STATE OF FLORIDA

PUBLIC SERVICE COMMISSION

Request for comment for EV Workshop and SB 7018	**Docket No. 20200000-OT** **Filed September 2, 2020**

WRITTEN COMMENTS OF TESLA, INC.

Tesla, Inc. ("Tesla") appreciates the opportunity to provide feedback to the Florida Public Service Commission ("Commission") as part of the development of a master plan for electric vehicle ("EV") charging infrastructure resulting from the passage of Senate Bill 7018 ("SB 7018"). Our comments address several of the questions outlined by Commission staff in its September 2, 2020 request for comments, as well as other topics pertinent to the Commission's jurisdiction, and issues for consideration between the Commission, Department of Transportation, and Office of Energy as they develop Florida's master plan for EV charging infrastructure.

The master plan should seek measures that ensure continued flexibility that enable a variety of technologies and stakeholders to participate in the growth of EVs and EV charging infrastructure. The industry is still at a nascent stage and rapidly evolving. Collaboration between EV industry stakeholders, utilities, regulators and policymakers can help reduce deployment timelines and costs, and ultimately accelerate EV deployments in Florida. To that end, our comments highlight ways for stakeholders to work together, and industry best practices to reduce costs and encourage additional investment.

About Tesla

Tesla's mission is to accelerate the transition to sustainable energy through the development of all-electric vehicles and clean energy products including photovoltaic solar and battery storage. Tesla is a U.S. based manufacturer whose vehicle line-up includes the Model S sedan, Model X crossover vehicle, Model 3 sedan, and Model Y crossover vehicle. The vehicles have all-electric range of up to 402 miles per charge, and industry leading performance and safety ratings. In 2019, Tesla delivered 367,500 vehicles globally. Since the company's inception, it has manufactured more than one million all-electric vehicles. In the coming years, Tesla is planning to launch the Cybertruck pickup, the Roadster sports car, and the Class 8 Semi truck. Tesla vehicles make up approximately 81% of the battery electric vehicle ("BEV") registrations in Florida as of December 2019.[1]

Tesla Charging

Creating a seamless and convenient charging experience is key to enabling mass market EV adoption because it ensures people do not need to compromise to drive electric. Simply put, drivers will not purchase an EV if they do not have convenient access to charging. In support of these vehicles and our customers, Tesla has uniquely made substantial investments in developing, owning, and operating charging equipment to support the transition to electric transportation. Tesla owns and operates the largest direct current fast charging ("DCFC") network, which is called the Supercharger network ("Superchargers").

The Tesla Supercharger network is extensive and designed to provide customers a seamless and convenient charging experience by being located near desirable amenities like restaurants, shops, and Wi-Fi hot spots. Each station includes multiple Supercharger stalls in order to get

[1] Florida Public Service Commission Docket No. 20200170-EI. FPL Response #6 to Staff's First Data Request

customers back on the road quickly. Globally, there are more than 2,100 Supercharger stations and over 18,650 total Supercharger charging stalls. There are currently 52 Tesla Supercharger locations and a total of 537 Supercharger stalls in Florida. For Tesla owners that pay to use Superchargers in Florida, they are billed approximately 26 cents per kilowatt-hour (kWh).

Supercharger stations are located in a variety of locations in order to best serve drivers. There are two primary use cases for public Superchargers. The first are Superchargers located along highway corridors to enable long-distance travel. In Florida, Tesla has developed stations along all-major travel corridors including I-4, I-10, I-75, I-95, Route 1 and the Florida Turnpike (Figure 1). The second are Superchargers located within major metropolitan areas. These Superchargers serve a dual purpose of enabling long-distance travel for drivers passing through or visiting, as well as providing options around town for residents that do not have convenient access to home or workplace charging. This can be seen in Figure 1 with the station clusters in the greater Miami/Ft. Lauderdale/West Palm Beach, Orlando, Tampa/St. Petersburgh, and Jacksonville metropolitan areas. Tesla plans to continually expand the Supercharger network to meet customer demand and to provide greater coverage over more travel corridors and metropolitan areas.

The Supercharger network is currently comprised of several different types of equipment. Some stations are what are referred to as V2 Superchargers which are capable of operating up to 150 kW per charging stall. Some stations are made up of “Urban Superchargers” which are more compact and designed for deployment in areas with clearance constraints, such as parking garages. Urban Superchargers can operate up to 75 kW. In early 2019 we began deploying our V3 Supercharger product, which is capable of operating up to 250 kW per charging stall, which provides and up to 172 miles of range in 15 minutes for Model 3. Virtually all new Supercharger stations use V3 Supercharger equipment. All new vehicles currently sold by Tesla are capable of

accepting charge rates up to 250 kW. Supercharger equipment utilizes power sharing capabilities to minimize the utility service requirements necessary to get drivers back on the road as quickly as possible.

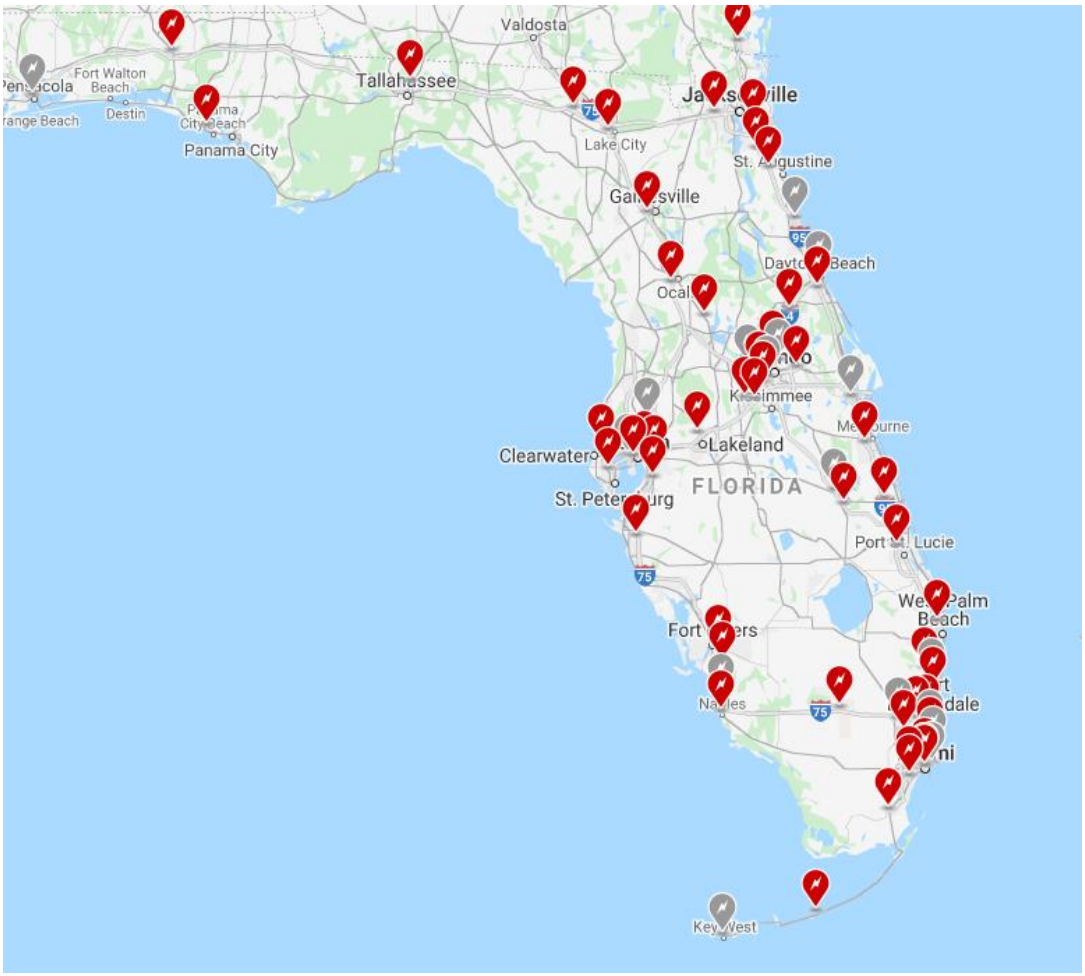

Figure 1 – Tesla Supercharger locations in Florida as of 10/1/2020. Red pins represent existing stations. Gray pins represent some new locations coming in the future. www.tesla.com/findus

Tesla also has an extensive Level 2 "Destination Charging" network with chargers located at hotels, restaurants and shopping centers around the world. Destination Chargers operate on 208/240 volt, alternating current circuits and can provide about 25 to 50 miles of range per hour.

There are more than 27,000 Destination Chargers globally. There are currently 300 Destination Charging locations and a total of 701 Destination chargers in Florida. Unlike the Supercharger network, Tesla does not own Destination Chargers. Instead, Tesla works with businesses and property owners to install the charging equipment, and the site host owns the equipment and pays for electricity while Tesla markets the chargers to drivers. Use of Destination Chargers is currently free. Tesla also works with businesses to deploy banks of Tesla Wall Connectors, Tesla's Level 2 charging product, at workplaces and multi-unit dwellings. The Tesla Wall Connector is available for purchase from Tesla's website.

While Tesla has invested significantly in public charging, especially the Supercharger network, we believe Level 2 charging at locations where vehicles are parked for extended periods of time is the best way to charge. Most cars sit idle for more than 20 hours a day while people are at stores, at work, and at home. That presents an opportune time to charge a vehicle. Tesla has adopted a philosophy of "Charge Where You Park" when developing charging solutions for drivers. Having convenient access to home and workplace charging is the best customer experience, it also presents greater opportunities for managing charging loads to take advantage of hours when excess grid capacity is greatest.

Responses to Commission Staff Questions from September 2, 2020 Notice

I. Projecting the increase in the use of electric vehicles in this state over the next 20 years

While Tesla does not have long-term projections for EV adoption and charging requirements in Florida, it is important to note that Florida is a top EV market in the United States and that should be expected to continue. There is significant uncertainty in all long-term forecasts, and therefore, we recommend that Florida's master plan for EV charging infrastructure avoid

prescriptive programs and instead seek flexible measures that will allow continued industry innovation and that enable faster and more cost effective infrastructure deployments in response to evolving driver needs.

II. Strategies to develop the supply of charging stations, including methods of building partnerships with local governments, other state and federal entities, electric utilities, the business community, and the public in support of electric vehicle charging stations.

A key area to consider for the master plan for EV charging infrastructure is education about EVs. Tesla and other charging operators have, in general, established strong and growing relationships with businesses in the retail, restaurants, and the travel industry where we site charging stations. The relationships have happened organically, but even today with rapid growth of EVs and infrastructure, there are many drivers and businesses that are not aware of EVs or charging stations. Florida's master plan for EV charging infrastructure can serve as an educational document for business, local and state agencies to better understand measures that can be taken to help increase EV investments in the state.

Permitting Requirements

There's also an opportunity for building partnerships between state and local governments and charging station developers to streamline charging station development. Streamlining EV charging station permitting is critically important for ensuring the infrastructure development needed to support significant EV deployment is provided in a cost-effective and timely manner to keep pace with driver needs. Local jurisdictions differ widely in their review timelines, mode of submittal, permit fees, and internal review procedures. Providing guidance or standardized, online

permitting processes with very clear requirements can reduce project timelines considerably, allowing for more stations to be installed to serve EV-charging demand.

State-level guidance can be extremely helpful to support local implementation of streamlined permitting processes for EV charging stations. In California, the Governor's Office of Business and Economic Development ("GO-Biz") released an EV Charging Station Permitting Guidebook to provide jurisdictions with best practices for streamlining permitting for EV charging stations.[2] In addition to the guidebook, GO-Biz developed an online map that scores California jurisdictions based on whether they have implemented a streamlined permitting process, which serves as a useful tool for not only indicating who has a streamlined process in place but also for gathering data on the length of permitting timelines and potential areas for continued improvement.[3] A similar permitting guidebook developed in Florida Energy Office or other another state agency would directly support local jurisdictions and greatly speed up EV charging station deployment timelines throughout the state.

An additional opportunity to coordinate between the state and local jurisdictions, and businesses to accelerate EV adoption is by providing guidance or best practices on building codes. EV-Ready building codes in new construction for single-family, commercial, and multi-unit dwellings helps ensure greater access to charging and lower cost deployments. The minimum recommended level of municipal code adoption is to require 20% of parking spots in new residential and commercial buildings to be EV-Ready, meaning that the required electrical circuitry is installed so the building is ready to easily install charging stations when needed in the future. Importantly, retrofitting existing buildings to include EV charging is significantly more expensive than incorporating EV charging is roughly 4-6 times more expensive than incorporating

[2] https://businessportal.ca.gov/wp-content/uploads/2019/07/GoBIZ-EVCharging-Guidebook.pdf
[3] https://business.ca.gov/industries/zero-emission-vehicles/plug-in-readiness/

EV charging in the designs of new buildings. The Southwest Energy Efficiency Project has developed an instructive "EV Infrastructure Building Codes Adoption Toolkit" for state and local jurisdictions that provides technical details on code options and lists jurisdictions that have adopted various EV-Ready building codes.[4] Miami-Dade County passed an EV-ready zoning ordinance which requires that, for most new parking lots with over 10 parking spaces, 10% of parking spots must be EV-Ready before 2022 and 20% of parking spots must be EV-Ready after 2022.[5] State-level guidance and information on best practices for local jurisdictions to develop EV-ready building or zoning code ordinances can accelerate transportation electrification.

Streamlining the Service Connection Process

In addition to local permitting for EV charging stations, streamlining the utility service connection process for EV charging stations facilitates streamlined EV charger permitting and is an integral process worth exploring further. Tesla has worked closely with utilities in Florida and around the country to reduce project timelines and development costs.

Through our experience, we have identified three simple best utility practices. The first is that utilities that provide dedicated account representative for EV charging accounts is highly beneficial. Having a single point of contact at the utility that understands charging technologies and typical site designs has helped reduce development costs and timelines. The account representative helps customers navigate new service requests, and coordinates schedules and potential outages. Secondly, having a transparent process with clear timelines for new service connections is also important. While DCFC are high powered, their construction schedules are significantly shorter than other types of commercial customers requesting similar power levels

[4] The Southwest Energy Efficiency Project. "EV Infrastructure Codes Adoption Toolkit." https://www.swenergy.org/transportation/electric-vehicles/building-codes#what
[5] http://www.miamidade.gov/govaction/legistarfiles/Matters/Y2019/190029.pdf

(such as a hotel). Having clear communication between charging station developers and utilities about their respective plans and timelines helps improve construction coordination and identification of opportunities to reduce development timelines or unnecessary costs. Finally, collaborating early with utilities to screen locations for EV charging viability reduces unnecessary costs and delays. In particular, working together prior to submitting a formal service request to identify where power is coming into a parcel and whether sufficient capacity is available without needing an upstream upgrade can help avoid project cancellations due to high cost estimates or site design revisions.

III. Identifying the type of regulatory structure necessary for the delivery of electricity to electric vehicles and charging station infrastructure, including competitively neutral policies and the participation of public utilities in the marketplace.

Even though the EV sales and infrastructure deployments have experienced significant growth in the past few years, the industry is still in a relatively nascent stage. The industry is rapidly innovating, and it is important that any regulatory structure or policies that directly or indirectly impact the industry be designed with flexibility and driver experience in mind. That will allow for continued innovation and rapid investment in EV infrastructure projects. Developing competitively neutral policies is crucial to the continued growth of EV infrastructure.

Electric utilities have an important role to play in transportation electrification, including establishing service connections, developing rates that send signals about the best times to charge, and potentially owning charging infrastructure. Electric utilities and utility regulation have operated for decades on the principle of providing non-discriminatory access to electricity. The master plan for EV charging infrastructure should seek to follow this principle and avoid

prescriptive technology requirements to ensure that all EV and charging technologies can participate in utility programs and are on equal footing when it comes to new rate designs and line extension policies. Restricting certain technologies or having overly prescriptive requirements can impact customer experience and slow EV adoption and infrastructure deployment.

Rate Design

A key role for regulated utilities to advance transportation electrification is to provide rate options for EV charging accounts, and to send signals through rates about the best times to charge. Affordable rate options that enable charging services to be competitive with gasoline fuels are a foundational step to encouraging third-party charging investments and greater EV adoption. Sending signals about the best times to charge will also help integrate EV charging load and can lead to benefits for all ratepayers by increasing the load factor of grid infrastructure.

This is especially true in the residential class since the majority of charging occurs at home. Utility rates can send customers signals about the best times to charge their vehicle through time-of-use ("TOU") signals. Several best practices for residential TOU rates are to make the peak period short enough, such as 4 to 6 hours, so that it is actionable, and that there is enough of a price differential between peak and off-peak periods to incentivize customers to charge their vehicles during off-peak times. Additionally, since many residential customers may be hesitant to enroll their entire home on a TOU rate, making the rate available to a sub-metered EV account is also beneficial. That is because EV charging loads are mostly predictable for customers and they know that vehicle will be idle for several hours at a time and can be charged during those periods. Sub-metering can occur via a separate utility meter, but also some states and utilities have begun experimenting with metering technology embedded within the charging equipment. Georgia

Power's residential Plug-In Vehicle Rate is an example of a well-designed rate for residential customers.[6]

For commercial charging uses cases, there are a variety of standard commercial and EV charging specific utility tariff structures that have been implemented around the country to expand and integrate more EV charging load. All of the structures are aligned in seeking to mitigate the outsized effect of demand charges on EV charging stations which typically have lower load factors than other commercial customers.[7] Much like the electric grid, charging stations and networks are designed and built to serve peak customer demand, which typically occurs around travel holidays or evacuation events. Achieving high load factors at DCFC stations can be a challenge. Stations that become frequently congested with drivers waiting to charge is a poor customer experience which can impede EV sales, thus necessitating the need for additional network capacity. Station utilization is also low in the overnight hours since there are much fewer drivers on the road. As a result, EV charging stations tend to have relatively low load factors, and coincident demand charges can result in EV charging operators paying effective electricity prices far above other commercial customers. Florida's commercial customer class average price of electricity was 9.2 cents per kWh for year-end 2018.[8]

Commercial EV rates are particularly important to support public charging deployments and fleet electrification, whether it be public transit, light-, medium- or heavy-duty fleet, which also can have lower load factors depending on use case. EV rate designs should seek to provide an opportunity for EV charging and fleet operators to pay a similar price per kWh to other commercial

[6] https://www.georgiapower.com/residential/billing-and-rate-plans/pricing-and-rate-plans/plug-in-ev.html
[7] For example, to achieve a 50% load factor would mean that a station is completely congested for 12 hours a day, seven days a week, with drivers queuing.
[8] EIA 2018 Utility Bundled Retail Sales – Commercial. Table T7 Commercial Sector: https://www.eia.gov/electricity/sales_revenue_price/

customers in order to ensure the fuel savings that motivate many EV purchasing decisions, both for individuals and fleets. Similar to public EV charging stations, electricity costs are the largest lifetime cost component for commercial EV fleets. Targeting effective electricity rates for commercial EV charging accounts to be on par with average commercial customers will encourage additional investments in EV charging and vehicles and will provide customers with the opportunity to realize fuel savings relative to gasoline or diesel.

Most utilities have gone the route of opting for a TOU rate structure in order to align cost causation while simultaneously mitigating the outsize effect of demand charges on EV charging stations. In the TOU rate structure, the costs associated with demand charges are usually relocated to volumetric "On-Peak" energy rates. Tesla generally supports time of use rates for EV charging and views all-volumetric TOU rates as an appropriate design to integrate charging loads into the utility system. Below is a non-exhaustive survey of EV rates across the country which shows this to be a common approach.

Utility	TOU Design Applied	Demand Charge Credit	Adjustment to Rate for EVs
Alabama Power (BEVT)[9]	X		
Anaheim Public Utilities (D-EV-2) [10]	X		
ConEdison (BIR)[11]			X
Connecticut Light and Power dba Eversource (EV Rate Rider)[12]			X

[9] https://www.alabamapower.com/content/dam/alabamapower/Rates/BEVT.pdf
[10] https://www.anaheim.net/DocumentCenter/View/20547/Developmental-Non-Domestic-Electric-Vehicles
[11] https://www.coned.com/en/commercial-industrial/economic-development/business-incentive-rate
[12] https://www.eversource.com/content/docs/default-source/rates-tariffs/ct-electric/ev-rate-rider.pdf?sfvrsn=e44ca62_0

Hawaiian Electric (EV-F)[13]	X		
Indiana Michigan Power (GS-PEV)[14]	X		
Northern States Power Company (A90)[15]	X		
NV Energy (EVCCR)[16]	X		
Otter Tail Power (Off-Peak EV)[17]	X		
Pacific Gas and Electric (BEV)[18]	X		
Pacific Power Oregon (Schedule 45)[19]		X	
PECO (EV-FC)[20]		X	
Southern California Edison (TOU-EV-9)[21]	X		
Tacoma Power (Schedule FC)[22]		X	
Xcel Energy Colorado (S-EV)[23]	X		

Details are provided below for several varieties of EV charging specific and EV friendly commercial electricity rates:

[13] https://www.hawaiianelectric.com/products-and-services/electric-vehicles/electric-vehicle-rates-and-enrollment
[14] https://www.indianamichiganpower.com/global/utilities/lib/docs/ratesandtariffs/Indiana/IM_IN_TB_18_06-29-2020.pdf
[15] https://www.xcelenergy.com/staticfiles/xn/Regulatory%20&%20Resource%20Planning/Minnesota/Me_Section_5.pdf
[16] https://www.nvenergy.com/publish/content/dam/nvenergy/brochures_arch/about-nvenergy/rates-regulatory/electric-schedules-south/EVCCR-TOU_South.pdf
[17] https://www.otpco.com/media/1298/mn_1412.pdf
[18] https://www.pge.com/en_US/small-medium-business/energy-alternatives/clean-vehicles/ev-charge-network/electric-vehicle-rate-plans.page
[19] https://www.pacificpower.net/content/dam/pcorp/documents/en/pacificpower/rates-regulation/oregon/tariffs/rates/045_Public_DC_Fast_Charger_Optional_Transitional_Rate_Delivery_Service.pdf
[20] https://www.peco.com/SiteCollectionDocuments/ThirdPartyEV.pdf
[21] https://www.sce.com/sites/default/files/inline-files/TOU-EV-7_8_9%20Rate%20Fact%20Sheet_WCAG_0.pdf
[22] https://www.mytpu.org/wp-content/uploads/FC_July_2020.pdf
[23] https://www.xcelenergy.com/staticfiles/xe-responsive/Company/Rates%20&%20Regulations/Regulatory%20Filings/CO%20Recent%20Filings/PSCo_Electric_Entire_Tariff.pdf

A. Example Rate: Dominion Virginia (GS-2)

Dominion Virginia's GS-2 commercial rate[24] is not specifically designed for EV charging but as a result of its innovative rate design, ends up being an attractive rate for commercial EV charging use cases. The GS-2 regular commercial rate for "Intermediate General Service (30-500 kW)" which is billed as a non-demand rate if the customer's kWh consumption in the month does not exceed 200 kWh per kW of demand, which translates to approximately a 28% load factor. If the customer is below that threshold, the distribution and transmission charges are assessed on a $/kWh basis rather than as demand charges.

If the customer's load factor is above 28%, they are billed demand charges for distribution and transmission costs. Figure 2 shows the effective price per $/kWh paid under the rates two tracks. The rate automatically switches over to being billed as a demand rate at the level of usage where a customer would prefer to be billed on the demand rate to achieve a lower price per kWh.

Since most commercial EV charging use cases including fleet, workplace and public charging stations tend to have low load factors, GS-2 is an attractive rate option. The transition between the volumetric track and demand-based track automatically occurs monthly without the customer needing to enroll in one or the other.

[24] https://cdn-dominionenergy-prd-001.azureedge.net/-/media/pdfs/virginia/business-rates/schedule-gs2.pdf?la=en&rev=65c74050107549f299d48689f738e948&hash=7CBE70107AE10C66B8EB5C5A1E248D12

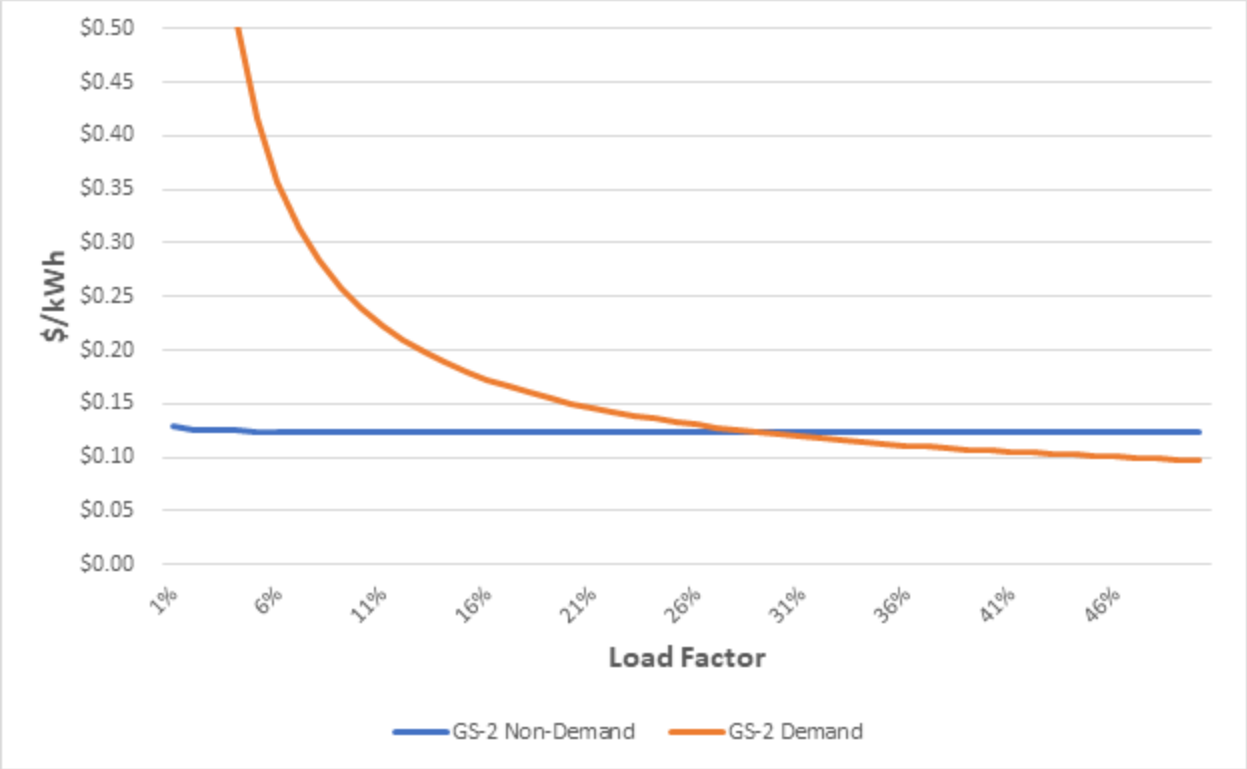

Figure 2 – The effective price per kWh that customers on Dominion's GS-2 rate would pay in the Non-Demand and Demand tracks based on their load factors. Below approximately 28% load factor, customers are billed on the Non-Demand rate. Load factors above that level are billed on the demand rate.

B. Example Rate: Georgia Power's Day Ahead Real Time Pricing - (RTP-DA-5)

Georgia Power has a real time pricing rate (RTP-DA-5)[25] that has proven beneficial for EV charging stations in their territory and sends customers signals about grid congestion and the best times to charge. The rate is only available to commercial and industrial accounts with a consistent monthly demand of at least 250 kW. The design of the rate is to effectively cover the account's actual cost of service by establishing a customer baseline load ("CBL") that is billed under a conventional commercial tariff. For example, the customer's CBL can be 100 kW and 15,000 kWh per month, and those values are billed on the standard commercial tariff. Billing the CBL in that

[25] https://www.georgiapower.com/content/dam/georgia-power/pdfs/business-pdfs/rates-schedules/RTP-DA-5.pdf

fashion is done to ensure that customer's cost of service is covered and the rate is revenue neutral when compared to other non RTP rates.

All kWh consumption incremental to the established CBL is billed at Georgia Power's real-time-day ahead prices, which reflect the marginal electricity costs. The design is innovative and attractive in that it ensures the costs to serve the account are recovered, and the customer's effective average $/kWh is lower as their consumption exceeds the CBL. Moreover, the granular prices can help integrate loads into the system by sending customers signals about peak times. Customers receive information about the hourly marginal prices a day-ahead, which allows customers to plan for load management measures if desired.

C. Example Rates: Pacific Gas & Electric's Business EV Rate

Pacific Gas and Electric ("PG&E") began offering a commercial EV rate earlier this year which does not have demand charges, and instead has TOU prices and "subscription charges" which are akin to a cell phone plan in that they come in 50 kW "blocks" of demand.[26] Customers can choose to set their subscription block amounts on a monthly basis, and they are billed for their subscribed amount regardless of whether they use it or not. If the customer's demand exceeds the subscribed amount, they are also charged an overage fee.

The design of PG&E's rate can be attractive for several reasons. First, it is available to all commercial EV charging use cases including fleet, workplace, and public charging stations. Second, it provides a level of flexibility in terms of managing demand and utility costs by setting subscription amounts in advance. And finally, the rate includes TOU volumetric charges that send clear and actionable signals about the best times to charge. (Figure 3)

[26] https://www.pge.com/en_US/small-medium-business/energy-alternatives/clean-vehicles/ev-charge-network/electric-vehicle-rate-plans.page

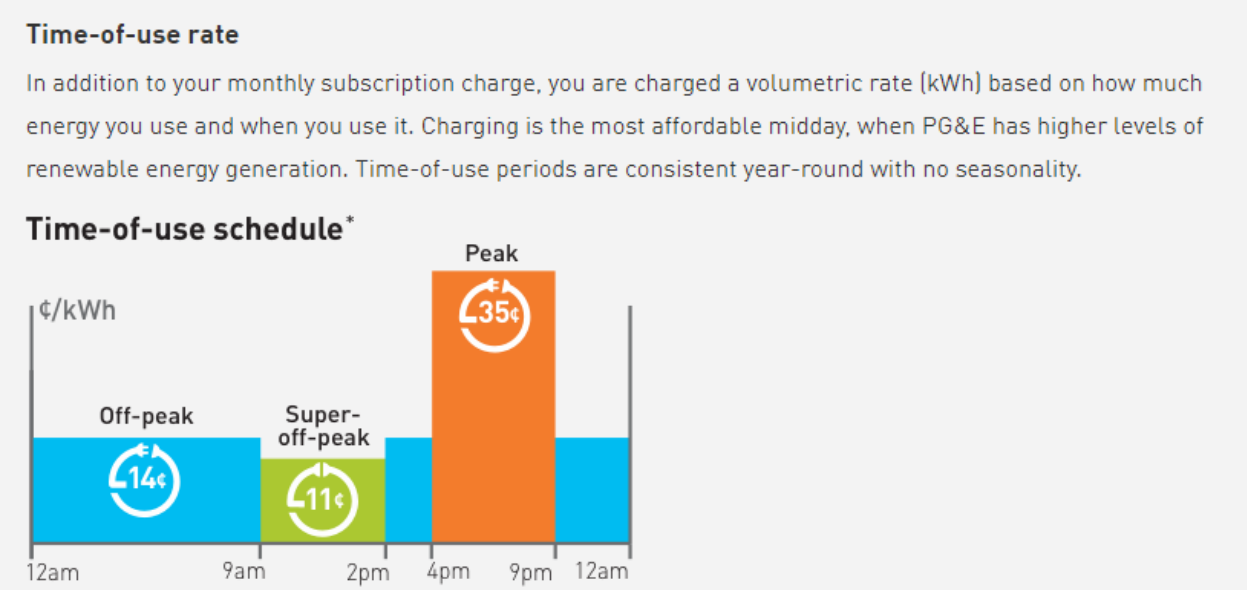

Figure 3 – Graphical representation of volumetric TOU charges in PG&E's Business EV rate.

Line Extensions and Make Ready Investments

Utilities can encourage and support EV charging infrastructure deployment with line extension policies tailored to reduce timelines and deployment costs. Many utilities around the country already have beneficial line extension policies for new services in their territories including separately metered EV charging stations. Due to the unique nature of EV charging station loads, utilities have also developed modifications to make their line extension policies more EV charging friendly in a way similar to EV charging utility rates. Line extension policies (again similar to rates) provide a good existing framework by which to encourage EV charging infrastructure deployment.

The term "make-ready" is oftentimes used to describe the utility extending their traditional role beyond the customer meter to prepare a site for EV chargers by doing the work all the way up to the charger. This removes the upfront contribution in aid of construction ("CIAC") that is usually paid to the utility from the cost of the charging station deployment and can represent a

meaningful amount of savings in the tens of thousands of dollars. Make-ready programs and investments are a good way to leverage the utility expertise in building infrastructure and extending their systems to serve new customers while keeping third-party charging companies focused on finding the best sites to serve EV drivers and effectively deploying the best charger technology.

Make-ready investments are not the only type of beneficial line extension policies but they are effective and straightforward programs that leverage the utility's strengths and experience deploying electrical infrastructure. Another type of beneficial line extension policy is where the utility will take into consideration the net revenue expected from the new service and provide an upfront construction allowance based on this estimate. Earlier this year Tampa Electric Company ("TECO") introduced an innovative line extension modification specifically for EV fast chargers.[25] TECO normally provides a four year credit calculation and decided to extend that credit calculation period out to ten years recognizing not all EV chargers will see heavy usage in the first few years of operation. An illustration of the increased allowance is in Figure 4.[26]

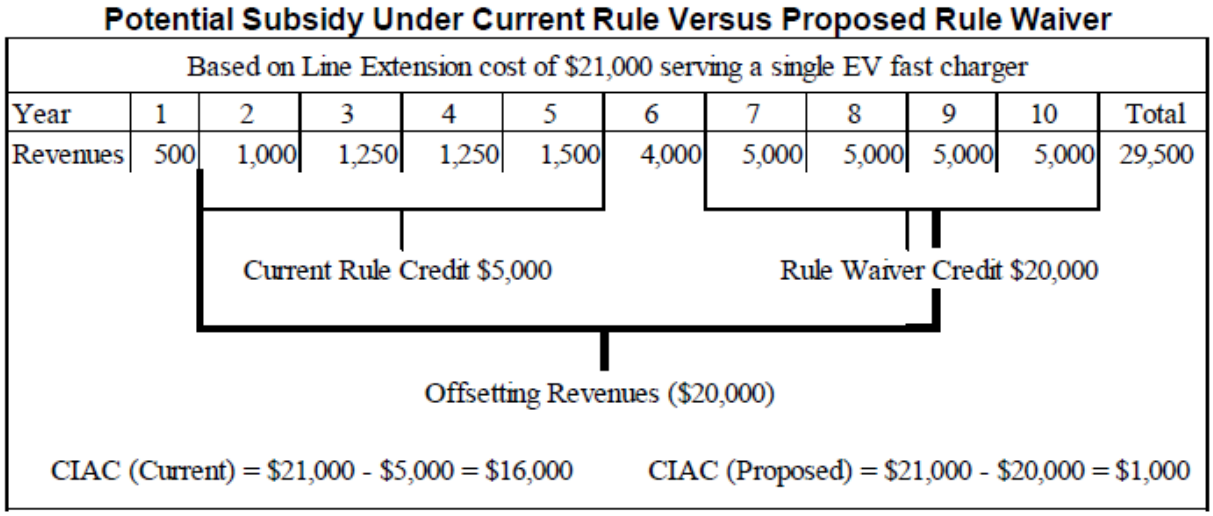

Figure 4 – TECO Line Extension Waiver for EV fast chargers

TECO's modification to their line extension policy is just one example of a beneficial modification outside of the standard make-ready offering. Similar to the way all-volumetric TOU rates have become the most popular EV charging utility rate, make-ready investments have become the most popular beneficial line extension policy to encourage EV charging deployment. In both cases they are not the only solution but both have proved effective and are becoming well understood and easily applied to the specific sets of circumstances for different utilities. Utility territories currently offering make-ready programs include Xcel Energy Colorado,[27] Green Mountain Power Vermont,[28] and the Joint Utilities of New York.[29]

Utility Ownership of Charging Infrastructure

Tesla's business model for the Supercharger network is unique and not representative of how other networks operate or price their services in the industry. Tesla has not operated the Supercharger network as a profit center, and customers that purchase Tesla vehicles are effectively contributing to the construction, operation and maintenance of the network when they purchase the vehicle, in addition to paying for the network when they use a Supercharger. As a result, Tesla has not been as extensively involved as other charging operators in deliberations about whether regulated utilities should be permitted to own and operate charging stations, nor has it taken a firm position on the matter. However, Tesla does support the adoption of competitively neutral policies or guidance as part of the master plan for EV charging infrastructure.

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[27] https://www.xcelenergy.com/programs_and_rebates/business_programs_and_rebates/electric_vehicles/ev_supply_infrastructure

[28] https://greenmountainpower.com/rebates-programs/helping-others/charge-fast/

[29] http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=18-E-0138&submit=Search

It is important to ensure that all stakeholders involved in the deployment, ownership and operation of EV charging equipment are on as equal of a playing field as possible. To the extent utilities are authorized to own charging stations, guidelines should be adopted to ensure they are subject to the same line extension policies and procedures, rate designs, and are not provided with preferential treatment relative to non-utility charging operators. Similar types of guidelines are well established in the electricity sector to prevent generation entities affiliated with the utility from having an unfair advantage over other independent electricity generators.

Technology Interoperability

Charging station interoperability is one area of frequent discussion in the industry. Interoperability can mean different things to different stakeholders, including referring to the charging connector type, as well as communication protocols between vehicles and charging equipment, communication between charging networks, and communication between charging networks and utility system operators. Tesla actively participates in industry interoperability discussions, but also cautions that standards should not be mandated as part of a Commission or EV master plan process. Instead, the trajectory of the technology development should be driven by customer demand, customer preferences, and the industry. Otherwise there are potential unintended consequences of prematurely adopting specific interoperability requirements through regulatory or policy measures, including added costs of deployments for technology components that go unused, and foreclosing opportunities for future technology innovation.

Tesla began developing its DCFC "Supercharger" network in 2012 to enable its customers' ability to confidently make road trips with quick charging sessions on highly traveled routes. At that time, the only publicly available DCFC connector was the CHAdeMO connector which was capable of charge rates up to 50 kW. The development of the Supercharger network

also pre-dated the finalization of the Type 1 Combined Charging System ("CCS") connector. Tesla viewed charging capabilities and station access as limitations to EV adoption, and as a result developed a connector capable of higher charge rates, as well as the ability to also provide alternating current charging through the same connector. While Superchargers are currently only compatible with Tesla vehicles, Tesla does not view the network as a "walled garden," and has discussed opening the network with other OEMs, however the conversations have yet to be conclusive. As noted in Tesla's 2018 Q1 Earnings Call:

> [W]e're happy to support other automakers and let them use our Supercharger stations. They would just need to pay the share of the cost proportionate to their vehicle usage. And they would need to be able to accept our charge rate or at least – and our connector, at least have an adaptor to our connector. So this is something we're very open to, but so far none of the other car makers have wanted to do this.[30]

Tesla also does not support signing exclusivity arrangements with site hosts that would bar other charging station operators from deploying at the same location as Superchargers. Tesla has worked with multiple charging network operators to co-locate equipment that are compatible with vehicles from other manufacturers at Supercharger locations. Finally, as part of the Destination Charging network, Tesla has supported the deployment of 300 total J1772 connectors that all electric vehicle makes can access for free across 100 locations in Florida.

Ultimately, the ratepayer and environmental benefits that EVs provide are agnostic to vehicle brands, types of vehicles, and types of charging connectors. These benefits largely accrue as long as electric vehicles are adopted, utilized and displacing fossil fuel vehicles. As such, the EV master plan should seek to maximize the benefits rather than adopt specific technology standards.

[30] 2018 Q1 Tesla, Inc. Earnings Call. Available from https://edge.media-server.com/m6/p/nwvzygovo, beginning at 50 minutes.

Additional Topics for Consideration

SB 7018 directed the Commission, the Department of Transportation and the Office of Energy to investigate several topics as part of the development of the master plan for EV charging infrastructure. Tesla respectfully submits additional feedback on some of these topics that are relevant to the development of the plan and the jurisdiction of the Commission.

Sales Taxes Applied to Electricity and Charging Stations

SB 7018 seeks quantification of the loss of revenue to the State Transportation Trust Fund due to the current and projected future use of EVs in Florida. Tesla will not address that matter in this forum, but we respectfully highlight an additional tax related matter for consideration. The rise of EV charging has raised a sales tax question in Florida as well as other states.

In several states, including Florida, EV charging providers pay sales tax on their electricity bills, while also collecting and remitting sales tax from the end use driver during the charging transaction. There are two primary areas for consideration in this context. First is that gasoline and other transportation fuels, while they pay a road use tax, are exempt from sales tax. Secondly, that it appears to be a case of double taxation and is complicated by the fact that the item being resold is electricity.

A number of issues around the definition of a public utility, as well as whether or not electricity is considered tangible personal property are tied up in this matter, but it seems that long term, sales tax collection should only be applied to the transaction between the EV charging provider and the end use EV driver to avoid double taxation. Since the item being resold is electricity, it is unclear whether a resale certificate would be the appropriate justification to

only collect sales tax at the final retail transaction. EV charging providers would benefit from guidance and clarification as part of the master plan for EV charging infrastructure.

Florida is not the only state where this issue is being evaluated. In July, South Carolina issued a private letter ruling that considered a similar set of circumstances.[31] In the South Carolina determination, the sale from the utility to the charging provider was considered a wholesale sale and not subject to sales tax while the transaction between the charging provider and the EV driver was considered a retail sale and therefore subject to South Carolina sales tax. While the example is in a different state with different laws and statutes than Florida, it serves to highlight that the question is simultaneously arising in different states given the unique nature of EV charging and the previously unconsidered provision of electricity for vehicle charging by non-utility companies.

Emergency Preparedness

Unfortunately, Florida is no stranger to hurricanes and the impact storms have on electrical infrastructure and the need for evacuation preparedness. In areas that are increasingly threatened with climate-related emergencies that impact the reliability of the electrical grid, emergency preparedness protocols and products are essential to support EV drivers. Tesla includes these considerations in our network planning, monitoring and response.

For all Supercharger stations, Tesla conducts due diligence as part of site selection which consists of but is not limited to surveys, reports and assessment of seasonal risks. In the past, we have included stormwater and drainage systems with an onsite detention basin, additional pervious and impervious areas, and raised equipment decks in order to combat potential flooding. In addition to site selection and design, Tesla monitors its network 24/7 and the user interface within

[31] South Carolina Department of Revenue. SC Private Letter Ruling #20-5 by W. Hartley Powell on July 7, 2020.

the vehicle provides drivers real-time updates about Supercharger Station availability throughout major storm events. Tesla also has mobile charging assets designed for emergency response to be deployed if grid availability is limited or down after a storm event.

A critical component of emergency preparedness and response is categorization of DCFC charging stations as critical infrastructure. DCFC stations like Superchargers enable drivers to travel long distances which is most critical during evacuation and reentry events. If there is a major storm event fast restoration of impacted sites is essential to enable drivers to return home. A critical infrastructure categorization would give EV charging station operators the ability to re-enter into an evacuation zone to assess and restore damage before the general public.

At the utility level, it is important for stations along travel corridors to be categorized as critical facilitates sites to be restored as quickly as possible in advance of reentry. Collaboration between the local utility and charging station operators is essential for monitoring and restoration in response to natural disasters. Tesla works closely with utility contacts as part of storm response. Duke Energy Florida recently launched an outage portal updated through a computer and smart-phone accessible application which provides real-time insights into the connectivity of customer meters. Named Balance of Plant ("BOP"), it sends automatic emails and text messages to customer accounts as soon as the system recognizes an outage. The development of similar applications for other utilities in the state will be essential to supporting EV growth in the state and the ability to travel during evacuation and re-entry events.

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Tesla appreciates the opportunity to provide comments and feedback in the development of Florida's master plan for EV charging infrastructure. Florida is a top EV market and will continue to be in the future, but there is always room for improvement. Reducing barriers to EV charging investments will be imperative to sustaining growth of EVs in Florida, and to do so in a cost effective and efficient manner. We look forward to continuing to work with the Commission, staff, and stakeholders and staff as the plan is refined and finalized.

Sincerely,

Patrick Bean

Global Charging and Energy Policy Lead

Tesla

Dated: October 2, 2020