Press Release

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Energy efficiency of data centers 28 May 2024

TÜV SÜD provides PUE calculations

Munich. Requirements governing energy efficiency for data centers have been further tightened at both European and national level. As a result, existing data centers will need to comply with stricter PUE values in the future. By providing PUE calculations, TÜV SÜD supports DC operators seeking to prove compliance with legal requirements.

The Power Usage Effectiveness (PUE) is a critical indicator of data center energy efficiency. It describes the ratio of the total annual data center energy consumption to the annual IT equipment energy consumption. The PUE and the calculation of the PUE value have been described in detail in the EN 50600-4-2 standard.

Now the EU Directive on energy efficiency (EU) 2023/1791 and the German Energy Efficiency Law (EnEfG) have further tightened the requirements for data center energy efficiency. Existing data centers must reach a PUE of less than 1.5 from July 2026, and of less than 1.3 from July 2030 onwards. New data centers are even required to have a PUE of less than 1.2 from July 2026 onwards.

Structured approach and practice-focused tests

On the above cutoff dates, data center operators must furnish proof that their data centers are compliant with the stricter legal requirements. “By providing our third-party PUE calculations, we support data center operators in tackling this challenge“, says Carlos Fernández Costa, data center energy efficiency and sustainability specialist at TÜV SÜD Industrie Service GmbH. Operators benefit from the experts’ comprehensive experience and their knowledge of the EN 50600 standard, which enables a structured approach and practice-focused testing.

Future data-center operators can benefit particularly from the expertise of TÜV SÜD’s specialists. “Knowledge of the design PUE (abbreviated as dPUE) is a prerequisite for excluding potential business risks in connection with compliance with the applicable regulations”, explains Timo Dressler, data center expert at TÜV SÜD Industrie Service GmbH. “At this stage, optimisation of, say, electrical and refrigeration or heat-recovery systems is still relatively simple.”

Services for secure and sustainable data centers

TÜV SÜD offers comprehensive services for designers, builders and operators of data centers. These services focus on certifications in accordance with the EN 50600 and ISO/IEC 22237 series of standards as well as environmental impact assessments of data centers based on the Blue Angel environmental label or the Data Center Maturity Model in accordance with CLC/TS 50600-5-1.

Boasting in-depth familiarity with the legal requirements and relevant standards in this context and providing innovative solutions, the TÜV SÜD experts support DC operators with designing a sustainable IT infrastructure and optimising data center energy efficiency, thereby reducing costs over the long term.

Further information about TÜV SÜD's services for data centers can be found at www.tuvsud.com/datacenter.

Note for editorial staff: The press release is also available on the Internet at www.tuvsud.com/newsroom

Media Relations:

TÜV SÜD AG Corporate Communications Westendstraße 199 80686 Munich, Germany	Dr Thomas Oberst Phone +49 89 5791-2372 Email thomas.oberst@tuvsud.com Internet tuvsud.com/newsroom

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