A review of national EV statistics and state-specific travel patterns and transportation electrification metrics
ABOUT
ATLAS PUBLIC POLICY

• DC-based policy tech firm started in 2015
• We equip businesses and policymakers to make strategic, informed decisions through the greater use of technology that aggregates publicly available information

Our Key Focus Areas

• **Access**: Collect and disseminate publicly available information.
• **Interpret**: Create technology to spur insights and conduct data-driven analyses.
• **Empower**: Strengthen policymakers, businesses, and non-profits’ ability to meet emerging challenges and identify and seize opportunities.
The EV Hub gives stakeholders from across the EV industry quick access to key data and information on the market, policies and regulations, and activities by the EV community.

• A one-stop shop for businesses, policy professionals, and the advocacy community to learn more about what’s going on in the EV market.

• A comprehensive platform for the EV community: [www.atlasevhub.com](http://www.atlasevhub.com)

Free access for public agencies and Clean Cities Coordinators!
DATA SOURCES

- All national data is collected by Atlas
- State-specific metrics are either statewide or from 2 urban regions in North Carolina (Core Based Statistical Area):
  - Charlotte (Charlotte-Concord-Gastonia, NC-SC)
  - Raleigh (Raleigh, NC)
- Caveats
  - Travel and transit data include neighboring states (South Carolina)
  - National Household Travel Survey (NHTS) data is a survey (not population-level data)

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<th>Data Sources by Category</th>
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NATIONAL OVERVIEW

Review of EV sales, government funding, and market developments
The auto market overall saw a 24% decline in the first half of 2020 due to COVID-19.


EV market holding steady around 2% of all light-duty vehicle sales and > 5% of passenger car sales.

Tesla accounts for 60% of sales since 2018.
$8.5 BILLION IN NEW PRIVATE INVESTMENT ANNOUNCED IN JULY AND AUGUST

- Investors remain bullish on EVs despite recent sales dip due to COVID-19
- $435 billion in global investment
  - $64 billion destined for U.S.
- Startups brought in $8.5 billion in new investment in July and August
- Tesla stocks rose from $1,200 in early July to $2,200 in late August before completing a 5-1 split of their stock
Government programs have provided more than $1.2 billion for electric trucks and buses through August 2020.

Almost 60% going to electric transit buses

Electric trucks and school buses each claim 20%

18% of funding awarded through the VW Settlement

- Transit Bus: $712,304,386 (59%)
- School Bus: $225,134,436 (19%)
- Freight Trucks: $120,532,598 (10%)
- Delivery Trucks: $100,054,075 (8%)
- Other Trucks: $48,269,635 (4%)
More than 14 new EVs introduced since July 2019. Luxury brands like BMW, Volvo, and Porsche claim the most EV models. Ford, GM, and Fiat-Chrysler only claim 5 out of 52 EVs across all brands.

NOW 52 EV MODELS AVAILABLE IN THE U.S.
Some new EVs have been delayed by COVID-19
Rivian and Tesla electric pickups expected in second half of 2021
Volkswagen ID4 crossover in production in Europe, will be made in U.S. in 2022

MORE THAN 30 NEW MODELS EXPECTED IN 2021
FAST CHARGING MARKET CONCENTRATED AND GROWING

- More than 17,600 fast charging ports
- More competition for market-leader Tesla
- Electrify America nationwide network reaches coast to coast

Source: Atlas EV Hub (www.atlasevhub.com)
Bloomberg New Energy Finance (BNEF) projects EVs to reach 60% of new passenger vehicles sales in the U.S. by 2040.

- EVs only expected to account for 4% of new vehicles sales in 2023
- Electric buses and trucks to make up 64% and 15% of global fleets by 2040

Source: BNEF
NORTH CAROLINA OVERVIEW

Analysis of emissions and EV deployment and funding
NORTH CAROLINA HIGHLIGHTS

Signed ZEV Truck MOU seeking 100% ZEV Truck Sales by 2050

NC ZEV Plan seeks 80,000 light-duty EVs by 2025

$76 million in proposed EV investment from Duke Energy (April 2019)
<table>
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<td><strong>EV Sales (through June 2020)</strong></td>
<td>• State Total: 20,061 (17th in nation)</td>
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<td>• Change 2019-2020 (through June): -14%</td>
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<td>• EVs per 1k People: 2 (27th in nation)</td>
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<td>• Models Available: 25 out of 52</td>
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<tr>
<td><strong>EV Charging Deployment</strong></td>
<td>• State Level 2 Total: 1,731 ports</td>
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<td>• State DCFC Total: 329 ports (17th in nation)</td>
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<td></td>
<td>• DCFC per 1k people: 0.3 (36th in nation)</td>
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<tr>
<td><strong>Approved Utility Investment</strong></td>
<td>• State Approved Total: $0</td>
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<tr>
<td></td>
<td>• Pending Investment: $76 million</td>
</tr>
<tr>
<td><strong>Government Funding</strong></td>
<td>• State Total: $21.8 million</td>
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<td>• 57% from federal programs</td>
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<td>• % of total awarded in 2020: 60%</td>
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North Carolina ranks 13th of 50 states in total CO₂ emissions and 37th in energy consumption per capita.

Light-duty vehicles account for 63% of the state’s mobile emissions of criteria air pollutants.

Sources: *EIA State Carbon Dioxide Emissions Data, EIA State Profiles*
Most of state falls in urban areas fall in SRVC grid region

Driving an EV charged in SRVC region produces emissions comparable to an 85-mpg vehicle

This puts the state below the national average of 88 mpg

Source: Union of Concerned Scientists
20k EVs sold in North Carolina through June 2020
  • 17th out of 50 states
  • 2 EVs per 1,000 people
  • 27th out of 50 states

Sales down 14 percent in Q1 Q2 compared to 2019
  • Sales flat between Q1 and Q2 2020 despite COVID-19

Most Popular EVs since 2019:
  • Tesla Model 3 (3,758)
  • Tesla Model X (409)
  • Chevy Bolt (341)
$21.8 M awarded for EVs and EV charging in North Carolina through August 2020

$9.47M from VW Settlement
54 electric transit buses deployed - 5th in nation

EVs account for 34% of VW Settlement awards made in July 2020
64.3% of state's VW Settlement allocation unspent

ZEV Truck MOU commits state to EV truck deployment which could be funded through the Settlement
DUKE ENERGY PLAN

• $76 million in potential investment proposed in April 2020
  • Would more than triple rejected investment in 2018
• 4,000 Level 2 and 240 DC Fast Charging Stations proposed
  • Would more than double current Level 2 deployment (1,731)
  • DCFC would increase by 70%
• Program includes $8 million for transit bus charging and more than $18 million for school bus electrification
• Underserved communities prioritized in multi-unit dwelling program worth $2 million
• Duke proposes more than $3 million in education and outreach
• Decision pending since April 2019