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ABB

October 31, 2018

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CLERK'S OFFICE

The Honorable Jocelyn G. Boyd
Chief Clerk/Administrator
The Public Service Commission of South Carolina
101 Executive Center Drive, Suite 100
Columbia, SC 29210

Reference: Application of Duke Energy Progress, LLC and Duke Energy Carolinas, LLC for Approval of Proposed Electric Transportation Pilot and An Accounting Order to Defer Capital and Operating Expenses. Docket numbers: 2018-322-E and 2018-321-E

Dear Mrs. Boyd,

ABB is pleased to support Duke Energy Progress and Duke Energy Carolinas (collectively "Duke Energy") Proposed Electric Transportation Pilot (EV Pilot). The EV Pilot helps lay the foundation for the deployment of reliable and accessible EV charging infrastructure that will serve all South Carolinians.

ABB has nearly 1,000 employees in South Carolina, with major facilities in Greenville, Belton, and Florence. ABB is a global electrification and automation leader and has been developing and deploying electric vehicle fast charging technology for nearly a decade. With more than 8,000 DC fast-chargers (DCFC) deployed worldwide, ABB has the largest installed base of high power EV chargers in the world. ABB is also the leading provider of power grid equipment worldwide.

The EV Pilot's focus on a broad set of EV use-cases, including residential, public, and transit charging, will likely accelerate adoption and produce learnings that will make future deployments more successful. Here are some benefits of the EV Pilot:

- **Utility leadership** - Utilities provide the foundation for EV infrastructure and they should be allowed to recover investments that enable EV charging deployment and also invest in charging systems themselves. Importantly, utilities are well-equipped to manage large infrastructure projects that incorporate high operational excellence, reliability and ubiquitous quality of service over the long life-cycle of charging stations.

- **Intelligent Charging and Grid Integration** – EV's create opportunities for enhanced grid reliability for all electricity customers, through advanced load management, demand-response, ancillary services, and distributed storage. Intelligent charging systems that collect and analyze data and allow for "managed charging" are key enablers of these opportunities. Data collected and analysis created should be shared with stakeholders in a transparent way so that the learnings from the EV Pilot can positively impact future deployments of EV charging infrastructure.

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- **Diverse Charging technologies** -While a majority of charging tends to happen at home and at work, the general public will not feel comfortable investing in an EV if they do not feel there are adequate fast charging options available in convenient locations. This becomes a concern when residents have a long day of errands or an intercity commute exceeds the 'single charge' range of their EV. This is why public fast charging is an important component of any EV infrastructure plan. Recent studies have shown that the total cost of ownership of electric buses is lower than conventional diesels. Transitioning public transit bus fleets to electric can lead to significant savings for customers and the communities that rely on public transit.

As the Commission and Duke Energy move forward with a transportation electrification program, we strongly suggest they both consider the following:

- **Maintenance and Operations Metrics.** Successful EV roll-outs are almost universally defined by proactive maintenance and operational models for long term charger health; rather than solely upfront cost. This is particularly important for public chargers which tend to see more wear than residential chargers. Remote monitoring of public chargers, preventative and corrective service plans, and post-warranty part and labor costs should be taken into account when evaluating public charging installations. Accordingly, ABB recommends that EV initiatives incorporate metrics and standards for operational health and uptime of charging infrastructure, as system health is the foundation for the consumer experience.

- **Interoperability-** Interoperability promotes innovation and diversity of offerings, leading to better customer experience and higher charger utilization rates. Some interoperability choices include, harmonizing networks with varied payment systems, allowing for roaming, open communications standards interoperable hardware, and back-end architectures. Interoperability supports: (a) innovation, by allowing multiple technologies and providers to compete; and by (b) protecting infrastructure investment by enabling upgrades and expansion through competitive bidding, not technology lock-in with vendor specific solutions.

As a technology company and manufacturer in South Carolina with significant experience in DC fast charging and power grids, ABB considers the EV Pilot as likely to benefit all of Duke Energy customers, achieve sustainability goals, and promote technology leadership throughout South Carolina.

Respectfully,

Asaf Nagler
Senior Director, Government Relations