

Press release

First energy transition data centre starts in Essen

- **RWE Supply & Trading integrates data centres into the energy transition**
- **Master+ and emergency power generators can help out in an emergency**
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Essen, April 2, 2020

Batteries are of central importance for the energy transition. They can help to cushion the fluctuating feed-in of renewable energy. To this end, many solutions are already being worked on in engineering and network technology. Help is now coming from an unexpected source: data centres. They store and process huge amounts of data, but so far they have only been considered large consumers of electricity. To be on the safe side, however, they have uninterruptible power supply (UPS) systems and emergency power generators available around the clock. These systems are rarely used.

Thanks to the "Master+" solution developed by RWE Supply & Trading and Riello Power Systems, data centres can now contribute to the energy transition: their UPS battery systems help to stabilise the grid. "Master+" features a premium battery with increased storage capacity and an integrated battery monitoring system. The system can automatically draw power from the grid or supply power to the grid in the event of grid imbalances. In addition, RWE has developed a service with which the emergency power generators can significantly relieve the load on the power grid by means of a few targeted operations. Both the UPS batteries and the emergency power generator are marketed with the support of RWE.

The Kraftwerks-Simulator-Gesellschaft mbH (KSG) is the first customer worldwide to use RWE's UPS battery solution "Master+" and is also providing its emergency power generator for network services.

The cooperation with RWE offers many advantages for KSG

Dr. Burkhard Holl, Head of Engineering and Operations, summarises the benefits for KSG: "With "Master+" and the marketing of our emergency power generator, we can benefit from the energy market: we have a higher storage capacity and our battery storage is monitored around the clock. This means greater security of supply while at the same time generating additional revenues - a solution that is both profitable and resource-efficient for us." Another advantage is that the emergency power generator is not used much more frequently than usual, even with RWE's remote control system.

RWE

"Put simply, we cycle the test runs of the emergency power generators, which take place anyway, in exactly the same way so that the networks are relieved," explains Claudius Beermann, the responsible product manager at RWE. "In this way, we replace wear-promoting test runs at low load with targeted operations under high load."

Due to its high degree of innovation, "Master+" was awarded the German Data Center Prize in the category "Energy Technology" in 2018 and the eco://award in the category "Datacenter Infrastructure" in 2019.

Expansion of the data centre meets the requirements of European standards

The expansion of KSG's data centre is now being gradually expanded: in the first stage of expansion, which has already been implemented, two UPS battery solutions, each with 250 kilowatts of "Master+" type power, and a 1,100 kW emergency power generator to secure the emergency power supply were installed. The next step is to increase the UPS output to 2 megawatts and to add a second emergency power generator. The certification of the KSG computer centre based on the TSI.STANDARD including the DIN EN 50600 specific extensions will be carried out by TÜViT. The overall concept of the site is currently undergoing conformity testing for Level 3, which stands for a highly available data centre. The catalogue of criteria also defines requirements for the planning of the building construction, energy supply and security systems trades and specifies criteria for the operation of computer centres.

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RWE Supply & Trading GmbH

RWE Supply & Trading is the interface between RWE and energy markets around the world. Around 1,600 employees from 40 nations trade electricity, gas, commodities, and CO² emission certificates. Aided by precise market analyses and guided by high customer orientation, they create innovative Energy supply solutions as well as concepts for risk management in industrial companies. The trading company also ensures the commercial optimisation of the RWE power plants, operates storage for natural gas, and markets the renewable energy generated by RWE Renewables.

Riello Power Systems GmbH

Riello Power Systems GmbH is the German factory branch of Italy-based Riello Elettronica (RPS SpA), Europe's third-largest and the world's fourth-largest UPS manufacturer, which has over 30 years of experience in the field of secure power supply. Twenty-five branch offices with a headcount of 1,000 operate the world over as part of the family-owned company Pierantonio Riello. The Riello Power Systems GmbH branch specialises in engineering and selling special UPS, BPS and storage solutions.

Kraftwerks-Simulator-Gesellschaft mbH (KSG)

For 40 years now, the Simulator Centre of KSG Kraftwerks-Simulator-Gesellschaft mbH in Essen has been providing training for the licensed operating personnel of all German and one Dutch nuclear power plant. KSG offers its customers individual training, engineering and consulting in the competence areas of power plant technology, simulator operation and construction as well as professional behavioral standards for more safety and efficient processes. KSG also operates a high-availability data center for all aspects of digitization under the new EKu.LOC brand for customers from various industries and of all sizes.

German General Data Protection Regulation (GDPR)

Following the introduction of the GDPR, RWE would like to continue to send you press releases featuring information on the latest topics regarding RWE and to contact you via electronic means for this purpose. We hereby inform you that we have updated our

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