84,054	\$ 109	\$ 35,432	\$ 389,750	\$ 54,565	\$ 46,029	\$ 490,344	1,433	395		\$ 1,119
Restroom Exhaust System	\$ 19,462	\$ -	\$ 109	\$ 1,957	\$ 21,528	\$ 3,014	\$ 2,542	\$ 27,084				
Development Costs								\$ 50,000				
Total Option 1								\$ 567,428				
Option-2: Service Building #109												
ECM-2 HVAC Replacement												
VRV & DOAS w/controls and duct removal	\$ 425,241	\$ 78,818	\$ 543	\$ 50,460	\$ 555,062	\$ 77,709	\$ 65,553	\$ 698,324	(19,747)	2,962		\$ 4,740
Development Costs								\$ 50,000				
Total Option 2								\$ 748,324				
<i>If USFWS did NOT select either Option-1 or Option-2, then Construction Management Fees for any of the ECMs below would need to be added.</i>												
Other Window Replacement ECMs												
Quarters #49												
ECM-3 Window Replacement	\$ 54,152	Note-5	\$ 109	\$ 5,426	\$ 59,687	\$ 8,356	\$ 7,049	\$ 75,092	407		63	\$ 124
Quarters #80												
ECM-4 Window Replacement	\$ 39,615	Note-5	\$ 109	\$ 3,972	\$ 43,696	\$ 6,117	\$ 5,160	\$ 54,973	190	46		\$ 134
Building #89												
ECM-5 Window Replacement	\$ 18,554	Note-5	\$ 109	\$ 1,866	\$ 20,529	\$ 2,874	\$ 2,424	\$ 25,827	-	-	-	\$ -
Other HVAC ECMs												
Duplex-1 A&B												
ECM-6 HVAC Replacement	\$ 26,108	Note-5	\$ 543	\$ 2,665	\$ 29,316	\$ 4,104	\$ 3,462	\$ 36,882	612			\$ 73
North Tract Contact Station												
ECM-7 HVAC Replacement	\$ 17,850	Note-5	\$ 543	\$ 1,839	\$ 20,232	\$ 2,832	\$ 2,389	\$ 25,453	500			\$ 60
Solar Photovoltaics ECMs												
Service Building #109												
ECM-8 Solar PV	\$ 31,563	Note-5	\$ 1,302	\$ 3,287	\$ 36,152	\$ 5,061	\$ 4,270	\$ 45,483	10,481			\$ 2,500
Duplex-1 A&B												
ECM-9 a Solar PV	\$ 62,486	Note-5	\$ 1,302	\$ 6,379	\$ 70,167	\$ 9,823	\$ 8,287	\$ 88,277	17,129			\$ 4,538
Duplex-1 & 2 A&B												
b (if added to Duplex1)	\$ 104,910	Note-5	\$ 1,302	\$ 10,621	\$ 116,833	\$ 16,357	\$ 13,798	\$ 146,988	30,261			\$ 8,067
Duplex 1, 2 & 3 A&B												
c (if added to Duplex 1&2)	\$ 145,516	Note-5	\$ 1,302	\$ 14,682	\$ 161,500	\$ 22,610	\$ 19,073	\$ 203,183	43,404			\$ 11,597

Got a Shovel? And two spaces in your panel?




Individual Accounts for Each Employee

← → ↻ 🏠 🔒 https://www.evsolutions.com/turbodock ☆ 🌐 📱

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First Name*

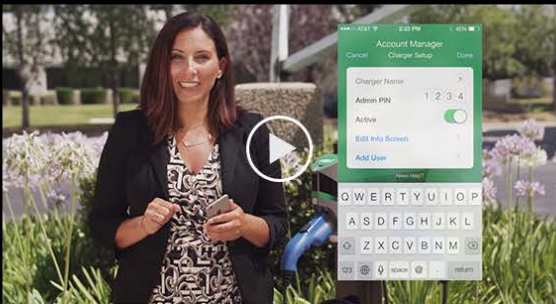
Last Name*

Email*

Company Name*

Phone Number*

SUBMIT



Take a closer look at TurboDock and how it can benefit your employees and business.

◀ **WATCH NOW.**

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ChargeGuard

https://www.clippercreek.com/workplace/?_ga=2.26220285.1758083656.1541183399-1440883113.1541183399

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The ChargeGuard® option, priced at an affordable \$78, delivers reliable key-based access control for the Level 2, 240V ClipperCreek® HCS Series product line which starts at \$565. The combination costs as little as \$643, and is a great value for an access-controlled charging solution... unlike anything else available on the market.

ChargeGuard® is an affordable access control solution designed for fleet, workplace, multi-tenant, hospitality and residential charging applications.

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The key can also be left in place in the "on" position for open access charging.