

Electric vehicles

Smart, attractive charging solutions for companies

Electric vehicles are on the move

There is currently a renewed interest, mainly in North America and Europe, in developing and using electric vehicles (EVs). This phenomenon is no doubt related to environmental considerations, but also to various technological improvements, notably in batteries and charging stations. These advances ensure greater autonomy, making EVs a more attractive option.

Charging stations: key to success


It is difficult to imagine an increase in electric transportation without high-performance charging stations and an appropriate infrastructure. Although public charging stations are already available, 50% of charging is done at home and 40% at work. Companies are therefore a strategic place to install charging stations. This is advantageous for employees who own EVs as well as employers who want to encourage this new mode of transportation or convert their vehicle fleet.



A smart choice when it comes to charging stations

Among the charging stations offered by various manufacturers, smart charging stations are the most advantageous for building owners and managers, since they are part of a network and have a communication system capable of receiving and transmitting all types of useful information. Drivers have peace of mind, since they can check the availability and estimated charging time either at the charging station or on their cellphone. Building owners benefit from a value-added solution that allows them to authenticate users, remotely control stations and obtain usage data such as the number of stations in use, charge times, plug-in times and power demand.

Higher electricity bills? Not a concern with building automation!

In Quebec, electricity bills for institutional, industrial and commercial buildings are not only based on energy consumption (kWh), but also on power demand (kW). This is an important factor to consider when installing a charging station in a building subject to Rate M. 

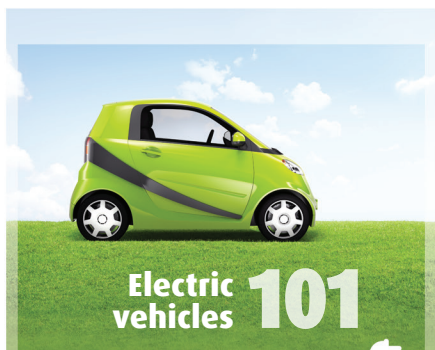
In fact, the cost of charging at 4.71¢/kWh can be as low as 50¢, but it is important to know that each station requires an approximate power demand of 7 kW, at \$14.07/kW—careful planning is therefore a must. If four charging stations are added, without a charging-monitoring strategy, to a building with a power demand of 200 kW, the electricity bill will increase by \$390 a month. That is why it is important to properly plan for the integration of charging stations in the building's electrical infrastructure. ►►►

Electric vehicles 101

There are 3 types:

- HEVs** hybrid electric vehicles
- PHEVs** plug-in hybrid electric vehicles
- BEVs** battery electric vehicles

Each has its own unique features, but only the last two are chargeable.



►►► A charging-monitoring strategy may be implemented by integrating smart charging stations compatible with the BACnet protocol into the building's automation system. This makes it possible to manage the impact of the charging stations on the building's overall energy consumption by limiting their use during peak demand periods. Through the smart management of power sent to the charging stations, this strategy also makes it possible to limit the size of the electric installation.

According to precise rules and available power, the system may be programmed to:

- authorize the charging of vehicles;
- limit charging to a specific percentage;
- assign charging priorities (e.g., company vehicles);
- mainly charge during off-peak periods.
- etc.



A winning partnership for clients

Regulvar recently concluded a partnership agreement with **AddÉnergie** — the only firm on the market that produces charging solutions compatible with the BACnet protocol. This agreement is designed to offer clients a comprehensive smart charging solution. Thanks to the expertise of Regulvar and AddÉnergie, managers can enhance their services while controlling their electricity bills.

For more information, contact

Michel d'Amour
Sales Director, Distribution
mdamour@regulvar.com

Richard Lequin
Representative
rlequin@regulvar.com

Marc-André Fortin
Representative, Distribution
mafortin@regulvar.com


Nathalie Fradet, Editor
nfradet@regulvar.com

Contech 2014

Regulvar's touch-screen intercom wins a prize

Last November, Contech held its Innovation and Sustainable Development Awards, aimed at highlighting and promoting Quebec's building expertise. Regulvar won the Technology - **Innovative Product** award in the ICI BUILDING (Industrial, Commercial, Institutional) category. The prize was awarded for the company's BACnet touch-screen intercom, entirely developed by its research and development team. This innovative product, mainly designed for the school sector, is now offered in three models. Congratulations to all!

Surprising, but true!

The first electric vehicles were invented in the 1800s. In the early 20th century, they represented 38% of the American vehicle fleet, compared to 40% for steam-powered vehicles and 22% for gas-powered vehicles. In fact, in 1900, out of the 4,192 vehicles manufactured in the United States, 1,575 were electric, 936 were gas-powered, and 1,681 were steam-powered. 



At the dawn of this New Year, we wish to express gratitude for our strong and privileged business ties. We hope your future projects will be as stimulating as they are successful.

The team at Regulvar



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For more information, visit our Website

www.regulvar.com

or contact the training department at 450-629-0435 ext. 1777 formation@regulvar.com