TOWN OF FAIRFAX
STAFF REPORT
February 2, 2022

TO: Mayor and Town Council

FROM: Jonathon Goldman, Interim Public Works Director
Rico Tabaranza, Police Chief
Michael Vivrette, Finance Director

SUBJECT: Receive Municipal Fleet EV Infrastructure Status Update and adopt a resolution to appropriate funds and authorize the Town Manager to:

(A) Negotiate Public Work up to $25,000 for Improvements to the Photovoltaic System at the Pavilion to Provide Level 3 EV Changing Capability Without Ground Disturbance

(B) Purchase One (1) Beam Global Solar EV ARC™M with ChargePoint Dual Port J-1772 Plug Mobile Solar Panel Electric Vehicle Charger Systems at California State Department of General Services Contract ID 1-18-61-16 Prices

(C) Sole-Source Purchase of One (1) 2022 Ford F-150 Lightning CREW CAB 4X4 LIGHTNING PRO EV

RECOMMENDED MOTION

Adopt a Resolution appropriating funds for and authorizing the Town Manager to:

(A) Negotiate Public Work up to $25,000 for Improvements to the Photovoltaic System at the Pavilion to Provide Level 3 EV Changing Capability Without Ground Disturbance;

(B) Purchase One (1) Beam Global Solar EV ARC™M with ChargePoint Dual Port J-1772 Plug Mobile Solar Panel Electric Vehicle Charger Systems at California State Department of General Services Contract ID 1-18-61-16 Prices;

(C) Sole-Source Purchase of One (1) 2022 Ford F-150 Lightning CREW CAB 4X4 LIGHTNING PRO EV from Downtown Ford Sales

BACKGROUND

With the Town's commitment to decarbonization and the Fairfax Police Department's pending acquisition of a fully-electric vehicle ("EV"), the Interim Director of Public Works was tasked with developing a plan for both the short- and longer term needs for charging and other infrastructure to accommodate transition from municipal fleet vehicles utilizing internal combustion engines ("ICE") to all-electric. The Town has one dual level, Level 1 and Level 2, EV Chargepoint[1] charger in the vicinity of Town Hall that is available to the public. The term dual level applies to the voltage (and thus charging current or charging

[1] https://www.chargepoint.com/

rate) available. From Forbes.com[2], "(t)here are three levels of EV charging; Level 1, Level 2, and Level 3. Level 3 is broken into DC Fast Charging and (Tesla) Supercharging. The higher the level of charging, the faster the charging process, as more power is delivered to the vehicle. It's important to note that different EVs charge at different speeds on each level, because each EV can accept different levels of power from the EVSE, industry-speak for electric vehicle supply equipment, the charger."

The Fairfax Police Department is acquiring a 2022 Ford Mach-E EV at no cost to the Town to replace an ICE vehicle lost in a collision in 2021. According to Ford's website[3], the Mach-E is equipped to accept charging at up to 10.5 kW AC and 150 kW DC (Level 3). The delivery timing for the Mach-E has not yet been confirmed by the vendor.

DISCUSSION

Long-Term

In the best of all worlds, the Town would be able to provide Level 3 charging infrastructure for the Fairfax Police Department's first EV with room to accommodate additional EVs as they can be acquired to replace Police, Building and Public Works' ICE vehicles. Doing so, coupled with energy storage to reduce susceptibility to grid power outages, and to alternative power sources should battery storage be inadequate, would provide the most resilient and reliable capability currently available for the first response requirements of all three departments.

On the basis of a meeting held Monday, January 9, 2022 with a PG&E new service representative and representatives of DC Electric Group, Inc[4]. (the Town's current streetlight and traffic signal maintenance contractor), the infrastructure necessary to provide that capability requires the underground extension of 12,000 volt alternating current ("AC") grid power from overhead lines on Mono Avenue to a location on the Town Hall parcel, the placement of an above-ground transformer and other equipment to reduce the voltage to 480 volts and convert AC to direct current ("DC") with electrical panels adequate to handle anticipated future loads and chargers for fleet vehicles. No detailed cost estimate has yet been prepared, but the Interim Public Works Director estimates the gross cost for that work and equipment (without the cost of design, CEQA and NEPA clearance and ancillary costs such as elevating the vehicle parking areas and equipment above the base flood elevation with adequate freeboard for potential future changes in flood levels) will be at least $500,000.

Further, updating and more resiliently interconnecting the Town's facilities to the electrical grid, energy storage, and standby power for the Corp Yard, Pavilion, Town Hall, Community Center building, the Police Building, and Fire Station 21 warrant a design consulting team and microgrid planning. That work would including parking, circulation, installation of a photovoltaic array over the sun-exposed open areas in the Corp Yard, security improvements, non-potable water storage and rainwater harvesting as part of the

[2] https://www.forbes.com/wheels/advice/ev-charging-levels/
[3] https://www.ford.com/suvs/mach-e/
[4] http://dcelectricgroup.com/

long range plan. Marin Clean Energy has identified two consulting firms it has worked well with on photovoltaic and microgrid systems. There are no doubt incentives, grants and other potential opportunities for the cost to the Town to be reduced but the development of such a capital project will likely take years. Staff recommends that Council includes these longer-term objectives in its strategic planning process in March, and the budget process for fiscal year 2022-2023.

Short-Term Solutions

In the interim, Staff recommends that the Town pursue two parallel paths to provision of EV charging capability at the earliest possible convenience for the Fairfax Police Department and EVs recommended for purchase for the municipal fleet.

First, the California Department of General Services ("DGS") e-procure system[5] has one current, valid, state-leveraged procurement system contract for a Mobile Solar Panel Electric Vehicle Charger System with the potential to provide Level 2 capabilities without any excavation or other constraints within a relatively short timeframe from receipt of purchase order or other form of commitment. The Beam Global ARC 2020 equipment appears to provide the generating capacity, storage, portability and reliability necessary to accommodate the Fairfax Police Department's EV, any plug-in hybrids and the Ford F-150 Lighting EV being considered for the initial Public Works fleet replacement. Specifications and other information are available from Beam Global's website and the DGS on this contract and attached. Utilizing a leveraged procurement system price satisfies the cooperative purchasing or "piggy-back" process for acquisition of goods and services under best public contracting processes.

A preliminary proposal from Beam Global for acquisition of two (2) ARC 2020 units at state contract prices is attached.

Second, the Interim Public Works Director understands that the photovoltaic system at the Pavilion is capable of being modified to provide Level 3 charging voltage and current capability. Staff recommends that the funds in the amount of $25,000 (already appropriated in the current FY budget under the Building Improvement Fund (5) for energy improvements to the Pavilion) be authorized for expenditure and the Town Manager authorized to negotiate a contract for public work in conformance with the California Uniform Construction Cost Accounting Act to replace at least one inverter and acquire and install a Level 3 EV charger without ground disturbance at the site. Avoidance of ground disturbance will avoid the potential for adverse environmental impacts at the Pavilion that could result from the work. The proposed budget is also intended to allow the space housing the inverters associated with the Pavilion to be improved to conform to the Town's current Building and Fire Codes for electrical equipment with the installation of fire-rated wallboard and a concrete floor.

Owing to current supply-chain issues, and the fact that without ground disturbance the Level 3 charger location at the Pavilion is outside the existing security associated with the

[5] Public Procurement Information (ca.gov)

Town's Corporation Yard, Staff recommends that both of these charging capability options be authorized to reduce the likelihood of delays in placing the Police and other municipal vehicles into service. Once completed, neither of the two charging system improvements will be redundant — having them both will provide as much operational flexibility as the Town can ask for on relatively short-notice and the Beam Global units are moveable — if initially placed in the sunniest space where the Fairfax Police Department parks its units and where the Public Works fleet vehicles are parked, they can be moved at a later date by forklift and truck to any other sunny location. The Beam Global unit's software can be modified to allow members of the public to compensate the Town for their use if they are placed, for example, in an on-street parking stall or a stall in an existing lot.

As an option, the Council may wish to offer the chargers for use by employees with plug-in hybrid or EVs when they are not in use by Town vehicles. Doing so would provide an incentive to decarbonize employee commutes.

Finally, Staff worked initially with Marin Ford and then Downtown Ford in Sacramento to acquire the attached firm quotation for vehicles from the first publicly-available production run of Ford F-150 Lighting EVs. These are configured in the manner expected to be available most quickly and best suited to the Town's municipal operations. The salesperson providing the quote recommended issuance of proposal acceptance at the earliest possible convenience in order to have the vehicle(s) manufactured during the 2022 production run. The expected delivery time from Ford's receipt of a firm order is 28 weeks if the production run is not closed before authorization is received by Downtown Ford.

Because the F-150 Lighting EVs are not available under the current California Department of General Services competitive procurement contract, Staff recommends that the Council authorize their purchase on a sole-source basis. Specifically, finding that the specified vehicles are one of a kind in the marketplace at this time at this price, are only available from the Ford Motor Company (the original manufacturer) and that any other potentially available product would delay the initiation of the Town's transition to municipal EVs, increase costs, and could reduce the value of the manufacturer's warranty. Owing to the projected timing of delivery and therefore the date of payment in full being in FY 22-23 rather than the current fiscal year, Council could authorize the purchase of one or both of the recommended F-150 EVs against next fiscal year's budget.

The Town's non-Police vehicle fleet includes a 2001 Ford Escape used by the Building Official, a 1998 Ford Ranger compact pickup truck (PW Truck #1) used for building maintenance (which recently required several thousand dollars in repairs) and a 2000 Dodge 3/4-ton pickup truck (PW Truck #7) used primarily for pavement marking painting. In addition, the Town has two heavy diesel vehicles that do not comply with current on-the-road emissions standards — a 1994 dump truck and a 2002 Freightliner/Tymco street sweeper. Each of the listed vehicles is fully depreciated and of zero book value on the Town's listing of fixed assets. The Town has apparently replaced only one public works maintenance vehicle in the last 10 years.

Staff has solicited a proposal from Marin Sanitary Service for street sweeping services and recommends that Council consider (as part of its strategic planning and FY 22-23 budget process) eliminating the two vehicles that both require a Commercial Driver's License ("CDL")[6] (owing to gross vehicle weight ratings in excess of 26,000 lbs.) and do not conform to diesel emissions regulations from the Town's fleet. Council may also wish to consider eliminating the requirement for maintenance of a valid CDL from public works maintenance worker's job descriptions.

FISCAL IMPACT

Staff has concluded that the funds necessary for three requested authorizations:

1. negotiation of a public work contract for improvements to the Pavilion photovoltaic system not to exceed $25,000.
2. acquisition of one (1) Beam Global ARC 2020 unit not to exceed $90,000 under the cooperative purchasing program at State Contract prices.
3. sole-source purchase of one (1) 2022 Ford F-150 Lightning EVs from Downtown Ford for the purchase price of $45,308.31 (including tax and delivery) with an additional appropriation for fitting of MERA radios and amber warning light systems not to exceed $4,700.

Consist of:

1. The $25,000 appropriated in the Building Improvement Fund (Fund 5) this year for energy improvements to the Pavilion.
2. A portion of the remainder of balance in Fund 3 (the Field Equipment/Vehicle Replacement Fund)($144,304) be appropriated to cover the $90,000 cost of one Beam Global ARC 2020 units this fiscal year (leaving $54,304); and
3. Another portion of the remainder of balance in Fund 3 ($54,304) be appropriated to cover the cost of one (1) 2022 Ford F-150 Lighting EV this fiscal year leaving approximately $4,300 in fund balance.

Should Council wish to order a second Beam Global unit and a second 2022 Ford F-150 Lighting, Staff recommends that appropriations be made in the budget for FY 22-23.

ATTACHMENTS

A. Proposed Resolution
B. Beam Global and California Department of General Services information
C. Quotation No. KD-11222 from Downtown Ford
D. Preliminary Quotation from Beam Global

[6] https://www.dmv.ca.gov/portal/driver-licenses-identification-cards/commercial-driver-licenses-cdl/#cmv

RESOLUTION 22-__

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF FAIRFAX AUTHORIZING THE TOWN MANAGER TO:
(A) NEGOTIATE PUBLIC WORK UP TO $25,000 FOR IMPROVEMENTS TO THE PHOTOVOLTAIC SYSTEM AT THE PAVILION TO PROVIDE LEVEL 3 EV CHARGING CAPABILITY WITHOUT GROUND DISTURBANCE;
(B) PURCHASE ONE (1) BEAM GLOBAL SOLAR EV ARC™ WITH CHARGEPOINT DUAL PORT J-1772 PLUG MOBILE SOLAR PANEL ELECTRIC VEHICLE CHARGER SYSTEM AT CALIFORNIA STATE DEPARTMENT OF GENERAL SERVICES CONTRACT ID 1-18-61-16 PRICES; AND
(C) SOLE-SOURCE PURCHASE ONE (1) 2022 FORD F-150 LIGHTNING CREW CAB 4X4 LIGHTNING PRO EV FROM DOWNTOWN FORD SALES

WHEREAS, the Town's Climate Action Plan 2030, duly adopted on July 7, 2021 by the Fairfax Town Council, establishes the following "Key Strategies:

• Clean & Renewable Power: Deploy and efficiently use clean, renewable, and locally sourced electricity generated onsite or transmitted through the power grid.

• Electrification & Fossil Fuel Phase-Out: Upgrade and replace carbon-intensive, fossil fuel-based infrastructure and combustion power throughout the transportation and building sectors with clean electric power"; and

WHEREAS, updating and more resiliently interconnecting the Town's facilities to the electrical grid, energy storage, and standby power for the Corp Yard, Pavilion, Town Hall, Community Center building, the Police Building, and Fire Station 21 warrant a design consulting team and microgrid planning including parking, circulation, installation of a photovoltaic array over the sun-exposed open areas in the Corp Yard, security improvements, non-potable water storage and rainwater harvesting as part of the long range plan and Staff recommends that Council includes these longer-term objectives in its strategic planning process in March, 2022 and the budget process for fiscal year 2022-2023; and

WHEREAS, the Town will soon receive (at no cost to the Town) a 2023 Ford Mach-E EV for use by the Police Department to replace an internal combustion-engined vehicle lost in a collision; and

WHEREAS, Staff recommends that the Town pursue two parallel paths to provision of EV charging capability at the earliest possible convenience for the Fairfax Police Department and EVs recommended for purchase for the municipal fleet; and

WHEREAS, the California Department of General Services ("DGS") e-procure system has one current, valid, state-leveraged procurement system contract with Beam Global ARC 2020 for a Mobile Solar Panel Electric Vehicle Charger System with the potential to provide Level 2 capabilities without any excavation or other constraints within a relatively short timeframe from receipt of purchase order or other form of commitment; and

WHEREAS, the Beam Global ARC 2020 equipment appears to provide the generating capacity, storage, portability and reliability necessary to accommodate the Fairfax Police Department's EV, any plug-in hybrids and the Ford F-150 Lighting EV being considered for the initial Public Works fleet replacement; and

WHEREAS, the Beam Global units are moveable — if initially placed in the sunniest space where the Fairfax Police Department parks its units and where the Public Works fleet vehicles are parked, they can be moved at a later date by forklift and truck to any other sunny location; and

WHEREAS, utilizing a leveraged procurement system price satisfies the cooperative purchasing or "piggy-back" process for acquisition of goods and services under best public contracting processes; and

WHEREAS, the Interim Public Works Director understands that the photovoltaic system at the Pavilion is capable of being modified to provide Level 3 charging voltage and current capability and recommends that funds in the amount of $25,000 (already appropriated in the current FY budget under the Building Improvement Fund (5) for energy improvements to the Pavilion) be authorized for expenditure and the Town Manager authorized to negotiate a contract for public work in conformance with the California Uniform Construction Cost Accounting Act to replace at least one inverter and acquire and install a Level 3 EV charger without ground disturbance at the site; and

WHEREAS, the Town's non-Police vehicle fleet includes:

- a 2001 Ford Escape used by the Building Official,
- a 1998 Ford Ranger compact pickup truck (PW Truck #1) used for building maintenance (which recently required several thousand dollars in repairs),
- a 2000 Dodge 3/4-ton pickup truck (PW Truck #7) used primarily for pavement marking painting,
- two heavy diesel vehicles that do not comply with current on-the-road emissions standards — a 1994 dump truck and a 2002 Freightliner/Tymco street sweeper (equipped with two internal combustion engines); and

WHEREAS, each of the listed vehicles is fully depreciated and of zero book value on the Town's listing of fixed assets; and

WHEREAS, for the purpose of facilitating the transition to "replace carbon-intensive, fossil fuel-based infrastructure and combustion power throughout the transportation sector" Staff worked initially with Marin Ford and then Downtown Ford in Sacramento to acquire a firm quotation for vehicles from the first publicly-available production run of Ford F-150 Lighting EVs configured in the manner expected to be available most quickly and best suited to the Town's municipal operations; and

WHEREAS, the expected delivery time from Ford's receipt of a firm order is 28 weeks if the production run is not closed before authorization is received by Downtown Ford; and

WHEREAS, the F-150 Lighting EVs are not available under the current California Department of General Services competitive procurement contract, Staff recommends that the Council authorize their purchase on a sole-source basis — specifically, finding that the specified vehicles are one of a kind in the marketplace at this time at this price, are only available from the Ford Motor Company (the original manufacturer) and that any other potentially available product would delay the initiation of the Town's transition to municipal EVs, increase costs, and could reduce the value of the manufacturer's warranty; and

WHEREAS, Staff has concluded that the funds necessary for three requested authorizations:

1. negotiation of a public work contract for improvements to the Pavilion photovoltaic system not to exceed $25,000.
2. acquisition of one (1) Beam Global ARC 2020 unit not to exceed $90,000 under the cooperative purchasing program at State Contract prices.
3. sole-source purchase of one (1) 2022 Ford F-150 Lightning EVs from Downtown Ford for the purchase price of $45,308.31 (including tax and delivery) with an additional appropriation for fitting of MERA radios and amber warning light systems not to exceed $4,700.

Are available and unencumbered consisting of:

4. The $25,000 appropriated in the Building Improvement Fund (Fund 5) this year for energy improvements to the Pavilion.
5. A portion of the remainder of balance in Fund 3 (the Field Equipment/Vehicle Replacement Fund)($144,304) be appropriated to cover the $90,000 cost of one Beam Global ARC 2020 units this fiscal year (leaving $54,304); and
6. Another portion of the remainder of balance in Fund 3 ($54,304) be appropriated to cover the cost of one (1) 2022 Ford F-150 Lightning EV this fiscal year leaving approximately $4,300 in fund balance.

NOW, THEREFORE, BE IT HEREBY RESOLVED, by the Town Council of the Town of Fairfax as follows:

1. Appropriate $90,000 for the purchase of One (1) Beam Global Solar EV ARC™ with ChargePoint Dual Port J-1772 Plug Mobile Solar Panel Electric Vehicle Charger System.
2. Appropriate $54,400 for the Sole-Source Purchase of One (1) 2022 Ford F-150 Lightning CREW CAB 4X4 LIGHTNING PRO EV and improvements.

AND BE IT FURTHER RESOLVED that the Town Manager is authorized to:

1. Negotiate Public Work up to $25,000 for Improvements to the Photovoltaic System at the Pavilion to Provide Level 3 EV Changing Capability Without Ground Disturbance.
2. Purchase One (1) Beam Global Solar EV ARC™ with ChargePoint Dual Port J-1772 Plug Mobile Solar Panel Electric Vehicle Charger System at California State Department of General Services Contract ID 1-18-61-16 Prices
3. Sole-Source Purchase One (1) 2022 Ford F-150 Lightning CREW CAB 4X4 LIGHTNING PRO EV from Downtown Ford Sales.

AND BE IT FURTHER RESOLVED that the Town Council of the Town of Fairfax directs the Town Manager to determine which non-Police vehicle in the existing fleet will be designated as surplus to the needs of the Town once the F-150 Lightning EV is received, and authorizes the Town Manager to dispose of that vehicle by any appropriate means.

The foregoing resolution was duly passed and adopted at a regular meeting of the Town Council of the Town of Fairfax held in said Town on the 2nd day of February 2022 by the following vote, to wit:

AYES:
NOES:
ABSENT:

_____
Stephanie Hellman, Mayor

Attest:

_____
Michele Gardner, Town Clerk

From: **Jonathan Goldman** jgoldman@townoffairfax.org
Subject: Re: Beam EV ARC Charging Example Only Pricing
Date: January 13, 2022 at 6:08 PM
To: Jason Keller jason.keller@beamforall.com
Cc: Adam Politzer apolitzer@townoffairfax.org, Michael Vivrette mvivrette@townoffairfax.org

JG

Excellent – thanks.

Jonathon

From: Jason Keller <jason.keller@beamforall.com>
Date: Thursday, January 13, 2022 at 5:00 PM
To: Jonathon Goldman <jgoldman@townoffairfax.org>
Subject: Re: Beam EV ARC Charging Example Only Pricing

Hi Jonathon,

As discussed please see an example of a proposal snapshot for the Town of Fairfax. This can be bought on the GSA and DGS Cal state contracts as needed. Please be advised that this proposal snapshot is for budgetary purposes only and not an approved or an official quote. Beam takes between 5 to 10 business days to produce and formalize a proposal once you have decided on exact configuration and feature set.

EV ARC™ 2020 Pricing

Product	Product Code	Product Description	Quantity	List Price	Total Price
EV ARC™ with ChargePoint Dual Port J-1772 Plugs	ARC-CP4023	4.3kW solar array, BeamTrak™, 22kWh (expandable) battery storage with ChargePoint CT4023-GW1, dual-plug derated Level 2 smart/networked charging station. CLIN #2, includes 2% CA DGS Contract discount.	2.00	$65,022.02	$130,044.04
Network Services for Chargepoint enabled smart charging equipment (EVSE)	CPNet	Annual subscription cost per plug; First 12 months of service is included in EV ARC purchase price. CLIN #19, includes 2% CA DGS Contract discount.	4.00	$270.00	$1,080.00
Additional Battery Pack	ABP	Increases energy storage in 8 kWh increments. CLIN #13, includes 2% CA DGS Contract discount.	2.00	$4,910.78	$9,821.56
Emergency Power Panel	EPWR	6kW with 208V or 240V connection (not GFCI protected) including 1x NEMA L14-30 (twist lock), and 120V connections (GFCI protected) including 2x Duplex NEMA 5-20 + 2x NEMA L5-20 (twist lock). CLIN #14, includes 2% CA DGS Contract discount.	2.00	$1,925.70	$3,851.40
RMMS (1 Year)	RMMS	Remote Monitoring and Management System: 4G LTE wireless, BeamTrak™ tracking technology, unit monitoring. First 12 months included with purchase. Auto-renew option available. CLIN #18, includes CA DGS Contract discount.	2.00	$360.00	$0.00
Warranty (1 Year)		Manufacturer Warranty - First 12 months included	2.00	$0.00	$0.00

Totals		
Shipping and Handling is FOB Destination and includes: - Beam Team performing un-load / un-stow of equipment - Return shipping of support equipment Please have a 15K capacity forklift onsite upon delivery	Total Price	$144,797.00
	Shipping and Handling	$0.00
	Grand Total	$144,797.00
	Expiration Date	3/31/2022

Jason Keller | BEAM
Clean Mobility Practice
Book A Meeting with Jason
O +1 (858) 201-5530
Jason.Keller@BeamForAll.com
Video | BEAM in Action
BeamForAll | LinkedIn | YouTube

From: Jonathon Goldman <jgoldman@townoffairfax.org>
Date: Thursday, January 13, 2022 at 12:36 PM
To: Jason Keller <jason.keller@beamforall.com>
Subject: RE: Beam EV ARC Charging Update

Roger – thanks.

Jonathon

From: noreply@salesforce.com <noreply@salesforce.com> **On Behalf Of** Jason Keller
Sent: Thursday, January 13, 2022 12:33 PM
To: Jonathon Goldman <jgoldman@townoffairfax.org>
Subject: Beam EV ARC Charging Update

Hi Jonathon,

I will have you a budgetary number this afternoon for 2 X units as discussed. Thank you for your patience.

Jason Keller | BEAM
Clean Mobility Practice

O +1 (858) 201-5530
Jason.Keller@BeamForAll.com
Video | BEAM in Action

BeamForAll | LinkedIn | YouTube

BEAM

EV ARC™

Rapidly Deployed with No Site Preparation

The patented EV ARC™ 2020 is the only 100% renewable, transportable, off-grid EV charging infrastructure option on the market

EV ARC™

Rapidly Deployed with No Site Preparation

The EV ARC™ (Electric Vehicle Autonomous Renewable Charger) is a clean-technology product manufactured by California based Beam Global in their San Diego facility. Beam's team of veterans, disabled workers and other fine American contributors design, develop, patent and manufacture sustainability products which make EV charging infrastructure rapid and easy to deploy without environmental impact or disruption during delivery or use. Electric Vehicles (EVs) charged by Beam's products are 100% emissions free (unlike EVs powered by most grid electricity). EV ARC™ products do not contribute to utility grid instability and ensure that EVs can continue to charge during blackouts or in locations where it is too expensive, disruptive or simply impossible to extend the utility grid. EV ARC™ systems are equipped with emergency power panels so that first responders can access life-saving electricity during emergencies.

Deployed in Over 100 Jurisdictions

EV ARC™ products deliver the Driving on Sunshine experience to government and enterprise customers in over 100 jurisdictions in the U.S. and also in the Caribbean, South America and Europe. Locations are as varied as densely populated urban environments like Manhattan, San Francisco, Atlanta and Los Angeles on one end of the spectrum, and remote wilderness locations such as parks, deserts and water-fronts on the other. In fact, any location which is environmentally sensitive, or where the construction and electrical work required to install grid tied chargers is disruptive, is an ideal location for an EV ARC™. There is no site disruption when an EV ARC™ is deployed and because it is transportable it can be moved at any time without leaving any trace of its having been there.

Quality Building Departments Say No Permits Required

EV ARC™ has been deployed in hundreds of locations for Federal, State, local and municipal governments and also for enterprise customers. In over nine years of deployments no agency or jurisdiction has ever requested a building or electrical permit after understanding the product, and no deployment of an EV ARC™ system has ever been denied on permitting or any other grounds.

With several hundred deployments across the US during the last decade we have only ever had one jurisdiction question a customer for lack of a permit (without having seen the EV ARC™ or understanding it). After a thorough review they dismissed the question. The County decision is posted right (see Figure 1). We have redacted it to preserve customer privacy.

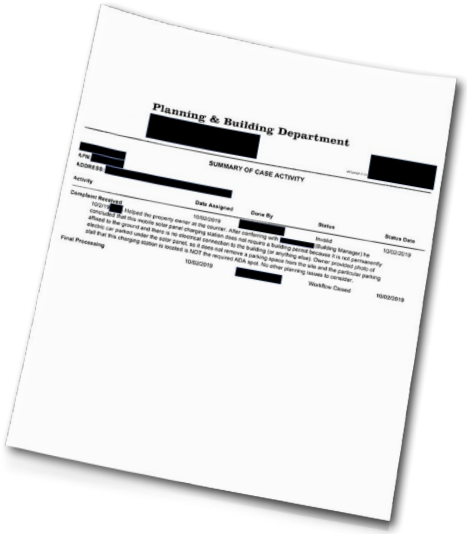
ZERO BUILDING PERMIT

MOBILE EQUIPMENT

- **Skid-mounted**
- **Temporary**
- **Transportable**
- **Not fixed to the ground**
- **Not bolted**
- **Not glued**
- **Wind rated to 120 mph**
- **Exceeds seismic and snow requirements**

Figure 1: Planning & Building Department Response and Resolution to an Open Case Requesting a Permit (Redacted)

> "After review, the Planning and Building Department "... concluded that this mobile solar panel charging station does not require a building permit because it is not permanently affixed to the ground and there is no electrical connection to the building (or anything else)."


Planning & Building Department

[redacted]

SUMMARY OF CASE ACTIVITY

[redacted]

Activity | Date Assigned | Done By | Status | Status Date

Completeness Review | 10/02/2019 | [redacted] | Issued | 10/02/2019

Final Processing | 10/02/2019 | [redacted] | Workflow Closed | 10/02/2019

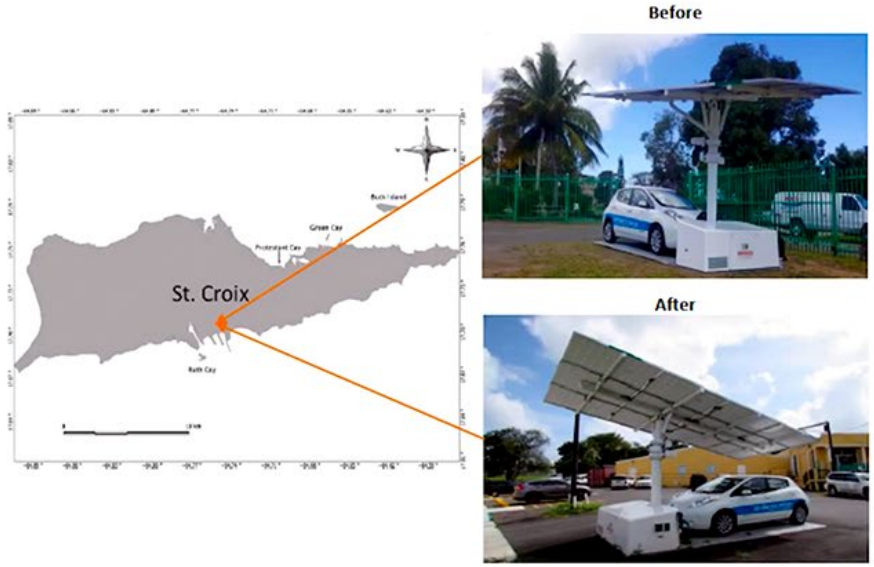
EV ARC™ Survives Hurricane Force Winds

On September 30, 2017 hurricane Maria struck the U.S. Virgin Island in St. Criox with category-5 winds (155-185 mph). The government Energy Office had deployed an EV ARC™ at that facility. When communications were restored to the island, we received the following email from the Energy Office's Facilities Coordinator:

"Hello David,

Your company's solar panel and the other components are exceptional. After our Hurricane, we did not acknowledge it because there was so much destruction everywhere. Your equipment literally did not have a scratch and there were no fault indicators or pieces broken. Too bad, it got no notice because it didn't break. Too good, it has proven itself in extreme circumstance that no test could generate. It is undamaged and working fine. We did not know that it had so much potential and capability that is included. This has to be utilized and advertised. Everybody wins!

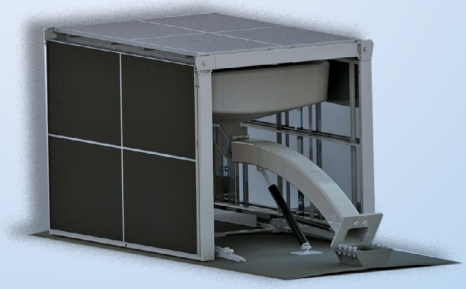
Stewart "



EV ARC™ Construction – There is None

- The EV ARC™ is a skid mounted piece of temporary equipment
- EV ARC™ is deployed in minutes and arrives on site ready to use (watch the ARC Mobility™ Trailer deployment video) https://youtu.be/a0WujevWAhM
- EV ARC™ is delivered to its location by a trailer which lower it into its spot or by flatbed and forklift.
- No site preparation is required for the deployment of an EV ARC™
- EV ARC™ does not need to be fastened to the ground in any way. No bolts, glues, concrete or other fastenings are required – it is skid mounted
- EV ARC™ is deployed on roughly level ground and has previously been successfully located on concrete, blacktop, gravel, grass and sand.

ARC™ Mobility Trailer which lowers your EV ARC onto the spot.



EV ARC™ Stowed System

No construction work of any sort is required to deploy an EV ARC™

- **No trenching**
- **No concrete**
- **No conduit**
- **No spoils removal**

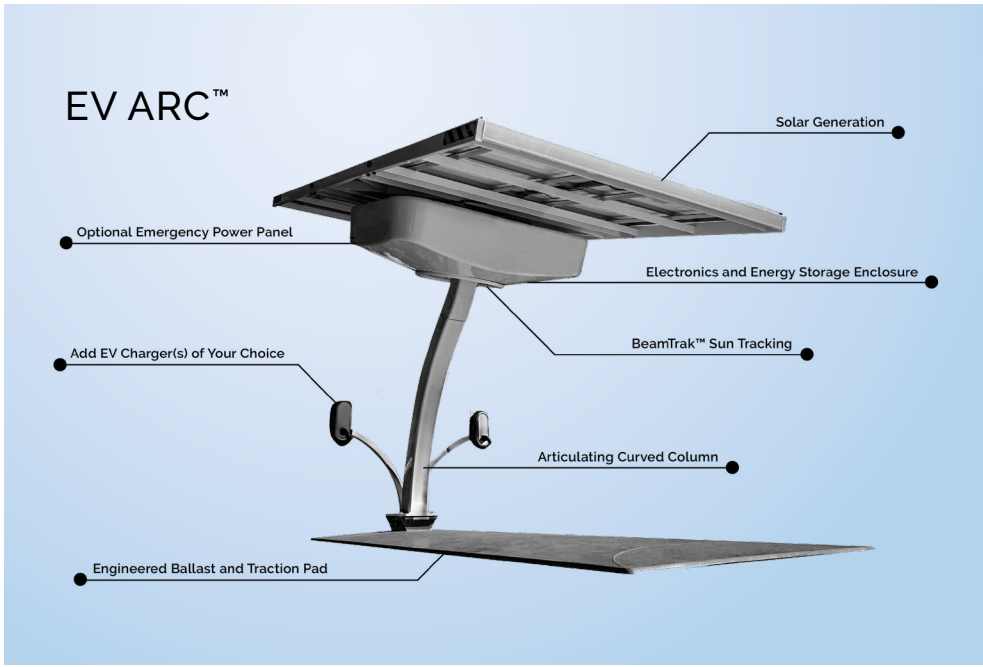
EV ARC™ Construction – There is None

- EV ARC™ exerts about ten times less pounds per square inch on the ground than a car does so no geotechnical study is required – if a vehicle can get there an EV ARC™ can be deployed there. Because there is no trenching, concrete, conduit or other work, no construction related inspections are required
- No assembly is required for EV ARC™ deployments. They arrive folded in upon themselves and then deploy like a satellite once in their location.
- EV ARC™ is ADA compliant because it places the EV charger (EVSE) within ADA reach requirements. There is no need to designate the EV ARC™ as an ADA compliant space so long as it is deployed next to one.
- EV ARC™ fits in a standard 9' X 18' parking space but does not reduce available parking in any way because vehicles can still use the space in which it is located
- EV ARC™ is not enclosed and does not offer shelter to people – it's a piece of equipment that is temporary, transportable and designed to provide clean, safe energy to EV chargers (EVSE) and first responders, just like a generator but without the fuel, emissions or other hazards.

EV ARC™ Electrical Work – There is None

EV ARC™ gets all its power from the sun

- EV ARC™ generates all of its own electricity from its integrated solar array so it doesn't need to connect to the electrical grid – ever
- EV ARC™ provides power to any quality, off the shelf EV charging equipment (EVSE). There is nothing special or unusual about the charger except that it does not need to connect to the utility grid
- EV ARC™'s electrical components are all integrated in accordance with UL listing
- EV ARC™'s electrical components are all integrated 9.5 feet above grade so they are safe from flooding (in fact it's the only flood proof solution of its sort that we are aware of)
- EV ARC™ is chassis grounded just like a crane or an RV, or any other piece of equipment, and as such does not require any external grounding



EV ARC™ doesn't connect to the grid so it doesn't need any sort of electrical work – **ever**

- **No wiring**
- **No transformer**
- **No switchgear**
- **No meter**

Because there is no electrical work, no electrical work inspections are required.

EV ARC™ supports and powers any quality EV charger

Structural Requirements
EV ARC™ Exceeds Them

- EV ARC™ is stamped by an independent and licensed structural engineer to withstand winds of up to 120 miles per hour
- It has actually survived 185mph, category five hurricane force winds in the Caribbean with no damage at all to the unit
- Wind is always the governing factor
- EV ARC™ is deployed in seismically active locations like San Francisco – the fact that it is skid mounted and not fastened to the ground makes it better equipped to deal with earthquakes. It will not overturn.
- EV ARC™ is deployed in heavy snow environments like Buffalo, New York – snow doesn't bother it
- EV ARC™ is deployed across the US in the most extreme conditions from blistering, dusty deserts to freezing snowy lakes and rain drenched, hurricane environments. EV ARC™ has never had any failure due to weather or other external conditions.

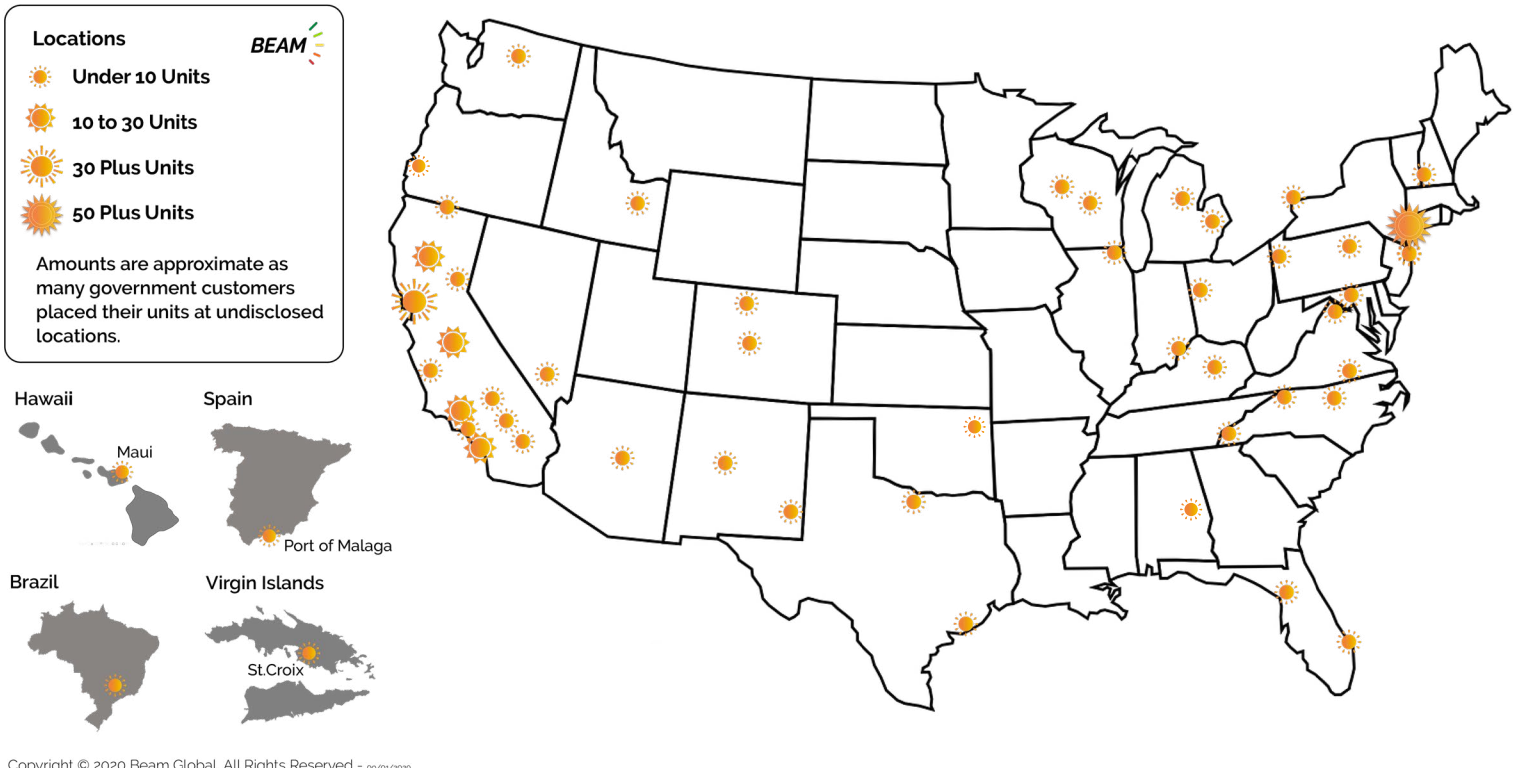
SNOW LOAD

WIND RATED

GRID FAILURE

BEAM Customers Drive on Sunshine 3,582,448 miles and counting...

EV ARC™ has been in constant use across the U.S. since 2012. No EV ARC™ has ever experienced a failure that could not be easily, safely and inexpensively repaired. No EV ARC™ has ever suffered any sort of condition that put anyone in danger. EV ARC™ systems are highly engineered, quality, Made in America products that have proved themselves year after year in the toughest conditions. Beam Global stands behind every EV ARC™ system deployed.



EV ARC™

The only 100% renewable, transportable, off-grid EV charging Infrastructure option on the market.

For questions about the patented EV ARC™ please contact a Clean Mobility Expert at BeamTeam@BeamForAll.com and let them know that you'd like to know more about the world's only transportable, off grid, zero construction, zero electrical work, rapidly deployed EV charging infrastructure product.

Our List of BEAM Customers Says it All...

Pfizer · California Department of Corrections and Rehabilitation · Cadillac · Johnson & Johnson · AXION energy · blink · Google · Office of Inspector General · GM · HONDA The Power of Dreams · TAMPA BAY SOLAR · Caltrans · Port Authority NY NJ Air Land Rail Sea · City of Los Angeles Founded 1781 · NASA · FCTA Fresno County Transportation Authority · BGE · chargepoint · Bronx Community College · California Department of Fish & Wildlife · City of Los Angeles Founded 1781 · Great Seal of the State of New York · Shasta Lake · Washington State Parks · City of Oakland · City of Long Beach · NAVFAC · Southern Company · Sandia National Laboratories · NREL

EV ARC™ 2020

The EV ARC™ 2020 is the only rapidly deployed, transportable but permanent, EV charging solution. Grid independent and 100% sustainable, it deploys in minutes without permitting, construction or electrical work. It will charge electric vehicles with the EV charger of your choice, even during grid failures. You'll never get a utility bill.

Sustainable EV Charging

The EV ARC tracks the sun and generates and stores all of its own electricity. It fits inside a standard parking space and because vehicles easily park on it you won't lose a single spot. Reaching as many as 12 vehicles, it can charge up to six EVs at the same time. Use it day or night and during periods of inclement weather.

Join organizations across the U.S. like Google, New York City and Caltrans who are Driving on Sunshine.

EV Charging Deployed in Minutes Not Months

- **Rapidly Scalable**
- **No Permits, No Construction**
- **Any Brand Charger, Pre-Mounted**
- **Charge 24/7: Night, Rain, Grid Failures**

BeamForAll.com BeamTeam@BeamForAll.com

BEAM

Get the Charger Brand You Want

Fastest Deployed

Most Scalable

Lowest TCO

Vital Energy When and Where You Need It

The EV ARC™ 2020 is off-grid so generates no utility bill and can charge EVs during power outages. It provides emergency power for first responders, is wind-rated to 120mph, flood-proof to 9.5' and ADA compliant. Units are deployed in minutes by a Beam Deployment Expert and require zero contact.

EV ARC™ 2020 Specifications

Performance	
Solar Array	4.3 kW
Daily Range Delivered [1]	Up to 265 e-miles
Battery Storage Options	22,32,43 kWh
Total EV Charger Power [2]	Up to 4.3 kW
EV Charger Type [3, 4]	Any brand; 1-6 plugs; type J1772
Certified Wind Load	120 mph

1. Range will vary based on local conditions
2. Actual total output power depends on EV model and charger model
3. Supports a variety of quality EV chargers that come pre-mounted.
4: Power may be reduced based on number of circuits, EV model and charger model.

Major Component Ratings
(Inverter) UL1741-2010/2018, IEEE1547a-2003/2014, FCC 15 class B, UL1741SA, CA Rule 21, HECO Rule 14H; (Solar Panels) UL 1703, IEC 61215, IEC 61730; (Battery) UL1642, BMS and Components Demonstrated to UL2271; (EVSE) UL2594 UL2231

Mechanical	
Array Dimensions (LxW)	21 x 10.6 ft
Max Height	15.3 ft
Min Clearance	9 ft
Base-Pad Footprint (LxW)	18 x 7.5 ft
Weight [5]	<12,500 lbs
Surface Loading [6]	8.14 psi
Standard Shipping Methods	ARC Mobility™ Trailer/ Truck & Trailer / Shipping Container
Transformer ARC Stowed Shipping Size (LxWxH) [7]	18 x 7.5 x 7.6 ft

5. Exact weight varies based on EV ARC™ model and options
6. Pressure calculated by weight distributed over 8in x 24in anti-skid pads
7. Enables domestic and international shipping on a standard flatbed trailer or shipping container

Drive on Sunshine

V1.4

DOWNTOWN FORD SALES
525 N16th Street, Sacramento, CA. 95811
916-442-6931 fax 916-491-3138

KD-11222

QUOTE

Customer

Name	TOWN OF FAIRFAX		
Address			
City	FAIRFAX	State CA	Zip 94930
Phone	ATTN: JONATHON GOLDMAN		

DATE	1/12/2022
SALES REP	KAYLA DEAN
PHONE	916-717-0362
FOB	SACRAMENTO

Qty	Description	Unit Price	TOTAL
2	**2022 FORD F150 CREW CAB 4X4 LIGHTNING PRO**	$41,199.00	$82,398.00
	EXTERIOR COLOR: WHITE		
OPTIONS			
2	DOC FEE	$85.00	$170.00
	SALES TAX CALCULATED AT 9.0% BASED ON REGISTRATION ADDRESS		

SubTotal	$82,568.00
DELIVERY	$600.00
SALES TAX	$7,431.12
CA Tire Tax	$17.50
TOTAL	$90,616.62

Payment Details

- ○ Cash
- ◉ Check
- ○ Credit Card

Name
CC #
Expires

Office Use Only

SIGNATURE *DATE*

STATE OF CALIFORNIA PLACES ORDER FOR 52 MORE EV ARC™ SOLAR-POWERED EV CHARGING SYSTEMS

ON MAY 20, 2021

SAN DIEGO, CA, May 20, 2021—Beam Global, (Nasdaq: BEEM, BEEMW), the leading provider of innovative sustainable technology for electric vehicle (EV) charging, outdoor media, and energy security, announced an order from the California Department of General Services (DGS) for 52 Beam Global EV ARC™ solar-powered EV charging systems. The EV ARC™ systems will expand access to sustainable EV charging and emergency power for 12 state government agencies. Beam Global EV charging infrastructure products are transportable, off-grid and require no construction, permitting or electrical work, providing fleet vehicles with access to clean, resilient EV charging. Wind rated to 120mph, flood-proof to 9 ½ feet and featuring an emergency power panel, the EV ARC™ systems also serve as emergency preparedness sustainable generators for fleet operators and first responders as they continue to operate during grid failures and provide power in locations without access to the utility grid.

Funded by a California Governor's Office of Emergency Services (Cal OES) grant and executed by the DGS Office of Sustainability's Transportation Unit, the order will bolster the state's off grid and resilient EV charging infrastructure for government-owned fleets, which already incorporates Beam Global products previously deployed statewide. This order is purchased through DGS' statewide California Contract #1-18-61-16 which simplifies the procurement process, ensures best pricing and is available to all state agencies and local government entities. The systems will provide power during emergencies and charge State of California EV fleets year-round. DGS has allocated the new EV ARC™ systems, according to each agency's needs, for delivery and deployment within 90 days of order placement. This bulk purchase reflects Beam Global's capability to fulfill orders of increasing scale while generating recurring demand, particularly in the public sector.

"We believe that this, the largest single order in our history is indicative of an increased emphasis on rapidly deployed and grid independent EV charging infrastructure by all branches of government," said Beam Global CEO Desmond Wheatley. "The U.S. has a Strategic Petroleum Reserve but there is no Strategic Electricity Reserve. Each EV ARC deployed contributes to our nation's energy security and in combination, provide the beginnings of a Strategic Electric Reserve. We are observing that this vital capability is becoming increasingly recognized in purchasing decisions and we applaud DGS and OES for taking this leadership position in securing the fuel of the future for California."

Federal, state and local authorities are accelerating demand for renewably-powered EV charging in the U.S. in response to recent grid failures and ambitious clean energy and electrified transportation targets. California is a leader in the transition, with Governor Gavin Newsom setting a 2035 deadline for phasing out internal combustion engine vehicle sales and advocating for $1.5 billion in public investments in the state's EV charging networks. The State of Washington has announced a similar ban five years earlier in 2030. At the federal level, President Biden aims to deploy 500,000 new public EV charging outlets as part of the administration's strategy to revitalize the country's transportation infrastructure and fight climate change.

About Beam Global

Beam Global is a CleanTech leader that produces innovative, sustainable technology for electric vehicle (EV) charging, outdoor media, and energy security, without the construction, disruption, risks and costs of grid-tied solutions. Products include the patented EV ARC™ and Solar Tree® lines with BeamTrak™ patented solar tracking, and ARC Technology™ energy storage, along with EV charging, outdoor media and disaster preparedness packages.

The company develops, patents, designs, engineers and manufactures unique and advanced renewably energized products that save customers time and money, help the environment, empower communities and keep people moving. Based in San Diego, the company produces Made in America products. Beam Global is listed on Nasdaq under the symbols BEEM and BEEMW (formerly Envision Solar, EVSI, EVSIW). For more information visit https://BeamForAll.com/, LinkedIn, YouTube and Twitter.

About DGS

The California Department of General Services acts as the business manager for the state of California. DGS helps state government better serve the public by providing services to state agencies including procurement and acquisition solutions, real estate management, leasing and design services, environmentally friendly transportation, and architectural oversight and funding for the construction of safe schools. DGS Office of Sustainability (OS) supports state agencies in sustainability initiatives including policies, strategies, programs and projects for state buildings. Key program areas to meet customer needs include: renewable clean energy generation (solar and wind), energy retrofits in existing facilities, zero net energy (ZNE) building policy development, electric vehicle supply equipment (EVSE) infrastructure, energy and emissions benchmarking, and recycling. The OS Transportation Unit designs and installs EV charging infrastructure at state facilities. For more information visit https://www.dgs.ca.gov/

Forward-Looking Statements

This Beam Global Press Release may contain forward-looking statements. All statements in this Press Release other than statements of historical facts are forward-looking statements. Forward-looking statements are generally accompanied by terms or phrases such as "estimate," "project," "predict," "believe," "expect," "anticipate," "target," "plan," "intend," "seek," "goal," "will," "should," "may," or other words and similar expressions that convey the uncertainty of future events or results.

Media Contact:
Next PR
847-436-6444
BeamGlobal@NextPR.com

LPA Contract Details

Printer Friendly View

Contract ID 1-18-61-16

Contract Type	Acquisition Type	Status
Statewide Contract	NON-IT Goods	Active

Description
Mobile Solar Panel Electric Vehicle Charger System

Supplier Name	Supplier ID
BEAM GLOBAL	0000040423

Begin Date	Expire Date
06/24/2018	06/23/2022

Contract Administrator

Buyer	Email
Rita Seale	Rita.Seale@dgs.ca.gov
Department	**Phone**
DGS - Statewide Procurement	916/375-4804

Categories

1 of 1

UNSPSC	UNSPSC Description
25175001	Vehicle vibration dampeners & isolators - Electric vehicle portable charger

Attachments

1-4 of 4

Attachment File	
UI_-_1-18-61-16_-_Supp_5.docx	View
Attachment_1_Contract_Pricing_-_Supplement_3.xlsx	View
Attachment_2_Product_Description.pdf	View
Attachment_3_Mfg_Warranty___Ops_.pdf	View

Contract Line Items

1 of 1

Download

Item ID	Description	UOM	Unit Price	UNSPSC	UNSPSC Description	MFG Name	MFG Item ID	EPP/SABRC	Status
	See attached User Instructions for additional information	Each		25175001	Vehicle vibration dampeners & isolators - Electric vehicle portable charger				Active