

100 percent supply of renewable energy feasible: VDE Task Force presents study on future energy system 2050

- **Experts from VDE ETG outline their vision of the energy system in 2050 and provide recommendations for action**
- **Renewable electricity and renewable gas such as green hydrogen will form the basis of our energy system**
- **Further technical developments and changes in the regulatory framework are necessary**

(Frankfurt a. M., 10.01.2023) We are currently at a historic turning point in energy policy and the further shaping of our energy supply. Therefore a task force of the VDE ETG, the Power Engineering Society within VDE, now presented their vision for the energy system in 2050: The study reflects the idea that Germany's energy supply will be covered 100 percent by renewable energy in 2050.

The authors agree that the future energy system will consist of centralized and local elements in rather decentralized structures. It will be based on smaller and larger units such as photovoltaics, onshore and offshore wind, and, where possible, geothermal energy, biogenic renewable fuels, and hydropower. Solar energy and wind energy will be the primary energy sources. The number of power generation facilities will increase immensely from about two million today, towards local or regional units with independent planning, operation and optimization.

Secure and affordable energy supply

Locally available, renewable energy sources in combination with energy storage may contribute considerably to the security, but also the affordability, of the energy supply. To approach closer the 2050 vision described in the study, experts and society alike are provided with recommendations for action. This includes, among others, establishing a priority program to

make the energy system more flexible. Electricity from renewable energies must be used preferentially in all sectors. For this reason, greater efforts must be made in pushing the sector coupling. Top priority must be given to overcome the shortage of skilled personnel.

Many new players on the energy market

The number and diversity of market participants will increase significantly. The central position of today's large producers will be lost. New market participants such as energy municipalities and cooperatives will also become participants in these markets, in which players from other sectors and industries will become increasingly active, for example mobility providers or real estate companies.

The ETG experts point out that the measures taken now in the context of the energy crisis must be future-proof and compatible with the energy system of the future. The realization and how to get there will become an important driver for economic growth and prosperity in Germany, a country poor in natural resources.

You can find ETG's complete study "Zukunftsbild Energie" (in German) at www.vde.com/zukunftsbild-energie

About the Power Engineering Society within VDE (VDE ETG)

With more than 12,000 members, the Power Engineering Society within VDE (VDE ETG) bundles the expertise of power engineering from generation, transmission and distribution to the various fields of applications. The comprehensive expert knowledge of the approximately 300 volunteers from industry, research, utilities, universities and authorities, who participate in specialized areas, technical committees and working groups, forms the technical-scientific basis for events and publications of the Energy Technology Association in the VDE.

For more information, visit www.vde.com/etg

About VDE

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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 more than 2,000 employees at over 60 locations worldwide, more than 100,000 honorary experts, and around 1,500 companies are dedicated to ensuring a future worth living: networked, digital, electrical. Shaping the e-dialistic future.

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

Press contact: Vanessa Rothe, Phone +49 170 7645316, presse@vde.com