

Intelligent control in the power grid advances the energy transition

- **Significant benefits possible for consumers through controlling intervention in the electricity grids**
- **Potential relief for customers through reduced network charges**
- **Acceleration of the energy transition and continuation of secure grid operation**
- **Necessary parameters for the public hearing of the Federal Network Agency on §14a EnWG**

(Berlin/Frankfurt a. M., 15.03.2023) The German government plans to allow grid operators to intervene in the power supply as part of the energy transition. In the future, millions of so-called controllable consumer devices will have to be integrated into the grid. These include heat pumps, electric cars or electricity storage systems. For the first time, the planned amendment of § 14a EnWG describes a fundamental concept of how the distribution network is to be controlled in order to avoid power outages and overloads. On the occasion of a public hearing of the Federal Network Agency, the Forum Netztechnik/Netzbetrieb VDE FNN draws attention to the advantages of intelligent control.

1. Consumers save money

In practice, control means that in the event of critical network situations, customers make part of their output available as flexibility at certain times of the day. In return, they receive financial compensation in the form of a reduced network charge - regardless of whether they are actually affected by interventions by the network operator as a result. A so-called control measure must always be justified by a concrete, imminent or established network overload and may only be effective as long as this dangerous situation persists. And here, too, there are minimum limits that must not be fallen short of, allowing consumers to continue operating their normal power consumers. Even charging an e-car is thus still possible. The mobility of users is not restricted. Market instruments such as variable electricity tariffs are only suitable to a limited extent for

averting local congestion situations in the power grid. For secure grid operation, grid operators need additional leeway to intervene preventively in the event of foreseeable congestion. This could significantly reduce the number and severity of interventions in the grid on a permanent basis.

2. Electricity grid expansion can remain within realistic limits

Electricity grid operators are already making great efforts to expand transmission and distribution grids in order to make our power supply fit for the energy transition. In the long term, according to the current ideas of the BNetzA, the power grid is to be expanded for the expected maximum capacity utilization. But that would be expensive and is not feasible in the short term due to lengthy planning and construction times. Without the ability to temporarily limit the output of controllable consumer devices until the power grid could be expanded, power grid operators would not be able to safely connect new devices to their power grids in the foreseeable future. As a result, some new grid connections would no longer be approved. Market and operational management instruments can be used to optimize grid expansion by stabilizing consumption. This ultimately also reduces network charges for all customers.

3. Support for the energy transition

The energy transition is fundamentally changing our energy supply. The goal is that in the future, electricity will be consumed primarily when a lot of energy from renewable sources is available. And saved when little solar or wind energy is produced. If grid operators can restrict the supply of heat pumps or charging points in critical grid situations, the devices will thus assume a stabilizing function in the power grid.

About VDE FNN

The Network Technology and Operation Forum within VDE (VDE FNN) develops the electricity grids with foresight. The aim is to ensure reliable system operation at all times with 80 percent renewable energies. VDE FNN makes innovative technologies practicable and provides answers to the grid technology challenges of tomorrow. Here, various specialist groups with different interests work together on solutions. Its members are over 470 manufacturers, grid operators, suppliers, system operators, authorities, and scientific institutions.

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

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 130 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 more than 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 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

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