

TELECOMMUNICATIONS

Regulatory framework

Regulatory approach to the copper
to fibre migration



Bundesnetzagentur

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Summary

- 1 The transition from traditional copper-based networks to future-proof fibre networks, known as the copper to fibre migration, will strongly shape the telecommunications market in the coming years.
- 2 In the Bundesnetzagentur's view, a prompt and structured migration to future-proof fibre networks is of great importance to society as a whole. It creates the basis for industry, the state and the population to be able to fully use the opportunities provided by the digital transformation and for Germany to be able to maintain and expand its role as a leading business and research location in a digitalised world.
- 3 The Bundesnetzagentur is actively involved in designing the framework for the copper to fibre migration. The first pilot projects were conducted in 2024 under the umbrella of the "Gigabitforum" to test the practical implementation of the migration process. In April 2025 the Bundesnetzagentur published a consultation paper entitled **"Impetus for discussion on the regulated migration from copper to fibre networks"**, which addressed the implications of the current legal framework. In October 2025 the Federal Ministry for Digital Transformation and Government Modernisation (BMDS) published a consultation paper entitled **"Key elements for an overall approach to the copper to fibre migration"**, which built on the Bundesnetzagentur's discussion paper.
- 4 The **regulatory approach** that is now being presented takes up these two strands of work and combines them with the Bundesnetzagentur's regulatory vision. The Bundesnetzagentur is deliberately departing from the existing legal framework and is presenting its current assessment of and ideas about a competitive and consumer-oriented migration from copper to fibre. In doing so, it is providing key pointers for the market. This is all happening against the background of upcoming changes to national and European legislation. The Bundesnetzagentur needs additional legal instruments and greater scope for action in order to be able to create an efficient and expedient regulatory environment for the technological switch. This realisation – together with the majority of the other considerations presented in this paper – is based among other things on the evaluation of the numerous and extensive responses to the Bundesnetzagentur's discussion paper.
- 5 The approach being presented is intended to contribute to the upcoming discussion processes relating to the European and national legal frameworks – and will need to be developed further in line with these processes. The vision and measures in the approach being presented therefore already depart from current legislation. An overall approach to the regulated copper to fibre migration is a long-term task that has to be worked out step by step and that does not end with the publication of this paper.

Key aspects of the regulatory vision

- 6 The Bundesnetzagentur has various roles to perform in the vision within the context of the copper to fibre migration. First, the Bundesnetzagentur's task is to create reliable framework conditions for efficient rollout and investment in fibre networks on the basis of current legislation. The rollout and the use of the future-proof networks have to be accelerated in order for Germany to catch up as quickly as possible with other European countries. Second, the Bundesnetzagentur's task as a competition authority is to ensure that fair competition is maintained on the new networks as well and that the interests of end-users are safeguarded.

Against this background, the Bundesnetzagentur considers it crucial to a) achieve (virtually) nationwide fibre coverage and b) enable end-users to have a choice between different service providers at reasonable prices in the fibre world too. 7

To create equal conditions in rollout competition and thus reliable investment conditions for the companies involved in fibre rollout, copper networks in an area should be switched off as soon as certain objective criteria relating to network coverage and wholesale offers are met in that area. This avoids an imbalance between the owner of the copper network and other companies rolling out fibre. 8

All this depends on key questions being clarified as early as possible. Only then can companies make informed investment decisions in the interests of a swift rollout. Transparency is also of decisive importance for end-users; they therefore need to be given early and reliable information about the various steps in the migration process. 9

Key elements of the regulatory approach

The Bundesnetzagentur's preferred approach that is being proposed and discussed in this paper for achieving the above-mentioned objectives specifically comprises the following key elements: 10

1. The legal formalisation of a rule-based procedure to switch off the copper networks. This procedure should enable a switch-off to be initiated if certain conditions ("migration conditions") are met in an area, irrespective of which company has rolled out the fibre network. The switch-off procedure should be allowed to be initiated by the owner of the copper network, its competitors or the Bundesnetzagentur when the migration conditions are met.
2. In the Bundesnetzagentur's view, at least the following migration conditions should have to be met in order to guarantee competition-friendly and consumer-friendly migration in each area:
 - a. the availability of adequate coverage with fibre,
 - b. the availability of suitable wholesale offers.
3. The migration conditions that have to be met should be laid down before the first procedure either by the legislature or through regulation by the Bundesnetzagentur. In the second case, this would have to be underpinned accordingly by law.
4. The migration conditions should generally be the same for all (target) network operators to whose fibre network end-users are being migrated and thus across all areas.
5. Different minimum levels of fibre coverage should be available at two points in time:
 - a. At least 80% of households and businesses in a rollout area should be connected with fibre at the time the migration process is initiated. In the context of the copper to fibre migration, this figure only includes households and businesses that actually have a full-fibre connection (FTTH/FTTP) ("homes

connected”). It does not include households or businesses that just have a fibre connection to the building (FTTB) (“homes passed”).

- b. In principle, there should be nationwide fibre coverage at the time of the actual switch-off. The Bundesnetzagentur is in favour of a determination by the legislature in respect of the mass market (Market 1). Policymakers will have to clarify whether exceptions should apply to the following connections: connections (1) that end-users refuse to have installed or (2) that would be disproportionately costly for network operators to install (even with potential public funding). In the latter case, end-users would have to have broadband internet access using another technology.
6. The availability of a suitable wholesale offer in every area, as a condition for migration, means there is “open access”, that is to say, there is already access for third party providers to the target fibre network in question when the regulatory migration process is initiated. In the Bundesnetzagentur’s view, this access should generally follow common principles in technical, procedural and pricing respects for all target fibre networks. To achieve effective open access to fibre networks, the Bundesnetzagentur is in favour of a legal simplification and substantiation of the provisions relating to section 22 of the German Telecommunications Act (TKG) (“Access obligation in the case of barriers to replication”) in order to define the universally applicable basic conditions for access to fibre networks, irrespective of the individual case, and stipulate them in advance. Simultaneous asymmetric regulation of a company with a dominant market position is not affected by this and would be possible irrespective of a symmetric access obligation.
7. Migration areas should generally be based on the copper network structure (multi-service access node (MSAN) or street cabinet areas), but should be grouped together wherever it is rationally possible following urban district boundaries (in towns and cities) or municipal boundaries (in rural regions).
8. In the Bundesnetzagentur’s view, there should be an obligation to draw up and publish a higher-level migration plan covering the whole of the federal republic. This obligation would first have to be established in law. The migration plan should include at least (1) the intended start of the first migration process, (2) the envisaged end of the last migration process and (3) milestones in the switch-off process between the start and end dates. The higher-level migration plan should be updated continuously.
9. For the implementation of a rule-based procedure (see point 1), a migration process over a total of at least three years should be planned. The stop-sell of copper-based products should be implemented at least 24 months before an envisaged migration; the stop-sell would have to be notified at least 12 months in advance. As the copper switch-off progresses and more experience is gained, the Bundesnetzagentur also considers a shorter interval between notifying the stop-sell and actually implementing the stop-sell to be conceivable.
10. The migration conditions (availability of a minimum level of fibre coverage and availability of suitable wholesale offers) have to be met at the time the regulatory process is initiated and should be verified by the Bundesnetzagentur immediately after the stop-sell is notified, in order to enable implementation of the stop-sell in time.

11. The stop-sell of copper-based products should be implemented at least 24 months before the actual switch-off. A longer time frame should be considered as an exception for specific complex business customer scenarios (Market 2) and their special requirements.

The timings in the migration process as described in points 9 to 11 are illustrated in the chart below.

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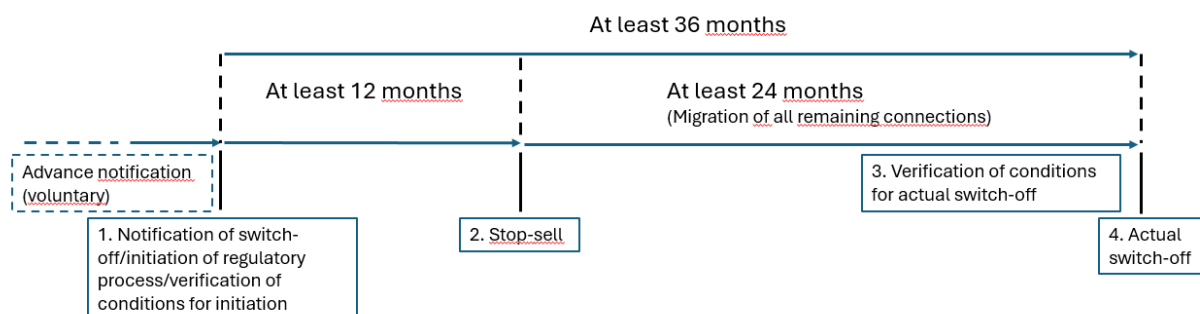


Figure 1: Key timings in the migration process

12. The Bundesnetzagentur considers an allocation of the migration costs to be reasonable that takes into account both the regulatory objectives set out in law – in particular efficient investment in infrastructure, sustainable competition and the protection of end-users – and practicable, clearly defined areas of responsibility.

Outlook

All stakeholders and other interested parties have the opportunity to comment on the regulatory approach being presented until 16 March 2026.

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The consultation process initiated with this publication does not mark an end point but is designed to provide impetus for the upcoming discussions as well as concrete proposals towards developing expedient solutions for an overall regulatory approach as swiftly as possible as part of the next steps.

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