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DKE publishes AI Energy white paper

- **300 relevant standards identified and imported into an architecture**
- **Experts in the fields of standards and AI worked closely together to produce the white paper**
- **Their shared goal is to optimize supply continuity with AI**

(Frankfurt, July 27, 2021) Artificial intelligence (AI) systems can improve efficiency, increase resilience and optimize supply continuity in the context of energy management and distribution networks and at power plants and end consumers. But how can AI – which is still a very new technology for the energy sector – be integrated into an established energy ecosystem with its tried-and-tested system approaches? This question is answered by the new AI Energy white paper written by VDE's standardization organization, DKE. To produce the white paper, DKE brought together experts in the fields of standards and AI. They identified and classified more than 300 standards that could be relevant for AI solutions in the energy sector. The standardization experts then created an architecture where norms and standards ensure the interoperability of the systems and processes. The AI developers contributed their ideas and applications to enhance the architectures.

Closing the gaps in standards and promoting the digitalization of the energy sector

“So the white paper not only provides an overview but also sets up the basis for industry and research to launch joint projects that will bridge the gap in standards between AI and energy or come up with completely new applications,” explains Dr. Matthias Uslar, deputy chairman and German spokesperson of the DKE “Smart Energy” system committee. With the white paper, DKE aims to help interest groups to network in order to promote the secure digital transformation of the energy sector. “Standards are needed to make the development and use of AI solutions transparent and scalable in the first place, and so to promote general acceptance,” adds Jörg Schmidtke, chairman of the “Smart Energy” committee. One element of

a standard is the definition of use cases. This method facilitates the mapping and comparison of processes.

Reinterpretation of sector coupling

The white paper is divided into four sections and presents potential applications from the energy sector in the context of AI. In the first section, the white paper investigates the possible uses of AI with respect to energy technology. “After this, the expert teams for standards are introduced, as well as the present state of technology, i.e. the topic of digital architectures in particular. The third section presents the existing norms and standards in light of their potential relevance to artificial intelligence. Finally, the last section looks at the next possible steps aimed at encouraging better coordination between artificial intelligence and energy. This represents a complete reinterpretation of sector coupling,” explains standards expert Dr. Uslar.

The “AI Energy” white paper is available free of charge (in German only) at [DKE Whitepaper KI Energy](#).

About VDE DKE:

The VDE-supported DKE German Commission for Electrical, Electronic & Information Technologies of DIN and VDE (VDE DKE) is the platform used by approximately 9,000 experts from industry, science and administration to develop norms, standards and safety regulations for electrical engineering, electronics and information technology. The goals of standards include supporting global trade and also promoting the safety, interoperability and functionality of products and plants. As a competence center for electrotechnical standardization, DKE represents the interests of German industry in European (CENELEC, ETSI) and international standards organizations (IEC). DKE also provides comprehensive services relating to standardization and the rules and regulations of VDE. For more information, visit www.dke.de/en.

About VDE:

VDE, one of the largest technology organizations in Europe, has been regarded as a synonym for innovation and technological progress for more than 125 years. VDE is the only organization in the world that combines science, standardization, testing, certification and application consulting under one umbrella. The VDE mark has been synonymous with the highest safety standards and consumer protection for 100 years. Our passion is the advancement of technology, the next generation of engineers and technologists, and lifelong learning and career development “on the job”. Within the VDE network, 2,000 employees at over 60 locations worldwide, more than 100,000 honorary experts and 1,500 companies are dedicated to ensuring a future worth living: networked, digital, electrical. We shape the e-dialistic future.

The headquarters of the VDE (Association for Electrical, Electronic & Information Technologies) is in Frankfurt am Main. For more information, visit www.vde.com.

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