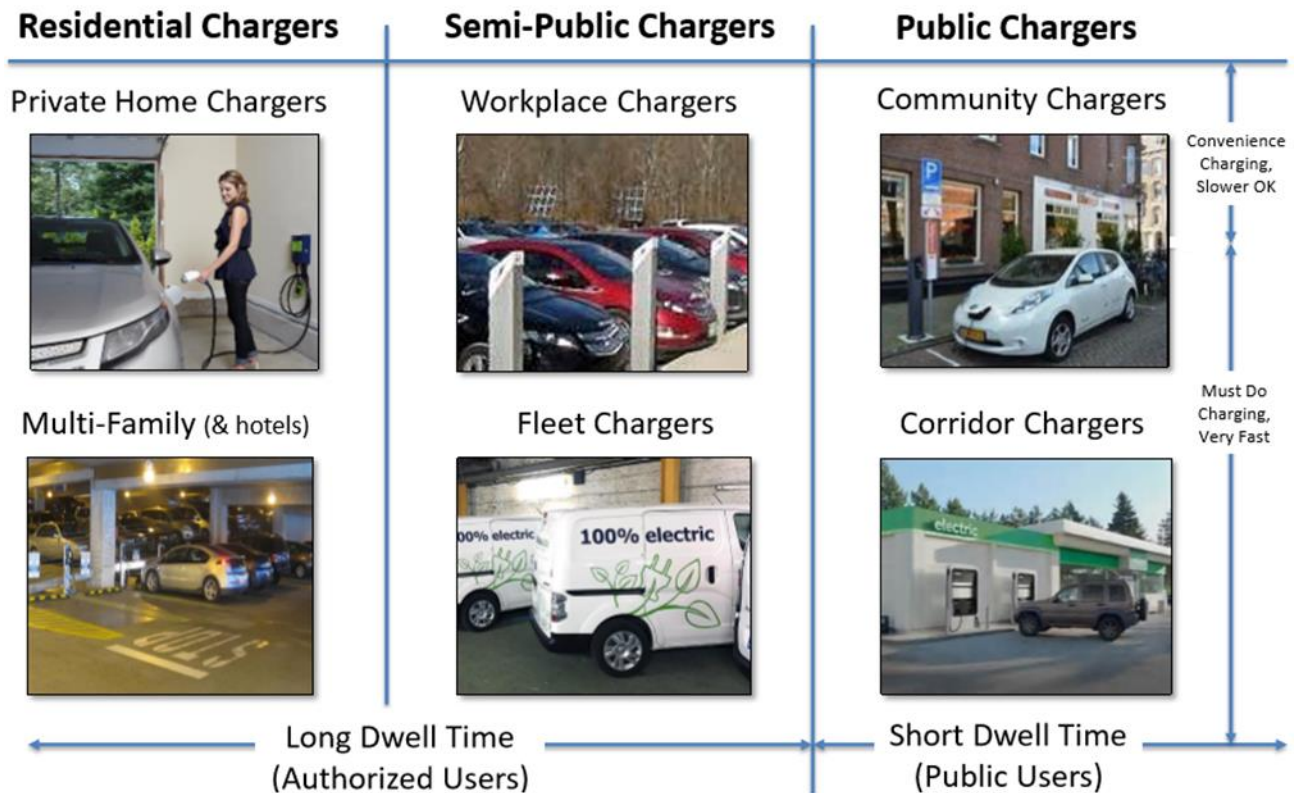


## Top Five Things to Know About Charging an EV

### 1. How will I charge my Electric Vehicle (EV)?

“Fueling” your EV will be similar to phone charging: plugging in overnight at home several times a week as a matter of habit. Most EV owners will be able to cover their routine travel based on overnight home charging. For longer or unexpected trips, public chargers are becoming available that allow EV drivers to charge their vehicles while away from home in under 15 minutes. Most EV drivers are surprised to realize that most of their vehicle’s “fuel” comes from routine electrical charging at home, rather than a trip to a public charging station. Drivers can plug their cars into a regular wall outlet for basic (low power) charging, or for a few hundred dollars, purchase a higher power home charger that will ensure a full charge overnight.

The following graphic shows the variety of ways drivers will be able to charge. Many drivers will use residential chargers at night.



## 2. What if I need to charge away from home?

Even with routine home charging, public charging may be needed when unexpected travel arises, or for long distance trips. In those cases, public chargers allow EVs to “fill up” while on the road. Some public chargers are lower power and require several hours for a full charge. These are frequently found at shopping malls, hotels, and urban centers. Newer, high-speed chargers, known as DC Fast Chargers (DCFC) make public EV charging similar to a gas station visit, recharging your battery to 80% in about 30 minutes or less. More advanced DCFCs are now being deployed that, over the next two years, will cut quick charging time to 15 minutes or less. There are currently over 480 electric vehicle chargers in New Jersey with additional locations being developed at a rapid pace.



## 3. How much does it cost to charge an EV at home?

In almost all cases, the cost to “fill your tank” electrically will be much lower than using gasoline – typically about two-thirds cheaper (at current prices). For example: a 2017 Chevrolet Bolt has a range of 238 miles, which requires about 60 kWhrs of battery energy. Using the average residential electricity rate of 11.7 cent per kWh, it would cost about \$7.00 to cover 238 electrically fueled miles. Conversely, if your vehicle averaged 21.6 miles per gallon (the national average) and gasoline cost \$2.45 per gallon (the average price currently in NJ), it would cost almost \$27 to fuel that same 238 miles of range.



#### 4. How will I charge my EV if I live in a multi-family residence?

With most charging done at home, it is very easy for families with a dedicated garage or driveway. For residents of multi-family facilities – apartments, condos, or townhouses, any situation where a landlord is involved or where parking is done in a shared lot, parking deck, or streetside – EV charging is more challenging. Some EV owners in this situation, can make arrangements to charge their EV at work. Many companies are now considering workplace charger installations for their employees. In that case, all the “routine charging” normally done at home can then be done at the workplace. Meanwhile, efforts are building in NJ for EV charging solutions in these types of settings.



#### 5. How far can I drive on one charge?

Historically, EVs could not travel more than 50 miles on a single charge. Now, most EVs have a range of more than 100 miles, and new vehicles offer more than 200 miles on a single charge. Some plug in hybrid-EVs (PHEV) include a small gasoline engine that acts as a “range extender” that provides electricity for the car even when the battery is exhausted – these vehicles have the same range as typical vehicles today (300-400 miles). Many of these PHEV’s function as pure EVs most of the time, since their electric-range is greater than their typical driving need – the gasoline engine is used rarely, for unexpected travel or longer trips, and only when needed. Note that PHEVs are not the same as hybrid vehicles (like most of the Prius vehicles on the road today). Hybrid vehicles are not designed for plugging in to recharge the battery. All the recharging of the battery for hybrid vehicles is done internally, within the vehicle.

For more information about charging you EV, please visit:  
<http://www.chargevc.org/resources/useful-documents/>