

Power Distribution Networks: VDE ETG Position Paper Outlines Measures to Curb Rising Costs

Power distribution network costs are rising — and driving up electricity grid fees in Germany. In a recent policy paper, experts from academia and industry outline how the price spiral can be stopped.

(Frankfurt am Main, March 19, 2026) The current level and projected increases in grid costs are not a temporary side effect of the energy transition. This is the conclusion reached in a recent policy paper by the Power Engineering Society within VDE (VDE ETG). “In this sense, the developments in grid fees to date are not isolated or self-correcting events, but rather an expression of a system under increasing structural strain, whose current capacity, planning principles, operating modes, and connection logic are in many cases not yet designed to meet the requirements of a fully decarbonized energy system,” write the experts from the V2 Division “Transmission and Distribution of Electrical Energy” of the VDE ETG in the paper — and they are calling for fundamental reforms.

Allowing curative approaches

Specifically, they propose allowing situational, controlled interventions during operation — so-called curative approaches — to enable better utilization of existing assets. “These measures can help significantly reduce the costs of grid expansion — for example, by replacing or postponing parts of the necessary grid expansion,” explains Dr. Sebastian Wende-von Berg, acting head of the Grid Planning and Grid Operations division at the Fraunhofer Institute for Energy Economics and Energy System Technology (IEE) and co-author of the position paper. In this context, he adds, it is also important to base the economic assessment on the total cost perspective. “When evaluating such projects, the Federal Network Agency should treat the operational costs on a par with traditional, capital-intensive grid expansion — especially with regard to financial incentives,” adds Wende-von Berg.

Make greater use of flexible connection arrangements

In addition, the authors of the paper suggest making greater use of flexible connection regulations. Since 2023, utilities have been able to enter into such agreements with their customers, which enables cost-effective grid integration. However, the paper notes that there is still a significant need for research in this area. “To change this, lawmakers must support grid operators in relevant research projects and in many cases reopen the option for experimental spaces,” says Wende-von Berg.

Preventing uncontrolled growth

However, the paper also criticizes uncontrolled proliferation. “Electricity suppliers are obligated to allow grid connection customers—as long as it serves the goal of climate neutrality—to do virtually anything, anytime, anywhere,” it states. Yet grid connections for transformation-relevant, often location-flexible installations are far more cost-effective to implement if sufficient grid capacity is already available on-site. “The federal government can and must set appropriate guidelines for market-oriented large-scale battery storage systems regarding location, facility size, and grid level,” suggests Wende-von Berg. “The same applies to ground-mounted photovoltaic systems and — with restrictions — also to electrolysers and wind turbines.”

Better grid planning and more research

Further suggestions found in the paper include better grid planning based on real or realistic load profiles rather than theoretical extreme cases, as well as clearly defining the limits of control. Currently, the Energy Industry Act allows grid operators to curtail renewable energy and disconnect consumers from the grid in exceptional cases — without, however, defining how often and to what extent this is permitted without requiring grid expansion.

Even though the authors believe that power distribution network costs are likely to continue rising and could thus have a negative impact on customers’ investment and usage decisions — the paper concludes on a cautiously optimistic note. “In our assessment, the rise in network costs can be significantly mitigated in the medium to long term if distribution networks are operated more actively, digitally, and flexibly,” the conclusion states. “The technologies and methods required for this are already largely available or identifiable today.” With the right political and regulatory course set, the path toward transformation can be continued swiftly and cost-effectively in the distribution grid sector as well — in line with the energy policy triangle of security of supply, economic efficiency, and climate protection, and for the benefit of society, the economy, and the environment.

About the Power Engineering Society within VDE (VDE ETG):

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