What is the difference between a hybrid, a plug-in hybrid, and a battery electric vehicle?

A **conventional hybrid**, such as the Toyota Prius, is primarily a **gas-powered car** that uses electric motors to help out the internal combustion engine.

A **plug-in hybrid (PHEV)**, such as the Chevrolet Volt, has an **independent electric motor** powered by a battery with enough range for a daily commute. It also has a **conventional gas engine** used to extend the vehicle's range.

A **battery electric vehicle (BEV)**, such as the Nissan Leaf, is powered solely by a battery and electric motor.

**When can I buy an EV with more space?**

EV pickup trucks and SUVs are likely a few years away. At this stage, EVs are mostly compact hatchbacks. But they’re also pretty versatile- believe it or not, with the rear seats folded, the **Chevrolet Bolt** has as much space as a **small crossover**! If you’re looking for even more space, Chrysler began marketing its **Pacifica Plug-In** minivan in 2017, featuring room for 8 or up to **140.5 cu. ft of cargo room**.

**What kinds of incentives are available?**

Several! The federal government offers a **tax credit** for plug-in electric vehicles of **up to $7500**, based on the capacity of the vehicle's battery- any new car with a battery over 17kWh is eligible for the credit.

California’s **Clean Vehicle Rebate Project** offers a rebate of **$4500 for BEVs** or **$3500 for PHEVs**, but as of July 2017 it’s limited to **qualified low-income buyers** until new funds are allocated in the state budget. PG&E offers a $500 rebate for PHEV or BEV buyers through its Clean Fuel Rebate program.

**How far will an EV go on a charge?**

**PHEVs** can generally travel **20-50 miles** on one charge before the combustion motor kicks in. **BEVs** can generally travel **80-240 miles** on one charge, with 200+ starting to become the new normal.

**What if I need to go farther?**

**PHEVs** pair the driving experience of an EV on short trips with the convenience of a gas motor for **extended range**: up to 400+ miles! Additionally, you’ll soon be able to power up at "Level 3” **DC fast chargers** (coming soon to 7+ locations in Humboldt County), which restore up to 70-80% of range in as little as **30-60 minutes**, dependent on vehicle.

**What happens if it runs out of battery “juice”?**

AAA currently offers a **mobile charging service** on their trucks in the major western metropolitan areas. In all other areas, you’ll need a tow - but with new and improved stations coming online, charging is quickly becoming even more convenient.
How much does it cost to charge an EV? How long does it take?
RCEA's network of charging stations costs $0.48 per charge session + $0.18 per kWh. See our infographic below for example costs and charging times. Note: pricing is subject to change.

<table>
<thead>
<tr>
<th>Vehicle Type</th>
<th>Cost to Charge</th>
<th>Time to Charge</th>
<th>Est. Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tesla Model 3</td>
<td>$11.28</td>
<td>9 hr</td>
<td>215 mi.</td>
</tr>
<tr>
<td>Chevrolet Bolt</td>
<td>$9.09</td>
<td>9 hr</td>
<td>238 mi.</td>
</tr>
<tr>
<td>Nissan Leaf</td>
<td>$5.88</td>
<td>4.5 hr</td>
<td>107 mi.</td>
</tr>
<tr>
<td>Toyota Prius Prime</td>
<td>$1.33</td>
<td>1.33 hr</td>
<td>25 mi.</td>
</tr>
<tr>
<td>Chevrolet Volt</td>
<td>$2.79</td>
<td>2.8 hr</td>
<td>53 mi.</td>
</tr>
</tbody>
</table>

1 Cost to Charge based on RCEA stations, from 0% capacity to 100% capacity.  
2 Time to Charge based on 6.66 kW Level 2 station, 0% to 100% capacity.

How do you find EV charging stations?
There are a number of free public charging apps. Among them, Plugshare (www.plugshare.com) is likely the best known and most well-used. It's easy to use and search for charging stations using its Google maps interface. RCEA also distributes paper maps showing the locations and addresses of county charging stations.

How long do EV batteries last? Do they have warranties?
Nissan and Chevrolet offer an 8-year/100,000 mile warranty on their battery packs; Hyundai offers it for life. There will be some minor battery degradation over time; the warranty doesn't cover that though. The common answer for battery replacement time is about 10 years. Battery replacement cost will depend on the size of the battery- about $6,000 at the low end.

What kind of services do EVs require?
Unlike conventional cars, in fully electric cars there are no oil changes, spark plugs, timing belts, fuel filters, head gaskets, radiators, or fuel lines. The main wear items will be tires, brakes, windshield wipers, and the occasional cabin air filter- all relatively cheap in comparison!

How does the federal tax credit work?
The federal tax credit decreases your tax liability by up to $7,500, depending on the vehicle purchased (vehicles with larger batteries get a larger rebate). It's important to note that you'll need a liability larger than $7,500 to take advantage of the full credit: any unused credit simply goes away. For more information, please visit irs.gov and search for "IRC 30D" or speak to your tax advisor.