

# Electric Vehicle Charging Station Study

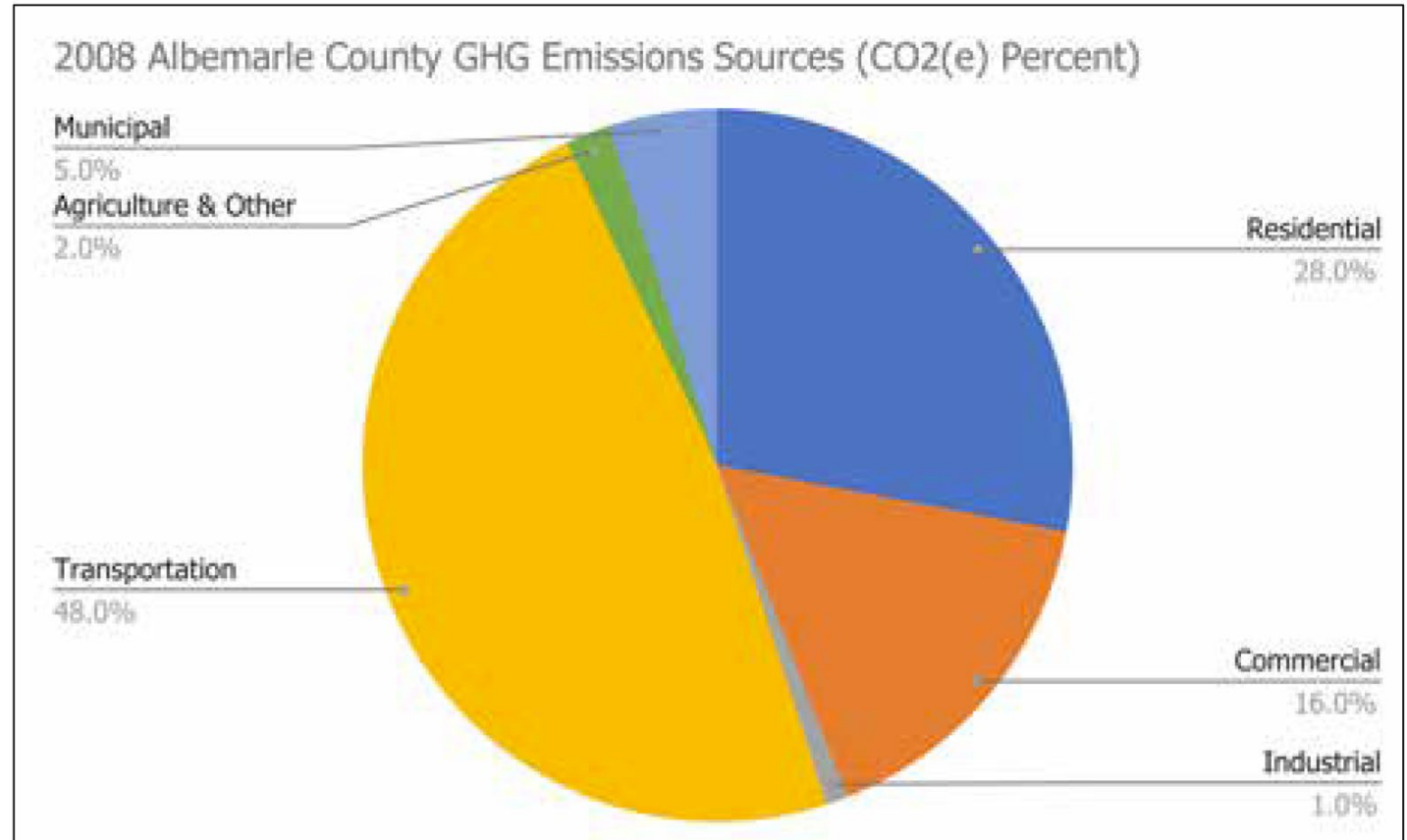
Region 10

# Benefits of Electric Vehicle Use

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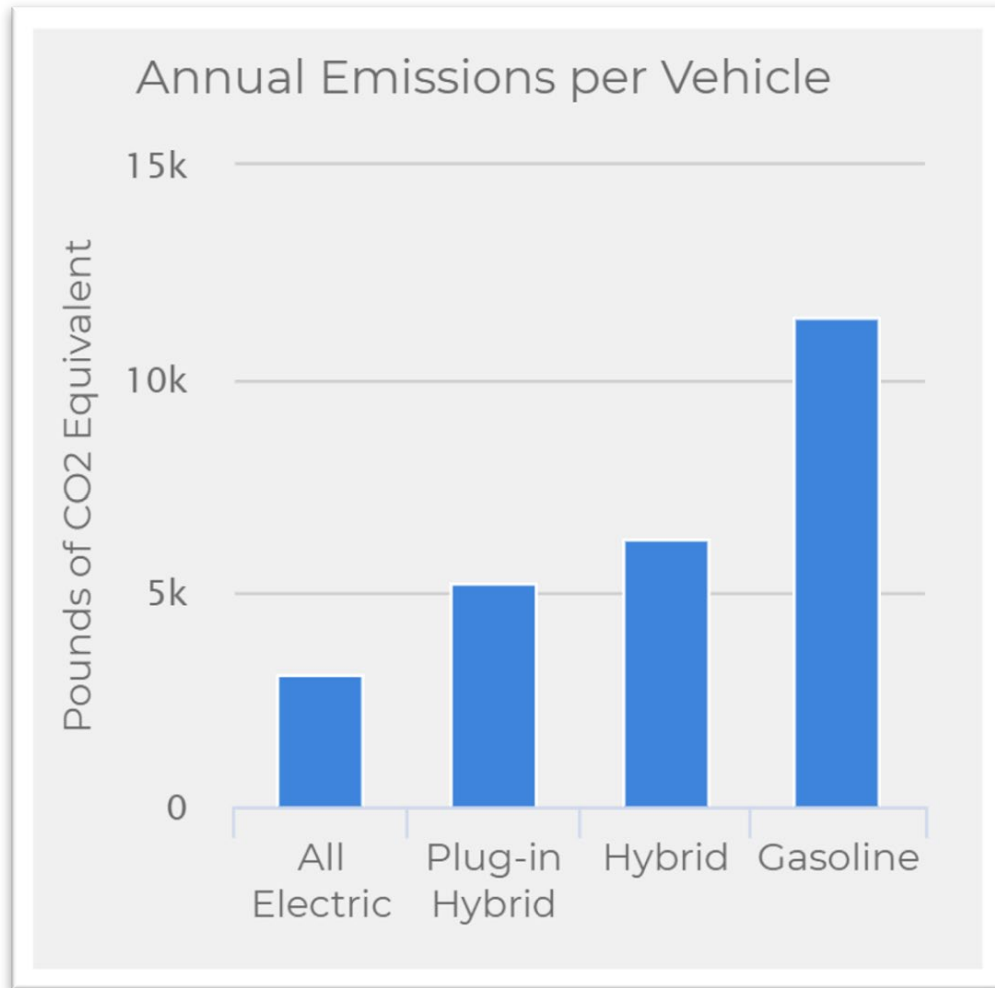
Transportation is the largest single source of greenhouse gas emission in the MPO area.

Figure 1: GHG Emissions Sources in Albemarle County



Source: Albemarle County Climate Action Plan Phase One

Figure 2: Comparison of Vehicle Emissions



Source: (Energy, Emissions from Hybrid and Plug-In Electric Vehicles, 2020)

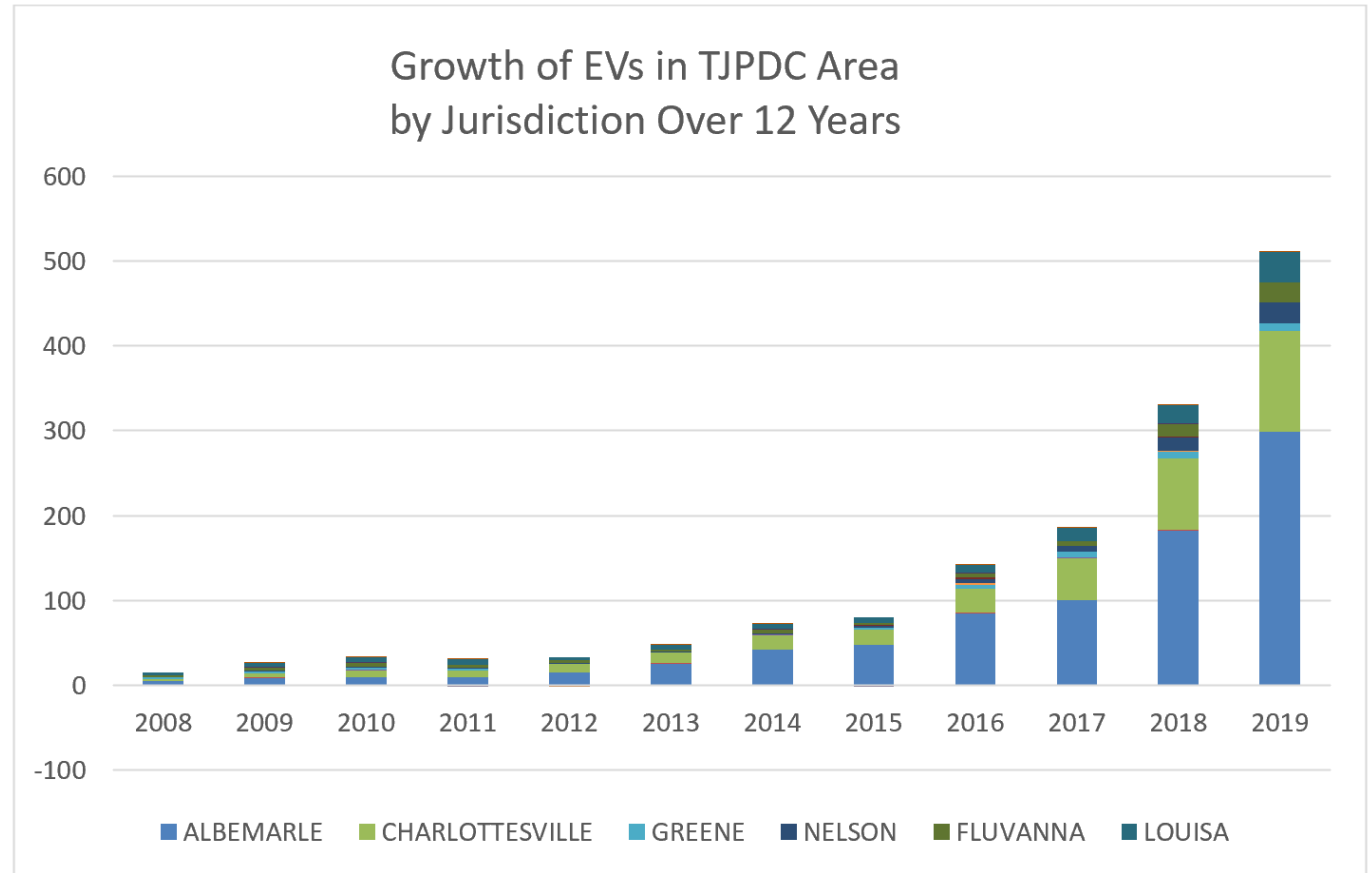
# Benefits of Electric Vehicle Use

EVs produce almost 70% less emissions than gas-powered vehicles.

# Benefits of Electric Vehicle Use

EV registrations in the TJPDC area have grown between 30% and 49% from 2008 to 2019

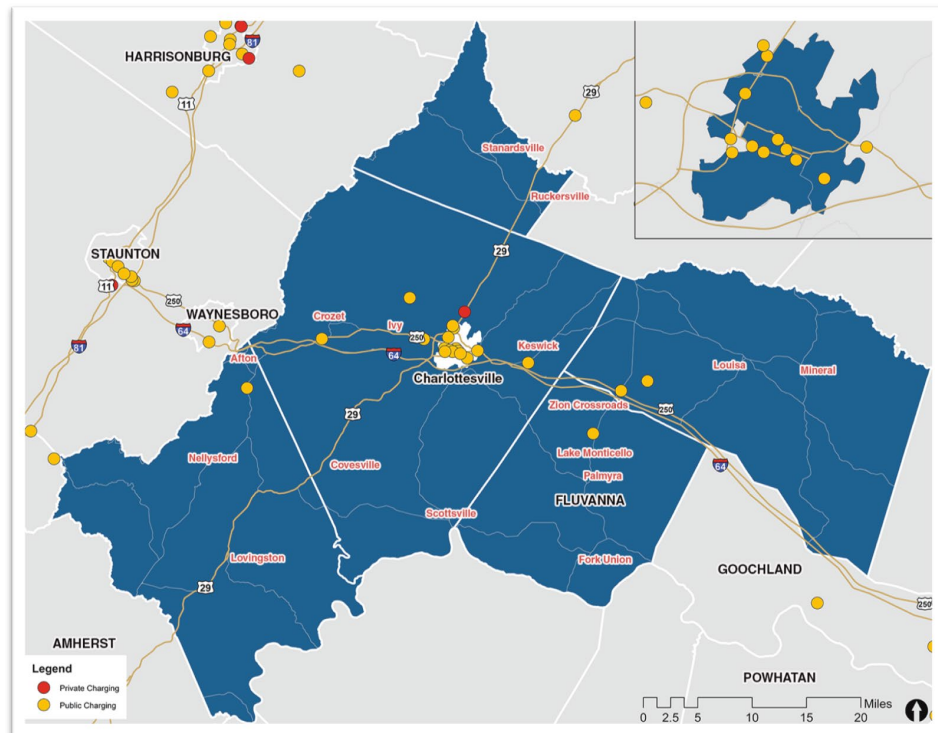
Figure 4: Historical EV Growth in TJPDC



Source: Virginia Annual Vehicle Registration Data provided by Virginia DMV to Virginia DEQ each year

# Infrastructure Supporting EVs in TJPDC's Region

Figure 6: Charging stations in Charlottesville



Source: TJPDC

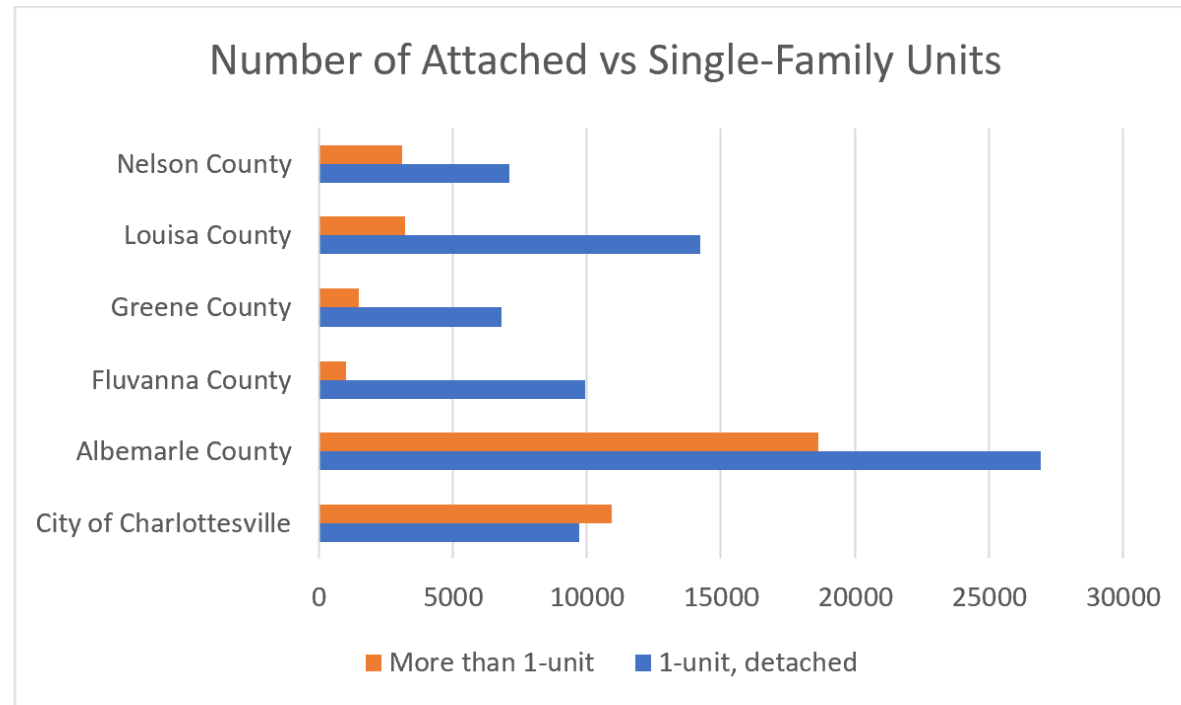
Table 2: Number of EV Charging Stations in TJPDC

Jurisdiction	# Stations	Jurisdiction	# Stations
ALBEMARLE	7	NELSON	1
CHARLOTTESVILLE	10	FLUVANNA	1
GREENE	0	LOUISA	1

Source: [www.plugshare.com](http://www.plugshare.com)

The U.S. EPA reports that 80% of privately owned EV charging is completed at home.

Figure 14: Estimated Number of Housing Units with Parking that is Suitable to Installing an EV Charger



Source: U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

There are an estimated 40K housing units in the TJPDC region with potential barriers to installing home charging facilities

Table 4: Number and type of Housing Units by Jurisdiction

Number and Type of Housing Units by Jurisdiction			
Geographic Area	% More than 1-Unit	More than 1-unit	1-unit Detached Single-Family
City of Charlottesville	53%	10,938	9,704
Albemarle County	41%	18,606	26,914
Fluvanna County	9%	1,018	9,930
Greene County	18%	1,481	6,810
Louisa County	18%	3,203	14,235
Nelson County	30%	3,085	7,090
<b>Total TJPDC Region</b>	-	38,331	74,683

Source: U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

# Strategies to encourage personal EV use



Financial incentives for vehicle purchase and charging infrastructure



Support installation of charging infrastructure for residents who do not own parking close enough to install EV charging infrastructure



# Strategies to support personal EV use

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Install charging infrastructure in public parking spaces that residents use to park overnight

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Provide guidelines for EV charging stations

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Develop local ordinances and policies to encourage new housing developments to include EV charging infrastructure

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Make ready standards, encourage new multi-family construction to provide electrical capacity necessary to accommodate future charging infrastructure

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Encourage employers to install EV charging stations for employees