CITY OF HENDERSONVILLE
ENVIRONMENTAL SUSTAINABILITY BOARD

Operations Center - Assembly Room | 305 Williams St. | Hendersonville NC 28792

Thursday, October 20, 2022 – 3:00 PM

AGENDA

1. **CALL TO ORDER**

   A. Roll Call- *Kelly Pahle, Chairperson*

2. **APPROVAL OF AGENDA**

   A. Approval of Agenda- *Kelly Pahle, Chairperson*

3. **APPROVAL OF MINUTES**

   A. Approval of Minutes from 09_15_2022- *Kelly Pahle- Chairperson*

4. **PRESENTATIONS**

   A. Alliance Auto Gas- *Happy Fox and Stuart Weidie, Alliance Autogas*

5. **PUBLIC COMMENT**

   A. Public Comment *(allotted time, 15 minutes)*

6. **OLD BUSINESS**

   A. Update on membership with ICLEI- *Kelly Pahle, Chairperson*

   B. Community Garden Follow Up- *Guest, Crystal Cauley*

   C. EV Slide deck Approval- *Will Garvey, Board member*

#1 Thanks for allowing us to present our proposal to you today! My name is _____ and I am representing the ESB today. We are here with a proposal to support the installation of electric vehicle charging infrastructure in Hendersonville.

#2 To start things off - a bit of technical background – EVSE or Electric Vehicle Supply Equipment is a formal building code term that applies to the installation of the infrastructure necessary to support electric vehicle charging. EV capable is the most basic approach and includes installation of the raceway (usually steel or PVC conduit) to a likely future destination for charging equipment – it also includes a dedicated circuit at the electrical panel for future use. EV – Ready is basically the same approach but with wiring pulled in the conduit and a "live" 240 volt charging outlet at the terminus. EV Installed is the same approach with the

exception that a working commercial EV charging station is installed at the terminus – this is the situation with the EV chargers at City parking lots.

#3 And very briefly – there are three charging levels for EV supply equipment. The first, LEVEL 1, is simply a 120 volt outlet such as where one might plug in a lamp – this approach is very basic and provides minimal charging speed – it is not part of the ESB recommendation. The second level is LEVEL 2 charging which is usually a commercial EV charger that provides "medium: charging speed – it is the most common home or work charging approach and can fully replenish an EV battery in generally 5-8 hours – the equivalent of overnight or a workday and is the current framework used in City Parking lots. LEVEL 3 or DC FAST charging is high voltage/high speed and is commonly found at commercial EV charging stations such as TESLA and ELECTRIFY AMERICA superchargers. The ESB recommendation would be for the installation of LEVEL 2 charging infrastructure for the City and in new development if the builder elected to pursue a full EV Installed approach.

#4 As you will recall, in December of last year the ESB prepared a draft Sustainability Plan that suggested that EVSE be required at all new development. At that time it was unclear whether such an approach was feasible. After researching implementation in other cities, we believe it is now appropriate to promote the concept in Hendersonville with a small adjustment.

#5 The ESB is now recommending that the City Council adopt a resolution that will promote (not require) Electric Vehicle Supply Equipment at new development in Hendersonville. The resolution would also require EVSE at new and renovated City Construction to support future City use of EVs. We believe this approach supports your continuing commitment to sustainability while providing flexibility to the development community and preparing City Public Works for future electrification opportunities.

#6 So why now? EVs are becoming more common. Automakers are increasing EV production and some will fully phase out the use of internal combustion engines by 2035 – far sooner than the life of residential development now under construction. Over 80% of EV owners charge their vehicles at home or work when they are not travelling long distances and this approach will future proof planned development in a cost effective way. In addition, and probably the biggest driver, significant funding has been allocated for the construction of EV charging infrastructure across North Carolina. This in turn, will help address the "range anxiety" that causes some new car buyers to avoid EVs. These funds are likely to be managed like the VW Settlement funds which were available to a wide range of applicants including private sector developers. And for the City, EVs are a perfect choice for future fleet replacement due to mileage use and ability to charge overnight.

#7 And as we can see from this graph, EV registration trends in NC are increasing. As of July of this year, Henderson County has approximately 290 registered EVs. (190 PHEVs)

#8 When we prepared the draft sustainability recommendations, you requested that we look for other examples where the recommendations might have been pursued. In North Carolina, the City of Charlotte recently adopted a Unified Development Ordinance that, when implemented, will require EV Charging stations as part of new construction. We understand that other cities in North Carolina are also considering this approach.

#9 There are other cities in the Southeast that have already implemented EVSE **REQUIREMENTS.** Clearly Hendersonville is not Orlando or Atlanta and we show you

this only to show that the concept is not necessarily a new one and that the approach of using a certain percentage of parking space to guide the design is fairly consistent.

#10 Since the resolution would take the form of a recommendation, we have been asked what might be provided as incentives for the development community to pursue EVSE installation. While we would look to the Planning Division for the best approach, other cities have taken the approach of providing incentives such as expedited permitting and adjustments to density, parking and landscape requirements to promote EV infrastructure.

#11 And finally, if you approve a resolution supporting EVSE implementation on a voluntary basis, the ESB will work with City staff to prepare materials that can be provided to the development community. Further, we are committed to assist the City in researching the installation of infrastructure necessary to capitalize on the benefits of electric vehicles to the city's fleet, including preparing draft grant applications.

#12 Thank you!

D. parklet - sub pod bike rack- *Virginia Tegel, Board Member*

7. **SUB COMMITTEE UPDATES**

A. Earth Day Subcommittee - Setup meeting dates and times- *Ann Twiggs, CoChair*

B. Bee City - *Will Garvey, Board Member*

C. Recycling and Plastics- *Geri Conley / Nance Grady Mountain True Contact*

D. City Council - *Lyndsey Simpson, Council Woman*

8. **NEW BUSINESS**

A. Invite Southeast Sustainability Directors Network for November -*Will Garvey, Board Member*

B. Timing of Agenda Items- *Will Garvey, Board Member*

9. **ADJOURNMENT**

The City of Hendersonville is committed to providing accessible facilities, programs and services for all people in compliance with the Americans with Disabilities Act (ADA). Should you need assistance or an accommodation for this meeting please contact the City Clerk no later than 24 hours prior to the meeting at 697-3005.

CITY OF HENDERSONVILLE
ENVIRONMENTAL SUSTAINABILITY BOARD

Operations Center - Assembly Room | 305 Williams St. | Hendersonville NC 28792

Thursday, September 15, 2022 – 3:00 PM

MINUTES

1. CALL TO ORDER

A. Roll Call - *Kelly Pahle, Chairperson*

Everyone was present except for Beth Stang, Anthony Baltiero, and Ann Twiggs.

Nance Grady was also present- She is the new mountain true member.

APPROVAL OF AGENDA

Unanimous Vote

2. Approval of Agenda -*Kelly Pahle*

APPROVAL OF MINUTES

Unanimous Vote - motion by Virginia Tegel

3. Approval of Minutes from 08_18_2022

SPECIAL ANNOUNCEMENT

4. Sustainability Manager Update - *John Connet, City Manager*

Formal apology to the board as the sustainability manager position will be a split position with public works, Originally thought the position would just be fore sustainability purposes.

John Connet recommends to the board to keep setting goals, lists of how the position would be used.

PUBLIC COMMENT

5. Public Comment (*allotted time 15 minutes)*

Lynn Huffman - Sustainability Plan Walkability Element

The walkability presentation included planning for safe cycling crossings. Examples are from Xenia, Ohio. Discussed ideas on cycling crossings downtown, i.e. one side of parallel parking dedicated to a bike path, specific traffic lights for bicycle traffic, barrier poles.

We also had public comment from Carlos Ruiz, of Hendersonville NC. He spoke on the EV club, and having a Tesla club coming, event planning, and combining efforts with the Green Expo. Proposed serving on a subcommittee. Currently Green expo is penciled in for April 23rd 2023.

OLD BUSINESS

SUB COMMITTEE UPDATES

6. Bee City - *Will Garvey, Board Member*

   Migration of butterflies in schools. 50% filled classrooms.

   On Oct. 20th,Blue Ridge Community College is showing My Garden of 1,000 bees.

7. Recycling and Plastics -*Geri Conley, Board Member*

   Campaigning on main street to start soon. Asheville is trying to get councils approval this month.

8. City Council - *Lyndsey Simpson, Council Woman*

   Lyndsey suggested they go a head and apply for Green Expo event, make a list of vendors/ sponsors and incentives. Ann Twiggs Volunteered to head up this subcommittee.

   Mayor gave proclamation to plant a magnolia to be designated as "mother earth city" and made a park bench in Elly Travis's name in Patton park.

NEW BUSINESS

* We have officially requested to join ICLEI

9. Daring Cities - *Virginia Tegel, Board Member*

10. Future Collaboration Opportunities- *Virginia Tegel, Board member*

    *(*Eric Bradford, operations director at Greenworks - speak at future ESB meeting regarding collaboration

Green Expo collab with CC

Conservation Learning Center, HC Soil and Water- Farm City at Jackson Park 10/1

Hard to Recycle, Jackson Park 9/17

Subpod- compost survey to city staff

Trash Trout, new installation on Brittain Creek

Register someone to go to the HC Soil and Water event, Farm city at Jackson Park on 10/1. Goal is to see parklet set up.

11. Green Meadows Community Garden Community Meeting - *Mary Ellen Kustin, Board member*

12. Meeting List for 2023

    Every third Thursday at 3pm.

    January 19th

    February 16th

    March 16

    April 20

    May 18

    June 15

    July 20

    August 17

    September 21

    October 19

    November 16

    December 21

    Change Dec 21 to December 14th.

    Board requested name placards.

Voted to have a virtual meeting for those who wish to attend virtually that are not board members.

ADJOURNMENT

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Who is Blossman Gas?

Blossman Gas, Inc. has been providing propane to families and businesses throughout the Southeast and Mid-Atlantic for 70 years.

Serving customers in 19 states from over 85 branches, the family-and employee-owned company delivers propane and efficient propane appliances to customers.

Leading the industry in technician training, Blossman is a full-service company that provides everything from propane delivery to appliance sales, installation and service.

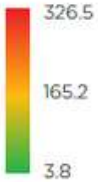
Carbon Intensity: Electricity vs. Propane

Renewable Propane

47 gCO2eq/MJ
AVERAGE FOOTPRINT

Conventional Propane

79.6 gCO2eq/MJ
AVERAGE FOOTPRINT

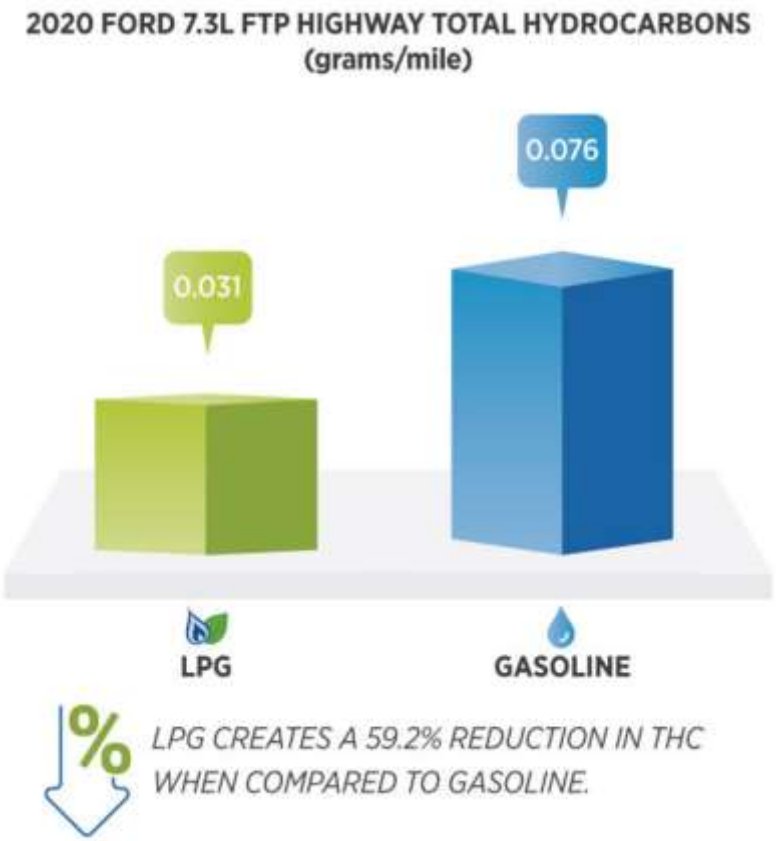


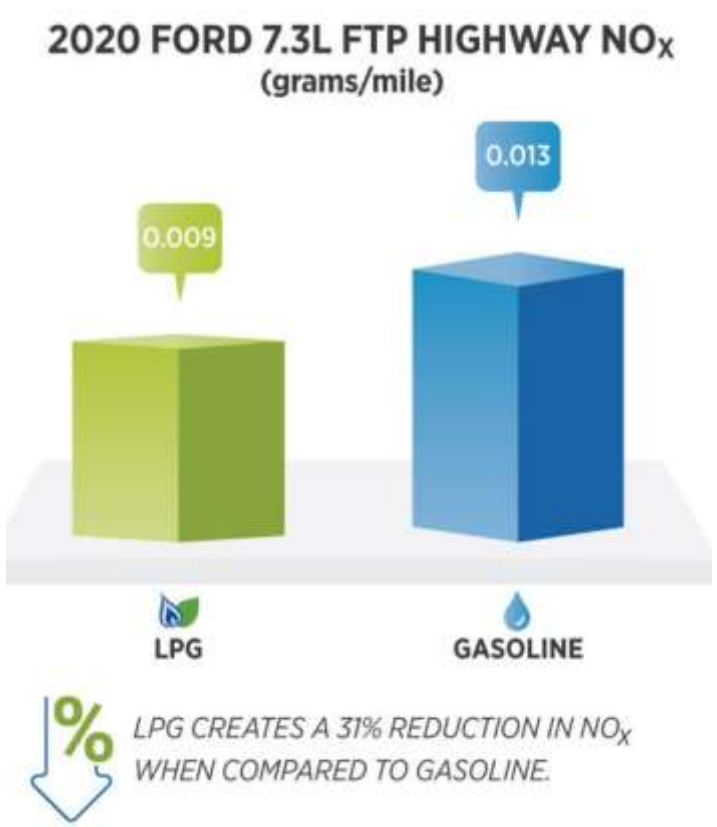
Electric Grid

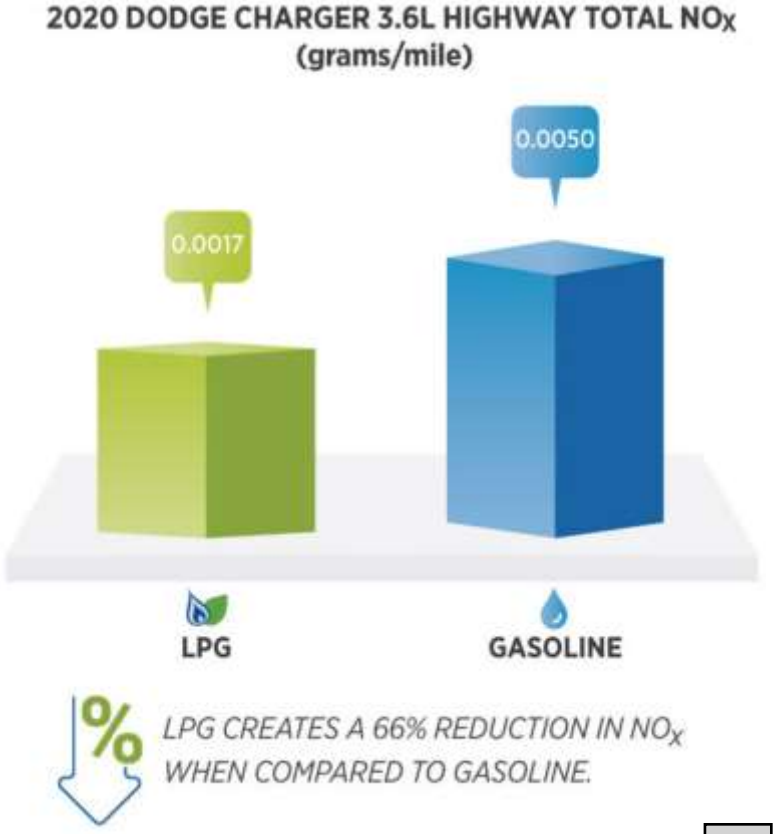
167 gCO2eq/MJ
AVERAGE GRID ELECTRICITY

The transition from a fuel intense energy system to mineral intense energy system will take decades.

Autogas Emissions







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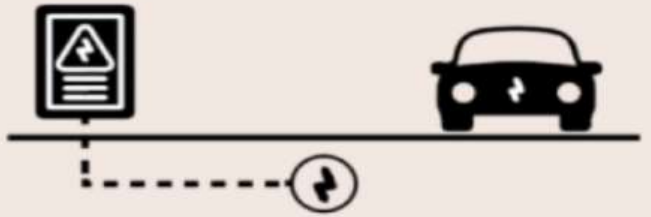
ESB Proposal for Electric Vehicle Infrastructure Installation

Electric Vehicle Supply Equipment (EVSE) Terminology

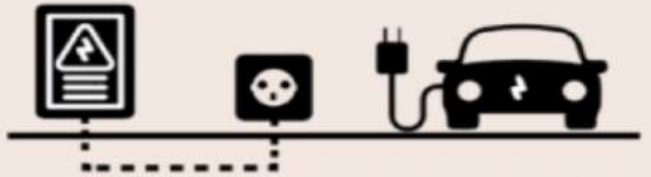
1. EV-Capable

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

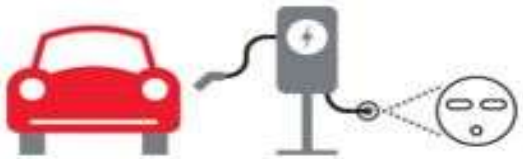
Install electrical panel capacity and raceway with conduit to terminate in a junction box or 240-volt charging outlet.



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.

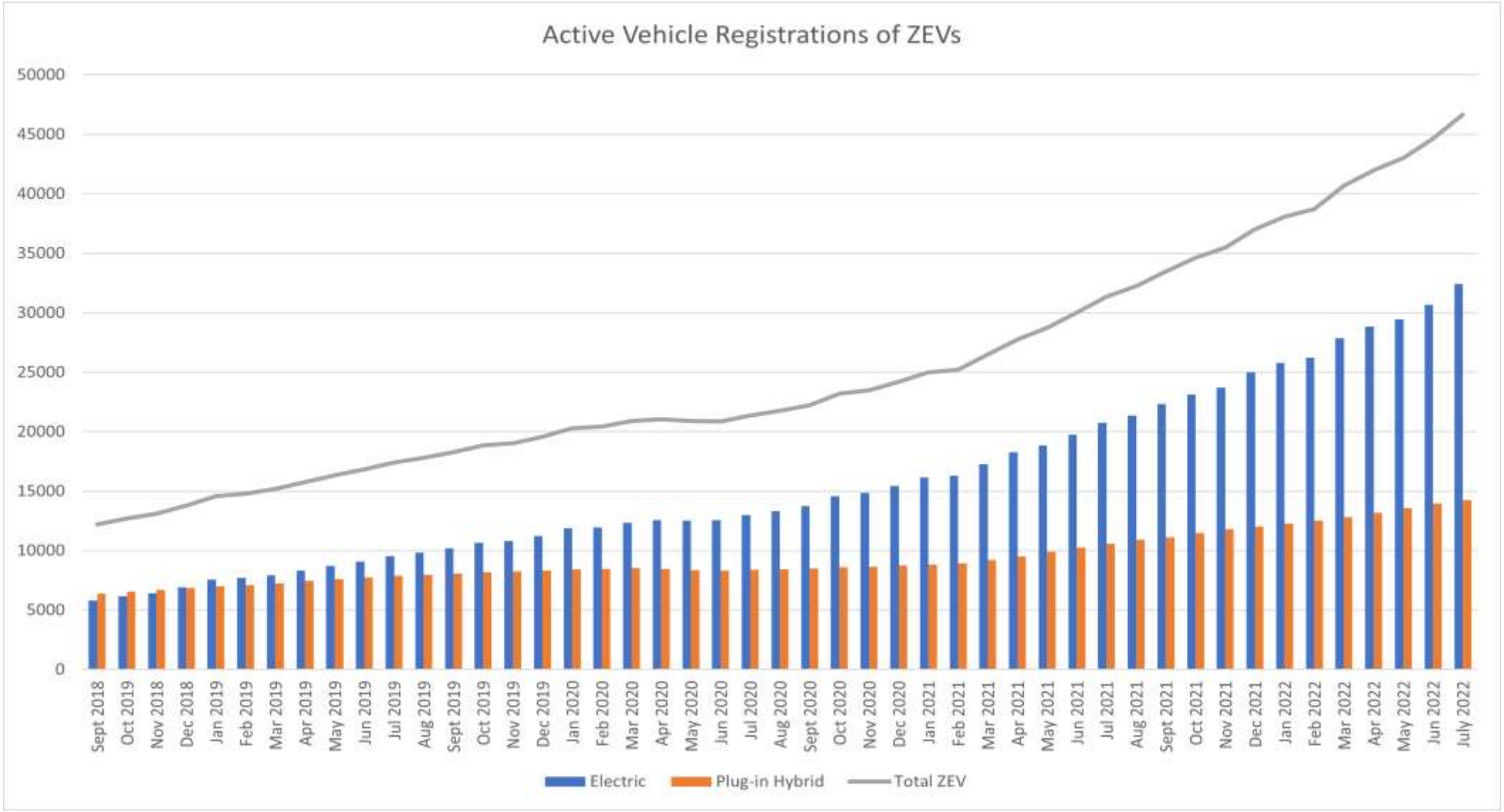
That Requires:

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!