



U.S. Department of Transportation

Federal Highway Administration

Toolkit for Public-Private Partnerships for Electric Vehicle Charging Infrastructure: EVCI-STAT User Guide

June 2024

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FHWA Center for Innovative Finance Support



EVCI P3 Toolkit: EVCI-STAT User Guide

1. Report No. FHWA-	2. Government Accession No.	3. Recipient's Catalog No.	
4. Title and Subtitle Toolkit for Public-Private Partnerships for Electric Vehicle Charging Infrastructure: EVCI-STAT User Guide		5. Report Date June 2024	6. Performing Organization Code
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		11. Contract or Grant No. 693JJ322A000016 693JJ323F00086N	
12. Sponsoring Agency Name and Address Federal Highway Administration Office of Performance and Innovative Finance New Jersey Avenue, SE Washington, DC 20590		13. Type of Report and Period Covered Task Report, April 2023 – March 2024	
		14. Sponsoring Agency Code FHWA – HCFB-40	
15. Supplementary Notes Contracting Officer's Technical Representative: Patrick DeCorla-Souza, Office of Performance and Innovative Finance, Federal Highway Administration			
16. Abstract This document is Part 2 of an Electric Vehicle Charging Infrastructure (EVCI) P3 Toolkit developed to provide technical assistance to public sector practitioners navigating the nascent EVCI market. The Toolkit is comprised of three educational tools: <ol style="list-style-type: none"> The EVCI-SCREEN Tool is designed to assist States and communities in determining whether they are ready to start an EVCI procurement and, if so, whether a performance-based P3 contract would be appropriate. The EVCI Strategic and Tactical Advance Tool (EVCI-STAT) provides a step-by-step process for considering the EVCI strategic goals, tactical approaches, and implementation techniques to move EVCI projects from consideration to implementation using a P3. The EVCI Financial Analysis Spreadsheet Tool (EVCI-FAST) aids in assessing the financial viability of an EVCI project, including the potential range of public subsidy that may be required, as well as potential payments from the private partner to the public agency in cases where the EVCI project may be capable of generating surplus revenue. This document is a User Guide for the second tool, EVCI-STAT.			
17. Key Words public private partnership (P3), electric vehicle charging infrastructure (EVCI), performance-based contracts		18. Distribution Statement No restrictions.	
19. Security Classification (of this report) Unclassified	20. Security Classification (of this page) Unclassified	21. No. of Pages 21	22. Price N/A



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Acronyms and Abbreviations

CFI	Charging and Fueling Infrastructure discretionary grant program
CFR	Code of Federal Regulations
DOT	Department of Transportation
EV	Electric vehicle
EVCI	Electric vehicle charging infrastructure
EVCI-STAT	EVCI Strategic and Tactical Advance Tool
EVSE	Electric vehicle supply equipment
FAST	Financial Analysis Spreadsheet Tool (for Electric Vehicle Charging Infrastructure using P3s)
FHWA	Federal Highway Administration
KPI	Key performance indicator
NEVI	National Electric Vehicle Infrastructure
O&M	Operations & maintenance
P3	Public-private partnership

For More Information

The EVCI P3 Toolkit includes tools to assist in educating public sector policymakers, legislative and executive staff, and transportation professionals in considering and developing performance based EVCI P3 projects. The EVCI P3 Toolkit and additional educational information on P3s and on delivering EVCI projects using P3s are available at the website of FHWA's Center for Innovative Finance Support.

FHWA P3 Toolkit www.fhwa.dot.gov/ipd/p3/toolkit

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1 Introduction

The current growth and expected surge in EV adoption necessitates the development of an extensive publicly accessible Electric Vehicle Charging Infrastructure (EVCI) network. Federal grant programs such as the National Electric Vehicle Infrastructure (NEVI) and the Charging and Fueling Infrastructure (CFI) grant programs make billions of dollars in grants available to states and communities to encourage EVCI network development. The EVCI market is inherently a private-sector endeavor. Still, programs like NEVI and CFI are providing public funds to jumpstart private EVCI investment to meet the expected surge in demand. Providing grants to support private endeavors is often considered to be a public-private partnership (P3) due to the financial collaboration between the public and private sectors. However, this type of “grant-based” P3 may not be effective in ensuring the operational performance of the EVCI and in achieving the goals of the public agency. A true “performance-based” P3 could help ensure the achievement of public-sector goals.

Performance-based P3s are long-term contractual agreements between a public agency and a private entity to design, build, finance, operate, and/or maintain an infrastructure project. Many public agencies have been utilizing such P3 contracts over the past three decades to expand the role and responsibility of the private sector in delivering transportation infrastructure in all modes. Performance-based P3 contracts offer public agencies improved efficiency, development expertise, and access to private capital. Some project risks can be shared by private developers, offering lower risk to the public sponsor.

Performance-based P3s may offer similar benefits for the development of EVCI projects. However, EVCI projects are not traditional transportation infrastructure projects. They are much smaller investments exposed to rapid technological change and uncertain revenue generation and are often developed on privately owned land. Thus, they call for states and communities to explore innovative contracting approaches. Performance-based P3 contracts for EVCI, like traditional P3s, seek to engage the private sector through contractual arrangements, leveraging private financing and risk transfer to spur private charging station development.

Performance-based P3 contracts offer promising solutions, but their adaptation to the unique challenges of the EV market requires ongoing research, collaboration, and state and community-specific considerations. Key structuring parameters of performance-based P3 contracts may include consideration of risk allocation, revenue guarantees, supervening events, payment mechanisms, handback provisions, and procurement strategies. Some recent FHWA reports that may clarify the issues include the following:

- [Structuring Options for Performance-based Contracts under the NEVI Program: A Discussion Paper](#)
- [State of the Practice and Emerging Practices of Public-Private Partnerships for Electric Vehicle Charging Infrastructure](#)
- [Market Engagement and Partner Selection for Public-Private Partnerships for Electric Vehicle Charging Infrastructure](#)

About half of the State DOTs have initiated EVCI procurement actions, as have many communities, but there are no documented best practices yet for States or communities to follow.

This document is Part 2 of an Electric Vehicle Charging Infrastructure (EVCI) P3 Toolkit developed to provide technical assistance to public-sector practitioners navigating the nascent EVCI market and seeking to use a P3. The Toolkit is comprised of three tools:

1. The EVCI-SCREEN Tool is designed to assist states and communities in determining whether they are ready to start an EVCI procurement and, if so, whether a performance-based P3 contract would be appropriate.
2. The EVCI Strategic and Tactical Advance Tool (EVCI-STAT) provides a step-by-step process for considering the EVCI strategic goals, tactical approaches, and implementation techniques to move EVCI P3 projects from consideration to implementation.
3. The EVCI Financial Analysis Spreadsheet Tool (EVCI-FAST) aids in assessing the financial viability of an EVCI P3 project, including the potential range of public subsidy that may be required, as well as potential payments from the private partner to the public agency in cases where the EVCI project may be capable of generating surplus revenue. The tool may also be used to understand rates of return reflected in P3 bids and contingent public liabilities.

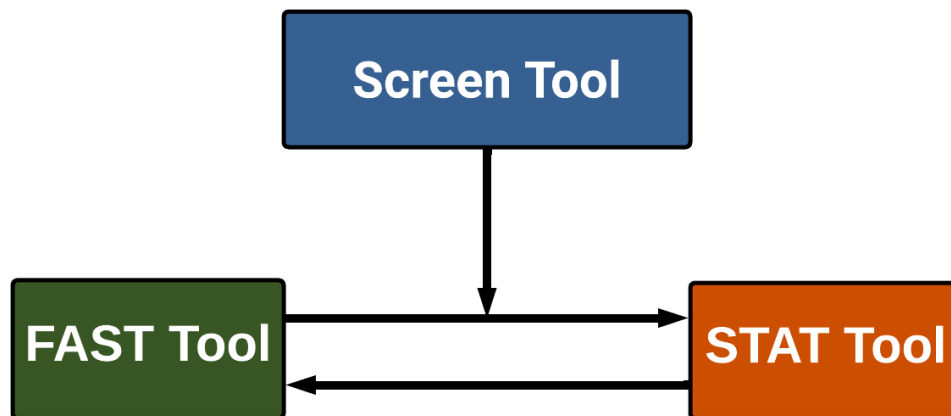


Figure 1: How the SCREEN, FAST, and STAT tools work together.

Each tool can be used independently from the others, but they may be most useful when used together. The SCREEN tool can be used to determine if an EVCI project is right for your community and, if so, whether a performance-based P3 contract best suits your needs. The FAST tool can provide project financial analysis to support this assessment. If a P3 is selected, STAT can assist with taking steps to achieve your community's strategic goals related to EVCI projects. This user guide is for the EVCI-STAT tool.

2 The EVCI Strategic and Tactical Advance Tool (EVCI-STAT)

Once it is determined that a performance-based or grant-based P3 could be used to procure EVCI projects by your agency, you can begin to explore the next steps in the planning process. EVCI-STAT can assist in this process by identifying strategic goals, tactical approaches, and implementation techniques that may be needed by an agency for a successful P3 procurement. It should be noted that every agency and project will have a unique history and context and that the areas listed in EVCI-STAT are examples that should be modified as needed to meet the specific circumstances.

As shown in Table 1 below, EVCI-STAT is organized into three categories: Strategic Goals, Tactical Approaches, and Implementation Techniques. This table allows the user to look across all three categories at once.

- Strategic Goals - These represent the main goals for the agency to consider.
- Tactical Approaches - These are the approaches the agency could consider to achieve the relevant strategic goal.
- Implementation Techniques - These are methods for implementing a given tactical approach.

Using the EVCI-STAT Tool

After opening the EVCI-STAT Excel file, the user should review the content of the Introduction and Instructions worksheets. After that, the user can proceed to the "Strategic Goals" worksheet.

On the Strategic Goals worksheet, the user will carefully read the description on each row and select a response (Yes or No) using the dropdown menus in column E (titled "To be Considered for the Project?"). The response indicates whether a particular item (strategic goal, tactical approach, or implementation technique) should be considered during the EVCI procurement process. As noted above, each agency will have its own set of priorities, opportunities, and constraints. Not all of the items listed on the Strategic Goals worksheet will be important for (or relevant to) a given EVCI P3 procurement.

Column F of the Strategic Goals worksheet (with the heading "Comments or Notes") provides space for the user to enter notes about each of the items listed on the worksheet.

Once the user has responded on each row of the "Strategic Goals" worksheet, the user can print the results by pressing "Ctrl+P" or by going to Excel's File menu and selecting "Print."

Prior to printing, the user has the option to filter out all of the rows for which the user selected "No" in column E. As shown in Figure 2, the user can use Excel's filter feature to hide all of the rows for which a "No" response has been selected. Using this filter feature will allow the user to produce a printed version that shows only those strategic goals, tactical approaches, or implementation techniques that the user has deemed relevant to the user's EVCI procurement.

The "Glossary" worksheet defines the acronyms that are used in the tool.

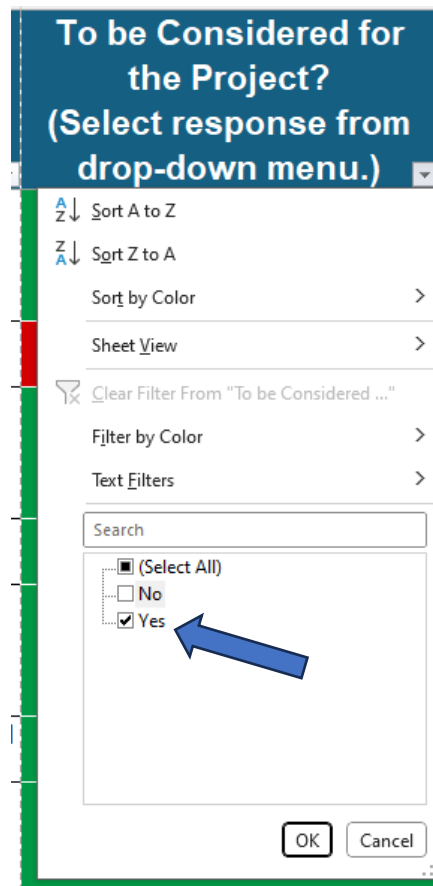


Figure 2. Filtering the Strategic Goals worksheet for rows with “Yes” responses.

Moving on to the EVCI Financial Analysis Spreadsheet Tool (EVCI-FAST)

If the user has not already done so, he or she may want to consider whether the envisioned project will be financially feasible independently and, if not, the amount of public financial support that may be required. The EVCI P3 Toolkit includes a user-friendly Financial Analysis Spreadsheet Tool (EVCI-FAST). The user collects certain cost and revenue data about the conceived EVCI project and enters them into EVCI-FAST. The Tool will estimate the financial characteristics of the EVCI project including the required subsidy, if any, or the payments from the operator back to the agency if anticipated revenues exceed costs. The EVCI-FAST tool and accompanying user guide are available for download from the [webpage for the FHWA P3 Toolkit](#).



Table 1. Develop a Performance-Based or Grant-Based P3 for EVCI Projects

Strategic Goals	Tactical Approaches	Implementation Techniques
Minimize Budgetary Impact		
<p>Minimize the impact on the public agency budget of EVCI projects - reduce constraints imposed on the public agency’s investment in EV charging infrastructure projects by insufficient funding and limits on the public sector’s debt capacity (i.e., borrowing limit).</p>	<p>Ensure your P3 partners in the private sector clearly understand your agency’s budgetary constraints.</p> <p>Use market forces to establish a competitive bidding process to encourage developers to propose an optimal package of EV charging infrastructure capital expenditure and operating expenditure costs.</p>	<p>Take advantage of deferred payment mechanisms to enhance the financial position of the public agency in the P3 deal.</p> <p>Ensure the proposed schedule of payments to the P3 developer meets the agency’s caps on capital payments, service commencement payments, and availability payments over the operations and maintenance (O&M) phase. (See EVCI-FAST model discussed in Section 4).</p>
Expedite Project Delivery		
<p>Expedite project delivery - Deliver EV charging station projects that would otherwise be delayed due to lack of funding.</p>	<p>Incentivize the private sector P3 partners to provide an expedited deployment schedule for EV charging infrastructure P3 projects while holding them accountable for all critical delivery milestones (e.g., apply appropriate performance penalties for not meeting the required deadlines) unless deadlines are entirely out of the P3 partner’s control, such as force majeure events, site energization or utility distribution upgrade schedules.</p>	<p>Evaluate the P3 developer’s proposed schedule for the project and timeline for completion, including the following major milestones:</p> <ul style="list-style-type: none"> ➤ Anticipated deadline for execution of the project agreement ➤ Assumed notice to proceed for design and materials ➤ Design and permitting completion ➤ Power utility service connection ➤ Communication/data utility service connection ➤ Project site preparation ➤ Electric vehicle supply equipment (EVSE) and associated hardware delivery ➤ EVSE installation ➤ Planned service commencement date ➤ Service commencement long stop date
Support the Development of EVCI		
<p>Strategically support the development of convenient, accessible, reliable, and equitable access to publicly available EV charging infrastructure.</p>	<p>Incentivize the private-sector P3 partners to bridge the identified gaps in alternative fuel corridors, especially in disadvantaged and rural communities, manage development, implementation revenue risks, and implement</p>	<p>Provide contractual incentives for the P3 partners to select project sites benefiting disadvantaged communities and rural areas where revenues risk is potentially greater.</p>

Strategic Goals	Tactical Approaches	Implementation Techniques
	using the most cost-effective approach possible.	
Build and Grow the EVCI Industry		
Build and grow the EV charging industry by establishing P3 partnerships.	<p>Utilize the advantages of the P3 model to accelerate the development and implementation of EV supply equipment and charging infrastructure in urban and rural areas.</p> <p>Catalyze further investment in EV charging stations across the state where utilization is anticipated, but the private sector may not otherwise be economically motivated to install and operate EV charging stations.</p>	Allocate government funding subsidies as catalysts for developing and implementing business models for EV Charging Infrastructure.
Connect Effectively with EV Charging Industry		
Connect effectively with a new and evolving EV charging station industry.	Utilize the EVCI performance-based P3 model as a platform for the public agency to engage with new or existing industry partners with whom the agency has not interacted for the same services.	<p>Use the EVCI performance-based P3 model as an opportunity to engage with current industry members and potential new entrants to better understand key elements of the P3 business model, including capital and operational expenditures, risk identification and management, and performance requirements.</p> <p>Use the EVCI performance-based P3 model as a platform for public agencies to be better informed about the latest technology trends and emerging practices in the EV infrastructure and equipment supply market.</p>
Shape Environment for Competitive Bidding		
Shape an attractive environment for competitive bidding in the EV charging infrastructure market.	Generate competition – A competitive bidding environment would help the public agency accelerate the EV infrastructure deployment program.	Effectively use industry forums, requests for information, one-on-one meetings with interested stakeholders, partnering sessions, and other communication and collaboration mechanisms to remove barriers to participation and reduce the cost of pursuit for potential private-sector partners.
Consider Economies of Scale		
Consider the potential advantages of Economies of Scale in delivering EV charging	Leverage opportunities for bundling projects that would otherwise be delivered in multiple segments over a much-extended period.	Reduce costs related to upfront analysis, procurement, construction startup, and closeout for a portfolio of EVCI projects using a P3 bundling approach.

Strategic Goals	Tactical Approaches	Implementation Techniques
<p>infrastructure projects.</p>		<p>Incentivize the private-sector P3 partners to compete and provide additional charging ports at the project sites beyond the requirements. Or include additional service facilities in the proposed project.</p>
<p>Create Single Point of Responsibility</p>		
<p>Benefit from a single point of responsibility in project delivery.</p>	<p>Explicitly hold one entity accountable for contractually specified responsibilities and performance requirements during the construction and operations of the EV charging infrastructure project during the term of the contract.</p>	<p>Structure the P3 contract to hold a single entity responsible for the construction, financing, operations, and maintenance of EV charging infrastructure and supply equipment while managing identified and unexpected risks, such as force majeure events. The contract will address events outside of the control of the P3 partner.</p>
<p>Facilitate Performance-Based Contracting</p>		
<p>Facilitate long-term, performance-based contracting</p>	<p>Structure contract to allow for the private sector to select potential EVCI sites and equipment as well as design and construction requirements while focusing on contractually specified outcomes and Key Performance Indicators (KPIs)</p> <p>Refrain from defining prescriptive solutions (i.e., identifying all the inputs, plans, and specifications common in traditional delivery.)</p>	<p>Transfer some or most of the design and construction risks to the P3 contractor and allow for sufficient incentives and penalties for the P3 contractor to meet design and construction requirements in accordance with contractually specified KPIs.</p> <p>Transfer some or most of the operational and maintenance risks to the P3 operator and allow for sufficient incentives and penalties for the P3 operator to meet O&M requirements in accordance with contractually specified KPIs. This can include developing and entering into a service level agreement (SLA), which includes KPIs such as minimum of 97% uptime for each charging port).</p>
<p>Minimize Lifecycle Costs</p>		
<p>Minimize the project lifecycle costs (i.e., enhance lifecycle cost efficiencies).</p>	<p>Utilize the inherent strengths of the P3 model to achieve a minimum life cycle cost. (Since the same investors are responsible for design, construction, and O&M, they are inherently incentivized to design and construct the facility).</p>	<p>Provide incentives and the flexibility to P3 developers to propose technical solutions that exceed minimum design performance and construction quality requirements.</p> <p>Encourage the P3 developer to partner with competent O&M subcontractors and equipment manufacturers to achieve optimal life cycle cost and enhanced level of service.</p>
<p>Consider Non-Price Factors</p>		
<p>Consider other important factors besides the price in selecting partners and evaluating their proposed ideas.</p>	<p>Develop an effective project acquisition strategy going beyond the traditional hard-bid procurement through utilizing qualifications-based selection (QBS) and best-value selection</p>	<p>Shortlist the most highly qualified partners (typically three teams) to move to the second phase to develop competitive technical and price proposals.</p> <p>Request detailed information about a prior recent experience of the key team members if available in</p>

Strategic Goals	Tactical Approaches	Implementation Techniques
	<p>(BVS) procurement methods in a single-phase or two-phase procurement. The first phase is the request for qualifications phase, and the second phase is the request for proposal phase.</p> <p>Consider team qualifications and experience of key personnel (e.g., project manager, construction manager, electrician, operations and maintenance manager) as an integral component of the procurement of the EV charging infrastructure project.</p>	<p>completing the installation or operation of EV charging stations and use the past experience as a main criterion in selecting the most highly qualified P3 partner.</p> <p>Require the adequate availability of key personnel to fulfill their responsibilities once the P3 contract is executed.</p> <p>Require an EVCI training program for electricians in the team.</p> <p>Use experience and expertise in construction safety, environmental compliance, proactive utility coordination, and public involvement as examples of the main criteria for evaluating the qualifications of the key personnel in the proposed P3 team.</p> <p>Incentivize the prospective P3 partners to provide their best solutions for addressing a wide range of project issues (e.g., construction safety, excellence in operations and maintenance, including safety, warranty, and routine maintenance, security, equitability, and accessibility to the site, and traffic patterns and ingress/egress considerations).</p>
<p>Avoid Technology Risk</p>		
<p>Do not accept any risk of new, rapidly evolving EV charging technology and leave it to the private-sector partners.</p>	<p>Transfer the risk of technology deployment through an output and performance-based approach without accepting any risk for detailed design and technology deployment.</p>	<p>Utilize the P3 contracting vehicle to use private sector expertise in the areas where the agency does not have internal expertise in the design, construction, operations, and maintenance of the EV charging infrastructure.</p>
<p>Optimize Allocation of Risks to Maximize Public Value</p>		
<p>Transfer project risks to the best qualified party</p>	<p>Utilize the P3 model to optimize the transfer project risks throughout the lifecycle of EVSE/EVCI projects).</p> <p>Structure project and develop a P3 contract that encourages achievement of the objectives of the public and private parties to the contract. Risk allocation should be reasonably balanced for the parties involved.</p>	<p>Conduct a risk review prior to project procurement that identifies major project risks, assesses the potential impact and severity of these risks, and develop a plan to manage, mitigate, and allocate identified risks.</p> <p>Develop a P3 contract that clearly establishes the risks to be transferred for the design, construction, equipment procurement, installation, financing, availability, performance, operations, and maintenance of the EVCI project.</p>

Strategic Goals	Tactical Approaches	Implementation Techniques
		<p>Develop a P3 contract that permits the P3 contractor/operator to obtain a reasonable rate of return on investment.</p> <p>Develop contractually defined mechanisms that allow for the parties involved to address unexpected project upsides and downside risks, such as revenue sharing and the periodic rebalancing of economic/financial equilibrium.</p>
<p>Flexibility for Site Selection</p>		
<p>Provide flexibility for site selection to benefit from the private sector’s real estate assets (i.e., open site selection).</p>	<p>Give the P3 developer the freedom to select each installation site.</p> <p>Incentivize the P3 developer to use a smart approach for site selection and preparation.</p>	<p>Ensure the selected P3 developer confirms meeting all the project site minimum requirements.</p> <p>Evaluate the P3 developer’s proposed plan for any applicable site development needs, including plans for site lease, site construction, or other site preparation other than electric power-related preparation.</p> <p>Evaluate the P3 developer’s proposed plan for any permits (e.g., air/land electrical, structural, zoning, local agency, and environmental) or other approvals that are required to complete the project and the status of each permit and anticipated timeline to obtain approval.</p> <p>Evaluate the P3 developer’s proposed plan for providing communications networking capabilities at the proposed project site.</p> <p>Evaluate the P3 developer’s identification of major project risks and its proposed risk mitigation strategies in several areas related to existing or planned roads, buildings, or other infrastructure.</p> <p>Evaluate the P3 developer’s proposed project site location through the assessment of the following information items from the proposed project site layout:</p> <ul style="list-style-type: none"> ➤ All existing buildings, structures, and amenities ➤ Existing and proposed designated charging parking spaces ➤ EVSE ➤ Electric service distribution lines and utility connection build-out to the project site ➤ Utility connection equipment (e.g., power meter, transformer, and switch gear) ➤ Signage, marking, and striping

Strategic Goals	Tactical Approaches	Implementation Techniques
		<ul style="list-style-type: none"> ➤ Vehicle and pedestrian points of access ➤ Space (if any) available for future use ➤ Americans with Disabilities Act (ADA) access ➤ Lighting and security features ➤ All other planned and proposed amenities <p>Evaluate the appearance of the P3 developer’s proposed project site, including height, width, color, and other visual features of the following items:</p> <ul style="list-style-type: none"> ➤ Existing and proposed designated charging parking spaces. ➤ EVSE ➤ Signage, marking, and striping. ➤ Lighting and security features ➤ All other planned and/or proposed amenities <p>Evaluate the P3 developer’s proposed means and methods of EVSE installation for the project site, including the anticipated depth and width of trenching for the following items:</p> <ul style="list-style-type: none"> ➤ EVSE footing and foundations. ➤ Power meter, transformer, switchgear footing, and foundations. ➤ Power utility, power lines, and cables connecting EVSE to the electrical grid.
Promote Sustainability		
<p>Promote sustainability in the development and operations of EV charging infrastructure.</p>	<p>Incorporate incentives that encourage the P3 developer to consider innovative sustainability features in the design and construction of EVSE/EVCI project sites. Project financial viability will require viewing project costs with respect to a lifecycle approach.</p>	<p>Include incentives to the P3 developer to consider using renewable energy sources like solar arrays and stationary batteries (e.g., onsite battery storage) during project design and construction and project operations.</p>
Minimize Supply Chain Disruptions		
<p>Minimize supply chain disruptions and get ahead of workforce shortages.</p>	<p>Do not accept any supply chain and labor availability risks.</p>	<p>Rely on the private partners’ resources and knowledge to schedule program delivery and expedite early procurement packages, considering substantial uncertainties in the availability of skilled labor and key equipment in the evolving EV charging station market.</p>
Facilitate Contingency Contracting		

Strategic Goals	Tactical Approaches	Implementation Techniques
<p>Facilitate contingency contracting.</p>	<p>Utilize a flexible contracting approach to award contingency P3 contracts to the winning bidders and then enter into formal P3 agreements.</p>	<p>Enter into a contract with the winning bidders after the public agency has conducted and received environmental and real estate clearance on the proposed sites.</p>
<p>Address Cybersecurity</p>		
<p>Effectively address cybersecurity and safe data storing/sharing issues.</p>	<p>Take advantage of private sector expertise in collecting, harvesting, and analyzing data to track performance measures related to deploying EV charging infrastructure projects.</p>	<p>Use the P3 developer to collect, store, and analyze the required data for tracking performance to ensure compliance with standards of access, sharing, reliability, convenience, and cybersecurity requirements.</p> <p>Evaluate the P3 developer’s proposed approach for maintaining the collected data safe while being obtained, transferred, and stored, following all federal and state cybersecurity requirements.</p>
<p>Minimize Environmental Impacts</p>		
<p>Minimize impacts to the surrounding environment.</p>	<p>Hold the private partners accountable for conforming to all federal and state environmental regulations in their site selection, site planning, and construction and operations management (i.e., transfer any potential environmental risks to the P3 developer).</p>	<p>Conduct an initial environmental screening for the proposed project site(s) to assess the overall environmental risk of the proposed project site(s) and (possibly) the construction footprint for minor utility upgrades.</p> <p>Ensure that the P3 developer clearly understands that cost and schedule impacts associated with environmental permitting and mitigation will be transferred to the P3 developer.</p> <p>Provide incentives in the P3 procurement and contracting process for the private sector partners to innovate to minimize the environmental footprint (i.e., impacts) of the EV charging infrastructure project.</p>
<p>Promote Local Economic Development</p>		
<p>Promote local economic development through investments in EV charging infrastructure sites.</p>	<p>Optimize economic development opportunities with suitable site placement. Flexibility in project selection and scale would also encourage local economic development</p>	<p>Incentivize prospective P3 partners to place EV charging infrastructure sites in areas that support local businesses and generate additional economic growth and job opportunities.</p> <p>Develop P3 procurements for single-site, zones and corridor projects, which would allow for a wider range of market participants.</p>
<p>Ensure Opportunities for Local Firms</p>		
<p>Ensure that EV charging</p>	<p>Allow small and minority businesses from local</p>	<p>Encourage private developers to provide opportunities for disadvantaged business enterprises (DBEs) to</p>



Strategic Goals	Tactical Approaches	Implementation Techniques
<p>infrastructure projects provide equitable opportunities to local, small firms.</p>	<p>communities to play a role in the EV charging infrastructure projects.</p>	<p>participate in various phases of EV infrastructure projects from site development, design, construction, installation, operations, and maintenance.</p>
<p>Enhance Public Involvement</p>		
<p>Enhance public involvement and community engagement.</p>	<p>Promote community awareness early in development by facilitating collaborative project engagement and proactive stakeholder communications.</p>	<p>Capitalize on the public and private sector expertise in public involvement and community engagement to build a supporting coalition in the community that is essential for the successful implementation of the EV charging infrastructure project.</p>
<p>Address Demand Uncertainty</p>		
<p>Effectively deal with commercialization issues and demand uncertainty.</p>	<p>Take advantage of the private sector’s business acumen and marketing experience to seek creative solutions to respond better to important issues related to understanding customer demand and its evolution, range anxiety, and willingness to pay.</p>	<p>Transfer the risk of meeting customer demands to the most qualified private sector partners capable of managing demand and revenue risks.</p> <p>If project revenues are not sufficient to cover capital and operational expenditures, then additional subsidies may be needed to close potential financing gaps. A minimum revenue guarantee, which sets a revenue floor, can also be offered. Under a minimum revenue guarantee, the public agency would be responsible for paying the difference between actual revenues and the guaranteed annual amount.</p> <p>If revenues significantly exceed forecasts, the P3 contract could include a revenue sharing clause whereby the public sector shares revenues above a certain ceiling. Revenue sharing mechanisms can include step increases whereby the revenue sharing percentages can increase if different thresholds are triggered, up to a 100% share.</p> <p>These P3 contract clauses can help to better manage demand risk while protecting the public interest.</p>
<p>Support Commercialization</p>		
<p>Support the commercialization of EV infrastructure projects to make public investments more successful.</p>	<p>Take advantage of commercial risk borne by the private sector P3 partners.</p> <p>Use the private sector’s expertise to build and grow the customer base and enhance customer</p>	<p>Provide incentives in the P3 procurement and contracting process to motivate private-sector P3 partners to select sites near existing amenities (e.g., shopping centers and eating establishments) and/or create additional amenities for customers.</p>



Strategic Goals	Tactical Approaches	Implementation Techniques
	satisfaction. Allow for contractual flexibility to include on-site amenities.	Specify the enhancements and amenities are of high value for the public agency at the project site to encourage greater demand. Provide additional charging ports to handle potential increases in demand over time.
Provide Secure Site		
Provide a safe and secure EV charging station site.	Transfer the risk of safe and secure construction and operations of the EV charging station project to the private sector P3 partners.	<p>Evaluate the P3 developer’s plan to harden the EVSE and supporting infrastructure against damage or loss of service due to weather, transient surge voltages, traffic incidents, vandalism, or other environmental factors.</p> <p>Encourage using advanced technologies to monitor and control the project site, its customers, and its equipment.</p> <p>Evaluate the P3 developer’s project site safety features for users and infrastructure safety equipment (e.g., site lighting, fire extinguisher, automated external defibrillator, automatic safety shutoff, video cameras covering the site, and anti-vandalism equipment).</p> <p>Evaluate the P3 developer’s proposed plan for handling potential incidents during the construction and operations and management of the EV charging station site.</p> <p>Evaluate the P3 developer’s proposed plan for EV charging station egress during times of emergency, such as evacuation during natural disasters.</p> <p>Evaluate the P3 developer’s safety plan for workforce training and the training approach for emergency service providers and host site owners.</p>
Require Private Equity Stake		
Require the private partner to have an equity stake in the undertaking and, therefore, a vested interest in the success of the EV charging infrastructure project.	Create a competitive procurement environment that encourages P3 developers to have skin in the game for the successful deployment and seamless operations of the EV charging infrastructure projects.	Explicitly spell out in the P3 procurement and contracting documents that private sector equity contribution will be required along with agency reviews and specified time periods that need to elapse before the sale and transfer of equity. If debt financing is involved, lenders will require that the private partner provide an equity contribution of at least 20% in relation to total private capital.
Address Utility Issues		
Be proactive in addressing utility	Recommend that the P3 developer coordinate with Utility Owners for sufficient power and	Use past, current, and planned utility coordination experience and expertise as one of the main criteria for evaluating firm qualifications.

Strategic Goals	Tactical Approaches	Implementation Techniques
<p>issues for the project site.</p>	<p>data communication availability for the proposed project site.</p> <p>Ensure that all the risks for utility coordination, power connection, and data communication network availability will be borne by the P3 developer at the proposed project site.</p>	<p>Develop an approach and outreach with utilities such as:</p> <ul style="list-style-type: none"> (1) determine whether upgrades are needed on the utility’s side of the meter or on the customer’s side of the meter; (2) If upgrades to utility side are needed: then (i) final design is in hand, (ii) load letter and design are submitted to the utility, or (iii) any utility engagement has taken place to date; (3) determine whether the utility itself, over which developers have little-to-no control, has a good record (e.g., utility’s average time to energize EVSE projects; (4) assign full-time POC for transportation electrification; (5) include distribution load capacity maps or tools to quickly vet costs; (6) include active incentive or make ready programs; (7) update rate designs that reflect unique needs of EV charging; (8) Evaluate the electrical distribution service needs of the P3 developer’s proposed project site. <p>Evaluate the P3 developer’s non-binding cost and schedule estimates for utility make-ready and interconnection work needed.</p>
<p>Ensure Fair and Secure User Payments</p>		
<p>Ensure fairness and security in user charge payments.</p>	<p>Hold the P3 partner accountable for providing secure, equitable, and accessible payment options.</p>	<p>Rate structure will be directly tied to capital expenditures and operational expenditures (e.g., utility fees, leases, capital costs) and private-sector capital expenditures. The P3 contract can include provisions as to the proposed rate structure for charging and methodology for assessing user fees (e.g., cost plus an appropriate profit rate, any additional cost at peak times, and any discounts to use the EV charging site).</p> <p>The P3 contract can include clauses that specify the base rate, maximum rates, and escalation rates.</p>



Strategic Goals	Tactical Approaches	Implementation Techniques
		<p>For Federally funded projects, ensure that the selected P3 partner confirms that their proposed billing approach is consistent with billing practices outlined in the Federal rules as per 23 CFR 680.</p>
<p>Promote Long-Term Stewardship of the EVCI Assets</p>		
<p>Promote commitment to long-term stewardship of the EVCI Assets.</p>	<p>Use the P3 business model as a stepping stone to develop an EV charging site that will continue to serve the community beyond the duration of the P3 agreement.</p>	<p>Ensure that the business model is financially viable and addresses local conditions. Evaluate the proposed approach of the P3 developer to operate and maintain the facility in accordance with contractually stipulated performance requirements. Include an option to extend the P3 contract.</p>