Electric Vehicle Fleet and Infrastructure





The electric vehicle (EV) transition is well underway and can be an extremely daunting prospect for resource- and knowledge-constrained clients to navigate. C&S employs a team of planning, engineering, and construction experts who have hands-on experience with all aspects of the vehicle electrification challenge. Together, we have helped our clients navigate the various pathways and phases of vehicle electrification including:

- Strategic planning and budgeting for fleet transitions
- Selecting, siting, and designing charging infrastructure
- Evaluating electrical infrastructure capacity
- Installing EV charging stations
- Securing federal and state grants, utility rebates, and tax incentives for vehicles and infrastructure
- Master planning for wholefacility/community energy sustainability and resilience to ensure proper integration of EVs and chargers with parking, buildings, on-site generation, and electrical infrastructure.

Fleet Planning

C&S helped Philadelphia International Airport, San Antonio International Airport, and Albuquerque International Sunport consider and plan for the transition of a range of fleet vehicles including buses, sedans, trucks, and ground support equipment to ensure that their fleet electrification would be executed on budget and consistent with airport master plans and sustainability goals. C&S has helped our airport clients secure more than \$100 million in federal funding for electrification initiatives.

Fleet Charging Infrastructure Analysis

C&S helped municipal transportation entities Central New York Regional Transportation Authority (CENTRO) and Niagara Frontier Transportation Authority (NFTA) take their first steps into the EV space with a practical evaluation of various hub facilities for electric bus charging infrastructure. Due to the nature of their operations, considerable infrastructure improvements were recommended. These recommendations included cost comparisons for each recommendation. With a fleet system, the phasing of buses was also a major consideration for how to integrate an infrastructure that could be budgeted over multiple years. NFTA has moved forward with an electric bus infrastructure at one hub, while CENTRO is still considering the alternative with insights provided by our evaluation.

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Charging Station Installation

As an approved contractor for National Grid, we have the qualifications and experience to properly install and commission Level 1, 2, and 3 EV charging stations.

Grants, Rebates, and Tax **Incentives**

EVs and charging equipment can be very expensive, particularly when DC fast chargers and the associated upgrades to electrical wiring come into play. The recent commitment to EV technology through an influx of federal dollars into EV infrastructure can substantially reduce local costs, making the transition affordable and feasible. We have in-house grant writers that comb the range of federal, state, and utility programs for our clients to support the purchase and deployment of vehicles and infrastructure.

Many states and utilities have their own incentives. For example in New York, the New York State Energy Research and Development Agency (NYSERDA) and utility companies offer a range of generous rebates for both EVs and charging infrastructure. In addition, New York state has tax credits for EV chargers. As a result, the cost of installing charging stations at C&S headquarters was 95% covered by a combination of incentives within a few months of project completion. We apply the same diligence to our clients' projects.

Community, Facility, and Sustainability Master **Planning**

The EV transition must often be considered within a broader context. C&S is a firm with diverse experience in comprehensive planning for clients that include airports, schools, municipalities, and other entities, each with their own set of requirements and goals. We work with our clients to understand how the EV transition fits into their "bigger picture" to ensure that their EV plans are supportive of, rather than disruptive to, these larger plans.





