U.S. Department of Transportation

Federal Highway Administration

State of the Practice and Emerging Practices in Public-Private Partnerships for Electric Vehicle Charging Infrastructure

June 2024

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1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.
FHWA-		

4. Title and Subtitle	5. Report Date
State of the Practice and Emerging Practices in Public-Private Partnerships for Electric Vehicle Charging Infrastructure	June 2024
	6. Performing Organization Code

7. Author(s)	8. Performing Organization Report No.
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9. Performing Organization Name and Address	10. Work Unit No. (TRAIS)
RCF Economic & Financial Consulting, Inc (Lead) 333 North Michigan Avenue Suite 2000, Chicago, Illinois 60601 • Jack Faucett Associates, Inc., Bethesda, Maryland 20814 • Clean Energy and Infrastructure Advisory, JLL, Washington, DC 20006 • Kutak Rock, LLP, Washington, D.C. 20006 • Build America Center, University of Maryland, College Park, Maryland 20742	11. Contract or Grant No. **693JJ322A000016** **693JJ323F00086N**

12. Sponsoring Agency Name and Address	13. Type of Report and Period Covered
Federal Highway Administration Office of Transportation Policy Studies New Jersey Avenue, SE Washington, DC 20590	**Task Report, April 2023 – December 2023**
	14. Sponsoring Agency Code **FHWA - HCFB**

15. Supplementary Notes

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16. Abstract

The National Electric Vehicle Infrastructure (NEVI) program and the Charging and Fueling Infrastructure (CFI) program play a pivotal role in supporting public EVCI. This report delves into the challenges and characteristics of the EV market, the role of the public sector, rapid technological changes, uncertain revenue generation, risk allocation, and land ownership issues. The report underscores the critical need for efficient EVCI development to meet the increasing demand for EVs. P3s and innovative performance-based contracts offer promising solutions, but their adaptation to the unique challenges of the EV market requires ongoing research, collaboration, and state and locality-specific considerations. The FHWA is developing guides, decision tools, case studies, and other resources to support states and local governments in navigating the evolving landscape of EVCI development.

17. Key Words	18. Distribution Statement
Public Private Partnership (P3), Electric Vehicle Charging Infrastructure (EVCI), performance-based contracts	No restrictions.

19. Security Classification (of this report)	20. Security Classification. (of this page)	21. No. of Pages	22. Price
Unclassified	Unclassified	36	N/A

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Executive Summary

The National Electric Vehicle Infrastructure (NEVI) program and the Charging and Fueling Infrastructure (CFI) program play a pivotal role in supporting public EVCI. This report delves into the challenges and characteristics of the EV market, the role of the public sector, rapid technological changes, uncertain revenue generation, risk allocation, and land ownership issues.

To address these challenges, States and communities are exploring innovative procurement approaches, particularly Public-Private Partnerships (P3s) and performance-based contracts. P3s, common in other sectors, involve long-term contractual arrangements between the public and private sectors, leveraging private financing and risk transfer. In the context of EVCI, adapting existing P3 models is essential due to the sector's distinctive features.

The report analyzes three case studies—Georgia, Ohio, and Oregon—to illustrate varied P3 initiatives. Each State has adopted a phased approach, aligning with the NEVI plan's five-year funding availability. The chosen contractual term, payment mechanisms, and performance requirements vary, reflecting state-specific priorities.

Key structuring parameters, including risk allocation, revenue guarantees, supervening events, payment mechanisms, handback provisions, and procurement strategies, are discussed. The report introduces a paper, "Structuring Options for Performance-Based Contracts under the NEVI Program," as a valuable resource for states and local governments. Future reports will delve into additional topics that could benefit from further research.

P3s and innovative performance-based contracts offer promising solutions, but their adaptation to the unique challenges of the EV market involves ongoing research, collaboration, and state and community-specific considerations. The FHWA will develop guides, decision tools, case studies, and other resources to support states in navigating the evolving landscape of EVCI development.

Chapter 1: EV Market Overview

1.1 Introduction to EV Market

The recent increase in consumer adoption of EVs is impacting major sectors of the economy—from auto manufacturers and suppliers to real estate owners, electric utilities, logistics providers, private companies, and a variety of other related industries. With increased EV adoption comes the need for more publicly accessible EVCI facilities to accommodate both normal and fast charging. Electric vehicle supply equipment (EVSE) manufacturers have pushed forward major technological advancements in direct current fast charging (DCFC) solutions, which deliver higher voltages and faster charging. Manufacturers have effectively reduced charging times for some vehicles from approximately 24 hours with Level 1 Alternating Current (AC) charging to 20-40 minutes with DCFC. Additionally, charging site developers are spearheading solutions using both the hardware and operating software to facilitate an efficient customer charging experience at costs lower than liquid refueling.

There are five broad categories of locations where EVCI can be implemented: corridors (such as highways and freeways), fleets, workplaces (either publicly and privately owned and operated), general public/retail spaces, and homes/multifamily buildings. Appendix A provides more information on each of these categories and discusses their potential for use of P3s. In accordance with 23 U.S.C. 151, FHWA has designated alternative fuel corridors to support installation of EV charging, hydrogen, propane, and natural gas fueling infrastructure at strategic locations along major national highways. The designation of AFCs has grown in importance because it is now tied to funding provisions under the BIL, which has a goal of supporting the creation of a nationwide network of 500,000 EV chargers by 2030.

While EV adoption is expected to increase significantly over the near term, building out a robust and reliable DCFC network across the Nation's highways is not independently commercially feasible and requires public support. The NEVI program provides that support by allocating $5.0 billion to be split between all 50 States, as well as the District of Columbia, and Puerto Rico, to increase the availability and reliability of public EVCI.[1]

1.2 Public sector role in EV Market

New public charging sites and networks are being developed, mostly sponsored by private sector entities looking to satisfy, and ultimately increase demand for EVCI facilities and potentially nearby, ancillary facilities. This initial investment, and the capital costs associated with it, can be

[1] Please refer to the following document for the latest NEVI Formula Program Guidance. https://www.fhwa.dot.gov/environment/nevi/formula_prog_guid/90d_nevi_formula_program_guidance.pdf. Additional funding is also provided under the Charging and Fueling Infrastructure (CFI) Discretionary Grant Program. More information can be found here: https://highways.dot.gov/newsroom/biden-harris-administration-opens-applications-first-round-25-billion-program-build-ev

a barrier to entry in some markets. Specifically, rural areas may face challenges finding developers interested in installing EVCI without a subsidy or other public sector support.

The policy purpose of NEVI is closing this coverage gap for sites where the business case is not independently financially feasible. States are using NEVI funds to aid in the development and implementation of EVCI along these corridors through their Departments of Transportation (DOTs) and other State agency implementation partners.

Any EVCI project receiving NEVI funds must comply with Title 23, U.S.C. Under this law and related regulations, income derived from EVCI operations must be used for debt service, a reasonable return on investment, improvement or maintenance of the EV charging station, payments under public-private partnerships, or other Title 23, U.S.C. purposes.[2], [3]

Some project characteristics that determine the financial feasibility of a EVCI project are the following:

- Capital costs and operations and maintenance costs
- Demand for charging services (driven by the location of the site and projected increase in EV usage)
- Tariff structure (including tariff variability, projected escalation of tariffs, as well as tariff regulation)
- Payment method (including subscription / membership / loyalty programs)
- Vehicle and system interoperability

[2] Paragraph under the Highway Infrastructure Program heading in title VIII of division J of the Bipartisan Infrastructure Law (enacted as the Infrastructure Investment and Jobs Act) (Pub. L. No. 117–58) (Nov. 15, 2021)

[3] 23 CFR 680.106 *(m) Use of program income.*

(1) Any net income from revenue from the sale, use, lease, or lease renewal of real property acquired shall be used for Title 23, United States Code, eligible projects.

(2) For purposes of program income or revenue earned from the operation of an EV charging station, the State or other direct recipient should ensure that all revenues received from operation of the EV charging facility are used only for:

(i) Debt service with respect to the EV charging station project, including funding of reasonable reserves and debt service on refinancing;

(ii) A reasonable return on investment of any private person financing the EV charging station project, as determined by the State or other direct recipient;

(iii) Any costs necessary for the improvement and proper operation and maintenance of the EV charging station, including reconstruction, resurfacing, restoration, and rehabilitation;

(iv) If the EV charging station is subject to a public-private partnership agreement, payments that the party holding the right to the revenues owes to the other party under the public-private partnership agreement; and

(v) Any other purpose for which Federal funds may be obligated under Title 23, United States Code.

1.3 Unique Characteristics of EV Market

EVCI has unique challenges and characteristics that are very different from other infrastructure sectors that will need to be addressed in the structuring of contracting arrangements:

Market characteristic	Description
Public Sector Role	Most public agencies indicate that they do not want to be in the business of owning and operating EVCI facilities, and only want to help catalyze an otherwise private industry.
Technological Change	EVCI technology is changing rapidly and the equipment that is being used today has significant performance issues, resulting in significant technology risk and performance risk.
Uncertain Revenue Generation	The demand for EVCI and the revenue model are highly uncertain, resulting in significant revenue risk.
Relatively Low Capital Costs	The capital costs of even large bundles of EVCI facilities are significantly lower than that for highway and transit facilities.
Risk Allocation	Given that EVCI development is still at the earliest stages, there is no roadmap for managing and allocating identified risks, let alone currently unidentified risks.
Land Ownership	Whereas some EVCI under the NEVI program will be developed on public land, the vast majority of the charging infrastructure will be developed on privately owned land.

With the opportunity presented by the NEVI funding, and the increased demand for EVCI, public agencies are grappling with how to deliver EVCI rapidly and efficiently and are therefore considering various procurement approaches to deploy this infrastructure. The program encourages the use of public-private partnerships (P3s) and other innovative performance-based contracts to catalyze private investment in EVCI.

Chapter 2: Innovative performance-based contracts and P3s

2.1 Introduction to P3s and performance-based contracts

Several states have expressed interest in exploring innovative contracting and partnership strategies for the NEVI program. P3 and other performance based contracting arrangements are relatively common in other sectors, including in road infrastructure and transit. P3 is generally defined as a long-term contractual arrangement between the private and public sector that involves private financing, performance based payments, and the transfer of more risk to the private sector than under conventional delivery models. Public entities often consider P3s to close potential financing gaps to develop new or modernize existing transportation infrastructure and when they expect better and more efficient delivery of infrastructure compared to the more conventional delivery methods.

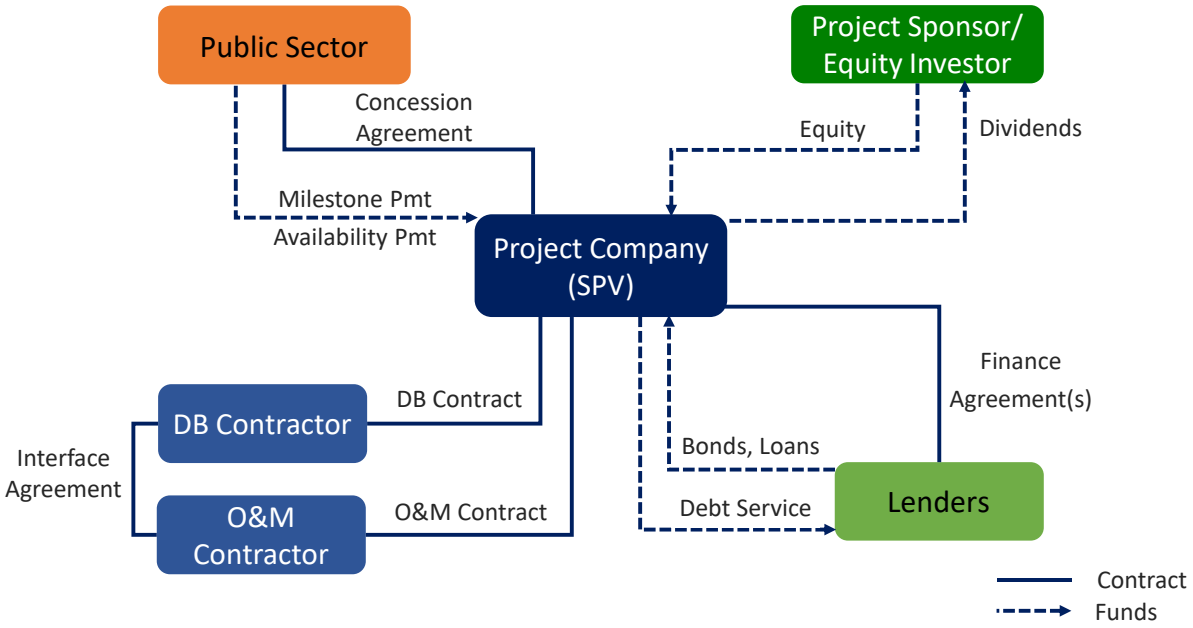
Depending on the type of project, the private sector may rely on net cash flow (i.e., revenues minus expenses) generated by user fees or government payments or a combination of both to earn a return on equity and repay debt. The standard P3 models that are being used in surface transportation projects are:

- **Availability Payment P3**: Under this model, the private sector partner is responsible for the design, construction, financing, and maintenance of the infrastructure, in return for which it will receive performance based payments (commonly referred to as "availability payments") from the public sector entity after the completion of the design and construction of the infrastructure, and only to the extent the performance requirements are being met.
- **Revenue Based P3**: Under this model, the private sector party is responsible for the design, construction, financing, operation, and maintenance of the infrastructure, in return for which it will receive the right to collect revenues from users (and the private party bears the revenue risk).

In addition to these two models, hybrid P3 models are being used, for example when user revenues are not sufficient to recover the entire investment and the public sector will have to contribute. Public sector contributions may be through a milestone payment at completion of construction, or a performance based payment during operations; alternatively, when the revenue risk is too great, the public sector entity may provide a revenue guarantee or participate in some other revenue risk sharing mechanism.

Figure 1 below depicts a typical contractual structure for a transportation project where the public entity enters into a P3 agreement. This figure can apply to both an availability payment P3 and a revenue risk P3 with revenue risk transferred partially or fully to the private sector, along with milestone payments during construction. The project's design, construction and other upfront costs are paid primarily using private financing (e.g., equity and debt from one or more lenders). Public funds such as subsidies and milestone payments could cover a portion of upfront costs as well. In this example, the project sponsor will receive user fees as well as ongoing

government payments, such as availability payments, during operations to cover operating expenses and to be compensated for costs and risks associated with its investment.[4]



Notes: SPV – Special Purpose Vehicle; DB – Design-Build; Interface Agreement – Ensures that identified risks are appropriately allocated among contractors.

Figure 1: Typical Availability Payment P3 Structure

For the most current information, primers, and other educational material from USDOT regarding P3s, please see the FHWA's Center for Innovative Finance Support website at: https://www.fhwa.dot.gov/ipd/p3/.

2.2 P3 and performance-based contracts for EVCI

Before discussing P3 and performance based contracting solutions, it is important to define the objective of deploying such solutions and to consider how to achieve those objectives when compared to the "default option". In other infrastructure sectors where P3s have been historically deployed, the conventional "default option" is typically a more traditional contracting option such as Design-Bid-Build (or Design-Build). The objective of a P3 in these sectors is to deliver better value for money than the conventional option through efficient risk transfer and commercial incentives. However, the conventional "default option" for EVCI projects under NEVI is typically a public (competitively awarded) grant to a fully private business for

[4] Availability payments are generally sized to compensate the private sector for investment costs and risks (e.g., return on equity, debt service payments) and ongoing and future operating and maintenance expenses.

implementation on private land. The table below discusses the expected implications of the EVCI market characteristics with respect to a P3 and performance-based contract.

Market characteristic	Structuring implications
Public Sector Role	An arrangement that shifts ownership and operations responsibilities to a private partner would address public agency concerns.
Technological Change	The public sector will want the private sector to take on these risks and continue to improve performance and technology. Concerns about obsolescence may lead to relatively shorter contract periods.
Uncertain Revenue Generation	Some level of sharing of revenue risk may be considered.
Relatively Low Capital Costs	The higher P3 transaction costs may be justified for projects with a significant scale, warranting consideration of bundling of projects into a single procurement.
Risk Allocation	There may be exceptional circumstances in which the private party may be granted relief through clauses relating to "supervening events" in the P3 agreement.
Land Ownership	Where publicly owned land is leased and the EV charging infrastructure is expected to generate positive cash flows, lease terms may include either revenue sharing or ongoing lease payments by the private partner to the public entity in exchange for the future stream of user fee revenues from the EV charging infrastructure project.
Third-party involvement	Utilities are likely to constitute an important element in the overall success of the project. Third-party risks should be addressed within the P3 contract and possibly through separate agreements.

Appendix B provides more details on EVCI P3 financing and the procurement and implementation process for an EVCI P3. An FHWA paper currently in the process of publication "Structuring Options for Performance-Based Contracts under the NEVI Program: A Discussion Paper" discusses these key structuring parameters in greater detail. The ideal P3 or performance based contracting solutions for DCFC stations under the NEVI program should be developed and tailored to the needs of each state, but may include the following features:

- A single private entity (Project Company) is responsible for the design, construction, financing, operation, and maintenance of EVCI stations
- The Project Company will collect revenues directly from users
- The public agency will provide financial support using NEVI funds through:
    a) a direct subsidy, most likely performance-based and therefore in the nature of an availability payment;
    b) a de-risking mechanism, most likely structured as a minimum revenue guarantee or a revenue sharing mechanism;
    c) a combination of a direct subsidy and de-risking mechanism.

- The Project Company will retain most of the risks and will only under exceptional circumstances be granted relief under the arrangement
- The term of the arrangement will be 5 years (and often even longer for contracts with local governments)
- There may be a handback provision to allow the public agency to competitively reprocure the site after expiration of the arrangement

Some of the resulting performance based contracting arrangements may or may not qualify as P3s. States and local governments are encouraged to perform legal due diligence to determine whether proposed partnership arrangements qualify as P3s, in which case P3 enabling legislation may be necessary. (See Appendix C for an overview of state P3 enabling legislation). Regardless of how these partnership structures and procurement processes are labeled, the resulting arrangement can be optimized through the inclusion of risk allocation and performance incentives that stimulate meaningful competitive pressure, which will allow states and local governments to minimize public expense and get the most value for each public dollar while leaving most commercial and performance risks with the private sector.

2.3 P3 and performance-based contracts for local EVCI projects

Many local government agencies are involved, or looking to get involved, in the deployment of EVCI within their communities and on key corridors. For local government sponsors of EVCI projects, the same expected market characteristics and structuring implications discussed above generally also apply. Local government sponsors may wish to consider a P3 and performance-based contracting structure similar to the one described above if the project size, in terms of capital expenditure reaches sufficient scale. This likely entails the bundling of multiple EVCI sites. Local government agencies are also encouraged to perform due diligence to ensure compliance with local contracting and procurement law for contracting structures resembling a P3.

Where local governments have been involved in EVCI projects, these have typically been for the deployment of Level 2 EVCI on publicly owned land such as schools, libraries, park-and-ride facilities, and municipal buildings. Some local governments are also considering funding DCFC stations to meet the same use case that NEVI is primarily targeting, which is fast and reliable EV charging service coverage to meet future demand. Given the significantly lower capital cost for Level 2 EVCI, the number of charging ports needed would be much higher than for a DCFC project in order to reach the scale at which the P3/performance based contract approach described above is likely to make financial sense. However, even without including all of the structuring elements discussed in the previous section, some risk allocation mechanisms, such as the concept of "supervening events" may still be transferrable to a smaller project, in which local governments will still be looking to hold EVCI developers accountable for continued adherence to performance requirements.

Unlike state EVCI projects, a local government EVCI project is more likely to be developed on publicly owned land. The project may use a lease of public property or the monetization of an existing property to support an EVCI project. A public lease or asset monetization entails a public entity selling or leasing a property (often underutilized and/or non-revenue generating) to a private entity, which agrees to develop, operate, and/or maintain the asset (the EVCI) according to agreed standards and terms. If a positive cash flow is anticipated from the EVCI, lease terms may include either an upfront payment or ongoing payments by the concessionaire or lessee to the public sector in exchange for the future stream of pledged revenues, i.e., user fees from the EVCI project.

Local governments are eligible applicants for the Charging and Fueling Infrastructure discretionary grant program, which has two tracks: Corridor Charging (deploying EVCI on AFCs) and Community Charging (deploying EVCI on public roads, schools, parks, and other publicly accessible parking facilities). Local governments awarded funds under this grant program must comply with a similar set of Federal requirements as the NEVI program in their contracting and procurement process[5].

There are a wide range of local EVCI use cases that local governments have pursued in the past, and which they may pursue under the Charging and Fueling Infrastructure program. Cincinnati, Ohio, initiated this trend by issuing a Request for Information in March 2022, seeking innovative ideas for EVCI that could also include P3 opportunities, aiming for cost-neutral or revenue-generating solutions. Following suit, Moreno Valley, California, engaged ICF Consulting in March 2023 to create an EV Charging Station Master Plan, which planned to assess a mix of ownership structures, including P3 models. The Los Angeles County Metropolitan Transportation Agency (LA Metro) explored whether to adopt a P3 or traditional procurement method for its EVCI at various facilities, with findings expected by Spring 2024. Additionally, the Mid-America Regional Council (MARC) in the Kansas City region, issued a Request for Proposals in September for consultancy on the Kansas City Electric Vehicle Readiness Plan, specifically to identify potential P3 opportunities. These diverse initiatives underscore a growing inclination among local governments towards P3 models, recognizing their potential for financial efficiency and risk-sharing. The varied approaches, from initial studies in Cincinnati and LA Metro to more advanced planning in Moreno Valley and MARC, reflect a dynamic landscape where different cities are at different stages of exploring P3 integration in public infrastructure projects. These efforts not only highlight the practical aspects of implementing P3 in EVCI but also serve as potential blueprints for other municipalities exploring similar endeavors in sustainable and economically viable infrastructure development.

[5] Charging and Fueling Infrastructure Grant Program. https://www.transportation.gov/rural/grant-toolkit/charging-and-fueling-infrastructure-grant-program

Chapter 3: Synthesis of Case Studies

3.1 Introduction of P3 Case Studies

All 50 States, as well as the District of Columbia and Puerto Rico, have submitted their respective NEVI plans in FY22 and they were updated in FY23. Based on these plans, some States as well as local governments have started to consider developing and delivering initiatives through a P3. Georgia, Ohio, and Oregon are executing EVCI projects with distinct structuring elements in their P3 initiatives. This section provides an overview of the three initiatives, and the following section compares the three approaches. More details on each initiative are presented in Appendix D.

Georgia EVCI P3 Initiative

The Georgia Department of Transportation (GDOT) was allotted $135 million from the NEVI Plan to develop its portion of the national network. The initial procurement covers five sites, selected based on needs analysis and market outreach. GDOT issued an RFP in September 2023, seeking proposals for design, construction, financing, operation, and maintenance (DBFOM) through a P3 agreement with a services commencement payment and availability payments. Best Value proposers will be chosen for individual corridors based on the lowest payment cap. Stakeholder involvement in site selection and procurement strategy includes collaboration with state agencies, regulators, utilities, and the private sector including OEMs. Phased procurement aligns with the statewide NEVI Plan. RFP requirements, released in July 2023, encompass NEVI criteria, payment security, 97% uptime, and demonstration of site owner interest and utility connections. GDOT reimburses up to 80% of eligible costs, allowing bidders to lease or purchase EVSE equipment. Payment and performance security, reducing over time, mitigates risks for subcontractors and the state. Property interest is confirmed through a Host Site Owner Letter of Intent. Availability payments reimburse developers for operation and maintenance (O&M) costs, subject to payment mechanisms that include potential deductions in the agreement. Developers must secure funding and, after five years, decide whether to continue operating, sell or transfer ownership, or decommission the site. GDOT provides no details on alternative handback options.

Ohio EVCI P3 Initiative

The Ohio Department of Transportation (ODOT) has received a $140 million allocation for its NEVI plan, focusing on EVCI. The state's Ohio Electric Vehicle Infrastructure Deployment Plan outlines P3 opportunities, allowing private contributions under specific statutes. ODOT's procurement strategy aims to be "first to market," minimizing supply chain disruptions for EVSE equipment and leveraging private funding. In 2022, Ohio pioneered stakeholder engagement, seeking feedback from potential developers through an RFI and hosting meetings with over 30 parties. The subsequent RFP, closed in January 2023, garnered 300 proposals from diverse entities, including EVSE vendors, fueling stations, general contractors, and hotel developers.

ODOT allocated over $18 million in July 2023 for 27 rapid charging stations across seven interstate routes. Additional plans include a call for proposals to establish 16 charging points along key U.S. highways and state routes. Proposers can select sites within 1 mile of any interchange, with contract terms matching the five-year NEVI funding period. The selection process considers technical and pricing criteria, including program understanding, team

qualifications, safety, infrastructure plans, and pricing proposals. The draft P3 agreement includes compensation schedules, liquidated damages for downtime, and reimbursement of eligible costs using NEVI funds. Construction is set to begin in late 2023, with completion in 2024. Ohio anticipates developer ownership of equipment.

Oregon EVCI P3 Initiative

Oregon, which has been allocated $52 million in NEVI funding, employs a P3 model through the Oregon Innovative Partnerships Program to establish its EVCI network under the West Coast Electric Highway initiative. Having concluded a call for statements of qualifications and 24 responses, Oregon plans to release RFPs at the end of 2023 or early 2024. P3 RFPs will mandate five-year operations and maintenance agreements, potentially integrating performance-based elements to ensure reliability.

Federal funding is capped at 80%, with the remaining 20% expected to be sourced from non-Federal avenues, primarily private-sector partners engaged through P3. Contractual details, including a proposed 10% fee holdback released based on uptime parameters, are being finalized. The "Oregoin' Electric" initiative, arising from the P3-based EV Collaborative, enhances information dissemination through a dedicated website. With three separate corridors, Oregon is developing contracting terms for construction, operations, and maintenance (O&M), clawback provisions, and bonding specifications, with agreements spanning five years, aligned with NEVI funding availability, and mandating indefinite asset ownership by the developer.

3.2 Analysis of P3 Case Studies

While there are commonalities in the overall approaches, the states have nuanced differences in the specifics of their contract terms, payment mechanisms, project size/scopes, and performance requirements and incentives. These differences, discussed below, often reflect the unique considerations and priorities of each state in implementing their EVCI projects.

Key structuring parameter	Similarities and differences
Project size and scope	All three states are executing their EVCI projects in phases or corridors. Georgia has a phased approach, starting with five sites, Ohio is implementing its project in phases with 27 rapid charging stations initially, and Oregon's NEVI plan includes three separate corridors.
Contract Term	All three states have chosen a five-year contract term for their EVCI projects. This duration aligns with the availability of NEVI funds. While all three states have a five-year contract term, Georgia specifies that developers will decide whether to continue operating the EVCI near the conclusion of the five-year term, sell or transfer ownership, or decommission if they choose to abandon the site. This aspect is not explicitly mentioned in Ohio and Oregon.
Payment Mechanism	Availability payments are a common payment mechanism across the three states. Georgia and Ohio both utilize availability payments as part of their payment-performance mechanism, while Oregon emphasizes payment mechanisms considering a 10% fee holdback, released based on uptime parameters. Georgia focuses on the "Best Value Proposer" and uses the lowest payment cap based on services commencement and availability payments for capital and operating expenses. Ohio incorporates a compensation schedule with liquidated damages for downtime events and reimbursable costs up to 80%.
Performance Requirements and Incentives	Performance requirements are a key aspect in all three states. They include uptime criteria, operational commitments, and potential liquidated damages for downtime events. Incentives are present in the form of a Best Value Proposer in Georgia, a pass/fail and scored evaluation system with points based on pricing in Ohio, and a fee holdback tied to uptime parameters in Oregon. Georgia places emphasis on stakeholder involvement and a sustainable business plan. Oregon mandates five-year operations and maintenance agreements considering performance-based elements, and a seamless handover.

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Appendices

Appendix A: General EVCI Market Overview

This appendix provides an overview of the EVCI market and the opportunities for utilizing P3. There are five broad categories of locations where EVCI can be implemented: corridors (such as highways and freeways), fleets, workplaces (either publicly and privately owned and operated), general public/retail spaces, and homes/multifamily buildings. Not all of these categories can be developed as a P3. Figure 2 depicts each of these categories and further discussion follows. State efforts to expand EVCI along corridors and at key sites are being informed by the broader EVCI market trends. The general market's progression provides valuable insights into user behavior and charging patterns, which are crucial for effective infrastructure development. The evolving EVCI market, therefore, serves as a barometer for states and local governments, helping them to strategically position their EVCI sites to complement existing and potential supply, while also enabling them to adapt to technological advances and consumer preferences.

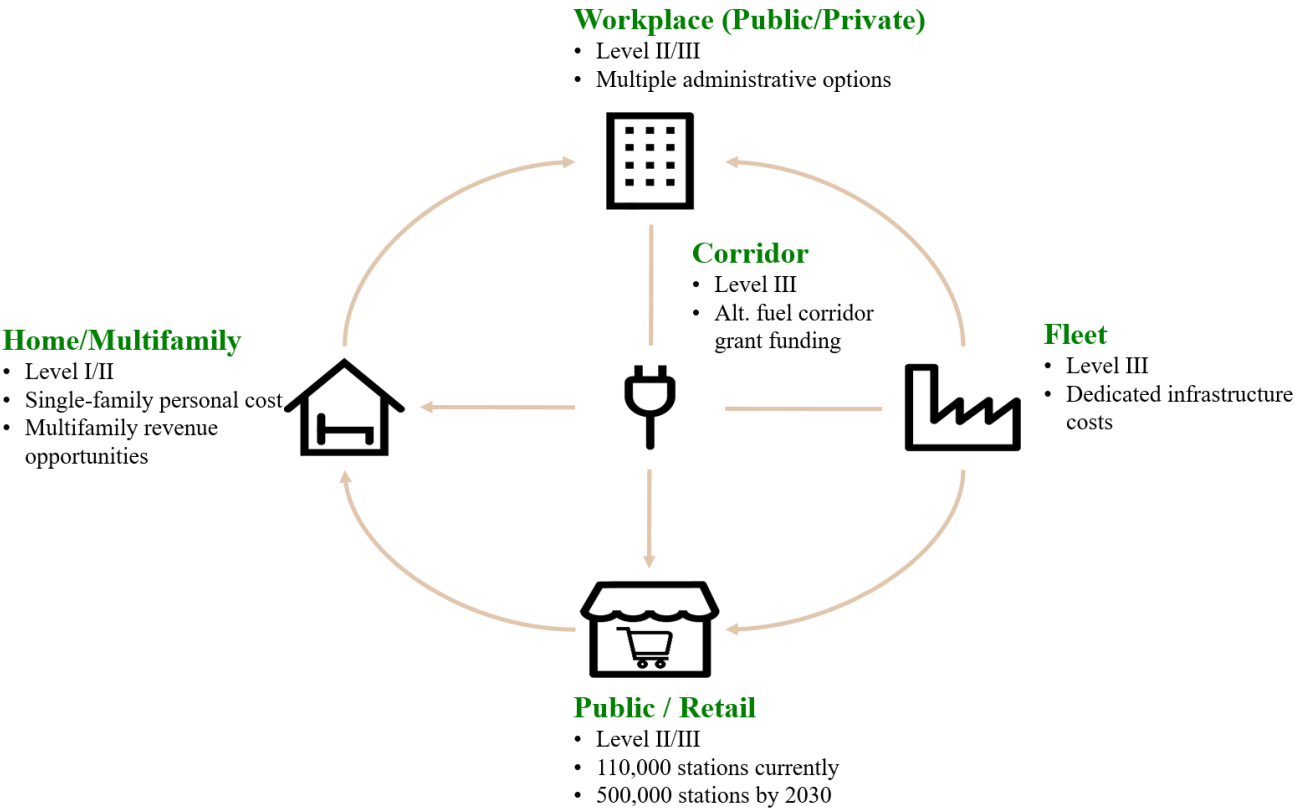

Figure 2: Categories of Locations for EVCI

Corridors

In accordance with 23 U.S.C. 151, FHWA has designated alternative fuel corridors to support installation of EV charging, hydrogen, propane, and natural gas fueling infrastructure at strategic locations along major national highways. The designated EV corridors make up part of the EVCI market in the U.S. The designation of AFCs has grown in importance because it is now

tied to funding provisions under the Bipartisan Infrastructure Law (BIL), which has a goal of supporting the creation of a nationwide network of 500,000 EV chargers by 2030.

In most cases, through their DOTs, states use NEVI funds to aid in the development and implementation of EVCI along these corridors. These corridors are where the P3 model is most commonly used for the procurement and implementation of EVCI. The funds from the NEVI formula program must be utilized first to fully build out these corridors.[6] P3 models enable the private sector to play a vital role in all aspects of EVCI development within designated corridors. This includes procuring, designing, building, operating, and maintaining charging stations equipped with smart charging technologies, payment systems, and support services. By partnering with the public sector, these projects can be tailored to meet the specific needs and goals of the states in expanding their charging infrastructure.

Fleets

Opportunities for publicly owned vehicles to electrify include public transit buses, light-duty fleets, and school buses. Publicly owned vehicle fleets do present an opportunity for utilizing a P3 as the project size encompassing multiple vehicles could warrant private sector interest. The public sector (i.e., city or regional transit authorities) can partner with private sector companies that specialize in the development, operation, and maintenance of EVCI. This collaboration could involve the private company financing, designing, building, and maintaining the charging stations while the public transit authority offers the land and ensures consistent usage of the stations. There are several ways to implement the P3 agreement. For example, a private sector company can finance the construction of EV infrastructure through finance and lease agreements, then lease it to the public authority, thereby limiting the public sector's initial financial risk. Private sector providers can also offer turnkey solutions to public transit authorities. These solutions bundle components, including vehicles, charging stations, energy infrastructure, maintenance, and fleet management. Additionally, multiple projects could be bundled together. By grouping the installation and maintenance of EV charging stations across various sites into a single project, transaction costs could be reduced.

Workplaces

As the market for EVs continues its rapid growth, demand for EV charging stations in workplaces (e.g., office buildings, commercial centers, medical facilities, industrial sites) is growing, too. More than 40 percent of companies in North America are seeking to include EV charging stations in future commercial building leases.[7] This would include new commercial buildings as well as additions to leases at brownfield properties. Incorporating terms related to charging stations in the lease agreements of workplaces can contribute to the environmental, social, and governance (ESG) goals of both landlords and tenants. Such provisions can also support the attainment of green building certifications. With so much demand expected for EV charging in leases, tenants and landlords will need to work together on carving out the details of how EVCI is implemented. As more tenants look to include EV charging in leases and meet ESG commitments through their real estate, green leasing can make a big difference. For EVs in

[6] Paragraph under the Highway Infrastructure Program heading in title VIII of division J of the Bipartisan Infrastructure Law (enacted as the Infrastructure Investment and Jobs Act) (Pub. L. No. 117–58) (Nov. 15, 2021)
[7] https://www.propmodo.com/ev-charging-poised-to-become-a-fixture-of-future-office-leases/

particular, language may be included that details what percentage of parking space should be reserved for hybrids and EVs and how costs will be shared for the installation, maintenance, and upkeep of the chargers.

Putting more charging stations in commercial buildings has gained support over the last decade. In 2013, the Department of Energy (DOE) launched a program to encourage more employers to provide charging stations at workplaces. DOE partnered with hundreds of companies around the country over the course of four years, resulting in a host of best practices, templates, and tools that have been made available to anyone interested in workplace charging. Installing chargers in office buildings can also contribute to green building certification through a charging station credit. The programs that recognize this include LEED, ENERGY STAR, and Sustainability Tracking, Assessment & Rating Systems, or STARS. The Inflation Reduction Act (IRA) restored expired tax credits for installing EV chargers in homes and businesses. The credits can be used for up to 30 percent of the costs of EV charging equipment and installation. This type of government support has increased EVCI use in commercial office buildings.

General Public and Retail Locations

P3 models offer potential for the implementation of EVCI in both general public and retail locations, although challenges related to project size may arise. One promising opportunity for local governments is the utilization of publicly owned facilities such as parking lots, which can be found in various public buildings such as courthouses, recreational centers, and city halls. Moreover, public streets, ports, and airports can also serve as potential sites for EVCI deployment. However, the implementation of a P3 in these locations may encounter difficulties due to the limited scale of the projects involved. On the other hand, retailers have recognized the business potential of EVCI and have started incorporating it into their locations. Major retailers and gas station chains have already initiated their EVCI installations. These retailers aim to enhance the customer experience and attract EV owners to their stores. However, it should be noted that strictly retail focused EVCI installations would not typically fall under the scope of a P3 model, as they lack direct involvement from the public sector.

Homes and Multifamily Buildings

Studies reveal that an overwhelming 85 percent of EV charging occurs in residential settings. This substantial trend suggests that homes, whether they are single-family or multi-family dwellings, play a pivotal role in the network of EVCI. The inherent complexity of P3 projects, which involve a convergence of legal, financial, administrative, and regulatory procedures, often results in high transaction costs. These may not be economically viable for smaller-scale projects, making it difficult to attract the private sector participation necessary for a P3. Larger home and multifamily builders may think about partnering with EVCI equipment and technology providers to contract bulk installments at new build sites. P3s are not commonly employed for single or multifamily (condominiums and apartments) EVCI projects.

The use of P3s may evolve over time, with corresponding changes in government policies and project selection criteria. However, in the current context, the cost range of single or multifamily EVCI projects falls significantly below the cost threshold typically considered for project delivery through a P3. An individual EV fast charger costs between $5,000 to $8,000 and even at

multifamily properties where more chargers would be installed, the total capital cost of these chargers will still be well below the minimum threshold of about $10 million to justify using a P3. This underlines the limited application of P3s for this component of the EVCI sector.

Appendix B: EVCI P3 Financing, Procurement, and Implementation

Project finance is an approach used by public and private entities to finance infrastructure, including industrial, energy, transportation, and public service projects, using non-recourse or limited recourse[8] financing structures. For the transportation sector, the FHWA defines project finance as specially designed techniques and tools that supplement traditional financing methods, improving governments' ability to deliver transportation projects (including EVCI). [9]

Project financing is typically composed of the following features:

- Special Purpose Vehicle (SPV): Private sector project sponsors may establish an SPV (with its own legal status) to pool the project's assets and protect the sponsors' other assets from risks and potential failures presented by the new project.

- Financing: Both equity and debt contributions are used to cover development and construction costs. Borrowed funds in the form of bonds, loans, or other financing mechanisms are often necessary to accelerate the implementation of the infrastructure. Financing is repaid through user fees or payments from the public sector.

- Dedicated Cash Flow: Because the project is effectively a standalone company, the financing is off-balance sheet, and the cash flow is generated through user fees or payments from the public sector assigned through contractual arrangements. These dedicated cash flows are the primary financing repayment source and the key component of a commercially viable transaction.

- Risk Identification and Allocation: Identifying project risks is an essential element of a project finance transaction. Projects may be exposed to market, technical, financial, legal, political, economic, and environmental risks, among others. Project parties engage in a detailed due diligence and negotiation process to appropriately allocate and mitigate such risks.

- Contractual Framework: Commercial, legal, financial, security and other documentation are used to memorialize negotiated terms agreed among the project parties and to ensure risk allocation is appropriately managed within a clear framework.

Although the public entity will not issue debt in a P3 arrangement, it is important to understand the private financing process to be able to evaluate the strength and probability of success for an EVCI project or portfolio of projects. Typically, a financier will focus on the payment stream, expenses, and risk of non-payment as identified above. The financier will want to identify the risks and determine, based on the terms of the contractual arrangements with the public sector,

[8] Unlike recourse debt, where creditors have access to loan collateral and other borrower assets to recover defaulted loan balances, non-recourse and limited recourse debt limit a creditor's claims to the collateral specified in the financing agreement. Non-recourse and limited recourse financings are riskier for creditors because the value of the secured loan collateral could be lower than the loan balance.

[9] See *https://www.fhwa.dot.gov/ipd/finance/defined/* for more information.

whether it is willing to finance such a project, as each of the issues impact the private partner's ability to repay the investors and creditors.

For an EVCI project, the contractual arrangement between the public entity and private partner will define and address:

- the public sector payment (potentially in the form of an availability payment),
- the use of funds earned by concessions or from user fees, if any,
- any real estate interest issues,
- the construction and operation timelines,
- any equipment interoperability issues,
- the role of the public sector in any decision-making (for example, setting of user fees, operating hours, location of facilities, performance metrics, and other specific project issues),
- third party or intergovernmental agreements with utilities,
- the risk of damage or destruction of the facilities,
- the risk of termination of the agreement (for default, convenience, or other reasons),
- where all of the payments will be made by the parties, and
- other specific issues.

Each project will also be reviewed by the lenders to ensure that the public sector has the authority to make the payments it agreed to make in the project agreement. If the legal authority of the public sector is not clear or there is a risk of non-payment, the risk will be reflected in the underwriting, or the transaction will be deemed unfinanceable. Most financiers of P3 projects understand appropriation risk and will review the underlying credit rating of the governmental entity.[10] Further, the type of real estate interest will also be a consideration as the project needs clear authority to be constructed and operated on a specific parcel of property, and the users will need access to the property to use the EVCI. Real estate interest is the legal authority to use the land for a specified purpose. It also defines the period that the EVCI project can be operated on the land.

In addition to the contractual arrangement between the government and the private entity, the financiers will also review:

- real estate agreements,

[10] See chapter 4, https://www.fhwa.dot.gov/ipd/pdfs/p3/p3_primer_financial_assessment_1213.pdf

- the construction/installation contract, and
- the operating contract.

Further, the financier will want to verify:

- the experience and creditworthiness of the parties,
- any other agreements or arrangements between the parties,
- the proposed operation and reinvestment periods,
- the delivery date of the project (typically, government payments and concession payments are reliant upon projects being in operation),
- the size and scope of the project, and
- other key terms.

A P3 project typically lasts many years and the operating term and expenses that will be incurred over the period of operations are important considerations for a financier. Maintaining a facility over time presents significant costs, which will be incurred as part of the concession agreement. Reinvestment in the equipment is also important for operations, as the technology in the EVCI industry is continually evolving.

Finally, the financier will typically require the project company or private entity to pledge the rights of the project company or private entity, including rights in the equipment, real estate interest, payments, and others, to the financier. These rights permit the financier to enforce its rights to repayment if the project company is not able to make the payments. With these rights, the financier may also replace the project company's controlling entities if the project is not performing (subject to the project agreement rights).

For further information on financing a P3 project, see FHWA's *Public-Private Partnership Concessions for Highway Projects: A Primer*, available at: https://www.fhwa.dot.gov/ipd/p3/

EVCI P3 Procurement and Implementation

The table below outlines the different stages in an EVCI P3 procurement and implementation process. The table is adapted from FHWA's *Public-Private Partnership (P3) Procurement: A Guide For Public Owners* available at: https://www.fhwa.dot.gov/ipd/pdfs/p3/toolkit/p3_procurement_guide_0319.pdf

Stages of an EVCI P3 Procurement and Implementation Process

Stage	Explanation
Create the Project/Program and Develop the RFP	The RFP will identify the goal of the specific project, such as number of EV chargers, the location(s) of the EVCI, minimum requirements of the EVCI (uptime, etc.), legal authority, estimated project cost for installation, estimated subsidy amount, private sector investment requirements, and clarification of responsibilities of the parties including permitting, taxes, etc. Typically, the model contract for the P3 will also be included in the RFP.
Advertise the RFP	Most public sector parties have requirements to advertise on certain platforms. Many public sector entities advertise EVCI projects to industry organizations.
Bid Preparation	The bidders' responses to the RFP should include responses to all the items identified in the RFP.
Evaluate the Proposal	Each public entity will have specific requirements with regard to whether the selection of the bidder can be based on the best value, best price, and/or other potential standards.
Execute Contract(s)	The contract(s) will identify the specifics of the projects and the requirements of the parties including any public sector payments and the private sector financial contribution. Further, if any real estate interest is required, the real estate transaction (lease, easement, etc.) will be executed.
Install and Develop the EVCI	The private party will typically install and deploy the EVCI, and execute power agreements and other agreements.
Operate and Maintain EVCI	Once the project is installed and approved for operation, the private party will operate and maintain the EVCI (in the case of NEVI-funded projects for a 5-year term at a minimum). If the contract is longer than the useful life of the equipment, the contract will identify equipment replacement. The contract may also specify possible decommissioning requirements at the end of the contract term.

Appendix C: P3 Enabling Legislation in the United States

A public entity typically requires specific legal authority to implement a P3. In turn, this legal authority, or statute, will often place certain constraints on contracting thereby limiting the types of P3s that can be used by the state or local government or a specific public agency to enter into a long-term agreement with a private entity. In general, these statutes set forth the basic requirements for the P3 project. For example, the statute may define the term or length of the project agreement (for example up to 50 or 99 years), the types of projects the public sector is authorized to enter into (roads, schools, etc.), a process for identifying eligible projects, funding requirements, approval requirements (such as by the state legislature or governor), the procurement process (competitive or not), general contract terms, and other important issues[11].

Depending on the jurisdiction, the P3 law may also give a specific agency authority to develop its own criteria and define and implement the procurement process. The law also defines the type of delivery method allowed or required for the project – design-build (DB), operate-maintain (OM), DBOM, DBF, and DBFOM. The scope of the P3 enabling legislation varies greatly across the states, with some allowing "broad " and others only "limited" or project-specific authority. "Broad" authority indicates states that do not limit the use of P3 procurements to certain types of projects or agencies. States with "limited" authority restrict the use of P3s to specific projects (or types of projects) or projects sponsored by select agencies.

As of August 2023, 15 states, Puerto Rico, and the District of Columbia have broad enabling authority, 7 states have limited or project-specific authority, 18 states have transportation only authority, and 10 states have no P3 authority, as shown in the updated map below.[12] In some cases, as the interest in P3s as a contracting vehicle increases and the states' needs evolve, the legislation is amended to better address the needs and requirements of the state.

In addition to specific P3 laws, most states have additional legal authorities that permit a P3 to proceed. For example, most public authorities have leasing authority, which can permit the leasing of land or access in a building, and in some cases a concession agreement, for an EVCI P3 project despite not having specific P3 laws in the state. Each public authority should consider all P3 options available to develop the EVCI P3 project including legal authorities that may not be P3 specific, including leasing, government payments to support specific types of projects, and other similar laws that are state specific. Typically, there are also restrictions on the use of the legal authorities.

Figure 3 shows the current status of P3 enabling legislation in the U.S.

[11] See Chapter 2, Successful Practices for P3s, at: https://www.transportation.gov/sites/dot.gov/files/docs/P3_Successful_Practices_Final_BAH.PDF
[12] Updated from State P3 Legislation, 2018: https://www.fhwa.dot.gov/ipd/p3/legislation/

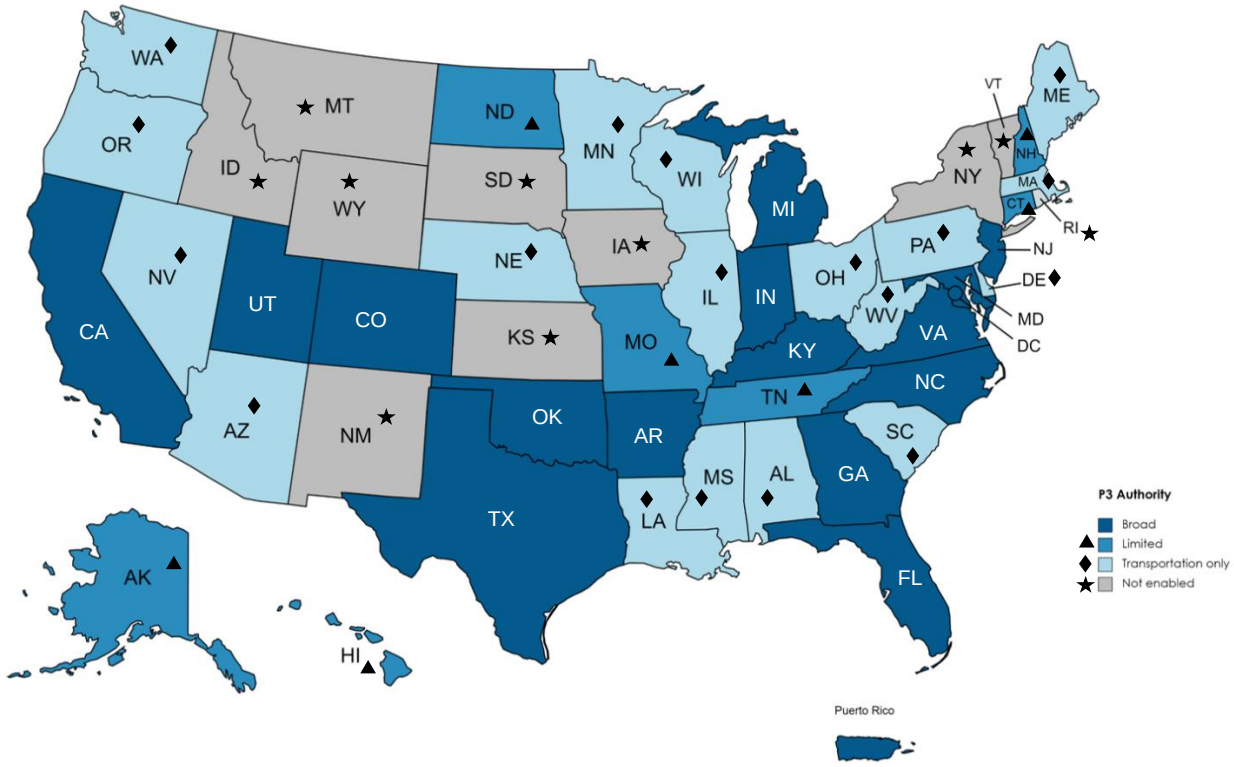

Figure 3: Status of P3 Enabling Legislation in the U.S. as of August 2023

The table below presents a selected list of states that have some form of broad enabling P3 legislation.

Examples of State P3 Authorities as of August 2023

Arizona	Broad authority	Ariz. Rev. Stat. §§ 28-7701 to 7711	A comprehensive statute that authorizes P3s for transportation projects. Legislation enacted in 2009 (Senate Bill 2396; 2009 Ariz. Sess. Laws, Chap. 141), authorizes the state DOT to enter into agreements with private entities to design, build, finance, maintain, operate, manage and/or lease transportation facilities, or for any other project delivery method that the DOT determines will serve the public interest. Allows for availability payments and revenue sharing. Limits agreements to no more than 50 years, which may be extended by the DOT. Requires any foreign entity that proposes to enter into a concession agreement to provide satisfactory evidence of compliance with certain requirements. Prohibits noncompete clauses, in that a P3 agreement must include a provision that bars a private partner from seeking relief to hinder the DOT from developing or constructing any facility that was planned

			at the time the agreement was executed. However, an agreement may provide for reasonable compensation to the private partner for adverse effects on revenues resulting from the development and construction of a then-unplanned facility. Allows for solicited and unsolicited proposals.
Florida	Broad authority	Fla. Stat. Ann. § 337.251	Authorizes the state DOT to lease to public or private entities, for a term not to exceed 99 years, the use of DOT property, including rights-of-way. Also authorizes the DOT to lease the use of areas above or below state highways or other transportation facilities for commercial purposes. Leases under this section may not interfere with the primary state transportation needs nor be contrary to the best interests of the public. Allows for solicited and unsolicited proposals.
Georgia	Broad authority	Ga. Code Ann. §§ 32-2-78 to 80	Authorizes the Georgia DOT to solicit and accept proposals for projects that are funded or financed in part or in whole by private sources. Requires all future P3 projects to be solicited by the DOT. Includes public comment requirements and criteria for the DOT to use in awarding contracts. Authorizes contracts to include tolls, fares, or other user fees and tax increments for use of the project. Final approval of P3 contracts shall be by action of the State Transportation Board.
Massachusetts	Broad authority	Mass. Gen. Laws Ann. Ch. 6C, §§1 to 74	MassDOT may solicit proposals and enter into contracts for design-build-finance-operate-maintain or design-build-operate-maintain services with the responsible and responsive offeror submitting the proposal that is most advantageous to the department through the sale, lease, operation, and maintenance of a transportation facility within the commonwealth. A Special Public-Private Partnership Infrastructure Oversight Commission is established, which must comment on and approve all requests for proposals.
Oregon	Broad authority	Or. Rev. Stat. §§ 367.800 to 826	Establishes the Oregon Innovative Partnerships Program within the state DOT, which is authorized to enter into agreements with private entities to plan, acquire, finance, develop, design, construct, reconstruct, replace, improve, maintain, manage, repair, lease, and/or operate transportation projects. Lists specific goals for the program, including to speed project delivery, maximize innovation and develop partnerships with private entities. Lists specific requirements for P3 agreements, including financing, risk management, penalties for nonperformance and incentives for performance. Allows for solicited and unsolicited proposals.

The following list contains a summary of areas which have enacted P3 enabling legislation as of August 2023. Areas with “Broad” authority do not limit the use of P3 procurements to certain types of projects or agencies. Areas with "Limited” authority restrict the use of P3s to specific projects or projects sponsored by select agencies. Areas with “Transportation Only” authority restrict the use of P3s to transportation projects. Some areas do not have P3 enabling legislation.

STATE	P3 STATUS
Alabama	Transportation Only
Alaska	Limited/Project-Specific
Arizona	Transportation Only
Arkansas	Broad
California	Broad
Colorado	Broad
Connecticut	Limited
Delaware	Transportation Only
District of Columbia	Broad
Florida	Broad
Georgia	Broad
Hawaii	Limited (Pilot Program)
Idaho	Not Enabled
Illinois	Transportation Only
Indiana	Broad
Iowa	Not Enabled
Kansas	Not Enabled
Kentucky	Broad
Louisiana	Transportation Only
Maine	Transportation Only
Maryland	Broad
Massachusetts	Transportation Only
Michigan	Broad
Minnesota	Transportation Only
Mississippi	Transportation Only
Missouri	Limited/Project-Specific
Montana	Not Enabled
Nebraska	Transportation Only
Nevada	Transportation Only
New Hampshire	Limited
New Jersey	Broad
New Mexico	Not Enabled
New York	Not Enabled
North Carolina	Broad
North Dakota	Limited
Ohio	Transportation Only
Oklahoma	Broad

STATE	P3 STATUS
Oregon	Transportation Only
Pennsylvania	Transportation Only
Puerto Rico	Broad
Rhode Island	Not Enabled
South Carolina	Transportation Only
South Dakota	Not Enabled
Tennessee	Limited
Texas	Broad
Utah	Broad
Vermont	Not Enabled (Pilot Program expired in July 2023)
Virginia	Broad
Washington	Transportation Only
West Virginia	Transportation Only
Wisconsin	Transportation Only
Wyoming	Not Enabled

Appendix D: Overview of Case Studies

Georgia

The Georgia Department of Transportation (GDOT) was allocated $135 million over five years for its NEVI Plan implementation. The state decided to use its P3 authority to procure and deliver the EVCI. The first procurement is for five sites (Tifton, Fort Valley, Dublin, Metter, and Brunswick), which were selected based on an internal analysis of need. GDOT added the NEVI program to its list of approved P3 projects in April 2023. GDOT issued a request for proposals (RFP) to design, construct, finance, operate, and maintain these sites through a DBFOM agreement with a services commencement payment and availability payments. Interested proposers may submit a proposal on any or all of the sites. GDOT anticipates awarding each site on an individual basis to the "Best Value Proposer" and there will be a separate project agreement negotiated and executed for each site. Best value is based on the lowest payment cap, which is the sum a services commencement payment and availability payments for each project site.

Recognizing the critical role stakeholders play in successfully implementing the statewide NEVI Plan, the sites and the procurement method were developed with substantial involvement from GDOT, regulators, utilities, the private sector, original equipment manufacturers (OEMs), and other state agencies to help determine a common framework for the NEVI Plan. A phased approach is being used for procurement and implementation of EVCI at the sites statewide.

The RFP was released on July 25, 2023, with bids due November 17, 2023. The requirements in the RFP include all of the NEVI requirements as well as a payment and performance security, operational performance requirements, including an annual average of 97 percent uptime, demonstration of property interest for proposed sites (a "Host Site Owner Letter of Intent"), and all power, data communication and utility connections. GDOT will make payments to reimburse a maximum of 80 percent of all eligible capital, operating, and maintenance costs for each site from the NEVI Formula Program subject to cost eligibility, and the timing and availability of public funds. Bidders have the option to lease or purchase the EVSE equipment for each project site. Specifically, the payment and performance security in the form of a bond or letter of credit, is a state procurement requirement put in place to protect subcontractors from payment risk and the state from performance risk. The amount will decrease over time commensurate with the time remaining in the contract between GDOT and the developer.

It is anticipated that GDOT will make reimbursement payments (services commencement and availability payments) to the developer at completion of construction and over the five-year operating period. The selected developer(s) also must demonstrate the ability to fund or finance all capital, operating, and maintenance costs for each site, subject to the payment mechanisms and potential deductions in the agreement. Near the conclusion of the five-year term, each selected developer will let GDOT know if they are going to continue operating the EVCI or sell or transfer ownership to a replacement developer. If the developer chooses to abandon the site,

the developer is responsible for decommissioning the equipment. GDOT remains silent on other hand back options.

Ohio

The Ohio Department of Transportation (ODOT) was allocated $140 million in NEVI funds over five years. The State of Ohio has released its Ohio Electric Vehicle Infrastructure Deployment Plan dated August 2023 (Ohio Plan).[13] The Ohio Plan identifies key state laws that can support P3 in NEVI contracting. Specifically, it states that for projects using a "P3 scenario that will have a private company contribute dollars or land to install, operate and maintain a NEVI system, ODOT could use its authority under R.C. §§ 5501.311 and .312 (leasing) or 5501.70 et seq. (P3). ODOT can accept (under R.C. 5501.31 and 5501.70) private contributions to a portion of the cost of a facility as well as land or other personal property (R.C. 5501.77 and R.C. 5501.33)." The Ohio Plan guidance identifies a traditional P3 where there is a payment and potential land contribution from the public sector entity, alongside private investment. The Plan also permits an asset-based leasing scenario. ODOT's procurement approach is driven by the goal of being "first to market" to minimize potential supply chain disruptions for EVSE equipment; and allowing the market to determine the corridors and sites which might be most appropriate for privately funded EVCI infrastructure.

In September 2022, Ohio was the first state to issue an RFI to seek feedback from EVSE vendors on its proposed plans for EVCI construction. As part of the RFI, ODOT held a series of meetings with over 30 interested parties. Through the meetings, ODOT gained valuable feedback on the proposed procurement process and identified key challenges the EVSE vendors are facing. This feedback ultimately informed Ohio's RFP that was released October 31, 2022. The RFP closed January 18, 2023, and garnered 300 proposals from 30 teams. Proposers were primarily EVSE vendors and fueling stations. Bids were also received from a general contractor and a hotel developer. The RFP solicited turnkey services for EVSE at selected sites for each corridor group including site acquisition, design, purchase, construction, installation of hardware (and accompanying EVSE management software), operations, maintenance, and reporting. On the 13th of July, 2023, ODOT allocated in excess of $18 million from the NEVI program on a conditional basis to establish 27 rapid charging stations for electric vehicles. These stations are to be distributed across seven interstate routes within Ohio, namely I-70, I-71, I-74, I-75, I-76, I-77, and I-90. Furthermore, ODOT has indicated plans to release a subsequent call for proposals aimed at setting up 16 additional charging points along key U.S. highways and state routes throughout Ohio.

ODOT allowed proposers to select sites within 1 mile of any interchange. ODOT also originally developed a list of 30 proposed sites and of the proposals received, 27 sites received responsive bids. The contract terms are for five years, matching the timing of the NEVI funding. Prior to execution of an agreement for a site, the selected developer will have to obtain payment and performance bonds for each site. The amount of the payment and performance bonds is anticipated to be 100 percent of the construction cost of that site.

[13] See, https://drive.ohio.gov/wps/wcm/connect/gov/36995384-a904-49a9-a8bc-66dab2e0b7f7/DriveOhio_NEVI_Plan_2023-07_28_Round7_removed.pdf?MOD=AJPERES

Award will be made based on pass/fail determination and/or a scored evaluation of administrative, technical, and pricing. Technical criteria include program understanding, team qualifications, proposed data interface plan, site safety, proposed infrastructure needs assessment and plan, enhancements exceeding minimums for equity and DBE, and amenities. The pricing proposal is allocated a score calculated based on the required subsidy relative to the proposal requiring the lowest fixed subsidy, with the proposal with the lowest required subsidy assigned the maximum score; separately, points are assigned based on the pricing narrative.

The draft P3 agreement outlines a compensation schedule that includes liquidated damages for "downtime" events that result in an average uptime of less than 97 percent. The liquidated damages are an assessment against any reimbursement due to the developer. Additionally, all eligible costs to procure the EVCI, construct the facility, provide initial utility connectivity, product warranties, etc. are reimbursable using the NEVI fund for up to 80 percent of the eligible costs. ODOT will then pay the developer equal monthly increments for the annual costs as described in the pricing proposal and negotiated in the agreement, covering the actual O&M eligible costs for the five-year period. Non-eligible costs include utility electrical service and purchase, rent, or leasing of property.

Construction for this round of funding is anticipated to begin at the end of 2023, with completion reached in 2024. Ohio expects the developer to maintain ownership of the equipment. Once charging stations on federally required corridors are complete, the remaining NEVI funds will be used for charging along additional corridors, at state tourist attractions, and freight corridors.[14]

Oregon

Oregon, which was allocated $52 million in NEVI funding, is using a P3 procurement through the Oregon Innovative Partnerships Program. Oregon will contract with various EVCI providers for their Alternative Fuel Corridors (AFCs) using NEVI funding. The state is building its EVCI network under the West Coast Electric Highway initiative. The state issued a call for statements of qualifications (RFQ) in June 2023 and received 24 responses. In October 2023, Oregon concluded Step 1 of the NEVI work solicitation process, which involved the RFQ. RFPs are expected to be released at the end of 2023 or at the beginning of 2024.

Within its P3 RFPs, Oregon DOT will mandate that chosen providers enter into operations and maintenance agreements spanning five years, which will include defined service level commitments. Oregon DOT is in the process of considering the integration of performance-based elements within these contracts, potentially reserving a fraction of payments until the vendors consistently meet defined reliability criteria. It is expected that the NEVI-funded charging stations will be operational for a minimum of 10 years, possibly longer. To this end, contracts are being structured to facilitate sustained operations and ensure a seamless handover should there be a future change in ownership or management entities.

According to NEVI guidelines, the Federal contribution to the total cost is capped at 80 percent. Oregon DOT anticipates that the remaining 20 percent will be financed through various non-

[14] https://drive.ohio.gov/programs/electric/infrastructure/nevi/nevi

Federal avenues, mainly sourced from the private-sector partners that Oregon DOT plans to engage via a P3. The state is finalizing the contractual structure and is considering a 10 percent fee holdback, releasing two percent per year as long as certain uptime parameters are met. A coalition of state agencies, along with various public and private stakeholders, have pooled their resources and information to enhance and promote essential details about electric vehicles and charging facilities across the state via the newly created "Oregoin' Electric" website. This initiative originated from a P3 known as the EV Collaborative, which revamped a website initially created by investor-owned electric utilities funded by the Clean Fuels Program.

Oregon's NEVI plan has three corridors, and each corridor has been tendered separately. The state is currently working through the contracting terms for the construction, O&M, claw back provisions, and bonding specifications. The agreements will be for five years, coterminous with the availability of NEVI funds. Oregon will also require that the developer indefinitely own the assets.

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