

# MWCOG Electric Vehicle Forum

## April 29, 2011

### Glossary of Terms and Acronyms....

**AC (Alternating Current):** a type of electric power commonly found in households or businesses where the electric charge constantly and cyclically reverses directions.

**AFV (Alternative Fuel Vehicle):** a vehicle that runs on any form of alternative fuel, whether it is electricity, solar energy, ethanol, biodiesel, etc.

**Amperage:** the strength of an electrical current measured in amperes (“amps”).

**Automatic start/shutoff:** An engine that automatically shuts off when the vehicle comes to a stop and restarts when the driver accelerates so energy isn't wasted during idling.

**Battery Electric Vehicles (BEVs): battery operation all** electric vehicles (electricity stored in the batteries). BEVs generally have the highest all-electric range (e.g., 60-300 miles) and the largest battery capacity (e.g., 25-35 kWh). Includes: Toyota RAV4 EV, Honda EV Plus, GM EV1, Ford Ranger EV, which are discontinued. Also include Tesla Roadster, Nissan Leaf, and Ford Transit Connect.

**DC (Direct Current):** a type of electric power commonly found in batteries and solar cells where the electricity charge flows in one direction.

**Electric motor assist:** The electric motor provides additional power to the engine during acceleration, passing, and hill climbing; uses a smaller, more efficient energy conversion unit (engine).

**Electric motor drive:** The electric motor alone provides the power for lower-speed driving.

**EV (Electric Vehicle):** a vehicle comparable to the conventional gasoline-fueled vehicle, except that refueling is done through electricity and stored in a battery instead of a tank. Power is then transmitted to the wheels via an electric motor, rather than a traditional Internal Combustion Engine.

**EVSE (Electric Vehicle Supply Equipment):** equipment used in charging electric vehicles.

**Extended Range Electric Vehicles (E-REVs):** electric vehicles with relatively large batteries (e.g., 16-27 kWh) capable of relatively long all electric ranges (e.g., 40-60 miles); has back up source of power such as gasoline or e85 ethanol. Includes: Chevy Volt.

**Heavy duty:** motor vehicles including all vehicles over 10,000 lbs. GVWR.

**HV (Hybrid Vehicle):** a vehicle that uses two or more power sources, usually with one fuel source such as gasoline, the other often a form of electricity stored in a battery.

**Instantaneous Demand:** the maximum electric demand at the instant of greatest load.

**kW (Kilowatt):** a unit of power measurement; one watt is equal to one joule per second; 1,000 watts equal one kilowatt.

**kWh (Kilowatt-hour):** a unit of energy measurement equal to one kilowatt acting for one hour; frequently used as a unit of electrical consumption by which domestic energy use is measured.

**Light duty:** motor vehicles including both passenger cars and light duty trucks at or under 8,500 lbs. gross vehicle weight rating (GVWR).

**Li-ion (Lithium Ion):** a rechargeable battery technology that uses the mineral lithium as a catalyst against various other materials to store and then deliver electrical energy.

**Medium duty:** motor vehicles including all vehicles between 8,500 lbs and 10,000 lbs GVWR.

**NEV (Neighborhood Electric Vehicles):** a battery-charged EV with a given amount of speed of up to 25 mph in designated neighborhood areas; great for small communities. Includes: Columbia ParCar Mega, Dynasty IT, GEM E4, Miles ZX40S, Miles ZX40ST, and Zenn Standard.

**NiMH (Nickel Metal Hydride):** a rechargeable battery technology that uses the mineral nickel and a hydrogen-storing alloy to store and then deliver electrical energy.

**Plug-in Hybrid Electric Vehicles (PHEVs):** hybrid vehicles that run on an internal combustion engine with batteries that can be recharged plug into an external electric power source. They have larger batteries than traditional hybrid vehicles (e.g., 5-22 kWh), allowing for a longer all-electric range. Because they have hybrid engines, they effectively have an unlimited driving range.

**Regenerative braking:** Energy normally lost during coasting and braking is converted into electricity and stored in the battery.

**V (Voltage):** a measure of electric potential, which is the condition that causes electric energy to flow; measured in volts.

**ZEV (Zero Emissions Vehicle):** a vehicle that produces no tailpipe emissions, no evaporative emissions, and no emissions from gasoline refining or sales, according to California's Air Resource Board, which also produced the standards for the SULEV and PZEV.