



April 2021

THE FUTURE IS ELECTRIC: LET'S DRIVE THERE TOGETHER

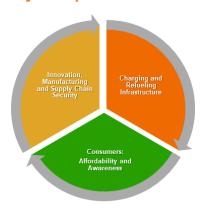
Automakers, suppliers, and the United Auto Workers have underscored to <u>President Biden and congressional leaders</u> a commitment to working toward a net-zero carbon transportation future that includes a shift to electric drive vehicles.

Automakers are planning to invest \$250 billion in electrification by 2023, and IHS Markit predicts there will be 130 EV models available in the U.S. by 2026. Yet today, of the 278 million light-duty vehicles registered in the U.S., only 1.5 million are electric. Although consumer interest continues to grow, and more than 50 EV models were for sale last year, EVs only made up roughly two-percent-of-new vehicle-sales—or approximately 300,000 vehicles out of the 14.5 million vehicles sold in 2020.

If the United States wants to be at the forefront of creating an even cleaner future, we need a comprehensive plan that takes the present market realities into consideration, as well as the on-going investment and innovation in internal combustion engine technologies. Such a bold, comprehensive strategy is required to establish the U.S. as a leader in the next generation of clean transportation innovation. Efforts that incentivize wider-scale EV adoption, build out the necessary charging and hydrogen refueling infrastructure, and facilitate consumer awareness are essential components to EV market expansion. As we work toward the future of clean transportation, it will be critical to ensure this transition benefits all communities, supports American workers, and enhances U.S. competitiveness and economic security.

This transformation is greater than any one policy, branch or level of government, or industry sector. It will require a sustained holistic approach with a broad range of legislative and regulatory policies rooted in economic, social, environmental, and cultural realities. We look forward to working with governmental leaders, regulators, policymakers, and key stakeholders to ensure that a comprehensive approach focuses on three key areas.

Keys to Expand Electric Vehicle Adoption



2020 Auto Sales by State and Vehicle Type







THREE KEY AREAS

Consumer Affordability and Awareness:

The auto sector has made significant progress driving down battery and fuel cell costs. Even still, further research and development investments will be needed to realize "cost, utility, and convenience parity" between EVs and their internal combustion counterparts. EVs currently cost significantly more to produce than equivalent gasoline cars or trucks. This divide grows when considering "convenience and utility parity," which requires larger batteries to support longer EV ranges commensurate with consumer expectations and needs. Larger, more capable vehicles (e.g., pickup trucks and SUVs) used by individuals and businesses for a variety of purposes may require even higher-capacity batteries. As we work toward the future of clean transportation, it will be critical to ensure this transition benefits all communities.

Read more here

Charging and Refueling Infrastructure:

While reducing costs and increasing consumer awareness, we must also strive for greater "convenience parity" that ensures access to abundant electric charging and hydrogen fueling infrastructure. Publicly

available charging infrastructure not only eases perceived concerns about "range anxiety," but also substantially increases consumer awareness of the technology.

All stakeholders must work together on public policy efforts, such as federal tax incentives, grants, rebates, and other mechanisms to spur significant refueling infrastructure development in three key areas: homes, workplaces, and highway and other public locations—especially since currently there are only just over 114,000 public charging outlets nationwide.

Read more here

Innovation, Manufacturing, and Supply Chain Security:

While demand-side solutions outlined in the <u>letter to President Biden and congressional leaders</u> can help address near-term challenges, they will contribute to sustained U.S. leadership in automotive innovation only if they are aligned with supply-side realities. Vital aspects of the EV supply chain require the manufacturing of batteries (critical minerals extraction, processing, battery cell production, end of life recycling) and fuel cell stacks. In 2019, Chinese chemical companies accounted for roughly 80 percent of the world's total output of advanced battery raw materials. In fact, the supply side represents one of the best opportunities to develop long-term and sustainable U.S. leadership through manufacturing investments.

Read more here

NEXT STEPS

The U.S. has a political, economic, environmental, and national security interest in being a leader when it comes to a net-zero emission transportation future. While sales of electrified vehicles hover at two percent nationwide the U.S. needs to be engaged now in developing smart and efficient policies that promote U.S. manufacturing and job creation; expand consumer awareness and adoption; develop robust supply chains with respect to critical minerals and battery manufacturing; and create an extensive network of charging and hydrogen refueling infrastructure. Such an approach will compliment and amplify the significant private sector resources and other important efforts by states and localities that will accelerate a net-zero-carbon transportation future.

U.S. Public Charging Infrastructure

- 687 locations (L1) with 1,375 charging outlets
- 42,589 (L2 and L3) stations with 93,206 charging outlets
- **5,943** DC Fast Chargers with **19,794 charging outlets**

Total U.S. Charging Outlets: 114,375

By comparison, in 2020 <u>China had over 807,000 public electric vehicle charging points</u>, an increase from 516,000 in the previous year.

USEFUL RESOURCES



- ➤ **Electric Vehicle** Sales Dashboard
- > State-by-State Breakdown of new vehicle registration by vehicle type (2020)
- > Innovation Agenda to preserve and enhance U.S. competitiveness
- > Reading the Meter: sign up for insights into automotive trends
- > Auto Industry <u>letter to President Biden</u> and congressional leaders (March 29, 2021)

