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Danish Data Centres Cut Energy Usage By 10% Using Eaton Technology

ESPOO, Finland ... Power management company Eaton has revealed that more than 90 percent of the data centres in Denmark that use the company's three-phase uninterruptible power supplies (UPSs) rated at 40 kW or more, are substantially reducing energy costs by taking advantage of Eaton's unique Energy Saver System (ESS) technology. ESS technology allows these data centres to cut their energy usage by approximately 10 percent, enabling them to tackle rising energy costs and meet the requirements of the Danish government for businesses to implement energy savings measures.

"Data centre operators across Europe are among the most energy and environmentally conscious in the world," said Tom Bojland, Sales Manager, Eaton Denmark. "Therefore, it's not surprising that those in Denmark have been quick not only to see the benefits of our ESS technology, but also to translate their interest into action by adopting this unique technology on a large scale. At Eaton, we firmly believe that ESS is the technology of the future, providing big energy savings with no performance compromises."

Eaton offers its innovative ESS operating mode on all double-conversion UPSs in its range of data centre solutions. In standard double-conversion mode, these products already deliver industry-leading efficiency of up to 97 percent, but when the quality of the incoming mains power is good, the ESS technology boosts efficiency to 99 percent. Not only does this substantially reduce the energy required to power the UPS, it also generates less heat, reducing cooling requirements and costs while enhancing the reliability of the UPS and prolonging its working life.

Compared to simple bypass systems, the ESS solution is far more sophisticated. UPSs that incorporate ESS technology use advanced digital signal processing (DSP) techniques to continuously monitor the quality of the mains supply. As long as the quality is good, power is supplied directly from the mains to the equipment, allowing the system to achieve the exceptionally high efficiency level of 99 percent.. Even when operating in this mode, the UPS continues to filter the power to the equipment effectively and reliably to eliminate current, voltage or frequency variations.

When the UPS detects that the mains power quality has deteriorated, it switches to double-conversion mode in less than two milliseconds, a transition so fast that it is invisible to even the most sensitive loads. This quick transition is possible because, when the UPS is operating in ESS mode, the rectifier input and output contactors remain closed and the power converter remains synchronised with the mains supply. To switch to double-conversion mode, it is therefore only necessary to enable the output stage of the power converter, which can be done almost instantly.

To learn more about Eaton's power quality solutions, visit www.eaton.eu/powerquality. For the latest news, follow us on Twitter via @Eaton_UPS or find our Eaton EMEA LinkedIn company page.

Eaton's electrical business is a global leader with expertise in power distribution and circuit protection; backup power protection; control and automation; lighting and security; structural solutions and wiring devices; solutions for harsh and hazardous environments; and engineering services. Eaton is positioned through its global solutions to answer today's most critical electrical power management challenges.

Eaton is a power management company with 2013 sales of \$22.0 billion. Eaton provides energy-efficient solutions that help our customers effectively manage electrical, hydraulic and mechanical power more efficiently, safely and sustainably. Eaton has approximately 102,000 employees and sells products to customers in more than 175 countries. For more information, visit www.eaton.com.

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