

PRESS RELEASE

The Caterva Energy Management System can market virtual storage power plants fully automatically in intra-day trading

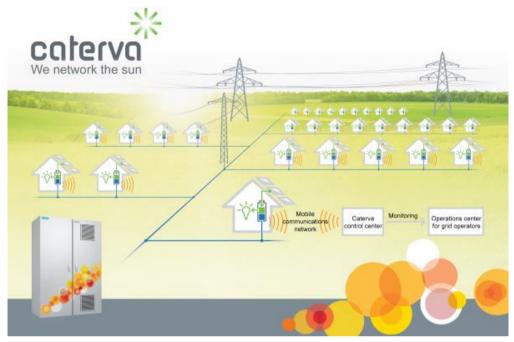
- Energy management for networked, distributed units provides access to new sales potentials for operators of large-scale virtual energy storage facilities
- The system fully automatically exploits opportunities in dynamic intra-day trading and assures plant availability for supply of balancing power
- Quarter-hour intra-day trading is possible around the clock, without manual intervention

Pullach / Munich, Germany, 14 March 2016 – The company Caterva GmbH, located in Pullach, near Munich, offers the contracted management of large-scale virtual energy storage facilities, as well as the fully automatic marketing of networked plants in intra-day power trading. This energy management system can likewise assure the availability of energy storage facilities for supply of balancing power. The IT solution was originally designed for application with Caterva Sun units – photovoltaic power storage systems for private homes – which have proven their effectiveness since the summer of 2015. In conjunction with SWARM – a joint project undertaken with the company N-ERGIE Aktiengesellschaft and supported by the German Federal State of Bavaria – a distributed network of 65 Caterva Sun units delivers primary balancing power. The Caterva Energy Management System implemented here enables automatic buying and selling of power in intra-day trading and assures that the energy storage network can always effectively react to mains power fluctuations. At the same time, the system monitors the charging levels of the individual power storage units.

The Caterva Energy Management System can be configured for virtual storage power plants to effectively account for momentary technical restrictions and for contractual obligations. The algorithm of this system fully automatically calculates bids for buying and selling on EPEX-SPOT and submits them in accordance with these restrictions – and on the basis of power generation forecasts, power consumption, weather data, dynamic market conditions, and price trends. The IT solution enables marketing plants with extremely high frequency – around the clock and without manual intervention. In this way, it is also profitable to market smaller volumes on the power exchange. Parties interested in having Caterva manage and market their plant network can likewise take advantage of Caterva support in networking and optimizing their plants for quarter-hour intra-day trading.

At the Energy Storage Europe conference fair, held from 15 to 17 March 2016 at the Congress Center Düsseldorf (CCD Stadthalle, CCD Süd) in Düsseldorf/Germany, Caterva CEO Markus Brehler will report on the experience gained with the SWARM project. His presentation – "Caterva Solar System – the world's first swarm of household sized batteries commercially supplying balancing power" – will be held on 16 March at 4:10 P.M. as part of Session 7.





Caterva Energy Management makes it possible, for example, to combine individual photovoltaic power storage units to form a large-scale virtual storage facility and to earn sales revenue on the market for balancing power – and to take part – fully automatically – in intra-day trading.

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About the company Caterva GmbH

The company Caterva GmbH, with headquarters in Pullach im Isartal, Germany, was founded in 2013. With its Caterva Sun, it offers the optimal combination of autonomous power supply and networking: Caterva Sun units supply private customers with 100 % of their power needs from a photovoltaic unit. The networking of Caterva Suns creates a virtual large-scale energy storage facility. The marketing of this large-scale virtual system provides additional revenue in power trading and by stabilization of the power grid – sales income that flows to ultimate customers and Caterva business partners. In addition to Caterva Suns, the Caterva portfolio includes its own development, the Caterva Energy Management System for virtual large-scale power storage facilities – as well as the Caterva App, which informs ultimate customers about the status and the efficiency of their Caterva Sun unit.

The concept of a multi-functional, grid-stabilizing solar-energy storage system is based on a development by Siemens Novel Businesses GmbH (SNB). SNB supported Caterva when it was founded and is a minority shareholder in the company. The principle shareholder and CEO of Caterva is Markus Brehler. The Managing Director is Gabriele Ellenrieder, and the Director of Engineering is Dr. Roland Gersch.