

GERMANY

FIXED WHOLESALE

NGN reference interconnection offer approved

BNetzA has finished the lengthy approval procedure ([Update](#)) for Telekom Deutschland's reference interconnection offer for NGN interconnection.

BNetzA adopted its second and final [decision](#) already on December 17, 2015, but corrected it in March 2016 and published it in the official gazette on May 4, 2016.

Telekom has already published the final NGN-RIO on its [wholesale website](#).

Retail level: two parallel networks until 2018

The migration of Telekom's fixed voice telephony network from PSTN to IP is based on two parallel networks, which are largely independent.

Telekom does no longer advertise PSTN or ISDN products, but generally sells IP-based voice products, typically bundled with broadband, IPTV and/or mobile.

Telekom is also migrating existing users from PSTN/ISDN to IP technology region by region.

43% of Telekom's German users have already been migrated (see page 17 of the [presentation](#) of the 1Q 2016 report).

Deutsche Telekom has [completed](#) the migration in Macedonia (Jan. 2014), Slovakia (Dec. 2014), Montenegro (Nov. 2015) and Croatia (Dec. 2015) and aims to complete it in Germany by the end of 2018. However, with the current speed of migrating about 14% of users per year it would take until early 2020.

Also parallel interconnection regimes until 2018

Telekom originally planned to migrate all interconnection to NGN by the end of 2016.

However, many small ANOs prefer to keep their PSTN equipment unchanged as long as possible. Telekom will therefore keep PSTN interconnection operational until the end of 2018.

Telekom will need BNetzA's approval before it can finally switch off PSTN interconnection. BNetzA could decide on this in the next round analysis of the fixed call termination market (market 1/2014).

Larger ANOs have already taken up NGN interconnection.

Telekom's PSTN and NGN networks have different porting codes in the established fixed number portability system. When Telekom migrates an end user from PSTN to NGN, this works like porting the user from one network into another.

For calls from an ANO network to an end user in Telekom's network, the ANO should look up the called number in the porting database and hand over the call with the corresponding technology.

Only if the ANO hands over the traffic in this technology conformant way ([Update](#)), the termination rate is regulated (in most cases 0.24 €cents/min, see [Table](#)).

If the ANO hands over traffic with the wrong technology (for example, using the legacy PSTN interconnection links also for calls to end users already migrated to IP), Telekom charges a slightly higher unregulated termination rate.

Telekom offers 12 points of interconnection (Pols) for NGN interconnection. ANOs

should interconnect at two of these Pols. The requirement to choose two Pols is however only for the sake of redundancy and network stability. The termination rate is the same for all 12 Pols and ANOs can hand over any call at any NGN Pol.

BNetzA required Telekom to offer an exception for smaller regional operators, which do not need more than 80% of one 150 Mbps NGN link. Such ANOs may interconnect at a single NGN Pol.

In the PSTN network, Telekom had 474 Pols for local interconnection and 23 Pols for single and double transit interconnection. Since 2013 Telekom is migrating local interconnection from the 474 to the 23 Pols ([Update](#)). This process will probably be completed by October 1, 2016.

This migration effectively eliminates the single transit termination rate, because ANOs that followed Telekom's migration path only pay the local termination rate, even if they are now interconnected at the 23 higher level Pols.

ANOs' migration to NGN is largely unregulated

The current interconnection regime provides some incentives for ANOs to switch to NGN technology, at least for outgoing calls to Telekom's network. In particular, ANOs can reduce the number of costly interconnection links.

However, there is no obligation for ANOs to switch to NGN interconnection, neither for outgoing nor for incoming calls.

With regard to incoming calls, all ANOs are obliged by the market analysis decisions to offer interconnection (call termination), but BNetzA does not define the technology and ANOs do not need an approved reference interconnection offer. Smaller ANOs offer only PSTN, many larger ANOs offer PSTN and NGN interconnection.

The rates for local PSTN termination and for all NGN termination are regulated and BNetzA applies the same rate to all operators, without differentiation between PSTN and NGN.

Some ANOs tried to argue that their specific network architecture justifies higher termination rates, but BNetzA fended off all such requests and set the rates to 0.24 €/cents/min for all fixed operators.