

# Demand For Electricity

---

Created at: 22.05.2019

Created by: Samer Chediac

Modified at: 22.05.2019

Modified by: Samer Chediac

## Description

As we accelerate the adoption of battery-powered mobility, our energy delivery channels need to be able to handle the shift in the delivery channel. Demand for retail energy will transition from primarily petroleum/gasoline based to a mix with greater demand delivered via the electricity grid.

## Examples

While only 2% of cars sold in the US in 2017 were electric cars (200,000), manufacturers are planning on producing and developing more electric vehicles in the future. Ford is planning on spending \$11 billion on technology to build up to 40 battery-electric and hybrid cars by 2022. Daimler is also planning on introducing 10 pure electric vehicles and 40 hybrid models. Chinese automobile manufacturer BYD was the world's top selling plug-in electric car manufacturer in 2016 delivering over 100,000 vehicles. BYD's primary market is China, which has been quick to adopt electric cars due to low costs of ownership and government subsidies incentivizing pollution reduction. VW has announced that its last generation of gasoline engines will launch in 2026, as it will shift its focus to battery driven vehicles.

Charge point infrastructure is currently fragmented with different standards by geography, but also by manufacturer. The regional challenges and impacts of this can be seen in how Tesla's new model 3 cars will ship to European customers with a different plug than in the US. The plug to be included in Europe is called Combined Charging System, which allows support for a greater range of manufacturers and older vehicles. Using CCS in European model 3's also means that Tesla's supercharging network will also be retrofitted to CCS allowing more manufacturers to use its network, assuming a partnership for the right price of course.

Cars, trucks, and buses are not the only vehicles driving the adoption of battery-powered transportation; motorized bicycles, hoverboards, electric skateboards, and battery powered scooters are increasingly becoming popular as they provide increased mobility with new business models to an aging population which has less appetite for asset ownership in environments that are becoming denser.

## What's Next

The first movers to provide charging infrastructure along travel routes will have the ability to shift traffic patterns and create a network advantage. The first mover advantage will be similar to how the development of the interstate highway system created an economic boom for certain towns but took it away from towns that became bypassed.

Tesla currently has an advantage as a first mover in its development of supercharger infrastructure, but gas station operators will soon respond with charging networks of their own given pressure from the larger car manufacturers like GM and Ford. As with building any network, it will be key to manage and grow both demand and supply; the vehicles and the charging stations. Shell Ventures and Repsol were part of a \$31 million Series A funding for an EV charging startup called Ample.

Solar highways are an example of teams looking into ways to create road infrastructure that is more self-sufficient and use networked intelligence. The highways can illuminate lines and markings, keep ice melted, generate electricity for EV power stations, and even communicate data about road repair.

## Tags

**electric vehicles**

**electricity**

## STEEP

- Technological
- Ecological

## Links

### TRENDS

Alternative Energy Sources

Battery Electric Vehicle (BEV)

## Projects

### RTA Future Scanning - Information & Trends

Rating criterion	04.06.2020
Importance	