



## Media Information

June, 2019

### Corsa-e Technical Glossary

AC	Alternating current (AC) is an electric current that periodically reverses direction, in contrast to direct current, which flows only in one direction (see DC). Electric power is supplied to businesses and homes as alternating current.
Battery pack	An electric storage unit containing cells where electrical energy is converted into chemical energy (charging) and back into electrical energy (discharging) (see Lithium ion). The battery pack of the sixth-generation Corsa contains 216 cells.
Cell	An electrochemical unit that contains the electrodes, separator and electrolyte.
Charging speed	The range added during the time the vehicle is charging to get to the next destination. Includes the power of both the external and on-board charger as well as the energy consumption of the car in the test cycle (see NEDC, WLTP).
Charging time	The time it takes to charge an electric car from empty to full. Most drivers top-up charge rather than waiting to recharge from empty to full. The bigger the battery and the slower the charging point, the longer it takes to charge from empty to full.



Chemistry	Chemistry refers to the lithium compound of the cell's electrodes. The chemistry of a Li-ion battery affects its performance. The Li-ion battery of the sixth-generation Corsa and the Grandland X PHEV uses nickel-manganese-cobalt for optimum energy density, durability and safety.
DC	DC or direct current refers to an electric current flowing in one direction. Batteries supply DC current. Alternating current (AC) can be converted into DC current through a rectifier. For AC-charging, all EVs have on-board rectifiers or inverters. DC charging stations can handle more power, charging is therefore faster.
Electric driving range	The distance that an electrically powered vehicle can cover in a defined speed cycle (NEDC or WLTP) on a single full charge of the battery.
Horsepower	The measurement of the power output of an engine or motor. An electric motor's output can also be given in kilowatts (kW).
Hybrid	A hybrid vehicle is powered by both an electric motor and a conventional internal combustion engine (see ICE). In contrast to a plug-in hybrid electric vehicle (see PHEV), a hybrid's electric motor is powered by an on-board battery that is exclusively charged by brake energy recovery or the ICE. It has no connector for charging.
ICE	Internal Combustion Engine
kW	A measurement of electrical power, roughly equivalent to 1.36 horsepower.
kWh	Short for "1000 Watts x hour," kWh is a measurement of electric energy (=



	Power*time). An EV's battery capacity is expressed in terms of kWh. A large battery supports high power over a long time.
Lithium-ion battery	A kind of rechargeable battery. During discharge, lithium ions carry the current in the battery from the negative to the positive electrode, through the electrolyte and separator. Under charging the lithium ions migrate from the positive to the negative electrode.
Module	An assembly of cells in a Li-ion battery. The 216 cells in the battery of the sixth-generation Corsa are arranged in 18 modules.
Motor	Electric motors have no idle speed, do not need a clutch, can supply torque over a wide speed range and they do not need gear shifts. They also have maximum torque immediately available from the start and, of course, they do not generate emissions.
NEDC	The New European Driving Cycle (NEDC) was the legally mandated method for establishing EU standard values for fuel consumption and emissions in a laboratory. It was replaced on September 1, 2018 by the Worldwide Harmonized Light Vehicles Test Procedure (see WLTP).
PHEV	Plug-In Hybrid Electric Vehicle. A PHEV is a hybrid electric vehicle combining an internal combustion engine with an electric motor and a battery that can be recharged by plugging into an electrical outlet or charging station.
Range anxiety	The fear that a battery electric vehicle has insufficient range to reach its destination and would strand its occupants with a depleted



	battery.
Regenerative braking	Captures kinetic energy during deceleration that would otherwise be dissipated as heat. Energy channelled back to battery pack and converted to electricity.
Semi-fast charging	11-22 kW DC charging stations.
Single-phase power	Standard connection typical of lower powered household mobile devices. Single-phase charging is slower than three-phase (see three-phase power).
State of charge	State of charge (aka SOC) is the current battery level as a percentage.
Three-phase power	Used for stationary high power household appliances. Three-phase power can carry three times more current than single phase and charging is thus three times faster than single-phase charging
Torque	Torque is twisting force that causes rotation. Electric motors deliver 100 per cent of their available torque instantaneously, which enables fast launches and strong overtaking.
WLTP	Worldwide Harmonized Light Vehicles Test Procedure (WLTP). Successor of NEDC. New cars registered since September 1, 2018 must be certified according to the WLTP. With higher average speeds, greater variations in speed and stricter test procedures, the WLTP provides a better overall estimate of fuel consumption under more realistic driving conditions. Like the NEDC, the WLTP cycle is also measured in the laboratory.
ZEV	Zero Emissions Vehicle. A ZEV emits no exhaust gas (NO <sub>x</sub> or CO <sub>2</sub> ) from the on-board propulsion system. ZEVs include bicycles,



	battery electric vehicles (BEV) and fuel cell vehicles (FCEV).
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### Electric-mobility fact and fiction

<b>Myth:</b> EVs are too expensive.	<b>Fact:</b> Although the price of an EV is typically higher than that of a conventional car with ICE, the energy and running costs of an EV over time can be much lower, because electricity is cheaper than diesel or petrol and an EV requires less servicing.
<b>Myth:</b> EV-range is insufficient.	<b>Fact:</b> A modern EV such as the Corsa-e can cover up to 330 kilometres on a single charge of the battery (WLTP <sup>1</sup> ). By adopting an especially economical driving style and making maximum use of regenerative braking, two journalists in an Opel Ampera-e covered more than 750 km on a single charge.
<b>Myth:</b> There are not enough charging stations.	<b>Fact:</b> There are now more than 100,000 charging stations in the European Union.
<b>Myth:</b> Charging takes too long.	<b>Fact:</b> The 50 kWh Li-ion battery of the Corsa-e can be recharged to 80 per cent in 30 minutes at a public fast-charging station.

<sup>1</sup> Preliminary data determined according to WLTP test procedure methodology. EG type approval and Certificate of Conformity are not yet available. Preliminary values may differ from official final type approval data.