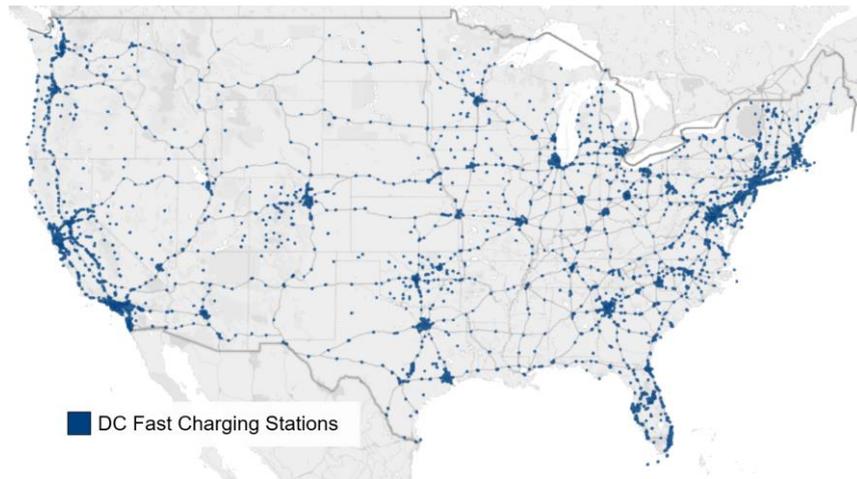


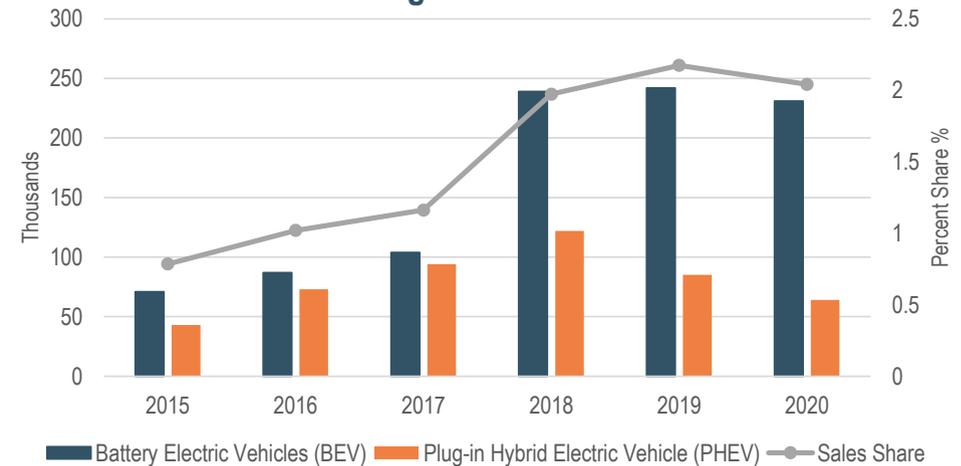
## Boosting Electric Vehicle Infrastructure

- The \$1 trillion Infrastructure Bill passed in November 2021 includes \$5 billion towards expanding electric vehicle (EV) highway charging stations, which is an unprecedented level of funding towards electrification. Many see a focus on charging infrastructure as a key lever to boosting low-carbon transportation in the United States. Shifting the century-old industry of internal combustion engines poses significant challenges, yet momentum has grown along with budding consumer enthusiasm and automakers' investments in EV development.

### Direct Current (DC) Fast Charging Station Network



### Electric Vehicle Registration and Market Share



- Alleviating Range Anxiety:** A main obstacle to making the switch is the perceived fear of running out of power on a journey, otherwise known as 'range anxiety.' A more robust network of DC chargers, which can charge an EV at a rate of 3 to 20 miles of range per minute, could mitigate range anxiety. Currently, 60% of fast chargers in the U.S. only suit Tesla models; standardized or interchangeable charger nozzles would ensure that fast charging is available for all EV models.
- Auto Makers Signal EV Pivot:** Automakers have pledged to spend billions towards EV development to capture a growing appetite. For example, German-based Volkswagen AG has set an ambitious \$180 billion investment plan, while U.S. automakers have committed to more modest plans to expand their EV fleet. U.S. EV sales, which account for 2% of all US vehicle sales, continue to lag those in Asia and Europe.
  - Expected growth in EVs will likely emphasize current challenges such as the extraction and mining of earth minerals for batteries and battery disposal. In addition, current price points make EVs all but inaccessible to the average household; ensuring equitable access will be key to EV proliferation across the U.S.
  - Cities and states will continue to play a pivotal role in aiding the EV transition by fast-tracking permits for infrastructure buildout, advancing recycling and disposal legislation and bolstering tax credits.

Source: U.S. Dept. of Energy Alternative Fueling Station Locator (as of 01/05/2022); IEA (2021), Global EV Outlook 2021, IEA, Paris <https://www.iea.org/reports/global-ev-outlook-2021>; and Bloomberg (as of 12/09/2021). The views contained in this report are those of IR+M and are based on information obtained by IR+M from sources that are believed to be reliable. This report is for informational purposes only and is not intended to provide specific advice, recommendations, or projected returns for any particular IR+M product. No part of this material may be reproduced in any form, or referred to in any other publication, without express written permission from Income Research + Management. "Bloomberg®" and Bloomberg Indices are service marks of Bloomberg Finance L.P. and its affiliates, including Bloomberg Index Services Limited ("BISL"), the administrator of the index (collectively, "Bloomberg") and have been licensed for use for certain purposes by IR+M. Bloomberg is not affiliated with IR+M, and Bloomberg does not approve, endorse, review, or recommend the products described herein. Bloomberg does not guarantee the timeliness, accurateness, or completeness of any data or information relating to any IR+M product.