

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF FLORIDA**

Undocketed Request for Comment)
For EV Workshop/SB 7018)

Docket No. 20200000-OT
Issued September 2, 2020

**COMMENTS AND RESPONSES TO QUESTIONS
OF THE ALLIANCE FOR TRANSPORTATION ELECTRIFICATION (ATE)**

The Alliance for Transportation Electrification (the “Alliance” or “ATE”) is pleased to submit the following comments in this Proceeding of the Florida Public Service Commission (PSC) in its Undocketed Request for Comment for EV Workshop/SB 7018, which was issued by the PSC on September 2, 2020. We provide here both some general comments on the importance of this proceeding and what will follow as well as answers to the questions asked by the Commission. We also look forward to the opportunity to participate in the Workshop scheduled for October 21, 2020 and participating in any future proceedings and workshops.

Background and Introduction

The Alliance for Transportation Electrification, a 501(c)(6) non-profit corporation, is led by utilities, electric vehicle (EV) infrastructure firms and service providers, automobile manufacturers, and EV charging industry stakeholders and affiliated trade associations. We started with 20 organizations at the launch in early 2018. By taking a “big tent” approach to advance the industry, we have grown rapidly to include about 45 national members today and are actively engaged in regulatory proceedings such as this across the country.

General Comments

The Importance of This Proceeding

We first commend the Florida Public Service Commission for initiating its examination of transportation electrification (TE) issues and for planning a workshop on these issues to be held

October 21, 2020. As we discuss below, TE provides many benefits to electric consumers and the general public within the state of Florida and any actions by the Commission to encourage the growth of the electric vehicle market will enhance these benefits.

The September 2nd Notice was issued of course under the backdrop of the Florida Legislature's passage and Governor's signing of SB 7018. This legislation primarily deals with state policy regarding hurricane evacuation and has several provisions regarding the provision of EV charging stations on evacuation routes, but also on EV policy more generally. Specifically, the Legislation calls for:

... requiring the department to coordinate, develop, and recommend a master plan for the development of electric vehicle charging station infrastructure along the State Highway System; requiring the department to submit the plan to the Governor and the Legislature by a specified date; providing responsibilities for the department and the Public Service Commission, in consultation with specified entities, in developing the plan; providing the goals and objectives of the plan; requiring the commission, in consultation with specified entities, to review certain emerging technologies; authorizing the department, commission, and the Office of Energy within the Department of Agriculture and Consumer Services to explore other issues as necessary and appropriate; requiring the department to file a status report with the Governor and the Legislature by a specified date containing any preliminary recommendations, including recommendations for legislation;¹

Notably, the Legislation makes a number of important findings, including a direct acknowledgement that climate change is having impacts on the state and that EVs can help reduce carbon greenhouse gas emissions. Moreover, the Commission is given an important and primary role in assessing the overall EV market, the need for infrastructure, the market development models for building infrastructure (utility and competitive 3rd party providers), and the adequacy of the "regulatory toolbox." Thus, the legislation, while focusing on the development of a master plan for EV development on the state highway system also requires the exploration of broader issues of EV charging infrastructure within the State.

It is important that the Florida legislation places a significant emphasis on the lack of charging infrastructure in Florida. By infrastructure gap, we mean the difference between the amount of publicly available charging stations (reliably available with adequate uptime), and the projected growth in electric vehicles over the next five to fifteen years.

¹<https://flsenate.gov/Session/Bill/2020/7018/BillText/er/PDF>

Charging infrastructure does matter. Numerous studies have shown that consumers steer clear of EVs because they worry about the lack of charging stations. Studies also show that consumers are more likely to buy an electric car when they see public charging stations on their daily routes. While fears about range anxiety are largely unfounded – even the cheapest EVs sport enough range to serve nearly all of a driver’s needs – the paucity of charging stations is a real concern on longer trips, and it is deterring consumers from going all-electric.

Charging infrastructure also needs to grow because EV markets will continue to increase rapidly over the next decade and beyond. The Commission may be surprised to know that Florida is the second largest market for EVs in the country, with over 64,000 registered EVs.² We believe that it is inevitable that "hockey stick" type growth will occur in the North American EV market during the next 5 to 10 years, with annual growth rates accelerating rapidly in the near future. Such projections are based both on the publicly announced plans of major auto OEM's and medium and heavy-duty manufacturers, but also on several projections by reputable research groups, analysts, investment banks, and trade associations. While the global pandemic has slowed all auto sales in 2020, the number of new EV models announced by the automakers continues to grow. The auto and truck OEMs (original equipment manufacturers) have committed billions of investment capital to the design and development of new EV models, larger capacity batteries and related supply chain. For example, Bloomberg New Energy Finance (BNEF), estimates in their 2020 Electric Vehicle Outlook that by 2022 there will be over 500 different EV models available globally.³

BNEF’s Annual EV Outlook 2020, which is the fifth annual Outlook provides national projections - both for light-duty EVs and especially for medium and heavy-duty EVs. Once again, those projections have increased from prior years with the forecast that 58 percent of all global passenger vehicle sales will be either all-electric or hybrid EVs by 2040. There is a range for other forecasts for the 2030 and 2040 timeframe, but it is notable as well that such annual projections of EV market growth and size have been increasing, not decreasing, over the past several years. We draw a couple of conclusions from these various market projections. First, the automobile and truck industries are global by nature and tightly interconnected between Canada,

² Source Atlas Public Policy - EV Hub. Includes both battery only electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs).

³ <https://about.bnef.com/electric-vehicle-outlook/>

Mexico, the EU, and Europe. The Commission should be assessing not only EV trends in North America, but globally. Second, due to range anxiety of consumers, we believe that it is important for the entire EV ecosystem to accelerate the pace of planning and deploying EV infrastructure now, with a central role for the regulated utility as a market transformation catalyst.

There are many drivers to growth in EV markets. In some cases, this growth will be driven by public policies that require or encourage the reduction of greenhouse gas emissions either as a result of national policy or state legislation. This is the case in states that have adopted Zero Emission Vehicle (ZEV) requirements. But even in Florida, which has not adopted such a requirement, SB 7018 makes the impacts of climate change and the states' desire for reduced greenhouse gas emissions clear. But just as importantly for growth of the market, the costs of batteries are continuing to come down and most estimates are that there will be a crossover point around 2024 when electric vehicles become cheaper to purchase than ICE (internal combustion engine) vehicles. EVs already are less expensive on a total ownership cost basis (total cost of ownership analysis is an important component of the education and outreach efforts with consumers who are considering purchasing a new vehicle, preferably by electric propulsion).

Moreover, fleet electrification has become a dynamic trend among both major corporations for reasons of sustainability and environmental and social governance (ESG) concerns and fleet operators who operate both long-haul routes on interstate highways, and shorter logistics routes in major metropolitan areas. Major companies are electrifying their fleets more, and medium and heavy-duty (MD/HD) truck announcements are being made, and transit and school bus manufacturers are selling many new electric models. Encouraging these trends will be important to the economic growth of Florida. The planning, incentive levels, and infrastructure needs of MD-HD use cases are quite different from those of the light-duty fleet and may require more near-term distribution upgrades if realized.

Simply put, the Commission has an important role to play – along with the other state agencies cited in SB 7018 – in developing favorable conditions to meet several of the statutory goals. These include ensuring that utilities engage in robust TE planning over a long-term horizon, rate design, overseeing the program development for end use cases, and ensuring adequate transparency and protections for consumers in this transition. Energy affordability, of course, is

another historical imperative of the Commission as it sets just and reasonable rates for EV charging. The Commission has been and will be asked to approve utility programs to install charging stations in either a separate proceeding or a general rate case. The Commission will be responsible for ensuring that traditionally under-resourced communities, or what we call BIPOC (Black Indigenous People of Color) are not forgotten in TE programs and plans. The Alliance has established an internal task force to evaluate these important BIPOC issues for transportation electrification. Moreover, the Commission should evaluate the utility role in increasing consumer awareness of EVs and for programs which may incorporate web sites, educational programs, and ride and drive programs to its consumers. The Commission and utilities may also wish to focus on key market segments, such as fleets. And finally, the PSC will maintain its traditional role in setting utility rates for EV charging and other services.

Benefits of Transportation Electrification⁴

Of course, a major benefit of TE is in replacing the combustion of gasoline and diesel in ICE vehicles with electricity which both today and over time will provide a cleaner solution. Even given the fact that fossil fuels are still burned to produce electricity in Florida and elsewhere, the efficiency of using electricity for transportation means the overall greenhouse gas emissions will still decrease. According to the Union of Concerned Scientists, 94 percent of people in the US (including all of Florida) live where driving an EV produces less emissions than using a 50 mpg gasoline car.⁵ The savings for MD/HD use cases are even greater.

EVs also provide significant benefits to consumers and ratepayers. Whether they use them or not. At least 80 percent of EV charging occurs in residences at night during off-peak electric hours. The more off-peak energy is sold to charge EVs, the more efficiently existing utility assets can be used. Off-peak charging means that utilities receive more in revenues from those sales than associated cost increases. These trends should put downward pressure on overall rates.

⁴ Studies done on the overall benefits of EVs to consumers and society are plentiful. A few include: https://www.afdc.energy.gov/fuels/electricity_benefits.html, <https://pluginamerica.org/why-go-plug-in/>, https://nicholasinstitute.duke.edu/sites/default/files/publications/Emissions_Benefits_of_Electric_Vehicles-Influencing_Electricity_Generation_Choices.pdf, https://mjbradley.com/sites/default/files/MD_PEV_CB_Analysis_FINAL.pdf

⁵ <https://blog.ucsusa.org/dave-reichmuth/are-electric-vehicles-really-better-for-the-climate-yes-heres-why>

A study performed on the California investor owned utilities demonstrated this fact in a real-world case. The study, by Synapse Economics, found that “from 2012 through 2017, EVs in California have increased utility revenues more than they have increased utility costs, leading to downward pressure on electric rates for EV-owners and non-EV owners alike. This finding holds across both utilities, and for customers on standard tiered rates and TOU rates.”⁶

The Commission can help ensure that charging occurs mostly off-peak by considering optional time of use rates either for EVs separately (where separate meters are possible) or for premises. Load control, through technology either in the vehicles or at the charging station can make adhering to off-peak charging easy for the consumer. The point is that utility programs and proper regulation by the PSC can help ensure that EVs charge off-peak and provide lower costs to all electric consumers.

EVs provide numerous benefits to their owners, especially if they consider the total cost of ownership (or TCO). While the up-front cost of purchasing an EV is higher than an equivalent ICE vehicle, the overall lifetime economics still favor EVs. The U.S. Department of Energy has a cost calculator on their website where the public can compare the lifetime costs of EVs versus traditional vehicles.⁷ As an example, comparing a 2019 Nissan Altima and a 2019 electric Nissan Leaf and average daily use in North Carolina which is about at the national average for fuel prices, and assuming the Federal tax credit of \$7,500 is utilized, the cumulative cost of ownership is about the same for the first five years of ownership, but the Nissan Leaf is less expensive after five years. In this example, the EV is not more expensive than the equivalent ICE vehicle even with a higher initial purchase price. In areas with higher gasoline prices, EVs will fare even better. And several national experts predict that there will be a crossover by 2024 when the up-front cost of an EV is lower than an equivalent ICE vehicle.

One of the other main advantages of EVs to the EV owner is maintenance on the vehicles. There is no oil to change and significantly fewer moving parts to break down. Tires and windshield wipers are about the only normal maintenance required. A recent paper by Consumer Reports

⁶ Frost, Jason, Whited, Melissa, and Allison, Avi. “Electric Vehicles Are Driving Electric Rates Down.” Synapse Energy Economics White Paper, February 2019

⁷ <https://afdc.energy.gov/calc/>

discusses the maintenance benefits of EVs, concluding that the cost of maintenance is about half for EVs compared to ICE vehicles.⁸

Finally, the driving experience of EVs is constantly cited as a positive by EV owners and surveys of drivers. EVs are technologically advanced, super-quiet, and have high torque and quick acceleration. In short, they are fun to drive.

Options for the Florida PSC – Experience of Other States

We cite here a few relevant States that the Florida Commission may wish to look at as it decides how to proceed with EV policy and regulation. These states, in particular, have provided up-front guidance to utilities which encourage (or require) the filing of TE plans to advance EV markets in these states.

Arizona

The Arizona Corporation Commission (ACC) issued policy guidance and a draft implementation plan for TE in July 2019 (see <https://docket.images.azcc.gov/0000199128.pdf>). The plan was developed based on a series of responses to questions posed by the Commission and two workshops held by the Commission. Utilities were requested to file pilot programs, rate design proposals, cost recovery alternatives, and education and outreach programs, as well as charging programs all based on Commission guidance in the Order.

The plan demonstrates a best practice for States tasked with providing direction and guidance for regulated utilities to file a plan, and providing greater certainty in Arizona about what infrastructure can be developed and advanced by regulated utilities, along with the private EVSE providers (which were “deregulated” or not subject to specific cost-based regulation as the other utilities). The regulated utilities have all filed plans at this point.

⁸ <https://www.consumerreports.org/car-repair-maintenance/pay-less-for-vehicle-maintenance-wi>

Michigan

The Commission does not have explicit legislative authority or guidance to accelerate the utility investments in EV infrastructure, and therefore acted under its own authority to set J&R rates and oversee grid modernization. Several workshops were held, with the Commission issuing Orders for further reviews. In parallel, the utilities (CMS Energy and DTE Energy) developed proposals taking into account the concerns of the stakeholders. The proposals were considered in the context of larger GRCs for both utilities. But in early 2019, the Commission approved a significant portion of each proposal (they were modified and changed, of course, during the litigation process) and a good series of pilots were approved. They include E&O activities, residential charging, workplace charging, public infrastructure, and others. Cost recovery was done through deferred accounting, and the Commission approved the capitalization of rebates.

Minnesota

Minnesota is another case where the Commission did not have explicit statutory authority (beyond a broadly worded bill from 2012 that allowed the Commission to approve residential charging programs from the regulated utilities, if submitted, but no mandate to develop anything beyond that like comprehensive TE plans). The Commission showed leadership, establishing a series of workshops with stakeholders to develop policy guidance. The Commission focused on the “filing guidelines” or what the Commission expected regulated utilities to file. At the same time, Xcel Energy/NSP was developing a series of 7 pilot programs, using the portfolio approach that were filed in parallel with the Commission’s filing guidance. Since the normal regulatory process takes significant time (9-11 months for a GRC, perhaps 18 months for a rulemaking), it is a best practice to allow utilities to do their own work in parallel with other Commission-led work, so that the ultimate deployment of charging infrastructure is not unduly delayed. (see <https://www.edockets.state.mn.us/EFiling/edockets/searchDocuments.do?method=showPoup&documentId=%7BD035FA6D-0000-C329-8CC4-8C86EA6E24C8%7D&documentTitle=201910-156850-05>)

Washington

Washington state was an early leader in providing guidance to the state's utilities on what their TE programs should encompass. The Washington UTC (in June of 2017) issued a policy statement, the purpose of which was to encourage private utilities to offer electric vehicle charging services to help meet Washington state's clean transportation goals. The policy statement required regulated utilities to convene a stakeholder group to review utility programs and make recommendations. This group was to include, at a minimum, representatives from the UTC, the Public Counsel Unit of the Attorney General's Office, the Washington State Dept. of Transportation, and the Dept. of Commerce. Utilizing stakeholder groups such as these to help get buy-in up front to utility filings has become a best practice in quite a few states. (policy statement is at <https://www.utc.wa.gov/docs/Pages/DocketLookup.aspx?FilingID=160799>).

A common thread among these states is that they took action to either provide guidance to utilities as to what TE program filings should encompass, or they initiated dialogues or workshops so that stakeholders could discuss and possibly reach consensus on utility plans. These are potentially good options for the Florida PSC.

It would also be helpful if the Legislature or the Governor were to establish goals for EV market development in Florida that could form the foundation for Commission action. These would be more aspirational targets and would include goals for both vehicles (light-duty and MD-HD) and public charging ports. Many of the states that have taken significant action have done so pursuant to state targets or goals. This does not mean that Florida need become a ZEV state or seek a waiver under the Federal Clean Air Act. But we have observed that such goals provide valuable and tangible guidance to utilities, vendors, and local government and help accelerate progress.

Other Issues

There are important issues that are not addressed by the September 2nd Request for Comment or by SB 7018 that the Alliance believes should be addressed and could be the subject of further proceedings. These include such issues as the appropriate level of regulation of non-utility Electric Vehicle Service Providers (EVSPs), maximizing benefits versus costs of EV programs,

utility cost recovery mechanisms, potential incentives for EV adoption, Education and Outreach programs to encourage the adoption by consumers of EVs, charging station standards and interoperability, rate design, medium and heavy-duty and transit programs, utility planning, and setting metrics and targets for utility EV programs, to name a few. Importantly, we believe that interoperability and open standards for both the hardware (EVSE) and the network operating systems are a key consideration as well as we approach greater scale. We believe workshops would be a good way to address the myriad of issues that accompany new utility programs and regulatory actions to gain the benefits of EV market penetration. These issues have been addressed in many other states and their experience will be useful to Florida. The Alliance believes that this Docket should be continued following the planned October 21st workshop and we pledge to provide input and assistance where needed.

Answers to Questions in the September 2, 2020 Notice

In the September 2nd notice, the Commission staff asks several critical questions with respect to several of the issues they will need to address in response to SB 7018 and in developing regulatory policies more generally with respect to electric vehicle markets and infrastructure. In this section, we provide responses to these questions.

I. Projecting the increase in use of electric vehicles in this state over the next 20 years and determining how to ensure an adequate supply of reliable electric vehicle charging stations to support and encourage this growth in a manner supporting a competitive market with ample consumer choice.

A. Please provide a ten-year and twenty-year projection for increased EV use in Florida, including your data source for such projections.

As a national public policy advocacy organization, the Alliance does not make state projections either on EV market penetration or on the number of needed charging stations or ports. We leave these projections to the Florida utilities and modeling experts who are better situated to develop such forecasts. There are many assumptions and inputs that go into such models, and studies need to be broken down by vehicle type, namely light-duty or medium-heavy duty (classified by gross weight). Other key assumptions include the ratio of (PHEVs) and BEVs,

battery capacity, and VMT (vehicle miles travelled). A popular and commonly used model (which the Commission and Staff could use) is the EV Pro-Lite model developed by NREL. Other Commission staff, such as the New York PSC, have used this flexible model to develop EV projections and impacts on the grid. In addition to the EV forecasts (and not mentioned in the legislation per se), the Commission should ensure that utilities include not only EV projections in their forecasts for planning, but also the impacts on loads both in the aggregate and in daily load curves. This data is under the control and management of the utility, and of course, load projections are a critical component of medium and long-term planning under the IRP framework.

There are also numerous national forecasts that could be relied upon by the Commission for some general trends. These national forecasts, by Brattle Group, Bloomberg New Energy Finance, and Edison Electric Institute to name a few suggest (on average) that about 30 percent of new car sales will be electric by 2030. Given the number of electric models available today (about 50), and the number of PHEVs and BEVs expected to be available over the next 1-5 years (at least 140 vehicle types), this estimate is not unrealistic. That may translate into about 18 to 20 percent of the total fleet being electric. Florida will have about 8 million registered vehicles (across all vehicle types) by 2030. The Covid-19 pandemic may slow down this uptake and curve during the 2020-2021 period, but most observers think that is just a short-term phenomenon. So based on these estimates, Florida would have about 1.4 to 1.6 million EVs (18-20 percent of 8 million) on the road by 2030 as a rough estimate.

B. Provide an estimate of the number of charging stations that will be needed to meet the demand presented by these ten and twenty-year projections.

Again, we will not attempt to forecast the number of chargers that will be needed in Florida over 10 or 20 years but looking at some national data may again be informative. All forecasts suggest a major EV charger rollout will be necessary to meet demand across the country. According to a February 2020 report by the Edison Electric Institute (EEI) and the Institute for Electric Innovation (IEI), the number of EVs on the road will increase from 1.5 million at the end of 2019 to 8.7 million by 2030.⁹ Although we believe this to be a conservative number, we think it is a

⁹ Edison Electric Institute (EEI), op. cit.

good reference point. To support this deployment, approximately 9.6 million charging ports¹⁰ would need to be installed by 2030.¹¹ EEI and IEI estimate that 50,000 to 70,000 charging ports were available in 2017 in public locations and workplaces (not including home charging).¹² According to Statista.com, there were approximately 79,000 (non-residential) charging ports and 25,000 charging stations (reflecting multiple ports per station) nationally in March 2020.¹³ The Department of Energy estimates 4,267 public charging ports and 1,474 public charging stations in Florida, about 5 percent of the national total.¹⁴ If 9.6 million charging ports are needed and Florida maintains this 5 percent ratio, it would need 480,000 charging ports by 2030. Thus, even using these rough estimates based on national data and extrapolation, it is clear that there needs to be significant growth in charging ports and stations by 2030.

Regardless of the forecasts, first and foremost as a policy matter, Florida needs to greatly increase the number of both public Level 2 and DCFC chargers in particular, the former for longer dwell-times, and the latter for faster opportunity charging. Many fully electric vehicles with large batteries are getting ready to come to market and purchases could happen much faster than it takes to deploy thousands of DCFCs. But there is another point, which is that the presence of EV charging, both Level 2 and DC Fast, causes people to think about sustainability and the benefits and enjoyment of driving EVs. So, this is not a chicken and egg question. More charging will motivate more EVs. The flipside is also true; the absence of charging conveys the impression (accurately) that there will be no place to charge, and this “range anxiety” prevents drivers from purchasing EVs. The bottom line is that Florida needs more chargers and needs them quickly.

II. **Strategies to develop the supply of charging stations, including but not limited to, 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.**

¹⁰ Ports are individual leads or connectors from a charging station to charge a vehicle. Charging stations often have multiple ports to charge more than one vehicle at once.

¹¹ Ibid.

¹² EEI and IEI, July 2017, Plug-in Electric Vehicle Sales Forecast Through 2025 and the Charging Infrastructure Required, July 2017.

¹³ <https://www.statista.com/statistics/416750/number-of-electric-vehicle-charging-stations-outlets-united-states/>

¹⁴ <https://afdc.energy.gov/stations/states>

A. Provide comments on strategies to develop the supply of charging stations, including methods of building partnerships between charging station installers, governmental entities, electric utilities, the business community, and the public.

There are multiple opportunities for utilities, electric vehicle service providers (EVSPs), governmental entities, the business community and the public to cooperate in developing public charging infrastructure. One model is known as make-ready investment, where the utility provides the infrastructure (largely conduit and wiring) for a charging station right up to the stub where the EVSP (non-utility electric vehicle service providers) is located, which might be installed or owned by any third party. A second model is rebates to third parties to help with the initial costs of installing chargers. Those costs can be capitalized and put in rate base (as is being done in Michigan and Minnesota). The utility can also issue RFPs for turnkey services from third party providers or make bulk purchases under an own and operate model for the utility. Another strong potential role for the utility is a leasing (of the EVSP) with a flat subscription service for the customer, that removes the complexity of TOU and rate design for the EV owner. In this case, the utility would own the asset until the end of its useful life. Joint ventures are also possible, either with EVSEs or with cities, counties or NGOs for providing charging infrastructure. There is also a host site model where EVSPs provide equipment and network services, but the charging station is still owned by the host, and the maintenance and repair are shifted to the host through some type of service agreement (or SLA). Since the Commission has no direct regulatory authority over the EVSPs, it will have no role over such maintenance agreements whose primary purpose is to maintain adequate “uptime” and reliability of the charger and the network.

B. Provide examples of strategies adopted or being considered in other states that could be implemented in Florida.

Many states have considered the options for increasing the number and geographic dispersion of charging stations and all have come to the same conclusion – utility investment is not only warranted but beneficial in helping to kick start this nascent market. Except for a short period in California, no state has banned utility investment entirely. A few states, such as New York and New Jersey have called on utilities to focus on make-ready investments at least for now but do allow such investment in some cases. We will discuss this further below but thinking of utility

investment as “competition” to private investment is in our view the wrong way to think about it. Utility investment can and will compliment private investment, will provide a benchmark against which non-utility efforts can be measured, and given the significant need for chargers, will still represent only a small part of the overall market.

Many states have approved utility filings to install, own and operate charging stations throughout their service territories, often in partnership with EVSPs and other third parties. California not surprisingly has approved the largest programs. Southern California Edison (SCE) recently received approval for the largest planned utility investment in the country. On August 27, 2020, the California Public Utilities Commission unanimously approved Southern California Edison’s (SCE’s) Charge Ready 2 program, for installation of light-duty EV charging infrastructure at workplaces, destination centers, and multi-unit dwellings. The Charge Ready 2 decision is an important step in advancing California’s goal of advancing zero emissions transportation, as it provides a total of \$436 million in funding, including \$14.5 million for marketing, education, and outreach. The Charge Ready 2 program will support approximately 37,800 EV charge ports (22,200 make-ready EV charging installations and 15,600 new construction rebates for EV chargers). The make-ready component includes 205 ports for Direct Current Fast Chargers. SCE’s Charge Ready 2 program will target 50 percent of installations in disadvantaged communities and 30 percent of installations at or near multi-unit dwellings (MUD). SCE’s Charge Ready 2 is expected to (1) provide customers the benefits of clean air and greenhouse gas reductions, (2) bring economic benefits and good jobs to California, and (3) result in downward pressure on electric rates over time. Pacific Gas & Electric also has a significant program. PG&E's program includes 7,500 Level 2 chargers and a budget of \$130 million. The utility pays for all of the infrastructure costs, from the transformer to the parking space.

It is of interest to note that California had initially banned utility investment in charging stations because of concerns that it would negatively affect the competitive market for charging. After several years, in 2014 the Commission reversed course finding that the private market was not sufficient to meet the needs of the state. We reference two documents here regarding the balance between regulated utility investments versus the non-utility 3rd party competitive market. The first is a 4-part test developed by the California PUC as it started to urge much stronger investment by utilities in the lagging infrastructure, while at the same time wanted to preserve a

competitive market.¹⁵ The second is the Washington UTC Policy Statement (UE-167099) of June 2017 referenced above which implemented the legislative directive of giving the primary role in EV infrastructure to the utility in market transformation, while at the same time encouraging a robust 3rd party market for service providers or EVSPs.

In April of 2017, the Michigan Commission issued an Order establishing a Collaborative Technical Conference after a filing for EV charging investment by Consumers Energy. The main question that the Commission sought to have answered in the Technical Conference is when and if it would be appropriate for utility investment in the charging market. ChargePoint, one of the major EVSPs had objected to such investment in Consumer Energy's filing.

Following the Technical Conference, the Commission issued an Order in October 2017 seeking additional input on topics related to the adoption of plug-in electric vehicles (PEVs) in Michigan and the deployment of associated infrastructure and technology, in an effort to define the regulatory role of the Commission in this area, and to provide guidance to regulated electric utilities and other interested persons. We call particular attention to this Order to the Florida PSC because it represents a good example of how Commissions might want to frame the issues they will ultimately have to deal with. (The Order is available at <https://mi-psc.force.com/sfc/servlet.shepherd/version/download/068t0000001UY3eAAG>). In December 2017 the Commission, based on comments from its October Order, issued a new Order which adopted guiding principles, set up a second Collaborative Conference, and encouraged pilot program filings from stakeholders.

Both Detroit Edison (DTE) and Consumers Energy (CE) have filed programs based on the Guidance provided in these Orders and the Collaborative process. DTE launched its Charge Forward program in June 2019 that will provide a rebate of up to \$500 to a residential customer who purchases or leases a new or used EV, installs a qualified Level 2 charger and enrolls in a special rate beneficial for EV charging. DTE's business customers can also receive incentives of \$2,500 per port and \$20,000 per charger when they install Level 2 or DC Fast Chargers. In addition, DTE has formed partnerships in the public and private sectors to extend charging stations to public areas. DTE has also worked with local transit agencies and school systems to

¹⁵ <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M143/K682/143682372.PDF>

secure a near \$14 million Federal Transit Administration Low-No Grant for eight transit buses and charging ports and secured a Volkswagen Settlement Award of \$1.5 million for four electric school buses. CE received approval for a \$10 million investment in rebates and marketing/education programs over three years. The PowerMIDrive rebate program includes rebates for residential, public and DC fast charging, including up to \$70,000 for DC fast chargers.

Closer to home, in Georgia, Georgia Power offers a rebate of \$250 to customers for installing home chargers and also offers a super off-peak rate for charging. And in Georgia Power's 2019 General Rate Case, the Georgia PSC approved \$8M to be spent annually over the next three years for EV-related infrastructure. Six million dollars per year will go into 'EV make-ready' investments and \$2M will go towards EV charging station rebates and consumer education.

In North Carolina, Duke Energy is awaiting approval of a comprehensive portfolio of programs which include use cases for residential, public DC fast charging, school bus EVs, and metro transit EVs. And in South Carolina, Duke recently reached a Settlement that provides for a residential charger rebate program for up to 400 customers and a DC Fast Charger Program where the Company, using contractors, will install, own and operate up to 40 DC fast chargers. As part of the Stipulation, Duke Energy dropped proposed school and transit bus programs.

All of these are examples of state actions that emphasize partnerships between utilities, EVSPs and other stakeholders, with utility investment of various types. It is significant to note that in almost all of these cases, investment is open to both utilities and third parties. Some state programs focus on utility make-ready investments with rebates for third parties for the charger itself, while many states have also allowed a reasonable amount of utility investment in ownership and operation. But even where the utility owns and operates the stations, it is usually third parties that provide the charging station and often the networks they operate on so there are still partnerships involved.

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.

A. Provide comment on the regulatory structure necessary for delivery of electricity to EV charging station infrastructure.

State Commissions have played a vital role over the past century in regulating electric utilities as the utilities built-out both electric generation and the distribution grid. Some regions of the country restructured to separate electric generation from the distribution grid in the 1990s by setting up Independent System Operators (ISOs) to manage the divested generation assets and dispatch electricity to load, while other regions (including Florida) have maintained a vertically integrated structure.

Regardless, Commissions have retained primary authority over the regulated utilities which operate and maintain the distribution grid. The Commissions, responding to filings from utilities and state legislation, have overseen significant technology changes in the grid over the past decade as more distributed energy resources (DERs) have been deployed and integrated into the grid. EVs and EV chargers are another kind of grid-edge resource that can be used and integrated as a flexible load under the proper rate design and under conditions that have been approved by commissions.

The role of the Commission continues in this evolving environment: to ensure that consumers are adequately protected with “just and reasonable rates”, to provide the utility with the authority to earn an appropriate return on its capital investments, and to ensure the overall reliability of the distribution grid is maintained and strengthened as new technologies, such as DERs, come online. The Commission, which is a key agency of state government and is responsive to the public policy goals of its governor and legislature, must balance the diverse needs of consumers and utilities as it approves the utility’s programs and tariffs. The review of long-term plans under the IRP framework, as cited above, by the Commission and staff is also a key regulatory function, and the challenges for transportation electrification need to be addressed well.

Many Commissions believe they have adequate “regulatory toolboxes” to carry out these new public policy goals as they recognize they should be more proactive in dealing with emerging technologies such as EVs. We believe certainly the Florida PSC has adequate tools to move forward on the modest recommendations presented here for further dialogue and workshops, resulting in Commission guidance to utilities.

Commissions can also play an important role in engaging proactively in discussions around the electrification of transportation in their respective states and can help facilitate a more coordinated approach among the various state agencies involved in transforming the transportation and electric power sectors.

Commissions have helped play a role in market transformation efforts in the past for energy efficiency and other emerging technologies, taking into consideration the best long-term interests of utilities and consumers. In such transformations, the utilities proposed, and the commission generally approved, a portfolio approach in which various technologies were not assessed for cost-benefit on a stand-alone basis, but instead were evaluated for their overall impact and with broader interests in mind.

A similar approach is necessary for the integration of charging infrastructure into the distribution grid. This is especially vital for the higher voltage DC fast charging infrastructure, which if faced solely with high demand charges by the utility and low driver utilization in the early years, will not survive as a stand-alone business case. However, such a portfolio approach is necessary for other types of charging equipment too.

Meanwhile, commissions need to ensure that charging infrastructure for EVs will be made available, and that it will be adequately maintained and operated by the regulated utilities for all income classes and all neighborhoods, including the historically under-resourced BIPOC communities. In addition to ensuring the provisions of universal access EV charging infrastructure, commissions will need to engage with utilities to ensure effective outreach and education for consumers, auto dealers and others, as previously mentioned. Commissions have traditionally provided support to consumers (as part of a general consumer protection function for natural monopolies separate from antitrust and fair competition laws) who have challenges getting reliable and affordable service. As EV infrastructure becomes more widely integrated into the electric distribution grid at scale, these consumer protection functions need to be addressed by the Commission.

A major role of the PSC will be rate design and cost recovery for utility services and investments. Rate designs should be structured to produce minimum impacts on the utility system and maximum benefits to all utility customers. In general, adhering to the Bonbright Principles of cost causation will provide efficient and equitable results. TOU and dynamic rates

may be used for certain use cases but may not be appropriate and cost-effective for all use cases, so the Commission should approach these utility programs on a case-by-case basis. Of course, the overall goal of all rate designs should be to move the EV charging load to off-peak periods through rates, technology, and changing consumer behavior. Otherwise, the Commission will be faced with a difficult choice of putting new peaking units into the rate base that otherwise could be avoided. Most important is that rate structures do not disincentivize or penalize EV users, but as long as rates are cost-based, that is unlikely. The cost advantages of electricity over gasoline have been substantial in the past (partly dependent on rate design and off-peak rates), and this trend is expected to continue in the future.

Rate structures that will apply to commercial (the C&I or general service class) chargers and for medium and heavy-duty applications (MD/HD), and also to roadside and fleet DCFC present a more significant challenge because they will often need to be used during daylight hours. Fleet users and highway drivers will likely not have much flexibility in when they charge. In many cases, without regulatory intervention, such charging would be subject to demand charges which can be significant and which would result in very high costs per kilowatt hours when chargers don't see that much utilization, which is especially probable in these early years of market development. Thus, demand charges may provide a deterrent to use of EVs by fleets and MD/HD vehicles. There are numerous alternatives to dealing with this issue which range from an EV specific rate with reduced demand charge to make EV fueling competitive with gasoline fueling, subscription rates that PG&E is testing, a temporary "holiday" on EV charging demand charges while increasing volumetric rates (e.g., SCE and SDG&E), rates that combine base charges and demand charges with time of use (so-called three part rates), and others. Our recommendation is that the Commission address the issue of both light-duty and MD/HD rate design in future workshops and proceedings. In the interim, this issue can best be addressed on a case by case basis by creative program design by the utilities with Commission approval.

If the Commission wishes to incentivize the use of EVs, the Commission can consider a multitude of utility programs for which it could grant cost recovery. There are three categories of potential utility investments. The first and most obvious is allowing utilities to invest in infrastructure - which could be make-ready projects that provide utility investments (in conduit, wiring, and associated equipment) from the utility pole transformer to the charger which third

parties could own and operate (often, financed through a utility rebate). The rationale for such utility infrastructure investments are discussed later in this response. Having more public and visible charging stations will help reduce the potential range anxiety of EV buyers and widen the appeal of the market, aside from the obvious convenience to EV owners of being able to charge when away from home.

Second, and, also importantly, are education and outreach (E&O) programs. Many surveys done over the years have shown that consumer ignorance about EVs and their benefits is a major factor in their decision to purchase ICE automobiles. Utilities should have a reasonable budget to engage in education and outreach programs that encourage consumers to consider EV purchases. These can include web sites and webinars, ride and drives, collateral material available for dealers and consumers, and dealer education, among others.

Third, utilities can offer rebate and incentive programs of various types and magnitudes. Incentives or rebates can be applied both to vehicle sales and to purchase or installation of charging stations. There are numerous examples of such incentive and rebate programs around the country – several were mentioned above. A summary of incentive programs (both government and utility) within each state is available from Plug In America.¹⁶

B. Provide comment on what constitutes competitively neutral policies in the electric vehicle charging marketplace.

The market for public charging stations for some use cases is somewhat competitive, but not nearly to the point where the competitive market acting alone will install a sufficient number of chargers to meet expected future demand. And there are certainly some market segments, such as for multi-family properties and low and moderate-income disadvantaged communities where there is little to no competitive activity. In brief, we believe that there are substantial gaps in the public EV charging market today.

Also, DC fast chargers may not be economical at this nascent stage of market development so a competitive market will likely not materialize in the near term. But the Alliance believes that

¹⁶ <https://pluginamerica.org/why-go-plug-in/state-federal-incentives/>

utility infrastructure investment, including ownership and operation, should not be dependent on the competitiveness of the market nor be limited to specific geographic markets. Utilities can ably and effectively complement the private or non-utility market and ensure successful EVSP deployment throughout their service territories – both in the near- and long-terms.

The Alliance believes that a "portfolio approach" is the best way for regulated utilities to proceed with respect to improving charging infrastructure to prepare for future demands from EV growth. The idea behind the portfolio approach is that the utility will not own and operate every segment of the market and "crowd out" potential non-utility service providers. At this stage of market development, even the statement of a regulated utility having the ability to "crowd out" other players reflect a disregard for market-based realities, or a tendency by vendors and certain advocates to want to "lock in" certain business models, including proprietary systems. Yet, the primary argument made by opponents of utility involvement is that competition and the development of a third-party charging market will be stifled by a dominant utility presence. The Alliance disagrees with that assessment of today's market where many market gaps exist and where a utility presence is necessary and constructive to catalyze further development.

C. Provide comment on the participation of public utilities in the electric vehicle charging marketplace.

There are multiple ways in which the utility can be involved in EV infrastructure investment. One is the aforementioned make-ready approach where the utility installs or upgrades equipment up to the point where a charging station would connect. At that point, either the utility or a third party might install the charging station. Another approach might be for the utility to contract with third party vendors for charging stations to be installed. Joint ventures are also possible where a private EVSP firm can bring technology, software and network management experience (such as vehicle to grid know-how) to the table, while the utility can bring its scale, engineering experience and detailed knowledge of the grid. Or there could be a different division of responsibilities where the parties partner in various ways on hardware, software, value propositions and so on. In some cases, utilities might also have rebate programs for the installation of either home chargers or public charging stations. The point is that a variety of business structures are possible in order to develop the EV charging market, and the particular

solution will differ from state to state, utility to utility, and case to case. And most cases will involve a hybrid model.

In other words, the Commission need not worry that utility-owned and operated programs in TE, which is properly scoped and overseen by the Commission with a viable stakeholder process, result in a zero-sum outcome. Regulated utilities necessarily take a long-term view of both planning and deploying infrastructure in the distribution grid, and adequate access to the capital markets to ensure that these investments can be made to catalyze the overall market. The results should be complementary and benefit all ratepayers, and participants in the EV ecosystem.

One fact is clear, there are an insufficient number of publicly-accessible charging stations in Florida, as noted above. If experience in other states is any indicator, Florida will continue to experience a deficit of charging due to reluctance or the inability of the private market to step in and deploy sufficient infrastructure, as evidenced by the very small number of developers (particularly for DCFC) and the overall inadequate number of plugs (both DCFC and Level 2). Instead, the Commission should consider a more robust utility role, perhaps including a utility ownership model with a turnkey approach with qualified vendors, as being an important accelerator of EV charging infrastructure in the state. Moreover, if ratepayer funds are invested, logic dictates that the utility retain the opportunity to be involved with the resulting infrastructure to ensure continuous and reliable utilization.

A robust role for the utility including utility ownership and operation of charging stations as an option (with the burden of proof to demonstrate cost-effective investments with prudence) will provide numerous benefits including:

- Going to scale quickly
- Strong capital base (equity and debt)
- Ability to take the long-term view
- Obligation to serve all customers and classes, rich and poor, urban and rural
- Ability to address some of the market gaps today- like rural, multi-unit dwellings, low-moderate income
- Flexibility in rate design and ratemaking, and the ability to spread costs in a portfolio of approaches

- Avoiding vendor lock-in – some EVSPs do not use open standard or interoperable software and thus the consumer is locked into their service unless they buy new hardware
- Allowing the utility to demonstrate new approaches, perhaps with vendors on a turnkey basis

Other jurisdictions, and some localities in Florida, have also discovered that EV charging stations that were built in the last decade, often with government grants and incentives, are not well maintained and experience poor uptime and availability. Obviously, there can be reliability issues with all the various business models and charging infrastructure. But especially with ratepayer funding for these investments, the utility would retain the primary responsibility for maintaining this distribution infrastructure, subject to the oversight and accountability of the Commission.

Some of the commenters in this Docket are sure to state that the utility role should be limited, either temporally (that is only until the market “matures”) or by certain use cases such as multi-family dwellings, and BIPOC or other disadvantaged communities. We strongly disagree. The level of market maturity or exhaustion of alternatives is not and should not be a factor in deciding whether utility ownership should be permitted. There is nothing that fundamentally makes utility investment, ownership or operation of charging stations more costly, or more likely to exhibit any anti-competitive effects. And while the maturity of a market may be an indicator of the degree of ratepayer support that is required, it has no bearing whatsoever on program design or ownership structures. In fact, we believe a policy that eliminates or reduces utility involvement, either through legislation or regulation, removes an important competitive alternative and reduces customer choice in the overall EV ecosystem.

There are of course examples of market gaps where utility investment may be particularly important. Rural and low to moderate income parts of utility service areas are not likely to see substantial investment by competitive third parties. Multi-family dwellings are another important gap that can be filled by utility investment. Several states, including Minnesota, Michigan, Oregon, California, and Washington have approved pilot programs to test the development of EVSP infrastructure in these markets and use cases. Other states are moving in this direction as well as they recognize the key role that regulated utilities can play.

Thus, the utility may be the only viable option for vast swaths of infrastructure, particularly make-ready but also charging hardware in cases where the private sector will not invest. And the Alliance points out that there are a variety of ownership, or joint venture or leasing of equipment, possibilities that are currently being explored in EV infrastructure as noted in the state examples above. The utility may want to put its brand on certain charging stations it rolls out, and a vendor may be fine supplying the solutions on a turnkey basis including all back-office and network management systems. The PSC should maintain flexibility for a variety of business models and should not foreclose any forms of utility investment, assuming they can be shown to be cost beneficial and prudent.

In summary, utilities can and should play a strong role, either owning and operating, or facilitating the deployment of EV charging infrastructure with host sites and vendors that is ready for the coming generation of EVs and position Florida as a regional leader. Regarding deployment facilitation, utilities could play many roles as discussed above, and also including providing reliability and situational awareness, leveraging the use of data from EVSPs to ease EV-grid integration, and aligning EVSP with other utility functions like demand response. The potential benefits to all ratepayers of this transition can be more easily realized through a robust role for utilities.

D. Provide examples of regulatory structures adopted, or being considered, in other states regarding electricity supply to EV charging station infrastructure, including examples of competitively neutral policies and the participation of public utilities in the marketplace, that could be implemented in Florida.

We have provided in the Sections above examples of state policies on EV charging. In some cases, states such as New York and New Jersey have focused on make-ready as the primary investment vehicle for utilities, but we would point out that most states that have considered the question have allowed utility investment of all kinds in charging infrastructure either through Pilot Programs or long-term infrastructure investments. Since 2012, electric utilities across 23 states have been approved to invest more than \$1.3 billion in programs supporting the expanding charging network. A quick summary of some of the more recent state approvals which include substantial utility investment follows:

- On September 22, 2020, the South Carolina PSC approved a Settlement agreement that allows Duke Energy to offer residential charging rebates for up to 400 customers and to install, own and operate up to 40 DC fast chargers.
- On August 27, 2020, the California Public Utilities Commission unanimously approved Southern California Edison's (SCE's) Charge Ready 2 program, for installation of light-duty EV charging infrastructure at workplaces, destination centers, and multi-unit dwellings. The Charge Ready 2 decision provides a total of \$436 million in funding, including \$14.5 million for marketing, education, and outreach. This program will support approximately 37,800 EV charge ports (22,200 make-ready EV charging installations and 15,600 new construction rebates for EV chargers).
- On July 16, 2020, New York approved a \$701 million make-ready utility investment program. The goal of the program is to install more than 50,000 charging Stations by 2025 including 1500 DC Fast Charging stations and increase the number and range of EVs. The Order requires investment of at least \$200 million in environmental justice and disadvantaged communities and \$15 million for MD/HD programs.
- On March 26, 2020, Dominion Energy Virginia gained approval from the Virginia SCC for \$20.8 million in investment, including rebates for make-ready charging infrastructure, rebates for smart charging equipment that enables managed charging, and utility-owned charging infrastructure at strategic locations. Approvals include almost \$8 million for rebated and make-ready investment supporting electric transit bus charging in Dominion's service territory. Dominion was also approved to own and operate four DC fast charging stations that will specifically target electrification of ride-hail vehicles. Other charging infrastructure elements of the program will support EV charging at multi-family dwellings, workplace, and public locations. The program also includes \$3.2 million designed to enhance customer EV awareness in Virginia. This approval also sets the stage for the roll out of Dominion's electric school bus program announced in 2019. The utility plans to deploy more than 1,000 electric school buses throughout their Virginia service territory over the next several years.
- On January 16, 2020 ConEd of New York gained Commission approval for separate make ready infrastructure programs, and publicly accessible DC fast charger and fleet DCFC programs.

- In October 2019, the Minnesota Commission approved (with modifications) a residential subscription service program for Xcel Energy. Xcel’s pilot program’s goal was to make the energy-related costs of operating an electric vehicle more predictable. This program would match the terms of the existing Residential Electric Vehicle Service Pilot Program, but generally would permit the customer to charge the vehicle for a flat monthly fee (subscription) for a two-year period, instead of paying for each kilowatt hour of energy consumed for charging as in Xcel’s other tariffs. Earlier, in July of 2019, the Minnesota Commission approved \$25 million in EV investment by Excel Energy for two other pilot programs - the first a Fleet EV Service Pilot, which would authorize Xcel’s investment in installing and maintaining EV infrastructure for fleet operators (entities using groups of EVs). Xcel estimated that over 700 charging ports would be installed as part of this pilot program. The second pilot is a Public Charging Pilot, which would authorize Xcel’s investment in installing and maintaining EV infrastructure for site hosts and developers of public fast-charging stations along corridors within Xcel’s service territory, as well as for a network of EV community mobility hubs.

Of potentially particular interest to the Florida PSC, the Xcel Large Industrial Group appealed the Minnesota orders in state court on the grounds that the Commission lacked authority to approve utility investments “behind the utility meter” and on other grounds. Just very recently, the Minnesota Court of Appeals upheld the Minnesota Commission’s decisions in these cases essentially finding that the Commission has broad authority to regulate electric service.¹⁷ The Court’s decision is interesting reading to other states contemplating the limits of their authority.

These are just a few examples of state decisions approving investment by electric utilities in charging infrastructure. We believe the Florida PSC has ample authority and would be acting on strong policy grounds to provide encouragement and guidance to the Florida utilities to increase investments in EV infrastructure for the benefit of all Floridians.

¹⁷ In re Xcel Energy’s Petition for Approval of Electric Vehicle Pilot Programs, No. A19-1785 (Minn. Ct. App., filed Sept. 21, 2020) (<https://macsnc.courts.state.mn.us/ctrack/document.do?document=618f7f5409863c3f544226eee34100226c3b1ce744e70a299ac4b3521d81aff2>)

Summary

We commend the Commission for undertaking this inquiry that will help the PSC respond to its responsibilities under SB 7018. We urge the Commission not to be misled into thinking that utility participation in building out EV infrastructure would in any way be anti-competitive or result in less customer choice. The opposite is true and there are multiple reasons why utility participation is in the public interest. And while utility participation can definitely help fill market failures or gaps, such should not be a limiting factor for utility participation. We also believe that the PSC should develop pro-active policies that provide guidance to utility TE program filings. Such guidance should be developed through stakeholder inquiries such as these by the Commission and continued workshops on the various critical topics for which the Commission will be responsible. And finally, there has been quite a lot of activity around the country in developing TE plans and in assessing the appropriate areas for Commission guidance and alternatives for regulated utility involvement in the EV markets. We have mentioned many of those states above and we encourage the Commission to review the referenced programs and Orders to help in this important Docket.

Respectfully submitted this 2nd day of October 2020,

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