Visualization Tool for Electric Vehicle Charge and Range Analysis

Electric vehicles and the charging infrastructure
"On-the-go" charging is key to EV growth

In the next decade, the number of electric vehicles (EVs) on our roads will likely rise substantially, and we believe the bulk of the charging of these vehicles will take place at home. But readily accessible charging away from one's home (or one's workplace) will also be key to support EV growth. Such "on-the-go" charge-ups will also need to be as easy and convenient as refueling an internal combustion engine (ICE) vehicle today.

While EVs account for less than 2% of new vehicle registrations in the United States, and much less than 1% of all vehicles on the road today (according to IHS Markit), the underlying economics of EV ownership are improving. State and federal regulators are incentivizing adoption, signaling that EV penetration will likely increase steadily over the next decade and beyond. The Biden administration has pledged to extend EV tax credits, and California—often a bellwether for other states—has moved to ban new ICE cars from 2035. By then, we expect EV ownership to be economically viable for most drivers .

So how will the EV infrastructure support the developing fleet? Today's automobile culture is supported today by an estimated 135,000 outlets with some 1.4 million pumps, according to the National Petroleum News. This network balances the competing demands of low cost and efficiency, locational convenience and capacity utilization. The result is that most motorists in most situations can easily find a competitively priced gas station and not wait in line for an open pump. We expect similar dynamics will shape the emerging network of EV charging stations.