Eaton launches its Buildings as a Grid approach to energy transition and acquires EV charging company Green Motion

MORGES, SWITZERLAND  Power management company Eaton is launching a comprehensive suite of hardware, software and services that can transform buildings into energy hubs that extract maximum benefit from on-site renewable generation. Its ‘Buildings as a Grid’ approach to energy transition and electric vehicle charging has been significantly enhanced following the recent acquisition of Switzerland based Green Motion SA, a leading designer and manufacturer of electric vehicle charging hardware and related software.

Eaton has taken an ‘Everything as a Grid’ approach to the energy transition to help customers accelerate decarbonization, boost resilience, reduce energy costs and create new revenue streams. For building owners, by managing the building energy system as a grid, Eaton can transform facilities into energy hubs that better manage existing electrical infrastructure and plan for future energy needs. This is what is meant by Buildings as a Grid.

If building owners instead choose an ad hoc approach bolting on EV chargers to existing infrastructure, they risk encountering power management difficulties and grid upgrade costs when they need to increase capacity to meet demand. This could happen quickly as the switch to EVs gathers momentum: EV sales in Europe grew by more than 140% in 2020, despite the Covid-19 pandemic, and the number of EVs globally is expected to jump from 8.5 million in 2020 to 116 million in 2030*.
Eaton’s Buildings as a Grid approach constitutes the most comprehensive and integrated energy transition offer for building owners and comprises three systems: EV charging, energy management and power distribution. Together these systems allow building owners to monitor and optimize the energy performance of their building and securely control energy assets. This is what the three systems do:

**EV charging system:** this is grid-connected EV charging hardware and software that provides a high level of service for EV charging users, as well as supporting dynamic charging and pricing;

**Energy management system:** this improves the resilience of a building’s electrical infrastructure and supports growing requirement for EV charging capacity in the building by providing demand-side flexibility. This is achieved with energy management software that manages energy flows amongst flexible energy assets that could include: EV chargers, energy storage systems, solar inverters and physical controls for heat pumps and boilers.

**Power distribution system:** manages electrical power distribution and protection.

Eaton’s Europe wide network of support, field service and application engineers and partners can help building owners not only design and optimize their on-site electrical systems to integrate EV charging points but also operate and maintain their system.

Building owners and operators are facing a growing need to monitor and optimize their energy consumption as they add more electrical loads such as EVs as well as new sources of on-site generation and even storage. Eaton’s energy management software automatically optimizes the control of connected assets according to different user-defined goals, including minimizing electricity bills and carbon footprint and maximizing consumption of renewables.

The combination of energy storage and energy management software offers multiple benefits: it can be added without the costly civil engineering works often associated with grid upgrades and it allows users to store off-peak energy and any self-generated renewable power they can make available from sources such as on-site solar photovoltaic (PV) generation. Stored low-cost power can be used at times of expensive peak demand, saving money and benefitting the environment because it enables what’s known as ‘peak shaving’ - reducing the load on the grid to prevent it being switched to carbon-intensive fossil fuel power which may be all that is available when demand is at its heaviest.
The energy management software is the ‘glue’ of the system from power generation sources to EV charging and buildings loads or energy storage. It helps building owners to monitor the energy performance of their buildings and securely control energy assets according to financial or business-driven needs and objectives and sustainability goals.

Eaton’s acquisition of pioneering Swiss EV charging company, Green Motion, has yielded a range of state-of-the-art EV chargers, together with billing and management software that will provide building owners with a suite of options to fulfil their specific EV charging requirements within eco-systems that Eaton will engineer to meet their specific needs. This includes managing EV chargers, balancing the load to ensure a smooth customer experience, enabling billing and customer authentication, and generating revenues.

For businesses, workplaces and residential developments such as apartment blocks, where multi-user EV charging must be balanced to distribute power load efficiently, Eaton’s Buildings as a Grid approach is pragmatic, cyber-secure, flexible and scalable.

**Fabrice Roudet, head of energy storage and EV charging, EMEA at Eaton said:** “With the acquisition of Green Motion, no other company on the market has such as a comprehensive and integrated energy transition offer for building owners. Our Buildings as a Grid approach helps building owners to integrate on-site renewables and address challenges related to the electrification of transport and heat. Additionally, it enables building owners to play an important role in facilitating and optimizing the transition to a high renewable energy system. The electrification of transport and heat will place ever growing demands on distribution networks as more loads are added at the edge. BloombergNEF modelling shows that the cost of grid upgrades to cope with mass electrification can be reduced when electricity generated and stored behind the meter can also be used to support local grids. For this to work, governments and regulators must urgently enable the deep and transparent flexibility markets needed to unlock private investment.”

**Francois Randin, founder and CEO, Green Motion said:** “Eaton and Green Motion form an ideal partnership capable of meeting the challenges presented by the rapid adoption of EVs. Green Motion has proven industry leading EV charging points and operating software. Together with Eaton, building owners can now be assured that they can meet the challenge presented by Electric Vehicle adoption in a pragmatic and flexible way.”
* 2020 Electric Vehicle Outlook Report, BloombergNEF.

**About Eaton**

Eaton’s mission is to improve the quality of life and the environment through the use of power management technologies and services. We provide sustainable solutions that help our customers effectively manage electrical, hydraulic, and mechanical power – more safely, more efficiently, and more reliably. Eaton’s 2020 revenues were $17.9 billion, and we sell products to customers in more than 175 countries. We have approximately 92,000 employees. For more information, visit www.eaton.com

**About Green Motion**

Based in Switzerland, Green Motion SA is a renowned and rapidly growing international company that has been pioneering the design and production of charging systems for electric vehicles since 2009. It manufactures charging stations, designs management software for charging networks, operates charging stations and serves as an electric mobility service provider. Green Motion creates breakthrough technologies, including charging stations for electric planes and onboard chargers for the automobile industry.

Green Motion SA operates its own network of charging stations under the “evpass” brand. evpass has become Switzerland’s most extensive network as well as the leading EV charging hub in Europe. The charging stations produced by Green Motion SA are entirely designed and engineered in Switzerland. Since March 2021, Green Motion is a subsidiary of Eaton. For more information, visit [https://www.GreenMotionEV.com](https://www.GreenMotionEV.com).

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