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#### -VIA ELECTRONIC FILING-

Adam Teitzman Commission Clerk Florida Public Service Commission 2540 Shumard Oak Blvd. Tallahassee, FL 32399-0850

#### RE: Dock et No. 20200000-OT Florida Power & Light Company's and Gulf Power Company's Comment for EV Workshop/SB 7018

Dear Mr. Teitzman:

Please find attached Florida Power & Light Company's and Gulf Power Company's Comment for EV Workshop/SB 7018.

If there are any questions regarding this filing, please contact me at (561) 304-5662.

Sincerely,

<u>/s/ William P. Cox</u> William P. Cox Fla. Bar No. 0093531

cc: Ben Crawford, PSC Adria Harper, Senior Attorney, Office of General Counsel

Florida Power & Light Company

# PUBLIC SERVICE COMMISSION REQUEST FOR COMMENT FOR EV WORKSHOP/SB 7018

I. Projecting the increase in the 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.

**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.

#### A. and B.

Florida Power and Light Company (FPL) and Gulf Power Company (Gulf) do not have a forecast for EV use in Florida or a forecast for the number of charging stations needed in Florida. Instead, FPL and Gulf's Internal Forecast based on the most recent Ten-Year Site Plan for the respective service territories is provided below. FPL and Gulf are still evaluating methodologies for estimating infrastructure need in territory. The National Renewable Energy Laboratory (NREL)'s EVI-Pro Lite tool is one such tool the Commission may want to reference. Note, with the market rapidly evolving any estimates or tools should be used in a way that provides flexibility.

Year	FPL EVs	Gulf EVs	Year	FPL EVs	Gulf EVs	
2020	43,369	1,886	2031	69,491	16,134	
2021	55,933	2,293	2032	1,000,338	19,610	
2022	71,115	2,787	2033	1,300,440	23,835	
2023	90,877	3,387	2034	1,690,572	28,971	
2024	122,444	4,117	2035	2,197,743	35,212	
2025	161,906	5,004	2036	2,857,066	42,799	
2026	211,207	6,082	2037	3,714,186	52,020	
2027	272,773	7,393	2038	4,828,442	63,228	
2028	352,793	8,985	2039	6,276,974	76,850	
2029	456,787	10,921	2040	8,160,067	93,408	
2030	591,916	13,274				

Electric Vehicle (EV) Outlook FPL and Gulf Service Territories (Passenger, Commercial, & Buses)

Source: FPL and Gulf Internal Forecast.

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.

- A. Provide comment 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.
- **B. B.** Provide examples of strategies adopted or being considered in other states that could be implemented in Florida.
- A. FPL and Gulf are committed to providing safe, reliable, affordable and clean energy and reducing carbon emissions for our customers and the state. As the companies have made steady progress over the last 20 years on these goals including significantly lowering emissions rate, it is now true that the transportation sector emits more carbon than the electric sector in Florida. And with electric vehicles requiring energy from utilities, there is an increasing focus on delivering clean energy. EVs emit 38% less carbon than gasoline-powered vehicles. FPL and Gulf support the growth and adoption of EVs in the state and FPL has proposed and designed EV pilots that support the adoption of EVs by removing barriers to EV adoption and expanding access to EV charging (detail below). FPL's EV pilots also enable data collection intended to inform the utility's approach to support and advance EV market development. While the pilots are still ongoing, FPL and Gulf believe that at the core of any strategy should be the acknowledgement that the Legislature under SB 7018 as codified in Sec. 339.287 (2)(c), Fla. Stat., contemplates that electric utilities and the Commission will play a central role in supporting the development and growth of EV charging infrastructure and the EV market in general.

## FPL Electric Vehicle Pilots

## FPL EVolution

FPL began implementation of the new FPL EVolution pilot program in 2019 to support the growth of EVs with the goal to install more than 1,000 charging ports, thus increasing the availability of public charging stations for EVs in Florida by 50%. This pilot program will be conducted in partnership with interested host customers over an approximate 3-year period. Limited investments will be made in EV charging infrastructure. Installations will encompass different EV charging technologies and market segments, including level 2 for workplace and fleet charging at public and/or private workplaces, destination charging at well-attended locations, and residential charging at customers' homes, and direct current fast chargers ("DCFC") in high-traffic areas, at bus depots and strategically located sites along highway corridors and evacuation routes. These key segments serve as building blocks to develop partnerships with governmental and private entities as further detailed in Table 1 below.

FPL's objective with the EVolution pilot is to examine EV use, adoption, infrastructure, potential new rate structures, power quality, and customer experience ahead of mass adoption

to ensure future electric vehicle investments enhance service for electric customers who select EVs.

		Private		
Segment	Local	State	Federal	Commercial/Retai l
Workplace	Administration Buildings, Fleet	District Offices	Federal Buildings, VA Hospitals	Corporate offices, Office parks
Destination	Parks, Public Buildings, Recreational Facilities	Park & Rides, Airports, Transportation Hubs	National Parks	Shopping centers, Town Centers, Tourist Attractions, Hotels
Fast Charging	City Centers, Bus Depots	Highway Rest Areas, Service Plazas	Limited applications	Shopping centers, malls, convenience /coffee shops

Table 1: Charging Infrastructure Segment Partnership Opportunities

# Proposed UEV Pilot Tariff

In June 2020, FPL petitioned the PSC for approval of a new optional pilot tariff, Utility-Owned Public Charging for Electric Vehicles (Rate Schedule UEV). This optional tariff allows EV drivers to purchase charging services directly from FPL at certain utility-owned public fast charge stations, at a rate of \$0.30 per kilowatt-hour.

# Proposed GSD-1EV and GSLD-1EV Pilot Tariffs

FPL's petition also included two Electric Vehicle Charging Infrastructure Riders for General Service Demand and General Service Large Demand (Rate Schedules GSD-1EV and GSLD-1EV). The optional riders to FPL's existing General Service Demand (GSD-1) and General Service Large Demand (GSLD-1) tariffs, available to qualifying providers of EV public fast charge services, that limit the amount of demand (kW) billed to these customers as a function of their energy (kWh) usage during low load factor billing periods.

FPL has filed for approval of the three optional pilot tariffs to study and support the development of electric vehicle public fast charging infrastructure in FPL's service territory and ensure future electric vehicle investments enhance service for electric customers who select EVs. FPL's petition is still pending before the commission.

Further Strategies to Develop the Supply of Charging Stations

# 1) Encourage utility ownership of electric vehicle service equipment (EVSE)

FPL, Gulf and our customers stand to benefit from transportation electrification. However, range anxiety, driven by a lack of public electric vehicle supply equipment ("EVSE"), is one the primary barriers to mass EV adoption. The public EVSE market is currently challenged by

low utilization, limiting investment and creating a "chicken or egg" scenario. Utility ownership is critical to ensure EVSE is deployed in a way that:

- a) Expands access to EVSE by filling gaps, with a focus on equitable access and access in underserved areas
- b) Reinforce evacuation routes along primary and secondary highway corridors are adequately served and resilient to ensure storm support
- c) Puts downward pressure on rates, benefitting the broader community, and not just EV drivers
- d) Optimizes grid to better manage network congestion and reduce grid stabilization costs

Enabling utilities to make strategic investments in EVSE will facilitate the goals of ensuring these priorities are met while the market is still in its nascent stages.

## 2) Provide incentives/ rebates and utility investment in EVSE deployment

While utilities play a central role in owning and operating EVSE to ensure adequate, fair and reliable coverage, utilities can also play a role in incenting additional EVSE deployment by providing financial incentives that cover some of the costs of EVSE. Strategies include:

- a) Make-ready cost-share programs to incentivize non-utility EVSE providers to deploy additional EVSE, in optimal locations
- b) Financial incentives for site hosts or customers to cover a subset of the costs of the EVSE
- c) OEM/Rideshare Partnerships: Utilities can partner with rideshare companies to provide financial incentives to support shared charging infrastructure

Upfront financial incentive programs should be structured to ensure the receiving party will be capable of operating and maintaining the infrastructure for the long term. Grant programs that only provide up front capital have led to situations where EVSE is abandoned because there is no funding to cover the operating costs or to maintain when the equipment breaks. The issue of abandoned infrastructure should be taken into account as part of the planning process. A lack of available and reliable charging options can be harmful to the market in the long term as it exacerbates range anxiety.

## 3) Enable Optimized EV Rates

In June 2020, FPL filed for approval of three optional EV pilot tariffs that support the development of electric vehicle public fast charging infrastructure in FPL's service territory. While EV rate design will invariably reflect the goals of a specific utility for expanding the EV and EVSE markets and that specific utility's role in these initiatives, rate-design can be used to:

- a) Encourage utility and third-party development of charging infrastructure
- b) Allow the utility to charge drivers directly for utility-owned EVSE
- c) Incentivize fleet electrification: utility tariffs can help build EV infrastructure by alleviating up-front cost barriers faced by fleet operators

- d) Residential EV charging rate: utilities can support residential customers by investing in home charging infrastructure that support grid goals and increases flexibility
- e) Optimize charging behavior by pushing charging off-peak or in line with locational charging costs
- f) Enable expanded value through grid services

### 4) Emphasize education & outreach

By playing an active role in educating stakeholders on the benefits of transportation electrification, utilities can accelerate the growth of the EV market. Stakeholders include the general public, customers, regulators and other ecosystem players, such as installers, charging and software vendors, and car dealers. Strategies include but are not limited to:

- a) Utilities can leverage events such as sustainability conferences, earth days, home shows, green markets, and vehicle days to promote EV and infrastructure adoption
- b) Utilities can establish automaker/OEM and dealer partnerships to help expand marketing focus and help to build electric vehicle awareness and sales. OEM partnerships also provide data sharing opportunities to inform station placement and demand.
- c) Utilities can drive fleet engagement work with fleet customers to educate them on the benefits and cost savings associated with electrification

### 5) Support Policy & Legislation

Utilities are well positioned to assist in the development and execution of statewide policies and government funding programs. Florida should consider:

- a) Implementing statewide EV and EVSE deployment goals
- b) Local regulations and standards that encourage EVSE adoption and integration, including planning regulations and building codes
- c) Adopting a Zero Emission Vehicle ("ZEV") standard

## B.

1) Legislation or commission standards enabling utility investments in, or ownership of, charging infrastructure:

- a) California: **CPUC Decision 14-12-079, 2014** allows investor-owned utilities to own and operate charging stations, with approval provided on a case-by-case basis
- b) Colorado: Senate Bill 19, 077, 2019 and Colorado Statutes 41-1-103.3, 41-3-116, and 40-5-107. Provides cost recovery for distribution system and infrastructure investments, may include utility-owned infrastructure. Retail rate impact not to exceed 0.005% of revenue requirement

- c) Maryland: **Commission Order No. 88997, Case No. 9478** Exelon Joint, utility-owned public charging infrastructure. Utility-owned assets, rate base, capital assets depreciated over useful life
- d) Washington: HB 1512, RCW 54.16 Utilities may petition the Washington Utilities and Transportation Commission (UTC) for a rate of return on EVSE installed for the benefit of ratepayers through December 31, 2030. The UTC may approve an additional 2% to the standard rate of return if the utility installs EVSE on a fully regulated basis similar to other capital investments behind a customer's meter, and the expenditures do not increase ratepayer costs more than 0.25%. EVSE must be installed after July 1, 2015, and all claims are subject to an EVSE depreciation schedule.
- 2) Rebates and incentives to customers for charging infrastructure deployment:
  - a) Maryland: **Commission Order No. 88997, Case No. 9478.** Rebates and program costs deferred regulatory asset, 5-year amortization
  - b) New Mexico: **HB 521, Statute 62-3** Public utilities application to the Commission to expand transportation electrification may include incentives to facilitate the installation of PEV charging infrastructure
  - c) Washington: **HB 1512, RCW 54.16** Upon adoption by the governing authority or commission of an electric utility of an electric transportation plan that proves that utility outreach and investment in the electrification of transportation infrastructure does not increase net costs to ratepayers in excess of 0.25%, electric utilities may offer incentive programs for customers
- 3) EV-specific rate design:
  - a) Colorado: Senate Bill 19, 077, 2019 and Colorado Statutes 41-1-103.3, 41-3-116, and 40-5-107. See above
  - b) Maryland: **Commission Order No. 88997, Case No. 9478** create new EV rate class to be used as a guide for proposed future rates and conduct cost-of-service study as utilization improves
  - c) New Mexico: **HB 521**, **Statute 62-3** Public utilities application to the Commission to expand transportation electrification may include PEV charging rates
  - d) Xcel Energy Minnesota and Colorado low load factor demand limiter<sup>1</sup>
  - e) Avista Utilities Washington utility-owned direct-to-driver rate<sup>2</sup>
  - f) Baltimore Gas & Electric utility-owned direct-to-driver rate<sup>3</sup>

<sup>1</sup> EVgo, "Best Practices for Electric Vehicle Market Transformation" (October 23, 2019); See In re: Application for authority to increase rates in Minnesota (Rate Code A14), by Northern States Power Company d/b/a Xcel Minnesota, Docket No. E002/GR-05-1420, November 2, 2005

<sup>2</sup> Washington Utilities and Transportation Commission v. Avista Corporation d/b/a Avista Utilities (Schedule 77), Docket 160082-UE, Order 02 (February 18, 2018).

<sup>3</sup> See In re: In the matter of the petition of the electric vehicle work group for implementation of a statewide electric vehicle portfolio (Schedule EVP), by Exelon Utility Companies d/b/a Baltimore Gas & Electric Company, Case No. 9478, Order No. 88997, iss. June 20, 2019, rev. February 5, 2020.

Residential or fleet managed charged rates (e.g. Xcel Energy Colorado, Xcel Energy Minnesota, Alaska Electric Light & Power, Hawaii Electric)<sup>4</sup>

- 4) Customer education and outreach
  - a) New Mexico: **HB 521, Statue 62-3** Public utilities application to the Commission to expand transportation electrification may include customer outreach and education programs
- 5) Empower utilities to file widespread transportation electrification plan
  - a) Colorado: Senate Bill 19, 077, 2019 and Colorado Statutes 41-1-103.3, 41-3-116, and 40-5-107. Requires utilities to file for widespread transportation electrification programs by 5/15/2020 and every three years thereafter
  - b) New Mexico: **HB 521, Statue 62-3** By January 1, 2021, and upon request by the New Mexico Public Regulation Commission thereafter, public utilities must file an application to the Commission to expand transportation electrification. The Commission may approve applications based on whether the proposed projects can be reasonably expected to improve the electrical system efficiency of the public utility, to increase access to electricity as a transportation fuel, including in low income and underserved communities, to reduce air pollution and greenhouse gas emissions, and to encourage consumer adoption of PEVs.
  - c) Washington: **HB 1512, RCW 54.16** The governing authority or commission of an electric utility may adopt an electric transportation plan that proves that utility outreach and investment in the electrification of transportation infrastructure does not increase net costs to ratepayers in excess of 0.25%.
- 6) Encourage EV infrastructure deployment via state funds
  - a) California: Emissions reduction grants provide incentives to cover incremental costs to purchase vehicles and equipment. Eligible projects include EV infrastructure, heavy-medium duty replacement, idle reduction technology, etc. Funding through 1/1/24.
  - b) California: small business financing loan and rebate program for charging equipment.
  - c) Colorado: Charge Ahead provides incentives up to 80% of station cost, Public funding via Colorado Energy Office (CEO). Est. 2009 by Colorado legislature, reaffirmed in HB-1315.
  - d) Minnesota: 2019, Clean Cars Minnesota infrastructure plan to be established within 15 months via Minnesota Pollution Control Agency (MPCA)

<sup>4</sup> See In re: In the matter of the application of public service company of Colorado for approval of its 2021-2023 Transportation Electrification Plan, by Xcel Energy d/b/a Public Service Company of Colorado. Proceeding No. 20A-0204E, filed May 15, 2020; See In re: In the Matter of Xcel Energy's Petition for Approval of Electric Vehicle Pilot Programs, by Xcel Energy [Minnesota], Docket No. E-002/M-18-643, iss. July 17, 2019; See In re: In the matter of the tariff revision designated as TA455-1 Requesting approval of Electric Vehicle Charging Rates and Rules (Schedules 93, 94), by Alaska Electric Light and Power Company, Docket No. U-17-002, Order No. 5, iss. October 4, 2017; Enel X North America, "Smart Charge Hawaii Case Study", (June 2020). https://info.evcharging.enelx.com/smart-charge-hawaii-case-study.

- e) Maryland: two programs: 1) Alternative Fuel Infrastructure Program provides rebates up to 50% of project costs, \$0.5 MM per fiscal year, \$55K max DCFC (~9 stations) Est. 2016 for businesses only. 2) EVSE Rebate Program from Maryland Energy Administration provides up to 40% of costs level 2 (\$1.2 Million)
- 7) Implement EV infrastructure deployment goals that drive other policy or commission action.
  - a) Zero Emission Vehicle (ZEV) deployment targets adopted in twelve states: California, Colorado, Connecticut, Maine, Maryland, Massachusetts, New Jersey, New York, Oregon, Rhode Island, Vermont, Washington. In 2018, the ZEV Task Force released a multi-state infrastructure plan to ensure adequate, reliable deployment of public EVSE.
  - b) Medium- and Heavy-Duty ZEV Deployment Support<sup>5</sup>, a Memorandum of Understanding (MOU) signed by 15 states (California, Connecticut, Colorado, Hawaii, Maine, Maryland, Massachusetts, New Jersey, New York, North Carolina, Oregon, Pennsylvania, Rhode Island, Vermont, Washington) and D.C. By investing in electric trucks, electric buses and the charging infrastructure needed, the signatory jurisdictions will support job creation and build a clean economy
  - c) Regional Electric Vehicle (REV) West Plan<sup>6</sup>, a MOU between 8 states (Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming) to create an intermountain EV Corridor that will make it possible to drive an EV across the signatory states' major transportation corridors. The MOU supports build-out of DCFC stations, partnership with EV manufacturers and collaboration of funding to support development
  - d) California: Various ZEV targets including 100% ZEV public transit fleets by 2040
  - e) Colorado: Joined the REV plan in 2017; enacted Project FEVER, the Colorado EV and infrastructure readiness plan in 2018; became a ZEV member in 2019
  - f) New York: 2020 State of the State address committed to various electric transportation initiatives including full electrification of transit buses by 2035, and build-out of a robust public charging network resulting in commission approval of ~\$700 million in additional utility investments in July 2020.
  - g) Maryland: Created state zero emission infrastructure council (ZEEVIC) which includes Commission representation and consultation from stakeholders and major IOUS (*e.g.*, Exelon - Baltimore Gas & Electric); develops policies, recommendations for ZEVs and development of infrastructure plan
- 8) Implement building code standards to promote growth of EV charging equipment
  - a) California: The California Building Standards Commission published mandatory building standards for EVSE installation in parking spaces at one- and two-family dwellings with attached private garages, multi-family dwellings, and non-residential

<sup>5</sup> National Association of State Energy Officials. Press Release, "15 States and the District of Columbia Join Forces to Accelerate Bus and Truck Electrification" (July 14, 2020). https://www.nescaum.org/topics/zero-emission-vehicles

<sup>6</sup> National Association of State Energy Officials. REV West Plan. https://www.naseo.org/issues/transportation/rev-west

developments in the California Green Building Standards Code within the California Building Standards Code)

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.
- **B.** Provide comment on what constitutes competitively neutral policies in the electric vehicle charging marketplace.
- C. Provide comment on the participation of public utilities in the electric vehicle charging marketplace.
- **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.
- **A.** The wide variety of strategies mentioned above demonstrate the diversity of approaches that have been successful in different markets and with various utilities, highlighting the importance of allowing the market to develop and "light touch" regulation of this space. FPL and Gulf believe the current regulatory structure is sufficient -- the PSC should be empowered to review and evaluate utility EV programs, tariffs and investments using a case-specific approach. With that in mind, any PSC review should acknowledge:
  - 1) The inclusion of EVSE in utility rate base will ensure investment in this important component of Florida's energy future.
  - 2) The general body of customers, and not only EV drivers, stand to benefit from transportation electrification as EV charging puts downward pressure on electricity rates and EVs reduce carbon emissions.
  - 3) Analysis of EVSE costs and benefits should be done on a system basis and not on a narrow cost of service analysis, *i.e.*, analysis of costs and benefits not limited to EV drivers only.
- **B.** FPL and Gulf interpret "competitively neutral policies" to mean policies that allow access and consumer choice and do not provide preference, judgment or unfair advantage for vendors, installation providers, EVSE providers and vehicles or vehicle types. FPL and Gulf believe the main priority of any policy should be to "encourage the expansion of electric vehicle use in this state," as stated in SB 7018. This will require greater investment in charging infrastructure by both public entities and private companies, including utilities. It's important that any policy not be overly prescriptive and have the unintended consequence of impeding market growth, *i.e.*, "light touch" regulation allowing utilities to participate in the marketplace as discussed above. FPL and Gulf believe as the EV market grows and matures a competitively healthy market will follow.

- **C.** Public utilities have an integral role to play in driving EV adoption and supporting the growth of EV charging infrastructure and the market in general. Please see the response II.C. for details on the importance of utilities and the recommended structures for utility involvement in Florida. The following is a non-exhaustive list of the importance of participation of public utilities:
  - 1) Utilities are well-positioned due to economies of scale and long-term business stability and can ensure adequate, fair and reliable coverage. Utility ownership is critical to ensure EVSE is deployed in a way that:
    - a. Expands access to EVSE by filling gaps, with a focus on ensuring equitable access in underserved and low-income areas
    - b. Ensure evacuation routes, including primary and secondary highway corridors, are adequately served and resilient to ensure storm support
    - c. Puts downward pressure on rates, benefitting the broader community, and not just EV drivers
    - d. Optimizes grid to better manage network congestion and reduce grid stabilization costs
    - e. Ensure charging infrastructure is installed and operated safely and reliably. Private investment and initial capital incentive efforts, such as grant programs, undesirable delays in deployment or asset abandonment as discussed above
  - 2) As EV penetration increases, utilities can leverage technology and utility-owned charging to manage the impact of EVs on the grid.
  - 3) Utilities can integrate EVSE into existing pricing models as well as new rate designs that improve the overall value proposition to the customer.

Overall, utilities are best positioned to understand the complete charging ecosystem and can enable well-planned EVSE and programs that ensure the charging needs of today's vehicles are met with robust solutions that are prudently built to reliably serve the needs of tomorrow.

**D.** Regulatory structures should allow for investment opportunities by private investors and utilities to help grow the EV charging station infrastructure market during the nascent stage of EV adoption. As of the first half of 2020, public utility commissions in 14 states including Florida have approved electric utility ownership of EV charging stations<sup>7</sup>. Examples include California, Colorado and Maryland each of which have adopted effective regulatory structures regarding electricity supply of EV charging station infrastructure that could be implemented in Florida.

In **California**, the California Public Utilities Commission (CPUC) Decision 14-12-079 allows investor-owned utilities to own and operate charging stations, with approval provided on a case-by-case basis. This has been further complimented by Assembly Bills 1082 and 1083

<sup>&</sup>lt;sup>7</sup> Edison Electric Institute, "Electric Transportation State Biannual Regulatory Update: June 2020,

https://www.eei.org/issuesandpolicy/electrictransportation/Documents/FINAL\_ET%20Biannual%20State%20Regul atory%20Update\_June%202020.pdf

which authorize electric utilities to file an application to propose pilot programs for installation of electric vehicle charging stations at city and county parks, state parks and beaches, school facilities and educational institutions. Most recently, California passed Assembly Bill 841 requiring utilities to invest in the distribution and utility-side upgrades required to support electric vehicle charging infrastructure. As of September 2020, the CPUC has approved over \$1.6 billion in utility investments which includes a combination of utility-owned infrastructure, make-ready investments, vehicle-to-grid applications, incentives, education and research.

**Colorado** enacted SB 19-077 in May 2019 authorizing utilities to earn a return on charging infrastructure and requiring electric utilities to submit electric transportation proposals to the Commission by May 2020 resulting in a \$102 million proposal by Xcel Energy Colorado focused on multiple customer segments and offering portfolios to include turn-key services and utility-owned infrastructure.

In **Maryland**, the commission approved case number 9478 filed by Exelon Joint Utility resulting in \$52 million in vehicle charging program offerings including utility-owned infrastructure and tariff schedule EVP for utility owned electric vehicle public charging. The commission supported utility owned public infrastructure in the near term to kick start deployment.