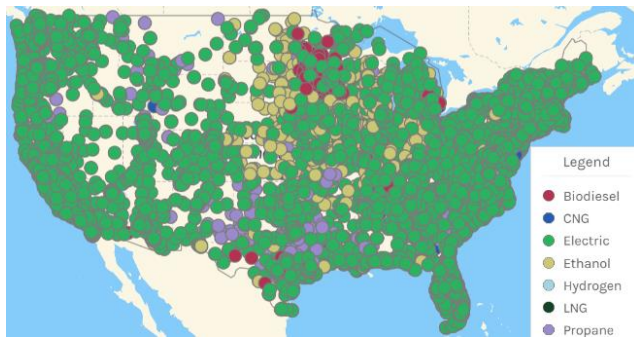


How Practical Are Alternative Fuel Vehicles?



Many of us have likely considered an alternative fuel vehicle at some point in our lives. Balancing the positives and negatives is a tricky process and varies greatly based on our personal situations. However, many of the negatives that previously created hesitancy have changed in recent years. Below, we have outlined a few of the most commonly mentioned negatives regarding the two leading alternative fuel vehicle types: Flex

Fuel vehicles and Electric/Hybrid vehicles. Then, you can decide for yourself whether one of these vehicle types are practical for you!

Cost – How much does the vehicle cost to purchase and operate?

Flex Fuel: Flex Fuel vehicles typically cost about the same as a gasoline vehicle.¹ For fuel cost, E85 typically costs slightly less than gasoline, however, due to decreased efficiency has a slightly higher cost per mile than gasoline.² Overall, a Flex Fuel vehicle is likely to be slightly more expensive than a gasoline counterpart.

Electric/Hybrid: This situation varies quite a bit depending on where you live. Electric vehicles and hybrid vehicles often cost considerably more than a conventional gasoline vehicle. For example, a plug-in hybrid will cost around \$4000-\$8000 more than a conventional model.³ However, there are [federal rebates](#) and [local rebates](#) that can refund thousands of dollars from the purchase price. Electric/Hybrid vehicles also tend to save money on fuel, with the possibility of saving thousands of dollars over the lifetime of the vehicle.⁴ Whether these rebates and fuel cost savings will eventually account for the higher purchase price can be [estimated with comparison tools](#).

Vehicle Range – How far can you travel from one re-fuel/charge?

Flex Fuel: Vehicles running on E85 will achieve approximately 15-30% less range than gasoline counterparts.⁵ Whether or not this reduced range is significant to you will largely depend on your average trip length and the availability of E85 in your area (see Fuel Access below).

Electric/Hybrid: Hybrid vehicles share ranges similar to gasoline vehicles since the electric component is primarily used to accent the gasoline engine and improve fuel efficiency. Electric vehicles have shorter ranges than conventional vehicles, though their ranges are improving.⁶ As of 2018, the median range of an electric vehicle was 125 miles, however models with ranges exceeding 300 miles were available.⁶

Vehicle Performance – How does the vehicle compare in horsepower, torque, etc.?

Flex Fuel: Flex fuel vehicles are optimized to operate using a wide range of ethanol concentrations, from 10% up to 85%, rather than optimizing for only E85 or gasoline.⁷ Due to this, most drivers will not notice a difference in performance between E85 and gasoline.⁷

Electric/Hybrid: Electric and hybrid vehicles are known for their quick and smooth acceleration.⁸ These vehicles provide maximum torque at 0 rpm, which makes them feel very responsive to acceleration, while remaining very quiet as well.⁸ A common comparison is that electric vehicles tend to be quick (0-60 mph acceleration) whereas gasoline vehicles tend to be fast (top speed).⁹

Fuel Access – How many consumer sources of fuel are located close to you?

Flex Fuel: E85 has a fairly wide coverage of fuel stations across the eastern half of the U.S., however the coverage is more sparse in the western half ([see here](#)). In particular, the Midwest has a high occurrence of E85 stations, likely due to the local presence of corn production. There are over 2,800 E85 fueling stations in the United States.

Electric/Hybrid: Electric charging stations have become fairly common in most populated areas within the United States ([see here](#)). If you live in or near a major city, there is likely plentiful access to electric charging stations. It is also possible to install a high voltage charging station within your own house/garage or to use the 120V electricity that is commonplace in nearly all U.S. households.