Discussion paper on the general electricity framework determination

Executive summary

Introduction

Current expectations of network tariffs are very different to those that were held 20 years ago when the Electricity Network Tariffs Ordinance (StromNEV) was drawn up, but the core requirements of tariffs are unchanged: an appropriate balance has to be found between the refinancing of network costs, the interests of paying network users and a system that is practicable for all concerned. The Bundesnetzagentur will decide the extent to which new approaches are needed to deal with the changed circumstances caused primarily by the energy transition. The aim is to create a network tariff system that enables all network users to act freely in the various markets, without losing sight of the requirements of the networks.

The discussion paper describes the changed conditions brought about by the energy transition and develops a target vision for the future network tariff system. It then presents the current system and compares it with the vision, using this as a basis to discuss the first adaptation options.

The discussion paper does not seek to make specific recommendations for a new network tariff system. Its aim is to establish a common understanding of the challenges and lay out various options for the future design of network tariffs. It is intended to serve as a basis for future analyses of complex issues and, above all, to promote dialogue with stakeholders about possible solutions.

In accordance with a judgment of the Court of Justice of the European Union, the Bundesnetzagentur must act independently in its regulation of the electricity networks and, in particular, must make its own regulations in the field of network tariffs. The Bundesnetzagentur therefore has the mandate to replace the ordinances regulating the electricity network that will cease to have effect on 31 December 2028. The framework determination on the general electricity network tariff system, known for short as “AgNes”, will amend the basic principles of distributing network costs.

The energy transition has changed the framework

Since the StromNEV came into force in 2005, the energy supply system has undergone major change and is continuing a process of transformation. As soon as 2030, at least 80% of electricity consumed in Germany is to come from renewable energy sources, a target that poses challenges including to the system of network tariffs. The large proportion of electricity that is fed into the network far from demand centres leads to high expansion costs and, increasingly, to networks dominated by feed-in. Moreover, the growth of renewable generation requires consumers and generators to be more flexible. At the same time, the rising number of prosumers means there are fewer and fewer financial contributions to the network. In addition, the growing number of flexible consumers and electricity storage facilities needs to be sensibly integrated into the market and the network.

Target vision and comparison with status quo

The multiple aims attached to the setting of network tariffs need to be clearly identified. The regulatory authority generally has a large amount of discretion in weighing up these numerous objectives, some of which are mutually dependent and some of which are conflicting. The legal framework gives rise to four dimensions for the Bundesnetzagentur:

1. cost orientation (esp covering actual network costs),
2. incentive function (esp cost efficiency and unrestricted market price signal),
3. financing contribution (esp cost reflexivity) and
4. feasibility (esp unbureaucratic implementation, transparency and comprehensibility).

A comparison of the existing system with the target vision shows that these four dimensions are taken into account to a greater or lesser extent.

The network tariff system remains a reliable way to accurately finance the revenue cap and cover actual network costs. Cost reflexivity may therefore essentially be assumed.

Feasibility may also be largely assumed, since the current system consists of a manageable number of network components and is described by network users, suppliers, meter operators and network operators as generally workable and predictable.

Financing contribution, on the other hand, must be regarded more critically. The extent to which the system is still cost-reflective must be examined, given that there is no participation by generating installations, there are numerous grounds for exemption for other user groups, self-generation means that an ever larger proportion of electricity produced is being used without tariffs being paid, and there is no consideration of components other than those based on withdrawal.

The various incentive functions are only fulfilled to a limited extent as well, since the heavily withdrawal-dependent components, in particular, hinder flexible demand behaviour. For example, the capacity price could inhibit network users from increasing their consumption at times when greater demand for electricity would stabilise the system, despite the network capacity needed for this higher consumption being available. Yet in a volatile feed-in system, it is precisely this flexible behaviour that gives rise to business models that can stabilise the system.

Adaptation options

On the basis of the challenges described and the preceding analysis of the current network tariff system, adaptation options are discussed and compared with the target vision.

These options include broadening the financing base by involving generators in network costs. The expansion of renewable generation is a key driver of network costs, yet no network tariffs are payable in Germany for the feed-in of electricity. Unlike in the gas transmission system and in contrast to the tariff systems of some other European countries, network tariffs in Germany are paid solely by final network customers. The Bundesnetzagentur therefore wishes to discuss, for example, whether and how network tariffs should be imposed in future when electricity is fed into the network. Contributions

could be charged via tariffs that are dependent on feed-in or via a basic network tariff that has to be paid by generators as well. This would share the costs across more payers.

Another possibility is the introduction of new tariff components such as a standing charge or capacity price. Above the low voltage level, all network tariff components are currently purely dependent on the amount of electricity withdrawn. Tariffs are charged on consumption even though it is not the main cost driver. An additional, flat-rate, standing charge could reflect costs more appropriately. A reinforcement of the existing standing charge component for prosumers at the low voltage level could also ensure their adequate participation in network costs. Network connection capacity plays an important role in the dimensioning of networks and is a further cost driver. It raises the question of whether direct pricing of the network connection capacity ordered would be appropriate.

Dynamic network tariffs would translate the utilisation of the networks into a time-related local price signal. Static time-of-use network tariffs are a simple, pre-form of dynamisation. The different tariff bands are set well in advance, rarely change and usually apply to large areas. The Bundesnetzagentur has set out a specific implementation option in its determination on controllable consumer devices. A network tariff based on the current actual degree of utilisation of the network would require numerous technical conditions including the near-complete digitalisation of the network and network users' devices.

A full harmonisation of distribution network tariffs across the country to smooth out special burdens in particular regions is also brought up for discussion. Tariffs for the user group of storage facilities are addressed separately in the discussion paper to ensure that storage facilities are integrated in a way that benefits the network and system.

The adaptation options are to be discussed with an open mind and in continual, close dialogue with all stakeholders.