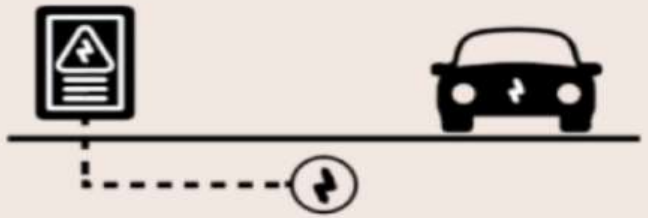
ESB Proposal for Electric Vehicle Infrastructure Installation

Electric Vehicle Supply Equipment (EVSE) Terminology

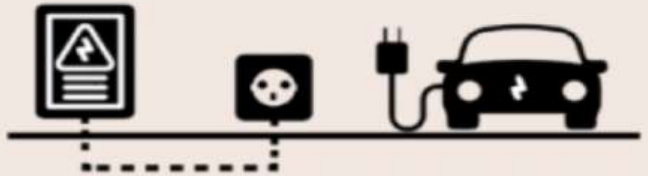
1. **EV-Capable**

   Install electrical panel capacity with a dedicated branch circuit and a continuous raceway from the panel to the future EV parking spot.



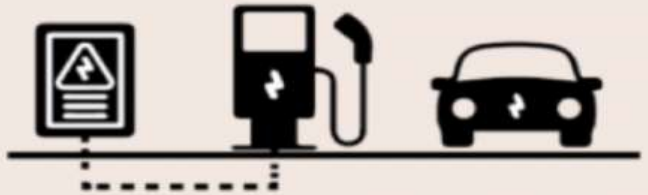
2. **EVSE-Ready Outlet**

   Install electrical panel capacity and raceway with conduit to terminate in a junction box or 240-volt charging outlet.

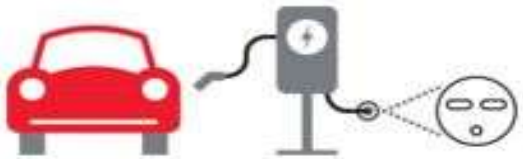


3. **EVSE-Installed**

   Install a minimum number of Level 2 EV charging stations.



Charging levels

		
Level 1 Charger	**Level 2 Charger**	**Level 3 Charger**
This charger has a 120-volt cord that plugs into the wall.	This charger requires a 208/240-volt service.	This is charger is typically used for public charging.
It can provide around 40 miles of range after charging overnight.[1]	It can provide 30-80 miles of range for every hour of charging.[1]	It can provide up to 40 miles of range for every 10 minutes of charging.[1]
This charger may not require an electrician.	An electrician is required to set up electrical wiring for a new outlet or breaker and a service panel upgrade if necessary.	It typically requires 480-volt service.

[1] Range depends on vehicle, speed, cargo weight, and other factors.

Draft Sustainability Plan

December 2022

Amend the City zoning code to **require** that EV charging stations be installed in all new single-family and multi-family housing developments of X units, new commercial enterprises including Y parking spaces, and any such pre-existing entity that incurs expansion or repair costs of at least 50 percent of its taxable value.

ESB Proposal:
City Council Adopt Resolution

That Recommends:

1) EVSE at new or expanded commercial construction. (specifically places of work).

2) EVSE at new multi-family residential construction.

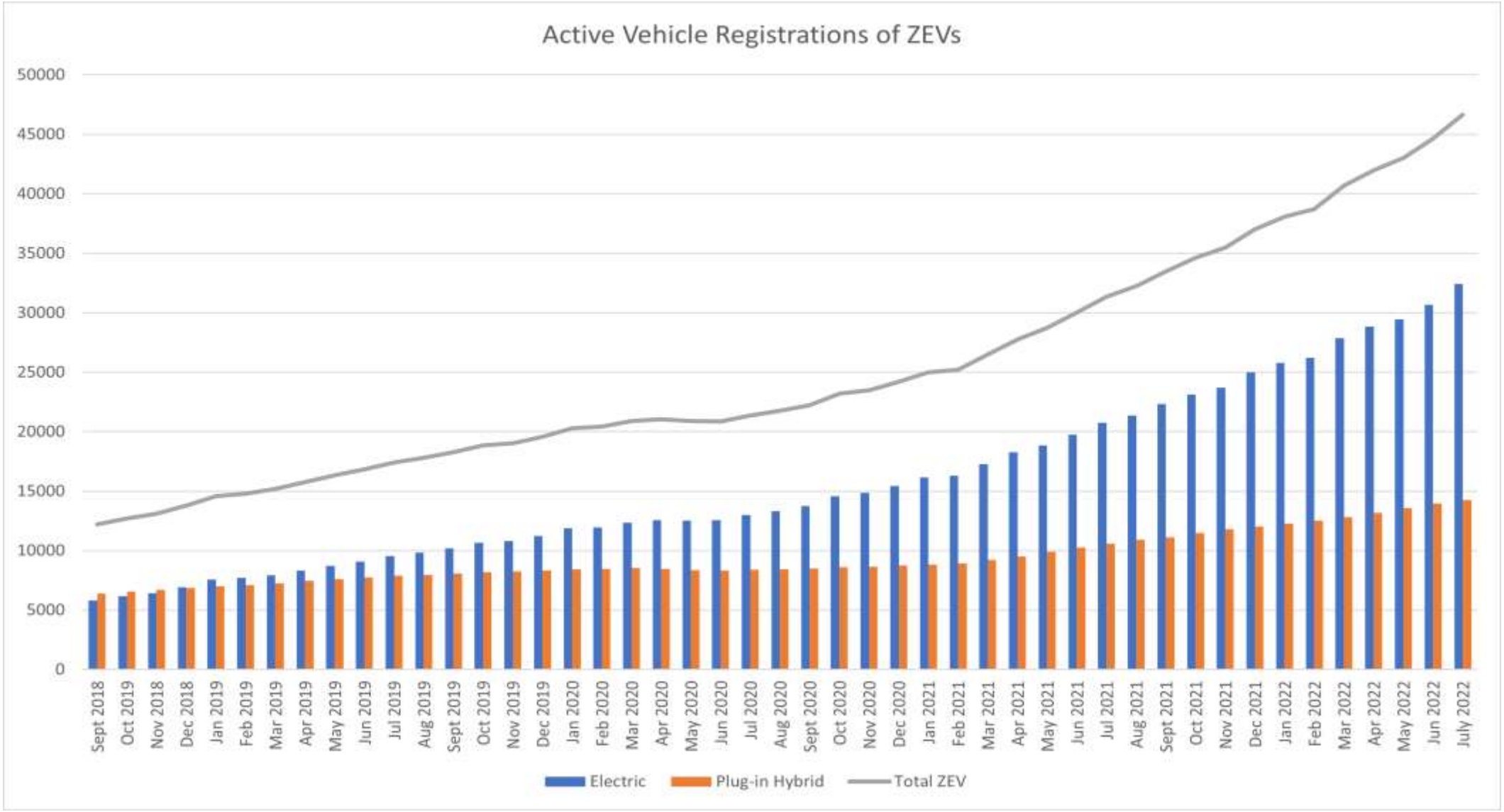
That Requires:

EVSE at new and renovated City construction.

Why NOW?
Opportunity to plan for the Future

- EVs are becoming more available and comparative cost of ownership is improving
- Opportunity to “future proof” new development
- In North Carolina, the Electric Vehicle Infrastructure Deployment (NEVI) plan funding will provide approximately $109 million to continue build out of the state’s electric vehicle charging infrastructure.
  - DC Fast charging will be available at least every 50 miles
  - Will likely promote DC Fast but will also support LEVEL 2 charger installation
  - Funding will likely be available to private sector including developers

North Carolina PHEV and EV Registrations



Charlotte Unified Development Ordinance

Effective June , 2023

19.3 REQUIRED ELECTRIC VEHICLE CHARGING STATIONS

A. Electric vehicle (EV) charging stations are required per Table 19-2: Required EV Charging Stations for:

1. Multi-family stacked dwellings
2. The residential component of mixed-use developments
3. Hotels
4. Parking lots and parking structures as a principal use

B. There are two types of electric vehicle (EV) charging stations required by this article: EV-Capable and EVSE-Installed. The types of electric vehicle (EV) charging stations are defined in Article 2.

Table 19-2: Required EV Charging Stations

Total Number of Provided Off-Street Parking Spaces	EV-Capable Spaces		EVSE-Installed Spaces
0-9 spaces	None		None
10-25 spaces	20% of spaces (rounded up)		None
26-50 spaces	20% of spaces (rounded up)		1 space
More than 50 spaces	20% of spaces (rounded up)		2% of spaces (rounded up)

C. In determining the number of required EV charging stations, when the result contains a fraction, any fraction is counted as one parking space.

D. For the residential component of mixed-use developments, the number of required EV charging stations shall be applied on a one-to-one ratio to the number of residential units in the development. However, where the number of parking spaces in a development is less than the number of residential units, the required EV spaces will be based on the total number of spaces provided.

E. EV charging stations shall only count toward a development's parking maximum if spaces are EV-Capable. EVSE-Installed stations do not count toward parking maximums.

F. Where a parking minimum is required, EVSE-Installed stations shall count as two spaces.

G. Any EVSE-Installed stations provided in addition to the required EVSE-Installed stations may be counted toward the EV-Capable requirement as two EV-Capable stations.

Other cities that **REQUIRE** EVSE

ORLANDO - In August 2021, City Council approved an Electric Vehicle (EV) Readiness code that requires new construction projects to meet current EV charging needs through installation of charging stations and prepare for future demand with “EV Capable” parking spaces.

- 2% of parking spaces to be equipped with EV charging stations
- 10-20% of parking spaces to be build “EV Capable,” with dedicated capacity in the electrical panel and conduit running to future EV charging spaces.

ATLANTA – In 2017, the City of Atlanta passed an ordinance that will require new residential and commercial construction to include Electric Vehicle Supply Equipment (EVSE) infrastructure for future use. This ordinance applies to new off road parking, expansion of existing off-road parking AND single family homes.

- 20% of parking spaces in new commercial and multifamily structures be "EV ready."
- all new single family homes be equipped with the infrastructure to accommodate future EV charging stations (conduit, wiring and electrical capacity).

Possible Incentives

- Expedited permitting process once development is approved.
- Increased density of development units.
- Adjustments to parking space allocations.
- Adjustments to landscaping requirements.

Implementation

- Once approved by City Council, ESB will work with the City Planning Department to prepare a brochure that can be distributed to developers.
- ESB would actively support the City Public Works department to help identify opportunities for EVSE installation at new or renovated facilities, including assisting with grant funding applications.

THANK YOU FOR YOUR CONSIDERATION!