



Vinson & Elkins

Power Play:  
The State of Electric Vehicle  
Charging Station Finance

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# Introduction

Global sales of electric vehicles (“EVs”) more than doubled in 2021 over 2020, from 3 million to 6.6 million, and sales were up 60% in the first quarter of 2022 over the same period in 2021.<sup>1</sup> With this explosive growth in the EV market, an effective and reliable charging infrastructure will be in high demand. Financing the build-out of this infrastructure at the asset level, however, continues to be challenging. Furthermore, given the myriad nature of EV charging business models, there will not be a one-size-fits-all approach. Such complexities notwithstanding, with an increased focus on transportation electrification and the associated infrastructure, the financing models supporting each flavor of EV charging project are beginning to come into focus.

## Stand Alone EV Charging Stations

The business model for stand-alone EV charging stations can involve any or a combination of sales, advertising (particularly in the case of slow (Level 2) EV charging stations), pay-per-use (generally available only for fast charging stations), subscriptions, and government incentives (as described in more detail below). Typically, the site host does not pay the EV charging company for the right to host the charging station, and grants a site license to the charging station company to use the site rather than an interest in the underlying real estate. The general lack of long-term contracted cash flows associated with these charging stations and the fact that owners of charging stations typically do not receive a recordable real property interest (e.g., fee interest, lease or easement) on the site present challenges to the build out of large-scale EV charging infrastructure using a traditional project finance model.

In light of the market opportunity, financing providers are re-evaluating underwriting assumptions around consumer use and host creditworthiness, focusing more on locational value. However, relying on a “build it and they will come” strategy has the inherent risk of competition from other subscription-based and branded EV platforms. For example, Tesla provides their customers with access to free EV charging stations. Other automakers, such as Rivian, are beginning to unveil membership-based unlimited free charging for their customers.

On the positive side, EV charging station projects are not capital-intensive to build and maintain on a stand-alone basis, and there is relatively low overhead involved to operate them once they are installed. While EV charging companies have generally not been able to demonstrate a steady, year-over-year stream of contracted revenues, investors can make and validate assumptions around customer use cases, government incentive availability and return on investment on a shorter time horizon. As such, we have seen increased investor activity in non-capital market finance transactions, noting that to date such transactions have been fairly bespoke to address the unique needs of the developer while addressing the sensitivities of their capital provider.

For example, ChargePoint recently announced a partnership with Goldman Sachs Renewable Power (“GSRP”), an investor in clean energy projects, to introduce new tailored financing solutions to reduce upfront costs of installing EV charging technology for site hosts using ChargePoint’s operation and maintenance services. Eligible site hosts for EV charging stations will be able to choose the financing option that best fits their needs, which includes a financed option, where hosts pay for charging infrastructure as an operational expense, and a turnkey subscription-based option, where hosts offering public charging can host a station at no cost to them.

Different EV charging companies provide different services to end users, such as free slower charging stations, generally seen in retail centers, and stand-alone fast charging stations, which require payment or subscription. Though most EV owners still charge their vehicles at home, when traveling longer distances, most consumers predictably prefer to use a stand-alone fast charging station. Fast-charging infrastructure also requires a direct connection to the power grid. In contrast, a more cost-conscious end user might use a simpler, ad-based, slower charger at no cost to the end user. There are benefits and drawbacks to both business models, which investors should keep in mind when deciding what type of model to back.

It should also be noted that charging stations do not price charging services in the same way gas stations set fuel prices. Some states have regulations, which set the price of electricity based on demand to the grid and prohibit sales above that price. One way to address this issue is the use of a subscription-based pricing model, which allots time charging for a subscription price. Under this model, users subscribe in advance to use the proprietary network developed and maintained by the applicable EV charging company.

## Fleet Charging



A promising model for EV charging stations is fleet charging finance. This business model relies on a subscription-based contract with a creditworthy customer that has a fleet of EVs, such as Amazon or UPS.

Fleet finance in various forms has been around for decades, including rental car company and railcar deals. The industry is well established and understood. The push toward fleet electrification using battery or hydrogen-powered vehicles presents a new opportunity in a traditional space. Unlike financing stand-alone charging stations, financing EV charging stations for fleets generally involves corporate credit and a competitive process. As a result, much like the historical transactions in this space, the EV charging financing deals of this kind will likely trend formulaic, and the yields will fall within a tighter band.

Governmental incentives can markedly change the structure of fleet financing deals, with a plethora of grants and other subsidies available from the federal to municipal level both for buying EV fleets and installing EV infrastructure. In addition, programs like California’s Low Carbon Fuel Standard (“LCFS”) can provide a relatively predictable revenue stream for at least the first few years of a fast-charging station’s existence.

# Muni-Transport

Municipal transport is another area ripe for EV charging stations to be project financed. Muni-transport deals present a form of fleet charging but with a municipal counterparty, such as a city, county or state government. There has been a lot of focus and perceived opportunity with respect to bus electrification or conversion to hydrogen based fuels. While the development of such projects requires working with municipalities and all the attendant governmental processes (e.g., approval processes in front of city councils and other governmental bodies) these types of projects are interesting not just from the fleet electrification perspective but may also allow for incremental value generated by ancillary services.

For example, investment in electrifying municipal transport provides an opportunity to re-examine bus routes and deploy smart software. Investment in the municipal transport space can actually improve our transportation system by taking stock of existing inefficiencies and creating third-party financial incentives to optimize how buses and trains run.

In addition, in this context, charged up fleets may be optimized in order to push energy back into the grid at times when the fleets are not being used and there is high energy demand. These additional ancillary services provide a large menu of monetization possibilities and facilitate the ability to finance the underlying projects.

Electrification of municipal bus systems also provides a way for municipalities to equitably spread EV benefits to less affluent areas. As one example, the California Comeback Plan (“SB 129”), signed in July 2021, included a \$3.9 billion package to equitably scale the zero emission vehicle market and accelerate the state toward meeting its climate and transportation goals. Legislation currently before the California legislature would add 1,700 zero emission transit buses and invest \$1.5 billion to support school transportation programs and electric school buses.<sup>2</sup>

The potential for successful financings and transactions in the municipal transport EV space is huge. As an example of one such transaction, in 2021, Montgomery County, Maryland selected AlphaStruxture, a joint venture between the Carlyle Group and Schneider Electric, to build a bus depot microgrid that will include chargers for a fleet of at least 44 electric buses. The project, which is still under construction, is slated to be complete later in 2022. Under the deal, AlphaStruxture will design, build, finance, own and operate the project, and the microgrid and charging infrastructure will be delivered to Montgomery County at no upfront costs through an “Energy as a Service” contract.

# Capital Markets

As a result of the challenges in applying the traditional project finance structure to EV charging stations, the EV infrastructure industries have historically been financed largely through the capital markets. Vinson & Elkins has significant experience taking EV charging infrastructure companies public, especially through acquisitions by special purpose acquisition companies (“SPACs”). Since 2020, the firm has handled transactions involving EV-focused companies totaling almost \$11 billion. SPAC acquisitions of EV charging infrastructure companies provide capital market financing in that they raise funds for such companies and result in such formerly private companies becoming publicly traded.

While capital markets have launched the EV charging infrastructure industry, the industry needs to tap into third-party asset based financing to attain the next level of growth and facilitate large scale charging station build-outs. The current business models for EV charging stations have supported asset-based, third-party equity investments, but we are unaware of any significant debt deals in the space.

## REITs

Another potential source of financing for EV charging stations may run through the favorable tax treatment offered to real estate investment trusts (“REITs”). Properties owned by REITs — retail, office and multifamily — are ideal sites for the installation of EV charging stations. However, REITs are intended to be passive vehicles for investment in real property. Thus, REIT legislation limits the extent to which a REIT itself can manage and operate properties and provide services to tenants. For example, it is not entirely clear whether site license fees, which do not represent an interest in the underlying real property for legal purposes, will constitute qualifying income for REIT purposes. Similar license fees, such as for the use of rooftop space for cell towers, have been found to be qualifying income, but the IRS has not specifically addressed EV charging stations. In addition, as our colleague Paige Anderson has written in Tax Notes, the effect of the tenant service rules is that it is difficult for REITs to become market leaders by providing new services to their tenants. And when REITs can provide these services, they are frequently limited in their ability to profit from them. This is the situation when it comes to EV charging stations. As Ms. Anderson advocates, if the Biden administration would make it clear how REITs can participate in and support the growth of EV charging stations, it would help spur existing efforts to develop the nation’s EV charging station network. This could also incentivize third-party financing deals by providing a steady stream of REIT income for EV charging stations. network. This could also incentivize third-party financing deals by providing a steady stream of REIT income for EV charging stations.



# Summary of Various Governmental EV Incentives

Type	Description	Amount
Federal: EV Infrastructure Grant	<p><b>Infrastructure Investment and Jobs Act:</b> Passed November 2021, this earmarks funds for deployment of publicly accessible EV infrastructure and hydrogen, propane or natural gas fueling infrastructure to be located along designated “alternative fuel corridors.” While only governmental entities can receive these grants, they are required to partner with private entities in execution.<sup>4</sup></p>	Total Funds: \$2.5 Billion
Federal: Alternative Fuel Infrastructure Tax Credit	<p><b>Alternative Fuel Infrastructure Tax Credit:</b> There was a federal alternative fuel vehicle refueling property tax credit under section 30C of the Internal Revenue Code for which electric vehicle charging station projects placed in service by December 31, 2021, could have been eligible, but this tax credit is currently expired. The currently defunct Build Back Better reconciliation would extended and strengthened the credit. Hopefully the credit will be resurrected in some form.</p>	N/A
California: LCFS Carbon Credit Market	<p><b>Low Carbon Fuel Standard (“LCFS”):</b> The LCFS is a carbon market in which users and producers of clean energy can earn credits through emission reduction which can be sold to emitters who need to offset their carbon footprint due to statutory requirements. This program provides two ways to earn saleable credits from building and operating an electric vehicle charging station in California. First, infrastructure credits can be earned based on unused capacity for a fast charging station with a minimum nameplate power rating of 50 kW in the early years of its operation. Infrastructure credits will decrease as a station/charger reaches full utilization, until it is only generating credits for its dispensed fuel. Second, fuel pathways credits can be earned based on the amount of electricity provided to electric vehicles at the charging station. The cleaner the source of the electricity, the more credits will be provided to the operator.<sup>5</sup></p>	LCFS credits have traded in the \$150–\$200 range for the last three years

# Conclusion

No one single model seems primed to emerge as a financing solution to build out EV charging infrastructure at scale. However, investors are keen to find ways to enter into this new market. Given strong interest and government incentives, creative ways to finance these projects through third-party equity, and eventually debt, arrangements are likely to take shape over the next few years. These arrangements will vary depending on the nature of the subject charging stations; i.e., whether they are standalone consumer, fleet-based or for municipal transport.

The seemingly abandoned [Build Back Better Act](#) included robust incentives and tax credits for EV charging. If Congress could find its way to passing some version of the bill, this would bring about much more capital into the space, including from tax equity investors. For reasons noted above, tax equity financing models for EV infrastructure will look different than those for wind or solar for example, but investors will surely borrow from those existing, tried and true models to find a way forward.

## Endnotes

- 1 Leonardo Paoli & Timur Gül, *Electric cars fend off supply challenges to more than double global sales*, IEA (Jan. 30, 2022); Laurence Iliff, *U.S. EV registrations surge 60% in Q1, driven by Tesla, Ford, new Korean models*, AUTOMOTIVE NEWS (May 10, 2022, 09:49 AM), <https://www.autonews.com/sales/us-ev-registrations-surge-60-q1-driven-tesla-ford-new-korean-models>.
- 2 S.B. 129, 2021 Leg., Reg. Sess. (Ca. 2021).
- 3 See Paige Anderson, *Can REITs Charge for Charging Electric Vehicles?*, TAX NOTES (Apr. 4, 2022), <https://www.taxnotes.com/tax-notes-federal/energy-taxation/can-reits-charge-charging-electric-vehicles/2022/04/04/7d9qc>.
- 4 Infrastructure Investment and Jobs Act, H.R. 3684, 117th Cong. § 11401 (2021).
- 5 See Unofficial electronic version of the Low Carbon Fuel Standard Regulation, July 1, 2020, located [here](#).



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