**Written Testimony of Jonathan Levy**

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**"Putting the Bipartisan Infrastructure Law to Work: The Private Sector Perspective"**

**Senate Committee on Environment and Public Works**

**United States Senate**

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## Introduction

Chairman Carper, Ranking Member Capito, Members of the Committee, thank you for the opportunity to appear today to share a private sector perspective on the impact of the Bipartisan Infrastructure Law (BIL) for the electric vehicle sector.

My name is Jonathan Levy, and I currently serve as EVgo's Chief Commercial Officer. EVgo is one of the nation's largest public fast charging networks for electric vehicles (EVs). We currently own and operate more than 850 fast charging locations across more than 60 metropolitan areas and 30 states, with more than 500,000 customer accounts. We are aggressively expanding our public fast charging network as we speak, with approximately 4,500 stalls currently in our active engineering and construction pipeline. Additionally, EVgo offers a variety of charging solutions to other partners, from behind the fence fleet solutions leveraging EVgo Optima to white label projects through our EVgo eXtend offering. Since 2010 EVgo has led the way to a cleaner transportation future, and our charging network has been powered by 100% renewable energy since 2019.

First, I would like to applaud this committee for its leadership in supporting the electrification of the transportation sector. Transportation electrification will reduce greenhouse gas emissions, create good paying jobs across the country, and provide cleaner air for all Americans. This committee's work, including its first-ever transportation reauthorization climate title, will help accelerate the buildout of

the electric vehicle charging infrastructure needed to enable this transition. The $5 billion National Electric Vehicle Infrastructure program, and accompanying $2.5 billion Charging and Fueling Infrastructure program, are keys to enabling the installation of additional charging stations across the nation. EVgo strongly supported passage of the BIL as well as consumer vehicle incentives that were included in the Inflation Reduction Act (IRA).

Secondly, I would note that the investments spurred through BIL and IRA are not starting from scratch; they are building upon a base of installed infrastructure and deployed vehicles in operation (VIO) that need to continue to grow in a complementary fashion. In addition to the more than 2,000 fast chargers at EVgo's 850+ locations, there are thousands more fast chargers around the country offered by our competitors, and full battery electric vehicles (BEVs) cleared 6%[1] of U.S. vehicle sales in the third quarter of 2022, up from less than 2% in 2020[2]. That being said, it is still early days for this industry, and public policy is critical to enabling the market to develop more rapidly.

The funding programs in BIL will induce a quicker buildout of EV infrastructure, but they alone cannot meet the Administration's goal of building 500,000 chargers by 2030[3] and the broader aspiration of an all-electric future. The private sector must also come to the table with real commitments and real expertise to amplify federal dollars and ensure a nationwide charging network is operated and maintained to deliver for drivers over the long term. I'm pleased to report we are doing just that. EVgo announced a partnership this year with Pilot Company and General Motors to install 2,000 high-powered chargers at up to 500 Pilot and Flying J locations in more than 40 states[4]. As noted at the time of announcement, that collaboration was designed "to combine private investments alongside intended government grant and utility programs to help reduce range anxiety and significantly close the gap in long-distance EV charger demand." EVgo is also well underway on a separate partnership with General Motors to install an additional 3,250 fast charging stalls and continues to work with Nissan and other partners to support expanded buildouts in priority markets[5]. Our industry is maturing by leaps and bounds and is excited to partner with states to execute on Congress and the Administration's charging deployment programs.

As the committee examines BIL one year in, EVgo appreciates the opportunity to share its perspective on the impact of the law on the EV charging industry. In addition to our more than ten years of experience as an owner-operator of EV chargers, EVgo has been a first mover and a first learner in infrastructure program design by participating in numerous state infrastructure programs. Based on that experience, this testimony shares our perspective on the key opportunities and remaining challenges from the charging investments in BIL. Specifically, we believe:

- Federal policy is a powerful tailwind to support EV adoption, and BIL is one of multiple complementary policy efforts to enable the transition to EVs;

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[1] https://www.autonews.com/retail/ev-registrations-us-57-through-september
[2] https://evadoption.com/us-ev-sales-share-reaches-7-in-q2-2022-new-data-now-available%ef%bf%bc/
[3] https://highways.dot.gov/newsroom/biden-harris-administration-announces-all-50-states-dc-and-puerto-rico-have-submitted
[4] https://www.evgo.com/press-release/evgo-announces-evgo-extend-project-to-deploy-high-power-fast-charging-access-to-drivers-across-the-us/
[5] https://www.evgo.com/press-release/general-motors-evgo-boost-build-plan-high-power-fast-chargers-across-us/

- BIL will significantly expand fast charging availability on corridors and in communities thereby helping to accelerate the transformation to a decarbonized transportation future;
- New public funding programs should leverage investment and expertise from the private sector;
- As program rules are finalized and future years of funding are obligated, U.S. and state DOTs should continue to adopt best practices and learnings from past State Energy Office and other charging programs to bolster new state DOT programs;
- Investments should be accompanied with technical support and assistance for local governments to meet deployment timelines; and
- Additional leadership by the federal government is needed to improve utility energization timelines and address supply chain challenges. BIL is catalyzing investments across the value chain, including in domestic manufacturing; however, FHWA must set a pragmatic Buy America implementation schedule, with waivers for EV charging at least through 2023 to reflect the current market realities.

We also plan to share perspective on two other transportation electrification policies:

- The value of the Renewable Fuel Standard (RFS) finalizing a pathway for renewable electricity from charging events (E-RINs); and
- Key implementation provisions from the Inflation Reduction Act that support transportation electrification.

## **BIL's infrastructure programs are part of a comprehensive policy effort to support transportation electrification.**

BIL's $7.5 billion in funding for charging and alternative fuel infrastructure is a major step towards expanding charging infrastructure to support a growing EV market across the United States. If properly implemented, it will create thousands of well-paying jobs in manufacturing, installing, operating and maintaining charging stations in every state. But to be most effective, infrastructure policy should be paired with actions to stimulate EV sales on the consumer side. Together, they work in tandem to bolster the creation of sustainable U.S. jobs across the EV value chain. At EVgo, we think of this as moving beyond "the chicken and the egg" to taking a "peanut butter and jelly" approach to infrastructure and vehicle availability. The goal should be to have sufficient public charging infrastructure to enable EV adoption, and a sufficient quantity of vehicles using that infrastructure to support the build out of even more of it.

We are grateful that Congress and the Administration recognized the need for those complementary policies of both charging infrastructure and consumer incentives to bolster EV sales. In this way, the charging investments from BIL are set up for long-term success through complementary vehicle purchase incentives via key tax provisions through the Inflation Reduction Act and ambitious fuel economy standards proposed by the National Highway Traffic Safety Administration[6]. From the private sector perspective, the key is that EV adoption occurs in tandem with deployment of charging infrastructure, as a sustainable public charging industry needs a robust EV market to drive usage and reinforce the unit economics that support additional buildout.

[6] https://www.nhtsa.gov/press-releases/usdot-announces-new-vehicle-fuel-economy-standards-model-year-2024-2026

We also applaud Congress for enacting the consumer credits for EVs with equity in mind, ensuring EV adoption will be possible for low- and moderate-income families by bolstering a strong secondary market for electric vehicles. This will ensure that all Americans – regardless of income level – can enjoy the long-term maintenance and fuel savings that an EV provides. In addition to the consumer incentives for electric vehicles, Congress wisely also created incentives for fleet and commercial vehicle electrification, which can have outsized emissions and clean air benefits for the communities they operate in that have historically borne the brunt of air pollution.

**BIL will spur the deployment of thousands of additional fast chargers during this decade.**

EV adoption in the United States is reaching tipping point levels, with EV sales reaching 6 percent last quarter, more than triple Consumer demand has shattered the myth that EVs are only interesting to a tiny slice of the driving public, with reservations and waitlists for the most popular models demonstrating that more and more drivers are clamoring for EVs. Automakers are investing to meet this surging interest and have announced plans to spend more than $1.2 trillion by 2030 to develop and manufacture EVs[7]. They are projecting EVs to make up more than 50 percent of vehicle production in 2030, in line with the Administration's goals[8]. Drivers are already seeing the benefits of this investment, with new models like the Chevy Silverado EV, Ford F-150 Lightning, Toyota bZ4X, and Nissan Ariya already on the road or beginning production soon.

As these new vehicle models are coming to market, EVgo is rising to the challenge to ensure that consumers have access to reliable and convenient charging infrastructure – with an eye toward equity – so we can truly enable mass adoption. We know that more fast charging infrastructure will be needed in all communities and geographies to enable ubiquitous EV adoption.

Unlike alternating current Level 1 charging from a standard wall outlet, or Level 2 charging from a 240-volt circuit, direct current fast chargers can charge a car in just 15-45 minutes[9]. Level 1 and Level 2 play important roles in the charging ecosystem as they take advantage of long idle times for most vehicles. However, fast charging enables drivers to charge in minutes instead of hours and is crucial to enable charging both in communities for drivers on the go, as well as along corridors for long-distance trips.

Thanks to the wisdom of Congress, the EV investments from BIL, particularly NEVI, are focused on fast charging. These chargers are capital intensive and also have high operating costs, including but not limited to 24/7 customer service, electricity, network operations, and maintenance. In this nascent stage of EV adoption, public funding through programs like NEVI incent investments to deploy charging infrastructure, but should also continue to help with ongoing operating costs, as has been authorized by Congress. These operating costs include electricity costs, which can often include punitive demand charges, as well as maintenance efforts which are key to reliability to increase confidence in the technology– and that can help bolster infrastructure access in rural or low-income communities.

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[7] https://www.reuters.com/technology/exclusive-automakers-double-spending-evs-batteries-12-trillion-by-2030-2022-10-21

[8] https://www.whitehouse.gov/briefing-room/statements-releases/2021/08/05/fact-sheet-president-biden-announces-steps-to-drive-american-leadership-forward-on-clean-cars-and-trucks/

[9] Actual charging speed depends on vehicle's charging capability

**Recommendation: After the buildout of the interstate corridor charging network, states and the Federal Highway Administration (FHWA) should pivot to community charging. Specifically, FHWA should certify corridors are fully built out by states once funds are obligated for those projects.**

NEVI's initial focus is on a nationwide network of corridor fast chargers along highways to enable long distance road trips, and to assuage range anxiety. A nationwide network of public charging provides consumers with the confidence necessary to purchase or lease an EV, knowing that charging will be there when they need it.

It's true that fast, reliable charging is needed to enable long distance driving, but given that the average American only drives 30 miles[10] per day, public fast charging also has a critical role to play in community locations, especially for renters, multifamily housing residents, and others without access to home charging or even dedicated parking. EVgo has customers across geographies and demographics that leverage fast charging in different ways, but for virtually all current and potential EV buyers, confidence that there is accessible and reliable fast charging near where they live is critical to their willingness to make an EV purchase.

The first iteration of NEVI funding has been targeted to help to assuage the range anxieties of EV drivers on trips or between cities and across the country, but attention is also needed on community charging to ensure an equable transition to a decarbonized transportation system for all Americans. In fact, with nearly ten years of operational experience, EVgo has found that the vast majority of public fast charging usage is in denser, urban and suburban areas where not every home has a driveway, attached garage, or in many cases any dedicated parking. This means that those who cannot charge at home need a place to charge away from home if EV penetration is to grow across all demographics, and not just those of single-family homeowners. In fact, the International Council on Clean Transportation[11] indicates that more than half of EV owning apartment dwellers in the U.S. rely on public charging sites for their needs. A study of EV charging data from the University of California – Los Angeles[12] similarly found that residents of multifamily housing units rely largely on public charging for their refueling needs.

At EVgo we believe in a vision of Electric for All where everyone has access to convenient, reliable charging infrastructure. Encouraging a focus on community charging will support this mission and the Administration's larger Justice40 and equity goals, by enabling EV ownership for those who aren't able to charge at home. For these reasons, and to enable a just transition to a decarbonized transportation system, EVgo recommends that community charging be a priority upon completion of FHWA corridors.

Given the importance of the community charging use case to ubiquitous charging access, it is no surprise that EVgo and other charging companies are eager for the launch of the community charging program within the Charging and Fueling Infrastructure Program drafted by this committee. But in addition to this set-aside, FHWA should work with states to prioritize community charging with remaining NEVI formula dollars to ensure benefits of BIL are seen by those without home charging as I detailed above. To do this, FHWA must provide further guidance on the statutory requirement that funds can only be spent on

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[10] https://aaafoundation.org/wp-content/uploads/2021/04/21-1101-AAAFTS-American-Driving-Survey-Fact-Sheet_v3.pdf

[11] https://theicct.org/sites/default/files/publications/US_charging_Gap_20190124.pdf

[12] https://innovation.luskin.ucla.edu/wp-content/uploads/2021/03/Evaluating-Multi-Unit-Resident-Charging-Behavior-at-Direct-Charging-Behavior-at-Direct-Current-Fast-ChargersCurrent-Fast-Chargers.pdf

corridors until they are "fully built out" with stations located every 50 miles. Based on the analysis of multiple state Departments of Transportation (DOTs), it will be feasible for some states to complete the buildout of their alternative fuel corridors in the first year of the NEVI program. However, FHWA has yet to issue guidance on how it will certify this buildout and allow states to build off corridors, and in doing so, expand funding opportunities to community locations.

FHWA should adopt a rule that allows states to launch community programs expeditiously. This could be accomplished by certifying built-out corridors when funds are obligated for charging sites rather than waiting until the charging station is fully built. If FHWA does not allow states to begin their community charging programs until a corridor build out is completed, it could take 2-4 years for community programs to begin implementation, as fast charging stations have development cycles of up to 18 months given complexities with securing locations, utility coordination and permitting.

On top of regular development timelines, EVgo expects that many state Departments of Transportation, which will be implementing EV charging programs for the first time under NEVI, may encounter stumbling blocks that could further delay implementation. In EVgo's experience at the state level with funding programs, we have seen unintentional program design flaws that lead to delays from when a solicitation is first opened until when a charging station location is ultimately complete. Further, given the large amount of interest in NEVI, applicant attrition is a real possibility as many new entrants to the EV charging space potentially will receive awards but may not be able to meet their obligations with the state DOTs; more than a hypothetical, similar outcomes have happened in past California Energy Commission corridor funding programs as well as certain other state awards through Appendix D programs. For these reasons, we recommend that states be allowed to begin community charging programs once funds are obligated – rather than waiting until sites are built – to ensure communities outside of the corridors see intended impacts of BIL programs without waiting years.

## **BIL's EV charging investments are designed to support a growing private EV charging market, but effective implementation is necessary to ensure success.**

The federal government is uniquely positioned to accelerate transportation electrification by leveraging significant private capital via public/private partnerships. Federal support can reduce private sector risk of investing into early-stage markets and bring private capital off the sidelines. With respect to EV charging, federal policies should act as a market stimulant to incent credible charging companies to extend their infrastructure footprints ahead of when they otherwise might if based on EV sales alone. To ensure a competitive market for EV charging flourishes over the next decade, EVgo wishes to provide recommendations to the offices in the Administration leading NEVI's administration based on successful best practices.

We greatly appreciate that BIL was crafted with exactly those types of partnerships in mind. Congress wisely designed alternative fueling and electrification investments in BIL to be a multiplier for, not to supplant, private sector investment in these technologies. Under NEVI, we expect that most states will use their formula funds to partner with experienced operators like EVgo to expand our public networks. We support this approach because it leverages the strengths and expertise of both the public and private sector. EVgo and other charging networks have the experience to install, operate and maintain equipment over the long term. As an owner-operator, EVgo relies on customer utilization for our revenue. This aligns our interests with drivers and compels us to invest in operations, maintenance,

innovation and other features that improve the customer experience. Public funders, such as state DOTs, can optimize NEVI program design to advance additional policy priorities such as serving environmental justice or rural communities, or stimulating local economic development. Today, there remain some open items that require resolution so that investments intended by Congress are not delayed.

**The charging programs in BIL are new ground for state DOTs, but FHWA and the Joint Office of Energy and Transportation can use lessons learned from Appendix D programs to assist state DOTs.**

NEVI, like many federal-aid highway programs this committee has jurisdiction over, is fundamentally led by state DOTs with guidance and rules from the U.S. DOT. But for most state DOTs NEVI will be the first time they are the lead agency for a charging deployment program. The good news is that many states have already administered charging programs funded by Appendix D of the Volkswagen "Dieselgate" settlement. Under Appendix D, where programs were administered largely by the state energy and environmental offices beginning as early as 2017, many states saw initial stumbling blocks in implementation, and efficiencies naturally grew over time. With NEVI we expect to see similar challenges for the state DOTs that their energy office counterparts experienced in the early administration of these programs. A best practice, as modeled by the state of Colorado, is to bring together relevant state Energy, Transportation, and Air Quality offices to ensure alignment and learn from past experiences. State DOTs have expeditiously drafted and submitted implementation for NEVI formula funds and should be commended for their commitment to soliciting and incorporating public and stakeholder comments in designing those programs. We hope that each state will continue to be receptive to data and lessons learned as the NEVI programs evolve.

At a high level, EVgo has recommended[13] states leverage transparent, points based scoring rubrics in order to evaluate projects for funding under NEVI, as has been best practice in Appendix D and other funding programs. When funding programs overspecify program requirements, qualified applicants may not respond to solicitations, often leading to delays in actual implementation of the program objectives. For example, one challenge we are seeing in state implementation in the NEVI programs is a requirement to bundle sites in order to apply for funding. Contrary to many of the effective programs administered under Appendix D, many states under NEVI are asking applicants to group – or bundle - several locations into one application, which has practical challenges that are likely to lead to delays in implementation. EVgo has seen bundling as one of the most prominent flaws in program design and has engaged in public processes in states such as California, Oregon, Tennessee, Massachusetts, Michigan, North Dakota and others to push for a site-by-site application process as seen in nearly all of the Appendix D programs. This program design will likely lead to implementation challenges for applicants, which will lead to delays in charging stations being built, especially if this bundling concept forces states to reissue their solicitations should insufficient qualified applications be submitted in response. In addition to the risks the bundling design poses to the success of various state NEVI programs, bundling often prevents small business applicants from participating, as they may be unable to fill an entire bundle, and thereby limits choices for consumers.

[13] https://site-assets.evgo.com/f/78437/x/8479bfa48d/021622_nevi-best-practices-for-charging-infrastructure.pdf

Unlike typical state DOT projects like bridges that inherently are one project to be awarded to one winning applicant, a recent Ohio EPA charging award from their Appendix D solicitation made 32 separate awards for a $7.9 million solicitation[14]. This is more common in the EV charging space than other solicitations that state DOTs are accustomed to administrating and is necessary for the success of the NEVI program. As such, EVgo encourages FHWA to work with states to leverage best practices from the VW Appendix D solicitation by requiring site by site applications rather than requiring applicants to bundle multiple sites into one application.

In addition to bundling, other flaws we are commonly seeing include long timelines for state reviews that will delay charger installations until 2024 at the soonest, potential requirements for ancillary technologies that will add costs to projects, or utility ownership in markets with significant private sector interest. In the case of untested program designs that may face unintentional challenges in implementation, we recommend that states grant addition points in a scoring rubric rather than requiring criteria that may impede the success of their programs.

To be clear, implementation challenges are inevitable in the early years for new programs as with the Appendix D programs, and we are hopeful that the program design of the NEVI programs will only improve with time if state DOTs leverage best practices from their peers. To that end, FHWA should play an important role disseminating best practices and examples for states so that NEVI does not experience the same problems as early Appendix D programs. We applaud the American Association of State Highway and Transportation Officials (AASHTO) and the National Association of State Energy Officials (NASEO) for their work on this front thus far. DOT could go one step further by encouraging stronger interagency partnerships where experienced State Energy Offices are at the table to share those lessons learned.

One immediate item that must be completed is the final rules for the NEVI minimum standards, as many states are waiting to make key program design decisions until that rulemaking is complete. Beyond formal rulemakings, the Joint Office provides valuable technical assistance to states for NEVI. This technical assistance should leverage these learnings and offer tried and validated program designs for states to replicate in their own programs.

**Recommendation: FHWA should remove elements of its proposed minimum standards that will inhibit a competitive private market and innovation.**

The committee should be commended for its work on BIL, which will spur innovation and investments necessary to enable a competitive private market for EV charging to flourish over the coming decade. This competitive market – and ensuing investments - will be seen across 50 states, fueling job creation in jobs such as EV technicians, electricians, construction and more.

The importance of this competitive market cannot be understated, and it is necessary. We do not expect the federal government, states, or even utilities to be able to or interested in owning retail fueling businesses long-term.

That said, despite the importance of BIL to the competitive market for EV charging, there are a number of pending – but not yet approved – requirements that potentially imperil its success if they remain

[14] https://epa.ohio.gov/about/media-center/news/ohio-epa-awards-grants-for-electric-vehicle-charging-stations-in-25-counties#:~:text=Ohio%20EPA%20has%20awarded%20%247.9,for%20travelers%20across%20the%20state.

unchanged. Before these rules become final, FHWA should address the problematic elements of its proposed rulemaking on NEVI minimum standards that will encumber this effort. As noted in our public comments[15], EVgo recommends specifically:

- FHWA should eliminate a proposal for states to regulate rates of return on investment. Unlike utilities, electric vehicle service providers, property owners that choose to host EV charging on their premises, and other possible applicants to the NEVI programs are not like regulated utilities with guaranteed rates of return. Private investment in EV charging is recouped over several years via metrics such as station utilization, or a measure of how much the stations are used over time by EV drivers—and potentially may never deliver a return even with generous funding support; grantees will take on that risk. FHWA and state DOTs are not equipped to regulate the prices charged to drivers, nor are they equipped to fully understand a private entity's full costs to deploy and operate a charger, including equipment or hardware, development and operations costs[16]. A cap on the rate of return is a wholly inappropriate requirement that would chill investment, contrary to the goals set forth under BIL. EV charging operates in a competitive retail environment and does not have monopoly pricing power or guaranteed returns like regulated utilities. This is unlike other projects that face similar restrictions, like ferry boats or toll roads, that typically have features of a monopoly. This requirement must be removed.
- FHWA should also amend proposals that specify specific versions of interoperability standards and protocols to set reasonable floors. FHWA's proposed rulemaking requires adoption of specific versions of standards, including ISO 15118, which is not yet widely utilized nor necessarily offers significant benefits to drivers over other standards, as well as Open Charge Point Protocol version 2.0.1. In a rapidly moving technology environment like EV charging, this level of specificity is a poor fit and will limit innovation. Instead FHWA should set reasonable floors or outcomes that companies can build on in the coming years.

## Charger deployment can meet FHWA's timelines if national recognition and technical assistance programs are stood up to assist states.

The NEVI guidance includes an ambitious, but achievable goal of energizing charging stations within six months of obligating funding. In order to meet these goals, states will need to work with stakeholders in the EV charging ecosystem to address the current bottlenecks impeding rapid third-party charger deployment. The actual construction of a charging station typically takes just 4-8 weeks, but the entire process to bring a fast charger online—from site host outreach through utility engagement and local permitting to interconnection and final inspection— currently takes closer to 18 months in total.

On local permitting, the major obstacle is not any federal laws currently on the books, given that the vast majority of our sites are built on already developed parking lots in convenient locations for drivers such as gas stations and retail centers and will therefore receive a categorical exclusion from the National Environmental Policy Act. Rather, we more commonly experience delays at the local level, such as with city and county permit offices, where insufficient resourcing constrains those permitting offices

[15] https://www.regulations.gov/comment/FHWA-2022-0008-0357

[16] See page 7: https://site-assets.evgo.com/f/78437/x/f28386ed92/2020-05-18_evgo-whitepaper_dcfc-cost-and-policy.pdf

from developing streamlined processes for approving permits. By adopting best practices from jurisdictions processing permitting applications in a timely manner, we believe many of these delays can be shortened significantly. However, if a NEVI grantee cannot complete energization within 6 months of obligation of funding due to local permitting or utility delays, that should not be held against the grantee.

**Recommendation: Support national recognition programs that share best practices and provide technical assistance to states.**

We recommend the Joint Office support nationwide efforts to establish best practice and technical assistance programs related to local government permitting. This is a big challenge that requires big solutions, and the federal government has a proven model in addressing soft costs as has been done in the solar industry through SunShot.

One successful program to address permitting issues in the solar space is the federally funded SolSmart,[17] a national recognition program for local governments. SolSmart recognizes cities, counties, and regional organizations for making it faster, easier, and more affordable to go solar, and includes technical assistance for local communities to become "open for solar business." Similar programs for EV charging are already being piloted or launch soon in Ohio, Michigan,[18] Minnesota[19] and Chicago[20]. These EV Smart or EV Ready programs are preparing communities for the influx of federal dollars and to reach their own transportation electrification goals. Organizations like the Great Plains Institute, the Interstate Renewable Energy Council and the Rocky Mountain Institute are developing a nationwide version of this program to help more communities successfully implement BIL and meet their own transportation electrification goals.

From the private sector side, EVgo established the Connect the Watts™ initiative which brings together representatives including automakers, suppliers, utilities, and local governments to identify best practices for deploying infrastructure, including complementary permitting[21] and utility processes for EV chargers[22], which I will discuss momentarily.

**Recommendation: Address utility energization timelines, which are increasingly becoming a bottleneck for charger deployment.**

Without reforms – and significant inward looking by utilities to improve their own processes, as well as increased staffing of engineers and others in utilities' service planning departments – the six-month deployment target under NEVI will be difficult to achieve.

Even before any NEVI funding has hit the streets, EVgo has already seen delays in energization from utilities across the country, particularly as charging station requests for new service become more ubiquitous, and staffing in serving planning, engineering, and related departments has not grown apace with this growth. The opportunity from BIL to expand EV charging to new regions and geographies will

[17] https://www.energy.gov/eere/solar/solsmart-funding-program
[18] https://betterenergy.org/blog/qa-with-lola-schoenrich-ev-ready-communities-pilot-project-in-michigan-and-ohio/
[19] https://betterenergy.org/blog/ev-smart-cities-and-native-nations-program-launches/
[20] https://mayorscaucus.org/initiatives/environment/becoming-ev-ready/
[21] See https://site-assets.evgo.com/f/78437/x/597fa39fa0/connect-the-watts_local-permitting-best-practices.pdf
[22] See https://site-assets.evgo.com/f/78437/x/a36897f7b3/connect-the-watts_utility -best-practices.pdf

further increase these demands. While we are pleased to see the Administration begin laying the groundwork for conversations around vehicle-to-grid integration, the issue of utility energization timelines is a separate, foundational issue that must be addressed.

The good news is that the BIL included amendments to the Public Utilities Regulatory Policies Act to require states to consider measures to promote greater transportation electrification. In addition to reforming electricity tariffs to drive greater third-party investment in charging, addressing this issue by amplifying best practices from peers, increasing utility staffing, focusing on supply chain planning for transformers, greater capacity planning with an eye toward greater electrification, reforming the utility easement process, and more will all make a difference. Leadership from DOE, the Joint Office, and other agencies will be necessary to create this culture shift necessary for this massive market transformation. EVgo is hopeful that DOE's GridAssist program will be one such avenue for these critical conversations.

## Build America, Buy America is creating a domestic EVSE supply chain, but it is not in time for round one of NEVI.

Until very recently, virtually all of the fast charging installed the United States were manufactured abroad. The lack of domestic manufacturing capacity is even more acute for high-powered fast chargers, for which proven American made supply still does not exist at any meaningful scale. The investments in BIL and the accompanying Build America, Buy America policy, are spurring the initial development of an American EVSE manufacturing base. Although EVgo is not a manufacturer of EVSE, as a technology-specifier of charging, we use a group of hardware suppliers for our network which gives us significant visibility into the speed of this transition to domestically manufactured products. In fact, EVgo has long consulted with our hardware suppliers on their offshoring plans, and those discussions intensified as BIL moved through the legislative process.

Based on EVgo's analysis of the market and projections for 2023 NEVI deployments, this coming domestic supply will not meet the demand for federally funded projects. FHWA has the ability to continue to provide a temporary waiver for EV chargers as it has in the past, but the existing waiver as proposed functionally expires at the end of this year. Due to ongoing supply chain concerns and the highly specialized manufacturing needed to assemble fast chargers, the proposed waiver is insufficient for new domestic facilities to become operational, but also produce volumes of fast chargers at significant scale. In comments[23] provided to FHWA on the waiver, EVgo suggested extending a full waiver through 2023 for fast chargers, and reevaluating supply at that time through a data-driven approach.

Without a more appropriate waiver period, the consequences for NEVI will be significant as we expect the private sector demand from that program for fast chargers in 2023 to be substantial. Over the first two years of the NEVI program, states are expected to receive $1.5 billion. At an estimated $150,000 cost per charger (a figure used by a number of states for planning), states could support between 8,000 and 10,000 chargers (depending on administrative and other cost overruns) in the first two years of the program. The supply crunch will be especially acute for 350 kW chargers, which are an excellent fit for NEVI's initial corridor focus, helping EV drivers achieve the fastest charge possible on the go. States are also expressing an interest in using NEVI funds for higher powered 350 kW-capable chargers, including Illinois[5], Oregon[6] and Ohio[7]. 350 kW chargers are the furthest behind in onshoring and highlight a

[23] https://www.regulations.gov/comment/FHWA-2022-0023-0075

disconnect between states' NEVI priorities and this FHWA policy. In fact, the American Association of State Highway and Transportation Officials filed comments[24] on the proposed waiver specifically requesting it be extended.

A full waiver through 2023 will also give purchasers of chargers like EVgo much-needed time to evaluate newly onshored chargers for safety and reliability. EVgo takes pride in delivering a product to consumers which goes well above and beyond Underwriters Laboratories (UL) certification on safety and reliability criteria. In our experience, UL certification is a necessary but not sufficient step before chargers are deployed in the field as we undertake further steps at our EVgo Innovation Lab in El Segundo, California to ensure the safety and reliability of fast charging equipment.

The more appropriate waiver period is also important because it will also allow more time to onshore additional component pieces that regularly fail from wear and tear and vandalism. If suppliers are relying on a single domestic component supplier as demand ratchets, as is very possible should the proposed waiver be finalized, then there is a significant supply chain vulnerability that may impact safety and reliability. A waiver that allows for time for redundancy to develop is necessary to ensure that charging operators can not only meet the construction requirements of Buy America Build America but also so that maintenance can be done expeditiously to deliver drivers the customer experience they expect and deserve.

Ultimately, EVgo believes our recommendation of a full waiver for 2023 strikes the appropriate balance of incentivizing investment in U.S. manufacturing and not impeding NEVI by lifting longstanding Buy America waivers before the market is sufficiently mature.

## Other Opportunities outside of BIL:

**Finalizing RFS regulations for the E-RIN pathway will support additional charger deployments.**

As noted above, support for charging infrastructure deployments in the early days of the industry often requires both capital expenditure and operating expenditure support. One such avenue for the latter is through credit programs. For example, the Environmental Protection Agency (EPA) is currently working to finalize regulations under the RFS for a renewable electricity pathway, commonly referred to as an E-RINs. The biogas-to-electricity pathway presents an enormous opportunity to accelerate private investment in EV charging, increase EV adoption, and reduce greenhouse gas emissions, particularly methane – outcomes consistent with the Biden Administration's climate goals. We support the Administration's efforts to complete this longstanding priority, and we look forward to reviewing their upcoming proposal.

E-RINs offer a unique opportunity to attract private investment in EV charging infrastructure by improving the long-term economic sustainability of charging stations, a critical step in scaling up transportation electrification. Therefore, the EPA should ensure that charging station owners or operators are directly included in the E-RIN value chain by properly measuring and allocating the value of E-RINs generated during public charging sessions. This will incentivize private investment in incremental charging infrastructure, and empirical charging session-level data will prevent any double counting of credits. Further, this is a best practice employed in all state-level clean fuels programs.

[24] https://www.regulations.gov/comment/FHWA-2022-0023-0015

**Swiftly implement guidance on the 30D and 30C tax credit modifications from the Inflation Reduction Act.**

The tax provisions in the Inflation Reduction Act, specifically the expansions of the 30D Clean Vehicle Credit and the 30C Alternative Fuel Infrastructure Credit, are well-designed complementary policies to promote transportation electrification. They work in tandem to stimulate both EV sales and infrastructure buildout, bolstering creation of sustainable U.S. jobs in manufacturing, construction, sales, and operations across the EV value chain. We encourage the Treasury Department to expeditiously issue guidance for both credits to enable their usage in 2023. The Clean Vehicle Credit will require substantial guidance on the new domestic content requirements. It is vital that this guidance is clear and achievable so that consumers can use the credit to the fullest extent possible. The infrastructure credit requires an update to IRS guidance from 2007 to bring it in line with the latest industry technology trends, like powersharing, which is a commonly used configuration for EV charging that allows multiple vehicles to charge at a single charge simultaneously while also helping that charge to throttle its grid impact.

## Conclusion

Thank you for the opportunity to share EVgo's perspective with the committee today. As noted at the onset of my testimony, EVgo is grateful to the committee for your leadership in passing BIL and including strong charging infrastructure provisions to promote the acceleration of an ongoing transition to electric vehicles. Congress and the Administration have acted boldly with BIL and IRA, and we commend them for that action. While there is currently still uncertainty regarding some specific elements of program implementation, we remain strongly supportive of the recently enacted EV and EV infrastructure programs and hope that our suggestions on best practices are implemented to ensure that the funds are expended as Congress intended. I look forward to answering any questions you may have.