

Electric Vehicle

— Acronym Glossary —



AER **-All Electric Range-**
Is the range of a vehicle using only its electric fuel source or battery pack.

AFV **-Alternative Fuel Vehicle-**
Is a vehicle that runs on a fuel other than "traditional" petroleum fuels (petrol or diesel)

BEMF **-Back ElectroMotive Force-**
refers to using the voltage generated by a spinning motor (EMF) to conclude the speed of the motor's rotation.

BEV **-Battery Electric Vehicle-**
Is a type of electric vehicle(EV) that uses energy stored in rechargeable battery packs for propulsion.

DFV **-Dual-Fuel Vehicle-**
A vehicle that has two separate fuel systems that work at separate times, usually Alternative fuel or conventional gasoline.

CEV **-City Electric Vehicle-**
shave 50-75 miles range and are smaller versions of battery EVs intended for around town use.

CFV **-Clean Fuel Vehicle-**
Any vehicle certified by the EPA that meets federal emissions standards.

ECU **-Electronic Control Unit-**
is a generic term for any embedded system that controls one or more of the electrical system or subsystems in a motor vehicle.

EHDV **-Electric Heavy Duty Vehicle-**
battery-powered vans, and trucks

EREV **-Extended Range Electric Vehicle-**
operates as a battery electric vehicle for a certain number of miles. After the battery has been discharged, a gas engine powers an electric generator for several hundred miles of 'extended-range' driving.

EV **-Electric Vehicle-**
Any vehicle that uses one or more electric motors or traction motors for propulsion.

H2V **-Hydrogen Vehicle-**
Is a Vehicle that uses hydrogen as its onboard fuel for propulsion.

HEV **-Hybrid Electric Vehicle-**
Is a vehicle which combines a conventional internal combustion engine (ICE) with an electric propulsion system.

HDEV **-Hybrid Diesel Electric Vehicle-**
Is a vehicle which combines a diesel internal combustion engine (ICE) with an electric propulsion system.

ICE **-Internal Combustion Engine-**
An engine that converts the chemical energy liberated through combustion of fuel, into a mechanical energy that is used to propel the vehicle.

IGBT **-Insulated Gate Bipolar Transistor-**
Is an efficient power switch that reduces power loss, during "Turn-on" and "Turn-off" states.

ILEV **-Inherently Low Electric Vehicle-**
Is a term defined by US Legislation as way of categorising Electric Vehicles which emits "inherently" low levels of air pollutants. The term may be used in a general sense, but low emission vehicles may be given tax or other advantages.

FCEV **-Fuel Cell Electric Vehicle-**
Are vehicles that convert the chemical energy from hydrogen and oxygen from the air, into electricity to power an electric motor.

FCHEV **-Fuel Cell Hybrid Electric Vehicle-**
Is a vehicle which combines a conventional Internal Combustion Engine (ICE) with a Hydrogen Fuel Cell System to propel the vehicle forward.

NEV **-Neighbourhood Electric Vehicle-**
Is classified by the Department of Transportation as a low speed vehicle, that are legally limited to roads with posted speed limits as high as 45 miles per hour depending on the particular laws of the state.

PEV **-Plug-in Electric Vehicle-**
Is any vehicle that can be recharged from any external source of electricity, and the electricity is stored in the battery packs, to propel an Electric Vehicle.

PHEV **-Plug-in Hybrid Electric Vehicle-**
Is any vehicle that combines an electric vehicle battery from any external source of electricity, and an internal combustion engine for propulsion.

PM **-Permanent Magnet-**
Is an object made from a material that is magnetized and creates its own continuous magnetic field, which is being used inside induction motors to eliminate "slip", and produce better energy efficiency over a wider speed range.

PWM **-Pulse Width Modulated-**
Is a commonly used technique for controlling power to inertial electrical devices (application: Implanted in an Electric Vehicle it will keep the battery from burning out)

PZEV **-Partial Zero Emission Vehicle-**
Is a vehicle that has zero evaporative emissions from its fuel system, has a 15-year (or at least 150,000-mile) warranty on its emission-control components, and meets Super Ultra Low Emission Vehicle tailpipe-emission standards.

SCR **-Silicon-Controlled Rectifier-**
This electronic device if used in combination with modern electronic power switches in it's "Off" state the device restricts the current to prevent current leakage.

SULEV **-Super Ultra Low Electric Vehicle-**
This Electric Vehicle classification is based on producing 90% less emissions than an equivalent gasoline-powered vehicle.

ULEV **-Ultra Low Electric Vehicle-**
This Electric Vehicle classification is based on producing 50% less emissions than an equivalent gasoline-powered vehicle.

ZEV **-Zero Emission Vehicle-**
This Electric Vehicle classification is based on a vehicle that produces no emissions from the on-board source of power.



A **-Ampere-**
Is a unit of measure of the amount of electric charge passing a point in an electric circuit per unit time with 6.241 * 10¹⁸ electrons per second constituting one ampere.

AC **-Alternating Current-**
Is the flow of the electric charge that periodically reverses direction.

BIPV **-Building Integrated Photo Voltaics-**
Are photo-voltaic materials that are used to replace conventional building materials in parts of the building such as the roof, skylights, or facades.

CPV **-Concentrated Photo Voltaic-**
Is a technology uses optics such as lenses or curved mirrors to concentrate a large amount of sunlight onto a small area of solar photo-voltaic (PV) cells to generate electricity.

DG **-Distributed Generation-**
Is energy distribution that generates electricity from many small energy sources.

DIAL **-Data Information Access Link-**
Is web-based data and information systems that enables scientists and small data producers in Earth science to format, document, and distribute data through their desktop computers.

EMS **-Energy Management System-**
Is a system of computer-aided tools used by operators of electric utility grids to monitor, control, and optimize the performance of the generation and/or transmission system.

ESC **-Energy Service Certificate-**
Are tradable certificates, similar to renewable energy certificates (RECs), that typically represent one megawatt-hour (MWh) of energy savings from efficiency projects.

ESS **-Energy Storage System-**
Is a system that stores electricity inside of it's cells or modules, generic use in Electric Vehicles, small electronics, as well as, as being used as back up generators for manufacturing companies.

ET **-Energy Technology-**

EVCS **-Electric Vehicle Charging Station-**
Any component that recharges an electric vehicle battery pack.

EVSE **-Electric Vehicle Supply Equipment-**
Is equipment in an infrastructure that supplies electricity for charging of electric vehicles.

G2V **-Grid to Vehicle-**
Is a generic classification for the smart grid, to describe the flow of electricity from the grid to the vehicle.

HAN **-Home Area Network-**
Is a residential Local Area Network(LAN) for communication between digital devices typically deployed in the home (possible application: communication between smartgrid devices).

NAN **-Neighborhood Area Network-**
Is a residential Local Area Network(LAN) for communication between digital devices typically deployed in a neighborhood.

PLC **-Power Line Communication-**
Is communication that carries data on a conductor that is also used simultaneously for AC electric power transmission or electric power distribution to consumers.

PV **-Photo Voltaics-**
Is the process of turning the sun's energy into electricity.

RFID **-Radio Frequency Identification-**
Is a process for tracking or triggering a signal, in small appliances using short range magnetic fields.

SAE **-Society of Automotive Engineers-**
Is a society that creates automotive technology standards.

SAE J1772
International Standard plug for Level 1 and 2 Chargers.

V2G **-Vehicle to Grid-**
Is a generic classification to describe the flow of electricity from the vehicle to grid.

V2H **-Vehicle to Home-**
Is a generic classification to describe the flow of electricity from the vehicle to home.

V2V **-Vehicle 2 Vehicle-**
Is a generic classification to describe the flow of electricity from the vehicle to vehicle.



CAA **-Clean Air Act-**
Is a federal law that regulates air emissions for stationary and mobile sources

CAFE **-Corporate Average Fuel Economy-**
First enacted in 1975, is a regulation to reduce energy consumption by increasing the fuel economy of cars and light trucks.

DOE **-U.S. Department of Energy-**
Is a Cabinet-level department of the United States government concerned with the policies regarding energy and safety.

EIA **-Energy Information Agency-**
Is a agency within the US Department of Energy, which collects and analyzes energy data to promote favorable policymaking.

EPA **-Environmental Protection Agency-**
Is an agency that protects human health and the environment by writing and enforcing regulations based on laws passed by Congress.

EVSP **-Electric Vehicle Service Provider-**
Is a provider that installs and operates a network of stations providing a service to EV drivers (ie Electric Vehicle Institute)

FMVSS **-Federal Motor Vehicle Safety Standards-**
Are standards which manufacturers of motor vehicles and equipment, must conform and certify compliances, to protect the public against unreasonable risk of death or injury.

GTR **-Global Technical Regulation-**
Are regulations meant for all the regions of the world can jointly develop global technical regulations regarding the safety, environmental protection, energy efficiency and anti-theft performance of wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicles.

ICC **-International Code Council-**
It is an international council dedicated to developing model codes and standards used in the design, build and compliance process to construct safe, sustainable, affordable and resilient structures.

IEC **-International Electrotechnical Commission-**
Is a commission that prepares and publishes International Standards for all electrical, electronic and related technologies that represent the needs of key stakeholders



Legend | Content



Types of Vehicles & Vehicle Parts



Electric Vehicle Supply Equipment

Engineering Specifications, Technology, Charging Stations, Smartgrid, Certificates



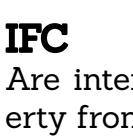
Government

Certificates, Regulations, Laws, Agencies, Organizations, Commissions, Incentives



Battery

Chemical Compounds, Battery Technology, Types of Batteries



-International Fire Code-

Are international codes contains regulations to safeguard life and property from fires and explosion hazards.



-International Green Construction Code-

Are International codes that include sustainability measures for the entire construction project and it's site.



-International Standardization Organization-

Founded on February 23, 1947, the organization promotes worldwide proprietary, industrial, and commercial standards.



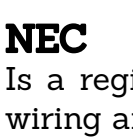
-Leadership in Energy and Environmental Design-

Consists of a suite of rating systems for the design, construction and operation of high performance green buildings, homes and neighborhoods.



-National Commission on Energy Policy-

A group of 20 of the nation's leading energy experts representing the highest ranks of industry, government, academia, labor, consumer and environmental protection for long-term U.S. policy.



-National Electrical Code-

Is a regionally adoptable standard for the safe installation of electrical wiring and equipment in the US.



-National Fire Protection Association-

Is a US trade association, that creates and maintains private, copyrighted, standards and codes for usage and adoption by local governments.



-National Science Foundation-

Is an agency that supports research and education in all the non-medical fields of science and engineering.



-Renewable Energy Credits-

Are tradable, non-tangible energy commodities in the United States that represent proof that 1 MegaWatt-hour (MWh) of electricity was generated from an eligible renewable resource.



-Standards Development Organization-

Is an organization that plays a role in the U.S. system, in developing and publishing industry specific standards.

WP29-World Forum for Harmonization of Vehicle Regulations-
Is a global forum that offers a unique framework for harmonized regulations on vehicles, focusing on benefits such as: road safety, environmental protection and trade



-Depth Of Discharge-

Is the inverse method to measure a battery's state of charge

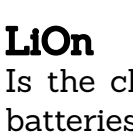


-Direct Current-

Is electric charge that that flows in one direction.

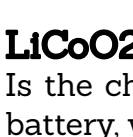


-Electric Vehicle Battery-



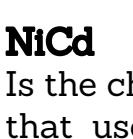
-Lithium-Ion-

Is the chemical compound symbol for the compound inside lithium ion batteries lithium-ions move from the positive electrode to the negative electrode during discharge, and back when charging



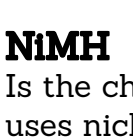
-Lithium Cobalt Oxide-

Is the chemical compound symbol for a type of rechargeable lithium ion battery, which has a high a discharge and voltage, but has the potential for instability (through overuse or overcharge).



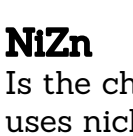
-Nickel Cadmium-

Is the chemical compound symbol for a type of rechargeable battery that uses nickel oxide hydroxide and metallic cadmium as electrodes.



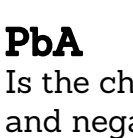
-Nickel Metal Hydride-

Is the chemical compound symbol for a type of rechargeable battery that uses nickel and hydrogen-absorbing alloy electrodes



-Nickel Zinc-

Is the chemical compound symbol for a type of rechargeable battery that uses nickel and zinc based electrodes



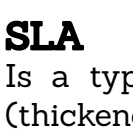
-Lead Acid-

Is the chemical compound symbol for a type of battery, where the positive and negative plates become lead sulfate(PbSO₄) and the electrolyte loses much of its dissolved sulfuric acid and becomes primarily water, but in the recharge process the reverse happens.



-Rolling Resistance Coefficient-

The value of the rolling resistance force divided by the wheel load.



-Sealed Lead Acid-

Is a type of lead acid battery that has the sulfuric acid coagulated (thickened) so it cannot spill out. They are partially sealed, but have vents in case gases are accidentally released for example by overcharging.



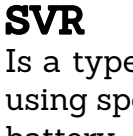
-Starting, Lighting, Ignition-

Is a type of battery responsible for starting the appliance or managing the appliance's lighting or ignition.



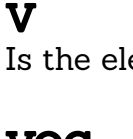
-State of Charge-

Is the available capacity of the battery, expressed as a percentage.



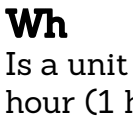
-Sealed Valve Regulated-

Is a type of rechargeable lead acid battery that is pressurized and sealed using special valves, and is able to reverse the chemical reaction inside the battery.



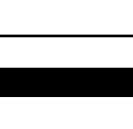
-Voltage-

Is the electric potential difference between two points



-Voltage Open Circuit-

Represents voltage source's full voltage potential, or it is a circuit that is open, to gage the potential voltage source.



-Watt hour-

Is a unit of energy equivalent to one watt (1 W) of power expended for one hour (1 h) of time.

Electric Vehicle Institute's Favorite Acronyms

- 1.CAFE Corporate Average Fuel Economy
- 2.CFV Clean Fuel Vehicle
- 3.PHEV Plug-in Hybrid Electric Vehicle
- 4.EVCS Electric Vehicle Charging Station
- 5.SAE Society of Automotive Engineers
- 6.LiOn Lithium-Ion