

Electric Vehicle (EV) Types

A basic guide for understanding EV capabilities



| | Examples | Plug-in | Approximate range | Cost | Incentives | Summary | Ideal uses | Typical charging time | Operation speeds |
|--|--|---------|-------------------|-----------------|------------|--|---|---|-------------------|
| Hybrid (HEV) | Toyota Prius Honda Insight Ford Escape | No | 500 miles | \$\$\$ | None | Has both an internal combustion engine (ICE) and an electric motor for increased fuel economy, but operates exactly like a traditional car. | Any | N/A | Freeway capable |
| Plug-in Hybrid (PHEV) | Toyota Prius | Yes | 500-600 miles | \$\$\$\$ | Federal | A form of HEV that generally has larger batteries, allowing it to derive more of its propulsion from electrical power than from the IC engine. PHEVs are, as a result, far more efficient in their use of energy than typical HEVs. These batteries can be recharged by connecting a plug to an external electric power source. | Any | 4-5 hours | Freeway capable |
| Neighborhood Electric Vehicle (NEV) | Zapcar Revolution R-1 Pulse | Yes | 20-40 miles | \$\$-\$ | Federal | Smaller than most light-duty passenger vehicles. NEVs have top speeds between 20 and 25 miles per hour, and are legally limited to streets with speed limits less than 35 mph. | Neighborhood trips or very short commutes | 2-4 hours | 25-35 mph or less |
| Battery Electric Vehicle (BEV) | Nissan Leaf Mitsubishi i | Yes | 80-120 miles | \$\$\$-\$\$\$\$ | Federal | Unlike a hybrid car—which is fueled by gasoline and uses a battery and motor to improve efficiency—an electric car is powered exclusively by electricity. | Commuting, city driving, and longer trips where supported by a charging station network | 30 min-20 hours (depending on charger)* | Freeway capable |
| Extended-Range Electric Vehicle (EREV) | Chevrolet Volt | Yes | 40-440 miles | \$\$\$-\$\$\$\$ | Federal | An electric drive train vehicle that relies on an electric motor to provide power to the drive train but which also include a gasoline internal combustion engine serving as an electrical generator to either provide electricity to the vehicle's electric motor or to maintain the battery's state of charge as it nears depletion. | Any | 4-10 hours | Freeway capable |

* Note: Ex: Nissan Leaf – 1. DC Quick Charger: up to 30 min; 2. Level2 (240-volt) up to 5 hours; 3. Level1 (120-volt): up to 20 hours.



For more information online visit:
PortlandGeneral.com/PlugIn

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