



ALTERNATIVE FUELS TECHNOLOGY AND INFRASTRUCTURE

At the end of 2021, two million electric vehicles (EVs) were in the United States, making up 0.5% of all light-duty vehicles – approximately double the number in 2018. At the same time, in Kentucky, about 6,000 EVs made up 0.2% of the registered light-duty vehicles – nearly triple the number in 2018. Of the 6,000 EVs in Kentucky, 3,700 (62%) were battery electric vehicles (BEVs) and the remaining 2,300 (38%) were plug-in hybrid electric vehicles (PHEVs). Annual EV sales in Kentucky have increased substantially from 0.5% in 2018 to 1.6% in 2021. The 2022 first quarter EV sales increased even further to 2.4%.* It is expected the EV market share will continue to grow as barriers to EV adoption are addressed.

For example, EV technology continues to improve, increasing vehicle range and reducing EV costs relative to comparable vehicle options. Customers are becoming more familiar with EVs and many more

models are on the market than in prior years. Based on recent research, one 2022 projection showed EV sales in Kentucky exceeding 30% by 2030. Private companies and public agencies are also investing billions in new EV infrastructure. For example, the IIJA/BIL included \$7.5 billion in new funding specifically to install charging infrastructure across the country. Much of this funding is designated to build DC fast-charging (DCFC) stations along designated Alternative Fuel Corridors (AFCs). The AFC are shown in the figure on the next page.

In Kentucky, while all interstates and parkways have been designated as alternative fuel corridors for EVs, only I-64, I-65, and I-75 have been designated as alternative fuel corridors for hydrogen. Hydrogen is being encouraged by the freight industry. Kentucky has planned three public hydrogen refueling stations as part of their AFC plan for Bowling Green, Louisville, and Georgetown.

Kentucky is also looking at other charging needs on other high priority EV corridors. Kentucky recently submitted a required EV Infrastructure Deployment Plan to FHWA, which will be updated in the future as infrastructure is installed and the industry matures. While most EV charging occurs at home or work, a major need still exists for long-distance and community-based public charging in Kentucky. As of August 2022, nine public 24-hour DCFC stations with a total of 21 charging ports were present in Kentucky and approximately 142 public 24-hour Level 2 charging stations with 282 ports.** (Private charging stations or those restricted by time or to customers were excluded). With current private and public investments, this network is expected to increase substantially in the next few years.

*International Energy Agency, 2022 and Alliance for Automotive Innovation, 2022

**US Department of Energy, Alternative Fuels Data Center, 2022.