



GSA Order: Electric Vehicle Supply Equipment (EVSE)

PBS 5605.1A

Center for Electric Vehicle Infrastructure

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Purpose:

This document provides guidance on the implementation, utilization and financial accountability for Electric Vehicle Supply Equipment (EVSE) infrastructure at federally-owned facilities under the U.S. General Services Administration's (GSA) jurisdiction, custody, and control, including facilities for which management and operation has been delegated to other Federal agencies by the Administrator of General Services (Administrator), and facilities leased by GSA.

Background:

1. Executive Order 14057 Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability requires 100 percent zero-emission vehicle (ZEV) acquisitions by 2035, including 100 percent zero-emission light-duty vehicle acquisitions by 2027¹. Annually agencies must submit a strategic plan for transformation of its fleet to zero-emission vehicles, including annual targets. Plans must include an assessment of agency site and fleet locations; a plan for installation of necessary charging or refueling infrastructure; an assessment of fleet size and composition to determine an optimum fleet inventory; elimination of unnecessary or non-essential vehicles from the agency's fleet; increasing the proportion of the fleet composed of zero-emission vehicles; and consideration of energy storage technologies and ancillary services to support vehicle-to-grid technology. Agencies are required to develop and annually update a zero-emission fleet strategy that shall include optimizing fleet size and composition; deploying zero-emission vehicle refueling infrastructure; and maximizing acquisition and deployment of zero emission light-, medium-, and heavy-duty vehicles where GSA offers one or more zero-emission vehicle options.

¹ [Memorandum M-22-06](#) states that for the purposes of meeting this requirement, plug-in hybrid vehicles may be considered ZEVs and defines a "light-duty vehicle" as a vehicle weighing 8,500 pounds gross vehicle weight rating or less, certified for use on all public roads and highways.

2. The Fixing America's Surface Transportation Act ([FAST Act](#)) authorizes GSA and other Federal agencies to install, construct, operate, and maintain on a reimbursable basis a battery recharging station in a parking area that is in the custody, control, or administrative jurisdiction of GSA or the requesting agency for the use of privately-owned vehicles (POVs) to the extent such use by only POVs does not interfere with or impede access to the equipment by Federal fleet vehicles. See 42 U.S.C. 6364(1)(A),(B). GSA and other Federal agencies shall charge fees to the individuals who use the battery recharging station for their POV in such amount as is necessary to ensure that the respective agency recovers all of the costs such agency incurs in installing, constructing, operating, and maintaining the station. 42 U.S.C. 6364(2)(A). The provision of POV charging stations at the workplace can reduce greenhouse gas (GHG) emissions by encouraging the displacement of commuters' petroleum fuel with lower emission electricity. [E.O. 14057 Implementing Instructions](#) states that planning for charging infrastructure for use by visitors, employees, and other authorized users, as appropriate, in conjunction with planning for agency fleet vehicles, should be part of a comprehensive and efficient EVSE deployment strategy. Agencies may allow government-owned vehicles (GOVs) and POVs to share EVSE, and may install dedicated EVSE for employees or visitors, including from other agencies. Agencies must ensure that such shared charging systems can separately track GOV and POV charging and energy consumption ensuring the parking area has accurate transparency and accountability of its charging systems.

Applicability:

This Order applies to all EVSE installations that support GOVs and POVs in federally-owned facilities under GSA's jurisdiction, custody, and control, including facilities for which management and operation has been delegated to other Federal agencies by the Administrator of General Services, and facilities leased by GSA.

Cancellation:

This Order supersedes GSA Order PBS 5605.1, Electric Vehicle Supply Equipment Infrastructure Management.

Summary of Changes:

This Order is rewritten and expanded to include information on the charging of both GOVs and POVs, to include project planning, compliance with relevant codes, guidance documents and policies and the collection of funding and data in order to comply with Executive Order 14057.

Roles and Responsibilities:

1. N/A

Signature

/S/ _____
Elliot Doomes
Commissioner Public Buildings Service

4/15/2024 _____
Date

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1. Definitions

- a. *Authorized User*: An individual authorized by a Federal agency to use its parking area. This includes agency employees, as well as its contractors, subcontractors, and visitors.
- b. *Battery Electric Vehicle (BEV)*: BEVs use an electric motor powered by electricity stored in a battery pack. The battery pack is charged by an external battery charger.
- c. *DC Fast Charging Infrastructure (Level 3)*: Includes, but is not limited to, a 480-volt electrical connection with chargers capable of outputting 22 kW or more and delivering DC power directly to the battery. This type of charging typically provides 250 miles for every hour of charging.
- d. *Electric Vehicle Supply Equipment (EVSE)*: Commonly called charging stations or charging docks, EVSE provides electric power to the vehicle to allow for recharging of the vehicle's battery.
- e. *Federal Automotive Statistical Tool (FAST)* - Located at <https://fastweb.inl.gov/>, FAST is a web-based information collection system used by Federal agencies to submit information about their motor vehicle fleet, its operation, and its supporting fueling and EV charging infrastructure. FAST is jointly funded and managed by the U.S. Department of Energy's (DOE's) Federal Energy Management Program (FEMP) and GSA's Office of Government-wide Policy. FAST is supported by staff at DOE's Idaho National Laboratory (INL).
- f. *Hybrid Charging System (HCS)*: Combining a utility grid with an Off-Grid Charging System to form the complete charging system.
- g. *Level 1 EVSE Infrastructure*: A 120-volt electrical connection on no less than a 20-amp circuit that must supply an average power output of 1.2 to 1.9 kW of AC power. This type of charging typically provides 3-5 miles for every hour of charging depending on the vehicle.
- h. *Level 2 EVSE Infrastructure*: Includes, but is not limited to, a 208/240-volt electrical connection on no more than an 80-amp circuit that must supply an average output of 6.6 kW (at 208V)/7.2kW (at 240V) to 19.2 kW of AC power. This type of charging typically provides 10-50 miles for every hour of charging depending on the charger's power output and vehicle's battery.
- i. *Net-zero emissions*: reducing greenhouse gas emissions to as close to zero as possible, and balancing remaining emissions with an equivalent amount of emission removal, through natural carbon sinks, carbon capture and storage, direct air capture, or other methods.

- j. *Off-Grid Charging System (OGCS)*: An isolated structure where power generation and consumption happen locally.
- k. *Parking Area*: Any federally-owned or leased building, structure or surface lot for vehicles, motorcycles, and bicycles.
- l. *Plug-In Hybrid Electric Vehicle (PHEV)*: PHEVs use an electric motor powered by an internal combustion engine. The battery pack is charged by an external battery source, regenerative braking and the internal combustion engine.
- m. *Zero-Emission Vehicle (ZEVs)*: A ZEV is any vehicle that, when operating, produces zero tailpipe exhaust emissions of certain pollutants or greenhouse gasses, such as an electric vehicle.

2. Project Planning

a. EVSE Indefinite-Delivery Indefinite-Quantity (IDIQ) Contracts and Blanket Purchase Agreements (BPAs)

- i. The Public Buildings Service (PBS) has awarded Governmentwide Design/Build and Construction [IDIQ Contracts](#) for EVSE Installation and Related Infrastructure Improvements at Federal agency locations throughout the United States of America, Puerto Rico, and the U.S. Virgin Islands. The Federal Acquisition Service (FAS) awarded [blanket purchase agreements](#), which include EVSE and other ancillary equipment and services.
- ii. The construction and design-build IDIQ contracts include architectural, engineering, construction, and other related services necessary to design and build EVSE infrastructure improvements and installations.
- iii. Related services include, but are not limited to, feasibility studies, site assessments, site planning, utility coordination, relocation & connections, permitting, testing and inspection during construction, commissioning, and supporting the transition from construction to operations.
- iv. Construction and design-build services consist of interior and exterior building construction and repair & alterations, including but not limited to: electrical, plumbing, mechanical, architectural, landscaping, meters/sub-meters, exterior renovations, demolition services, abatement services (e.g. asbestos, lead, mold, and polychlorinated biphenyls earthwork, and pavement repair, and other miscellaneous work).

- v. The work to be performed includes, but is not limited to: installation or modification of electrical services feeds, switchgear, switchboards, panel boards, transformers, conduit, cabling, trenching, coring, road surfaces such as asphalt, concrete and other types of pavement, renovations, site work, signage, new construction, wall partition construction, HVAC ductwork, lighting, and modification of existing building fire sprinkler and fire alarm systems, and other such related work which would be outlined in Task Order and job drawings.
- vi. GSA Class Deviation [CD-2022-04](#) allows contracting officers to authorize contractors under these IDIQ contracts to use the Federal Supply Schedule (FSS) EVSE and Ancillary Services BPAs for supplies and ancillary services required to support electrification of the Federal fleet, to include infrastructure. Use of the [FSS EVSE and Ancillary Services BPAs](#) for EV charging stations specified in the Task Order (TO) requirements is mandatory, unless the required EV charging stations are not available on the BPAs. In the event that a contractor determines that the required EV charging stations under a TO are not available through the FSS EVSE and Ancillary Services BPAs, contractors must notify the TO Contracting Officer as soon as practicable to request an exception from this requirement.
- vii. All Federal agencies have the ability to place task orders against the EVSE IDIQs and the EVSE BPAs. There are multiple ordering paths depending upon where the agency is located. Visit www.gsa.gov/electrifythefleet for additional details.
- viii. [PIB 24-02](#) provides policy for the mandatory use of the EVSE D/B & Construction IDIQ contracts for EVSE installation and related infrastructure improvements at federally-owned facilities under GSA's jurisdiction, custody, and control. Once the PIB is in effect, it will be listed on the [NARC website](#).

b. Utility Coordination

- i. Rebates and Incentives
 - 1. GSA project teams managing EVSE installations in federally-owned space shall actively explore utility companies' rebate and incentive programs for both construction and utility rate structures.

2. It is the responsibility of EVSE project teams to thoroughly research and understand the availability, eligibility criteria, and terms and conditions of utility-provided incentives.
 3. Where feasible and within regulatory compliance, project teams shall incorporate applicable utility incentives into the project delivery to optimize cost-effectiveness.
 4. Request review by GSA OCFO/budget analyst during project planning phase: All projects should be reviewed by the regional budget analyst (BR) and the PBS Budget Director (BBP) during the planning phase.
- ii. Involvement of Regional Energy Managers and/or Utility Coordinators
1. Regional project teams should include the Regional Energy Managers and/or Utility Coordinators in the early planning phases of the EVSE project(s).
 2. Their expertise in energy efficiency, sustainability objectives, and utility coordination shall guide the project's alignment with energy conservation goals.
- iii. Contact with Local Utility Company
1. During the project planning phase, project teams are required to establish open lines of communication with the local utility company serving the federally-owned/managed space.
 2. Project teams shall promptly engage with utility representatives to discuss pertinent information regarding available incentives, rate structures, and specific requirements for EVSE installations.
- iv. Department of Energy's "EV Utility Finder"
1. Project teams are encouraged to utilize the "EV Utility Finder" to identify suitable utility partners and access information on relevant programs and incentives.

2. The "EV Utility Finder" shall serve as a valuable resource for project teams in their pursuit of utility coordination and maximizing cost savings.
3. Project teams may use the [Department of Energy's "EV Utility Finder"](#) to connect with utility partners.

c. Site Assessments/Feasibility Studies

- i. A site assessment will allow project teams to understand the electrical capacity of the facility and will help to determine if the location can meet requirements stated within the Architectural Barriers Act Accessibility Standards (ABAAS) and the Interim Fire Safety Guidance Bulletin: Electric Vehicles & Electric Vehicle Supply Equipment Projects (See section 3). Project teams should determine if an assessment was already completed at the facility and/or evaluate the need for a new assessment.
- ii. Regardless of agency, the first EVSE installation project shall be preceded with a comprehensive site assessment to be paid for by the requesting agency. Site assessments may not be needed for facilities in which site assessments were already completed.
- iii. Site assessments/feasibility studies can be conducted in-house or they may be procured through the EVSE IDIQ or the EVSE BPA.
- iv. If the assessment identifies that infrastructure upgrades are required, the project team should review the EVSE Pricing Policy to determine if the needed upgrades are a tenant improvement item or a GSA shell item and consult with the Regional Asset Manager to see what funding options are available to support the required upgrade. Project teams should consider the needs of other building tenants to see if cost sharing opportunities are available. Project managers may need to work with Asset Managers and/or Facility Management to confirm potential requests from other tenant agencies.
- v. If funding is not available for the upgrade, the project team should look for other charging alternatives, such as recommending the agency charge at public stations, leasing of new parking spaces, and/or discussing vehicle options with a FAS fleet representative. If the project is not viable due to a reason listed above, the work request may be canceled or modified.

d. Design Requirements for Scopes of Work in Federally-Owned Locations Under GSA's Jurisdiction, Custody, and Control

- i. Adhere to the [GSA Facilities Standards for the Public Buildings Service \(P100\)](#) requirements for EVSE.
- ii. Follow requirements in the Interim Fire Safety Guidance Bulletin: Electric Vehicles & Electric Vehicle Supply Equipment Projects. (See section 3.B)
- iii. Follow GSA ABAAS Guidance for accessible charging facility standards.
- iv. Software/Cloud solutions must be Federal Risk and Authorization Management Program (FedRAMP) authorized (see [FedRAMP Marketplace](#) for authorized solutions) and must obtain an additional GSA Authority to Operate (ATO), which requires an additional security assessment, if building data will be passed to any 3rd party software or cloud platform. For FedRAMP specifics, please visit <https://www.fedramp.gov/>
- v. EVSE Hardware shall be connected to an associated cloud solution to allow for data reporting, managed charging and payment collection. Standalone EVSE hardware is not allowed. The 2024 version of the P100 will require all stations to be network connected.
- vi. EVSE Hardware that connects to the EVSE Cloud solution must adhere to the Secure Configuration Profile established by GSA IT Security.
- vii. Data collection of EVSE energy consumption is required and can be met by the following methods:
 1. Preferred: Utilize an Application Programming Interface (API) for transferring all necessary data elements from the cloud platform.
 2. Alternate Method(s): Metering/submetering of the electrical feed for the charging stations. Meters must have the ability to locally store a minimum of 90 days worth of data.
- viii. All Federal systems are bound by the requirements prescribed by [M-21-07](#). Hardware that connects to the Building System Network

(BSN) must be scanned and remediated for use on the GSA network and must meet all current requirements.

ix. Authority to Operate (ATO)

1. Vendors are required to have FedRAMP authorization to operate (ATO) as a Low Impact System. Link to FedRAMP authorized vendors:
<https://marketplace.fedramp.gov/products>
2. Vendors must also obtain GSA-specific ATO approval. This ATO is required in addition to the FedRAMP ATO and can be obtained only after the FedRAMP ATO is issued. No Government data can be uploaded into the production software application until the GSA ATO is obtained. The GSA ATO process requires the vendor to complete a Customer Responsibility Matrix System Security Plan (CRM SSP), which is dependent on the security controls each vendor assigns GSA responsibility for, such as account management, authentication, and other settings. Once the CRM SSP is complete, the GSA Security team will conduct an assessment and authorization (A&A) and notify the vendor of any remediation required. Once remediation is completed and verified by GSA Security, an ATO will be issued for the vendor to operate their solution for GSA.
3. [Electric Vehicle Charging Station Implementation Attestation Form](#) must be completed to ensure that the EVSE was installed in accordance with the GSA ATO.

x. National Environmental Policy Act (NEPA) and the National Historic Preservation Act

1. Consult with the regional NEPA Program Manager to evaluate the level of NEPA analysis.
2. Certain EVSE Projects may be exempt from Section 106 of the [National Historic Preservation Act, subject to certain requirements being met.](#)

e. Design Considerations

The bullets listed below are additional items that should be considered in the planning and design phases of the project.

- i. The current electrical capacity of the facility.
- ii. The current and planned GOV electric fleet and number of POVs located at the facility and how that relates to the planned EVSE. Consider how the vehicles are being used and how often they will need to be charged, and when charging will occur. Level 2 charging stations are usually sufficient for GOV charging. A DC Fast station may be considered if there is an operational need (DC Fast stations have higher equipment, infrastructure and installation costs and a greater load).
- iii. Consider how time of use for EVSE would be managed to support the customer's mission while minimizing charging during periods of high grid stress.
- iv. Understand the types of charging stations and the vehicles that the facility can and cannot support. The DC Fast charger cannot be used to charge a PHEV.
- v. Plan projects to allow for future expansion.
 1. EVSE placement must consider needs for future expansion, access, use and infrastructure impacts. Consideration should be given to aligning charging stations into 'banks' to avoid having to routinely relocate tenant spaces to allow for new EVSE requests.
 2. Parking space assignments should be aligned with infrastructure versus bringing infrastructure to currently assigned spaces unless it is both technically and fiscally advantageous to do so.
- vi. Consider public charging stations within the vicinity of the project location, which may reduce the need for government-owned EVSE and related infrastructure.
- vii. Consider all other potential scope items including, but not limited to: bollards, parking lot restriping, ABAAS, signage and lighting.
 1. Network packages and maintenance agreements should be planned and budgeted for; however, they should not be included in the scope for construction. See section 6.

3. Related Guidance

a. EVSE Pricing Policy

- i. [EVSE Pricing Asset Management Alert](#)
- ii. Project teams should consult with Regional Asset Managers to ensure compliance with the latest guidance.

b. Fire and Life Safety Guidance - Applies to work in federally-owned space under GSA's jurisdiction, custody, and control

- i. [Interim Fire and Life Safety Guidance bulletin](#)
- ii. Project teams should consult with the Regional Fire Protection Engineer during the project planning phase to ensure compliance with the latest guidance.
- iii. If a request is made to install EVSE in a location that is not in compliance with the latest guidance, the project team should:
 1. Consult the Regional Fire Protection Engineer (FPE) to see if any considerations and improvements can be made.
 2. Review the EVSE Pricing Policy to determine if the needed upgrades are a "Tenant Improvement" or a "GSA Shell Item" and consult with the Regional Asset Manager to see what funding options are available, to include exploration of utility incentives.
 3. Look for other charging alternatives, such as public charging networks, leasing of new parking spaces, and/or discussing vehicle options with a FAS fleet representative, if funding is not available for the upgrade. The work request may be canceled or modified.

c. Architectural Barriers Act Accessibility Standards (ABAAS)

- i. [GSA policy providing accessibility to EV charging stations](#)

- ii. [Design recommendations for Accessible Electric Vehicle Charging Stations](#)
- iii. Project teams should consult the regional ABAAS Subject Matter Expert (SME) during the project planning phase to ensure compliance with the latest guidance.
- iv. Loss of Parking: The ABAAS space is larger than a standard parking space, which may result in the loss of parking. Project teams should work with regional SMEs, Regional Asset Managers, regional service center Building Managers, and/or professional designers during the planning phase to avoid the loss of parking spaces to the maximum extent practicable. If needed and funding is available, project teams should consider modifying the current parking layout to absorb the additional space needed to comply with ABAAS. If the loss of parking is unavoidable, the project team should:
 - 1. Refer to 41 C.F.R. 102-74.285 “How must Federal agencies assign priority to parking spaces in controlled areas?” when making a determination on how to address the loss of a parking space.
 - a. The Regional portfolio team has discretion in the decision-making process.
 - 2. Consider leasing parking spaces at a commercial parking lot in order to support the agency's mission.

d. Structural Engineering Guidance

Due to the nature and variability of electric vehicles in terms of weight relative to gasoline powered vehicles, and the additional weight of EVSE, it is possible for parking structures to locally incur an increase in total loading relative to the original design loads.

- 1. Project teams should consult with the Regional Structural Engineering (SE) SME during the project planning phase when structured parking is included in the project scope.
- 2. Certain existing conditions (age of structure, condition of structure, etc...) and planned vehicle inventory (heavy vehicles, condensed vehicle parking conditions, etc....) should be considered by the SE SME during the planning phase of the project.

3. Visual inspection and a review of previous maintenance issues for parking structures should be performed by the SE SME to identify potential overload conditions due to the need to support heavy vehicles and supplemental EVSE.

4. If recommended by the SE SME, the project team should work with their project Acquisition team to acquire the services of a Structural Engineering consultant to perform a load study for parking structures.

4. Leased Facilities

- a. Requesting agencies should work with the appropriate GSA leasing representative for any EVSE installation to occur in leased space.
- b. [PBS Office of Leasing EVSE Guidance and Policy](#)

5. POV Charging

- a. POV charging is authorized by the FAST Act of 2015.
- b. For POV charging in federally-owned GSA-controlled facilities, a networked station must be used to allow for payment and data collection.
- c. When determining the charging rate, project teams should consider the local energy rate, operating and maintenance expenses, and the cost of construction (see below).
- d. The FAST Act requires Federal agencies to charge fees to the individuals who use the battery recharging station for POVs in such amount as is necessary to ensure that the respective agency recovers all of the costs such agency incurs in installing, constructing, operating, and maintaining the station.
- e. In accordance with the FAST Act, in determining the component of the fee that relates to hardware, construction, and installation costs, Federal agencies are required to include the costs of installing or constructing any charging equipment, unless: (1) installed or constructed on or before December 4, 2015; (2) installed or constructed primarily for use by Federal agency fleet vehicles; or (3) installed or constructed pursuant to appropriations for the purpose of installing or constructing charging equipment.

- f. Project teams may utilize the Department of Energy’s [“Federal Workplace Charging Fee Calculator”](#) to determine the rate of charge.

6. Maintenance and Dashboard Subscriptions

- a. Refer to current EVSE Pricing Policy for information on funding and responsibilities.
- b. Networking and Maintenance packages should be purchased through:
 - i. [EVSE BPAs](#)
 - or
 - ii. Included within a Charging as a Service (CaaS) package which is also available on the EVSE BPAs
- c. Customer funding for maintenance and network subscriptions must be provided in a separate Reimbursable Work Authorization (RWA) from the construction. Maintenance and network subscriptions are considered to be a severable service and can not be combined with a non-severable service such as construction.
- d. NOTE: The unit price of a network-capable EVSE on the BPA includes one year of network services. Project teams must negotiate this cost out of the proposal for construction and installation in order to comply with GSA’s RWA policy.

7. Project Reporting

a. Project Tracking

- i. All GSA EVSE projects must be entered into the project management system of record by GSA regional project teams. Project teams must input information on the number of stations, number of ports, level of charging stations and other relevant information.
- ii. Instructions on how to properly input EVSE data into KAHUA can be found on the links below:
 1. [Sustainability for EVSE Program](#)
 2. [EVSE Attributes Field](#)

- iii. GSA will utilize the data from KAHUA for reporting and tracking purposes, which will reduce the need for data calls to the regions.
- iv. The Contract Specialist should select “Electric Vehicle(EV) Construction” or “Electric Vehicle(EV) Services” under the Category/Template Information in EASi when creating the solicitation action and award action in EASi.

8. Station Inventory Tracking & NCMMS Data Completeness

- a. EVSE station information must be properly entered into the National Computerized Maintenance Management System (NCMMS) at the conclusion of the installation by GSA Regional Project Teams. [Project teams are responsible for providing data as outlined in the NCMMS EVSE Attribute template.](#)
- b. NCMMS EVSE assets will be included in the Key Performance Indicator (KPI) calculation for the broader [‘NCMMS Asset Data Completeness’ KPI.](#)
- c. Please search the [NCMMS Library](#) for the term ‘EVSE’ for the latest instructions, including a [‘Job Aide for EVSE Data call’](#), [EVSE Data Call - “Get Started” presentation](#), and [recorded EVSE Data Call Working Session training from February 29, 2024.](#)

9. Training/Resources

- a. Training and resources can be found [here.](#)