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Ultra-Fast Broadband in Europe: State of play and trends – What does it cost?

Dr. Annegret Groebel,

Head of Department International Relations/Postal Regulation

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- ULL price of 11.19 € approved applying as of 1st July 2019 (until 30 June 2021) increasing slightly from 10.02 €
- Cost approach of the 2013 NDCM Rec. followed, i.e. the costs were calculated with an updated version of the WIK analytical cost model for the access network (V 3.0 of 2018), i.e. an efficient NGA network capable of providing EDA connections was modelled
- For the price of the copper ULL a „retrofitting“ was applied, however keeping the basic cluster algorithm for the structure of the network (in line with rec. 40), an invest per line of 1,392,35 € resulted (capital cost of 8.90€ - 4.87% real rate of return applied)
- In line with the NDCM Rec. reusable civil engineering infrastructure was valued with an indexed book value and completely written off civil engineering infrastructure not counted
- The reason for the increase is an increase of input costs – digging, copper prices etc. but cost reductions (e.g. no costs for civil engineering structure written off etc.) did not overcomensate the increases this time (as they did in 2016)



- 2019 publication (WIK Discussion paper 456): Cost of a total NGA (FttH-PtP) network stand-alone roll-out calculated at: 65 bn €
- 2020 publication (WIK Discussion paper 457): Cost of a direct migration from FttN to FttH-PtP with a Greenfield/Scorched Node approach taking into account all cost saving effects calculated at: 61 bn €
- Main cost drivers:
 - population density and distribution
 - Use of civil engineering infrastructure sharing (in various forms) where it exists
 - Asset valuation of existing civil engineering infrastr.
- For the business case the speed of take-up is important
- Given a relatively low willingness to pay, this is rather slow in Germany compared to other EU countries making the business case more difficult

Market analysis of M3a – Local access



- From 27th May 2019 until 1st July 2019 BNetzA run the national consultation of M3a – local access until
- The relevant market includes all fixed technologies – copper, fibre, cable and is nationwide
- It comprises ULL and L2-bitstream at the local level
- Deutsche Telekom continues to be dominant, i.e. DTAG is designated as significant market operator as it continues to have a high market share and unconstrained freedom to set prices
- While the market share of cable operators increases, it is not a constraint to DTAG's price setting behavior
- The final draft was notified to the Commission in September 2019 and received several comments

Considerations for future remedies of Market 3a



- In parallel to the market analysis proceeding the Ruling Chamber 3 opened a proceeding regarding the review of the SMP obligations (“remedies”) imposed on Deutsche Telekom and published “Discussion points on the future regulation of access to the copper and fibre access network” on 5th July 2019
- The Ruling Chamber held a public hearing on 12th July discussing the document on future regulation with stakeholders, e.g. the question whether the SMP obligations to be imposed should be differentiated between copper/fibre and whether the right of DTAG to terminate the access in case of vectoring should be discontinued to push fibre roll-out
- The Ruling Chamber received 15 comments and is now working on a draft decision



The ruling chamber intends to maintain the successful regulation of the **existing copper network**. This means maintaining the following obligations:

1. access obligations-
Unbundled access to the local loop in the form of copper pairs at the HVT or another point closer to the subscriber connection unit (street cabinet etc). Access to the unbundled local loop at the HVT/KVz remains restricted when vectoring is used within and outside the proximity area. - Local virtual unbundled access at the MSAN (MSAN-VULA) and at the BNG (BNG-VULA in the variants ADSL, VDSL and SDSL, i.e. retention of the previous Layer 2 bitstream access obligation)- collocation- Access to ducts and - in the absence of capacity - to dark fibre.
2. non-discrimination obligations including monitoring obligations, i.e. monthly evaluations of key performance indicators (ordering process, service provision, service quality, troubleshooting times, switching between different wholesale services)
3. transparency obligations, i.e. the obligation to submit completed access agreements to the Federal Network Agency
4. publishing the reference offers for the access products; this results in the possibility of reviewing and amending the reference offers
5. Ex-ante rate regulation for access to the copper local loop



Important: The ruling chamber does not intend to transfer the regulation of the copper network to new fibre-optic networks, but rather to impose it in a differentiated manner and to limit it to the absolutely necessary minimum. The decision chamber assumes that demand will generally be concentrated on the fibre-optic VULA.

1. non-discrimination obligations

In any case, a non-discrimination obligation must be imposed, whereby it must be decided whether this should be imposed further in the form of the concept of equivalence of output (EoO) or in the form of the concept of equivalence of input (EoI).

2. access obligations

- Obligations are currently imposed to grant unbundled and bundled access, to grant collocation and to allow cooperation opportunities.
- Questions: Under what conditions is it possible to completely waive access obligations to fibre-optic-based access networks?
 - o Is it possible to waive an access obligation subject to conditions? Which requirements/conditions would be appropriate?
 - o Is it possible to waive obligations for unbundled access in the case of parallel infrastructures (FTTH networks and/or cable networks) of different network operators in connection with competitive access offers based on unbundling?
 - o Is it possible to waive access obligations if EoI is offered voluntarily, e.g. in a joint venture?
 - o Is it possible to waive access obligations as long as alternative operators are granted effective access to the fibre connection on the basis of a voluntary agreement, which provides for a neutral arbitrator in case of dispute?
 - o Are there any special requirements for cooperation models?



3. transparency obligation

- The resolution chamber regards the retention of the transparency obligation imposed so far with regard to the submission of concluded access agreements as sensible.
- In addition, the question arises as to whether it is necessary to extend the transparency obligation with regard to fiber rollout and migration from copper to fiber.

4. reference offer obligation

It makes sense to retain an obligation to submit and publish a standard offer if an obligation to grant access is imposed (see above).

5. rates regulation (very important)

- In the event of the imposition of a tariff regulation, possible standards would have to be considered:
 - o Costs of the efficient provision of services (KeL)
 - o Retail minus. Can this standard be applied in the context of fee approval under Art. 31 Par. 2 No. 2 TKG or only under Art. 31 Par. 2 No. 1 TKG for wholesale resale services? How does the retail minus test differ from the margin squeeze test pursuant to § 28 Par. 2 No. 2 TKG?
 - o Misuse control (possibly in the sense of a replicability approach?)
 - o Can further standards be considered for fee regulation?
- Can a complete exemption from fee regulation be considered - especially if an EoI approach is applied?



- Ruling chamber received written comments on the cornerstones and discussion points from 15 market players
- Elaboration of a draft decision for national consultation
- National consultation envisaged for 2020
- Moreover, synergy effects such as those conceivable with the 5G deployment should also be considered a. exploited.
- Ultimately, companies must also take their responsibilities seriously to successfully roll out fibre.
- Although regulation cannot make unprofitable business cases profitable, the regulatory framework plays a key role regarding investments in fibre networks in a competitive environment.
- Therefore BNetzA will implement future-oriented regulatory approaches that provide the necessary incentives to invest in fibre networks in line with take-up.



Thank You For Your Attention!

Dr. Annegret Groebel

Head of Department International Relations/Postal Regulation