Infrastructure for vehicle electrification and renewable integration



Electric vehicle charging infrastructure: more than just charging stations

Widespread adoption of electric vehicles (EV) will lead to a more sustainable future, but it can't happen without a robust and accessible EV charging network. The ability to charge electric vehicles efficiently and economically without overloading the power system is critical and depends on a reliable electrical infrastructure.

Eaton has a broad product portfolio and the expertise to provide the complete EV charging electrical infrastructure, from the power distribution equipment and corresponding services, including substation or service entrance studies and system upgrades, to EV chargers and charge management software, to energy storage and integration of renewables.

With demonstrated experience in the design, development, implementation and maintenance of complex Distributed Energy Resources (DERs) and microgrids, and a growing portfolio of EVCI solutions, we stand ready to support America's federal stimulus initiatives and build a stronger future for our families and communities.



Our Everything as a Grid approach to the energy transition is unlocking a low-carbon energy future. We've been helping customers safely add more renewables, storage and electric vehicle charging infrastructure to their energy mix—to become more sustainable and resilient while lowering energy costs.

EVERYTHING



Modernize operations

Future-proof the power distribution system for planned EV charging deployments

Increase reliability and resiliency

Integrate DERs to reduce grid connection dependence and improve EV charging reliability and resiliency



Improve energy efficiency

Couple battery energy storage with EV charging to shave peak demand costs and optimize the charging experience

Enhance safety

Ensure EV charging infrastructure equipment meets UL safety standards to protect people, property and investment

To what extent will the EV charging

system be integrated into the existing energy management system, if at all?

Can the system be optimized by adding

How will electrification affect energy

usage and billing?

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TRANSFORMER

EV CHARGING

POWER

DISTRIBUTION

FOUIPMENT

battery energy storage and or solar PV?

SOLAR PANELS

P\/

NVERTER

ENERGY

STORAGE

Eaton's comprehensive EV charging infrastructure offerings will include equipment, software and engineering services solutions to meet EV charging project requirements.

• EV charging

AC Level 2 and DC Level 3 fast chargers for residential, commercial and fleet operations

Battery storage

Eaton xStorage 400 Battery Energy Storage System (BESS) includes batteries, inverters and management software to shave peak demand cost for EV charging applications

• EV charge management software

Enables users to operate a network of charging stations, from charging point management and power management to financial rules

- Microgrids and Distributed Energy Resource (DER) integration Incorporate local solar photovoltaics and other renewables into EV charging infrastructure to help meet sustainability goals
- Power distribution equipment and grid connection upgrades Installation and upgrades of electrical equipment, including transformers. switchgear, switchboards, circuit breakers and battery storage

• Electrical engineering services

Includes feasibility analysis of planned EV deployment sites, power systems analysis of electrical infrastructure, electrical system conceptual design and configurations, system protection analysis and recommendations, automation and control solutions and turnkey electrical services

Did you know?

Eaton can assist with project scope identification, system incoming power supply sizing, space constraints, relevant standards compliance, performance considerations and a host of other details. We can help answer questions such as:

- Based on the charging time requirements, is AC or DC charging technology the best option?
- Will the existing power DER MANAGEMENT distribution system support the new charging loads?
- What are the benefits of installing intelligent breaker technology for remote metering, communications and control?
- Will you need to upsize the incoming switchboard and circuit breakers?
- protection equipment be required?

To get started or to learn more about Eaton's solutions for federal stimulus funding, visit Eaton.com/EVCI or email stimulus@eaton.com

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SOFTWARE

EV CHARGING MANAGEMENT

SOFTWARE

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UTILITY

GRID



Faton 1000 Eaton Boulevard Cleveland, OH 44122 United States Eaton.com

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• Will a new transformer and