

Siemens expands virtual power plants to industry with new Sinebrychoff contract

- **Siemens, MW Storage International, Fluence and Vibeco develop unique ecosystem for global beverage manufacturer**
- **Solution to enable new levels of energy optimization**
- **Encompasses software, financing, latest storage technology**
- **Sinebrychoff's first energy storage service contract**

In a move that brings new market opportunities for industrial players, Siemens has developed a unique business model to support the next level of energy optimization for Finnish brewery Sinebrychoff, a subsidiary of the international Carlsberg Group. At the heart of the solution, which will be implemented at Sinebrychoff's plant in greater Helsinki, is a virtual power plant (VPP) and the latest energy storage technology, supported with financing solutions, to create one of the first examples of power flexibility in an industrial site.

The innovative model required close cooperation between a number of entities. For financing solutions, Siemens Smart Infrastructure (SI) partnered with Switzerland-based MW Storage International AG, which secured the initial project investment, and Siemens Financial Services (SFS) to bring in its risk management and deal structuring expertise. MW Storage International owns a 69 percent stake in the project. SFS created the financial and legal framework, co-developed the business model, and enabled the VPP setup through smart financing. Fluence, a joint venture of Siemens and AES, is contributing its 20-megawatt Edgestack energy storage system to the plant, designed specifically for commercial applications. Vibeco, a subsidiary of Siemens Finland specializing in VPPs, will supply the trading platform to enable energy transactions.

“We have worked with Sinebrychoff for years to support their energy efficiency and emission reduction goals. Thanks to historical energy data and bundling the competencies from different players, we can now use digitalization to create the potential for savings and improve the quality of power supply to the brewery,” said Matthias Rebellius, managing board member of Siemens AG and CEO of Smart Infrastructure. “Together with our partners, we can offer an innovative service model to actively help industrial companies make the transition to the green economy.”

In addition to devising the model and bringing in its domain know-how, SI will upgrade the grid connection and also be responsible for ensuring energy optimization at the plant. Altogether, the partners are creating a unique digital ecosystem that supports the energy transition. The solution is slated to debut by summer 2021.

Sinebrychoff is one of Finland's leading breweries, producing over 300 million liters of beer, cider, soft and energy drinks annually. With the new energy and storage model, the company is expected to reduce its annual energy consumption and CO₂ emissions. Sinebrychoff provides the location for the energy storage system, which is half the size of a soccer field. The company consumes energy from the storage system for its own operations. The benefits Sinebrychoff receives, include improved energy efficiency, a new revenue stream, advanced analytics and weather forecast integration. Sinebrychoff plant's power loads are connected to the Finnish energy market, which the country's national grid operator Fingrid oversees. The latter compensates market players for playing a role in enabling grid flexibility.

Lease-based energy storage

“We were looking for ways to improve our energy efficiency and power quality in our production facilities,” said Pasi Lehtinen, VP Supply Chain at Sinebrychoff. “This innovative model developed by Siemens and its partners is an ideal all-in-one solution.”

Fluence's Edgestack™ energy storage system is built on its sixth-generation tech stack, which combines factory-built hardware, advanced software and data-driven intelligence. Edgestack features a modular design and supports commercial and industrial applications, helping customers avoid expensive peak loads, regulate frequencies, and balance voltage fluctuations.

“Energy storage provides significant benefits not only to customers but also to the broader electric grid,” said Dennis Fehr, CFO at Fluence. “We are pleased to contribute our industry-leading technology to the project and look forward to replicating this service model with Siemens and MW Storage International in the future.”

Purchase, installation, and operation of the system are handled by Siemens and Vibeco. Grid operator Fingrid purchases additional services, such as primary grid frequency regulation, that are supported by the energy storage system installed at Sinebrychoff. Thanks to Fingrid establishing national marketplaces for reserve power and balancing the grid, the storage system can automatically and continuously balance the grid.

“We see this as the storage model of the future for various industries, including food and beverage,” added Wilfried Karl, CEO, MW Storage International. “They benefit from state-of-the-art storage technology, financial and environmental advantages, as well as proven expertise and an attractive license model.”

“Like many other industries, the global food and beverage sector is going through a major energy transformation,” said Roland Chalons-Browne, CEO, Siemens Financial Services. “The integration of technology and finance has enabled this ground-breaking solution for Sinebrychoff, and in turn has created a very effective model for energy management.”

The project will be a new showcase for Siemens’ VPP solution, which runs on a software platform. The platform intelligently balances electrical loads from buildings or manufacturing facilities that have been connected in a microgrid, incorporating renewable energy and energy storage. In helping balance power consumption, the VPP decreases the need for reserve power, leading to a reduction in carbon dioxide emissions in the Finnish market.

This press release and a press picture is available at

<https://sie.ag/3kgvrE6>

For more information on Siemens Smart Infrastructure, see

www.siemens.com/smart-infrastructure

For more information on Siemens Financial Services, click here:

www.siemens.com/finance

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Siemens Smart Infrastructure (SI) is shaping the market for intelligent, adaptive infrastructure for today and the future. It addresses the pressing challenges of urbanization and climate change by connecting energy systems, buildings and industries. SI provides customers with a comprehensive end-to-end portfolio from a single source – with products, systems, solutions and services from the point of power generation all the way to consumption. With an increasingly digitalized ecosystem, it helps customers thrive and communities progress while contributing toward protecting the planet. SI creates environments that care. Siemens Smart Infrastructure has its global headquarters in Zug, Switzerland, and has around 72,000 employees worldwide.

Siemens AG (Berlin and Munich) is a global technology powerhouse that has stood for engineering excellence, innovation, quality, reliability and internationality for more than 170 years. Active around the world, the company focuses on intelligent infrastructure for buildings and distributed energy systems and on automation and digitalization in the process and manufacturing industries. Siemens brings together the digital and physical worlds to benefit customers and society. Through Mobility, a leading supplier of intelligent mobility solutions for rail and road transport, Siemens is helping to shape the world market for passenger and freight services. Via its majority stake in the publicly listed company Siemens Healthineers, Siemens is also a world-leading supplier of medical technology and digital health services. In addition, Siemens holds a minority stake in Siemens Energy, a global leader in the transmission and generation of electrical power that has been listed on the stock exchange since September 28, 2020. In fiscal 2019, which ended on September 30, 2019, the Siemens Group generated revenue of €58.5 billion and net income of €5.6 billion. As of September 30, 2019, the company had around 295,000 employees worldwide on the basis of continuing operations. Further information is available on the Internet at www.siemens.com.

Siemens Financial Services (SFS) – the financing arm of Siemens – provides business-to-business financial solutions. A unique combination of financial expertise, risk management and industry know-how enable SFS to create tailored innovative financial solutions. With these, SFS facilitates growth, creates value, enhances competitiveness and helps customers access new technologies. SFS supports investments with equipment and technology financing and leasing, corporate lending, equity investments and project and structured financing. Trade and receivable financing solutions complete the SFS portfolio. With an international network, SFS is well adapted to country-specific legal requirements and able to provide financial solutions globally. Within Siemens, SFS is an expert adviser for financial risks. Siemens Financial Services has its global headquarters in Munich, Germany, and has almost 3,000 employees worldwide. www.siemens.com/finance.

Founded in 1819, **Sinebrychoff** is part of the Carlsberg Group. Sinebrychoff brews beer and produces ciders, long drink beverages, soft drinks, waters and energy drinks. Power brands Karhu, KOFF, Carlsberg, Battery Energy Drink, Crowmoor and Somersby are in the company's portfolio, as well as Coca-Cola beverages such as Coca-Cola, Fanta, Bonaqua and Sprite. Diversity of its personnel, interaction with its customers and society and strong brands are important to Sinebrychoff along sustainability. Sinebrychoff targets to be carbon-neutral and halve its water usage before 2030. The brewery supports responsible drinking with its selection of alcohol-free beers.

www.sinebrychoff.fi

Fluence, a Siemens and AES company, is the global market leader in energy storage technology solutions and services, combining the agility of a technology company with the expertise, vision, and financial backing of two well-established and respected industry giants. Building on the pioneering work of AES Energy Storage and Siemens energy storage, the company's goal is to create a more sustainable future by transforming the way we power our world. Providing design, delivery and integration, Fluence offers proven energy storage technology solutions that address the diverse needs and challenges of customers in a rapidly transforming energy landscape. The company currently has more than 2.1 gigawatts of projects in operation or awarded across 22 countries and territories worldwide. Fluence topped the Navigant Research utility-scale energy storage leaderboard in 2018 and was named one of Fast Company's Most Innovative Companies in 2019. To learn more about Fluence, please visit:

fluenceenergy.com.

MW Storage International is a young and agile Swiss company that plans, finances and operates large-scale storage facilities throughout Europe. It relies on well-known and proven technologies from its partners. MW Storage International focuses on profitable projects and offers investors interesting investment opportunities. MW Storage International aims to become the leading integrator and operator of battery energy storage systems in Europe.