BEREC
Body of European Regulators for Electronic Communications

BoR (26) 88_12

BEREC's position on Migration and Copper Switch-off (Articles 53-61) of the DNA

2 June 2026

Key messages in relation to the copper switch-off procedure

- The DNA proposal foresees necessary and welcome changes that empower NRAs and member states to take charge of the CSO process.
- The application of CSO rules may be disproportionate for countries that are already well advanced. BEREC therefore suggests a more targeted scope of the CSO rules.
- The DNA proposal may induce competitive and connectivity risks if the in-building infrastructure would be targeted by the switch-off mandate. BEREC suggests to limit the scope of the switch-off to the network up to the building serving point.
- BEREC identifies the risk of unintended downsides of an unconditional switch-off after 2035, and proposes to allow for exceptions if fiber coverage is not reached.
- After noting that the DNA proposal does not foresee a time-slot for the mandated market analysis prior to switch-off, BEREC proposes to explicitly acknowledge the impact of this important exercise for the CSO process.
- BEREC cautions that a clear assessment of the required administrative resources and the proportionality of their use compared to the desired benefit is needed.
- BEREC notes that end-user information is of utmost importance for a successful CSO process. Therefore, information obligations should be extended to all parties involved, including retail service providers and access seekers.

Commission proposal:

The chapter on migration and copper switch-off (Part 5; Articles 53 – 61) foresees major changes compared to the European Electronic Communications Code (EECC) with respect to the involvement of public bodies, the tools to be used by public authorities and the ambition to speed up the processes.

The section of the DNA proposal should be applied in Member States where copper networks remain in service after 30 June 2029. It requires Member States to prepare and notify the Commission of a transition to fibre plan. Moreover, NRAs are tasked with the definition of copper switch-off areas, which should be monitored regarding two “sustainability criteria” (i.e. (i) >95% premises passed by fibre and (ii) availability of affordable retail connectivity to end-users).

On the basis of these sustainability criteria, the DNA foresees a 2-stage process. In stage 1 (before 31 December 2035), Member States shall mandate copper switch-off where those sustainability criteria are met on a yearly basis. In the subsequent stage, switch-off should be mandated without the need to fulfil those conditions.

The proposal foresees several safeguards for end-users.

The DNA proposal for migration and copper switch-off does not affect HFC networks. It does affect all elements of legacy copper networks, including in-house wiring based on copper twisted pair cables (typically DSL cabling). In BEREC’s understanding, it remains uncertain if the DNA proposal would affect in-building CAT5e LAN cabling or other (copper based) Gigabit Ethernet -capable cables inside the building.

BEREC's assessment:

BEREC acknowledges that the Commission took into account important suggestions from the recent BEREC progress report on Migration and copper switch-off[1]. In particular, BEREC welcomes the postponement of the 2030 deadline for completing the copper switch-off as suggested in the EC's White Paper, now to the end of 2039 (with exceptions), considering the data from BEREC showing 2030 would have been very hard to achieve. In its contribution to the White Paper, BEREC also noted that a uniform date might not be the most appropriate tool given the different situations in the Member States. BEREC stands ready to provide any support required to find the best way to manage this transition, as guidance will likely be needed.

BEREC welcomes the change to the overall copper switch-off regime, in particular, giving NRAs and Member States an active role, allowing them to structure and lead the process. However, losing the safeguards provided in Article 81 of the EECC is concerning, as it is allowing NRAs to impose conditions on the incumbent operator for copper switch-off.

As a general remark, BEREC would like to caution that a clear assessment of the required administrative resources and the proportionality of their use compared to the desired benefit is needed.

Alternative proposals:

In particular, there are **six important points** that BEREC would like to flag and discuss.

1. **Application of rules may be disproportionate for countries that are already well advanced**

The DNA sets rules for migration and copper switch-off, which shall apply in Member States where copper networks remain in service after 30 June 2029. Given that some Member States are already well advanced in their migration and copper switch-off processes under the current regulatory framework which is based on VHCN, and taking into account the potentially significant administrative burden associated with the new provisions, BEREC considers that there may be merit in exploring a broader exemption or transitional flexibility for Member States that have achieved a substantial level of copper switch-off by the relevant date (or achieved a significant transition to networks enabling gigabit connectivity), allowing them to continue implementing established national transition plans following the EECC.

More concretely, based on public FTTH coverage forecast for 2030 and on the recent BEREC report[2] , the CSO has already started in 16 countries. Full switch-off has been achieved by 2025 in 3 countries (Liechtenstein, Norway and Spain), is expected to be completed by 2026 in 2 countries (Malta and Sweden), and by 2030 in further 5 countries (Cyprus, Denmark, France, Luxembourg, and Portugal). Under realistic projections, the majority of European countries will already have a CSO plan (typically of the incumbent operator) launched by 2030, with some countries in its final stage. The objectives pursued by the DNA proposal can be seen as naturally achievable in most EU countries within the timeframe foreseen by the DNA CSO framework without further legislative intervention. The remapping of an ongoing migration and switch-off regime to the DNA rules would definitely increase the administrative costs, in

[1] BoR (25) 66, BEREC Progress Report on managing copper network switch-off, 05.06.2025, https://www.berec.europa.eu/en/all-documents/berec/reports/berec-progress-report-on-managing-copper-network-switch-off

[2] Ibid footnote 1

obvious disproportion to the goal of simplification, and could even lead to the process slowing down or coming to a halt until operators have fully adjusted to the new rules, without providing any obvious benefit in terms of gains in speed of the migration and switch-off process. Moreover, in countries where the share of active copper lines is negligible, the administrative costs of the proposed regime seem disproportionate. BEREC considers that more than 3% of active fixed broadband connections would be non-negligible.

Alternative proposal: Improvements to the scope of the title to achieve simplification

BEREC proposes the following change to Article 53:

- Article 53 Scope of this Title:

  "This title shall apply in Member States where copper networks remain in service after 30 June 2029 ***in a non-negligible share of the fixed broadband accesses nation-wide and where there is not a CSO plan with objectives and a timeframe that are compatible with the goals set out under this Regulation for the transition to fibre. Member states that are exempted may choose to apply Articles 59 and 61 of this Title."***

The intention of the proposed change is not only to achieve simplification of a highly bureaucratic process where this does not lead to tangible benefits, but also to provide a legal basis for the administrative oversight over the ongoing copper switch-off plans of the incumbent. Provisions are needed (safeguards and enforcement powers for member states and NRA's) to ensure end-user protection and continuity of critical services, as well as to regulate the competition in the migration process, if necessary.

2. Competitive and connectivity risks induced in countries relying on FTTB infrastructures

With respect to the scope of the CSO mandate, specific attention has also to be given to competitive and connectivity risks potentially induced in countries relying on FTTB infrastructures. The inclusion of FTTB with copper as in-building infrastructure within the scope of copper infrastructures required to be switched off could lead to situations where the 95% coverage criteria (Article 57 (1) a) would be met, but the in-building FTTH infrastructure is not in place yet, nor would it be in the four-week timeframe foreseen in the definition of "premises passed". In BEREC's understanding, the four-week period refers to the average time technically required to deploy the in-building segment of the FTTH connection. However, this does not consider that, during the migration following a switch-off mandate in a given area, there could be **a significant number of buildings still requiring internal modifications**. The sequential nature of construction work, as well as administrative burdens, **could likely result in the in-building copper wiring being switched off before the fibre has actually reached all homes**. Moreover, in countries where FTTB infrastructure is owned by alternative operators (e.g., in Latvia and Lithuania), the inclusion of in-building copper wiring in the scope of DNA provision on CSO might give rise to distortions of current competitive conditions and have a negative impact on end-users through retail price increases. It is also important to stress that the Single Market 2030 objectives are currently aligned to European rules that incentivise

and aid investments into VHCN, which include FTTB by definition: such a sudden change of objectives from FTTB to FTTH can lead to unfeasible and harmful situations for the market.

These elements all put together strongly call for adjustments of the scope of the DNA provisions relating to CSO to consider countries where the switch-off of the FTTB in-building segment would lead to more negative (or even unfeasible) situations for EU connectivity goals, for competition and for the end-users' interests.

More generally, with regard to the notion of "premises passed", BEREC stresses the need to specify the four-week period as in the BEREC definition of premises passed, outlined in its Handbook of the Guidelines on Geographical surveys of network deployments.[3] The BEREC definition makes it clear that the four-week period only includes the ability to technically connect the end user and that potential delays due to non-technical factors (including administrative or complex/costly processes) are not taken into account.

Alternative proposal: Improvement to the scope of the CSO mandate to guarantee a unitary level of feasibility in the Single Market and to counter likely negative unintended consequences for EU connectivity goals, competition and end-user interests

BEREC proposes the following changes to Article 54(1)-(2):

- Article 54(1)-(2)
  *"1. Before 31 December 2035, Member States shall mandate the copper switch-off **up to the building serving point** in copper switch-off areas (CSO areas) where the conditions set out in Article 57(1) are met.*
  *2. By 31 December 2035, Member States shall mandate the copper switch-off **up to the building serving point** in all CSO areas."*

3. Unintended consequences of an unconditional switch-off after 2035

The underlying assumption of the DNA proposal is that a rule-based copper switch-off serves as an incentive for fibre deployment and for take-up. This is, however, a controversial topic even within academic circles, as it has emerged in the BEREC Workshop[4] with the Commission and external stakeholders (Brussels, 17th March 2026). Indeed, looking at past experiences in Europe, the switch-off has always taken place only after widespread FTTH coverage had been achieved in the relevant area. In general, an enforced CSO might actually exacerbate existing bottlenecks in construction, civil engineering and planning capacities. A spike in construction costs could hurt positive market-driven dynamics.

For the above reasons, countries that are lagging behind in both deployment and take-up should be incentivised to focus on fibre deployment and take-up before the copper switch-off. **The trigger for the first phase of the switch-off, requiring 95% fibre premises-passed coverage (Article 57 of the current DNA proposal), can be seen as an incentive for alternative operators to extend coverage in an area**, thereby inducing the switch-off of the copper network. The incumbent's copper users could then migrate to fibre, which, according to the second trigger condition (affordable retail connectivity alternatives acc. Article 57), might

[3] Handbook of BEREC Guidelines on Geographical surveys of network deployments (p. 10), June 2021, https://www.berec.europa.eu/sites/default/files/files/document_register_store/2021/6/Handbook_on_BEREC_Guidelines_on_Geographical_surveys_of_network_deployments.pdf
[4] BEREC external workshop on migration and copper switch-off in light of the DNA | BEREC

also be offered at prices comparable to copper services. Likewise, **the incumbent operator would be motivated to accelerate its own fibre rollout** to prevent its users from migrating to alternative operators. Therefore, a first CSO phase according to Article 54 (1), which is conditional to a proper fibre coverage could indeed have a beneficial effect in terms of accelerating deployment and take-up, provided that the assessments in the previous section related to in-house cabling and to the "premises passed" notion are addressed consistently.

However, the DNA proposal foresees a second CSO phase in Article 54 (2) with a full copper switch-off mandate by the end of 2035 without any coverage and affordability conditions. The process should be completed at the latest within 4 years of that mandate, by the end of 2039. It is important to note that only a minority of European countries will likely be affected by the proposed final switch-off date rule, and these European regions will likely continue to face the same structural market conditions that have prevented the acceleration of the deployment of FTTH up to that point in time. A copper switch-off without prior fibre rollout is likely to have negative effects on consumers and competition and will fall short of the DDPP ambition to ultimately provide Gigabit Connectivity to all End-users in Europe and avoid a risk of digital divide. A significant part of the copper switch-off area may lose the only fixed network, and it may be substituted with wireless solutions such as FWA or satellite, possibly leading to a decrease in quality and higher prices relative to fixed connectivity. Furthermore, **reduced competition and no affordability conditions are likely to result in higher prices in the part of the area covered by the fibre network.** Indeed, BEREC considers that the threat of unconditional switch-off would **not, in all cases,** lead to a race to complete the fibre footprint of operators but rather have the opposite effect.

An unintended consequence could be that fibre operators that are investing in an uncontested CSO area may conclude that it is more advantageous not to connect the most costly last percentages of households to achieve a certain threshold, if, by only waiting for the unconditional switch-off mandate, the competing copper networks would be switched off anyway.

This potential negative effect **might** dilute the incentives of the sustainability conditions of the first phase, by **favouring those "non-copper" operators (cable or wireless), for which it is more advantageous to wait until copper is decommissioned** and copper users are forced to migrate to their networks, rather than to invest in fibre deployment themselves. Reported cases where DOCSIS networks have significant penetration in highly dense urban areas, and yet, there is no clear interest in accelerating the transition from coaxial to fibre, are paradigmatic of the disproportions that an unconditional second phase of the switch-off could produce in certain regions, where many customers will be forced to switch from copper to the cable network. This point, even though clearly not the intention of the DNA proposal, would be a competitive distortion without positive effects on fibre take-up .

Given all the above elements, BEREC considers that an unconditional copper switch-off, as is currently defined by the DNA proposal, is disproportionate. It may also increase the correlated risk of compensation claims by the copper-network owner, a risk which is not addressed by the DNA.

In order to address the risks described above, which are related to the second phase of the DNA CSO proposition (Article 54 (2)), a balanced **safeguard shall be introduced that does not impair the DNA design**, but allows the Member States to avoid worst-case disproportion scenarios.

Alternative proposal: Add a safeguard to avoid an unintended disproportion scenario of an unconditional switch-off: Article 54(3)

BEREC proposes to extend the possibilities of the Member States to make exceptions to the final CSO Act according to 54(2) by amending Article 54(3):

- Article 54(3)

  *"3. By way of exception to paragraph 2, in CSO areas **(i)** where fibre deployment is not economically viable and no adequate connectivity solution capable of replacing copper-based services is available **or (ii) where less than 95% of the premises are passed by a fibre network**, Member States may decide not to mandate the copper switch-off."*

4. Insufficient time foreseen for market analysis

According to Article 73(1) of the DNA proposal, a market review shall be conducted before any copper switch-off takes place across most of the national territory. This market review should assess competition in the hypothetical scenario where the switch-off has already occurred. However, **it is not obvious if and how the result of the market review would impact the copper switch-off decision.** The final DNA would need to clarify this point. If, *ad absurdum*, this market analysis exercise is not envisaged to have any material impact on the copper switch-off process, this step could clearly be avoided. In BEREC's view, however, this market assessment is important so that proportionate safeguards, including access remedies, can be implemented when needed. Such a market analysis exercise requires significant administrative resources as well as time, which is currently not foreseen in Article 53 -61 DNA.

BEREC considers that the time[5] needed to conduct this market assessment shall be explicitly taken into account in the timeline of the CSO policy, given the stringent timing definitions in the current DNA proposal. Reported experiences of post-switch-off market analyses in European countries exemplify what could happen after copper switch-off in cases where such a process leads to the emergence of regional monopolies. It has been observed that a market analysis is particularly challenging due to the inherently dynamic nature of a post-switch-off scenario with several regional/local market players and due to the difficulty in precisely defining geographical market boundaries over time.

Furthermore, it needs to be clarified how often such exercise would be required. Article 73(1) states only "prior to copper switch-off" and that it should cover at least the areas affected by the switch-off. It could be deduced that for each CSO area update (on a yearly basis, or even shorter), in which further areas meet the "sustainability conditions", this market analysis would be required. The exorbitant administrative burden both for NRAs and operators based on such understanding would, however, be clearly disproportionate.

[5] According to Article 73 (1), a market analysis procedure should be conducted within a one-year timeframe. BEREC suggests not to define a maximum duration for market analyses in the DNA. If a maximum duration is kept, it should be at least three years, comparable to the existing rules in the EECC (Art 67 (5)), in case of the publication of a new recommendation on relevant markets or in case of EU accession. In the context of this paper, the further calculations are based on this hypothetical 1-year time indication. See BoR (26) 88_9 BEREC's position on SMP Remedies (incl. Harmonised Access Products) of the DNA, 2.06.2026, see: link.

If the DNA intends to foresee this procedure only prior to the first switch-off, or to the last one or to any intermediate one, this should be made explicit and the necessary preconditions[6] for these administrative procedures should be specified at least in a recital.

BEREC believes that such market review can only take place once after the CSO legal acts have been issued by the Member State, and only after the associated plans of the operators have been submitted to the NRAs according to Article 60(2). However, the Commission proposal does not account for the necessary time for this market review, nor it does take into account for the fact that **the outcome of this market review might also entail remedies that could necessitate a technical time for implementation.**

Alternative proposal: Specify the market review purpose and requirements in relation to the CSO process and amend Articles 54(4) and 60(3) consistently.

First, BEREC considers that the **co-legislators should specify the requirement for a market review and its implications in the context of copper switch-off** according to Article 73 (1) DNA, clarifying the overall purposes and need of that exercise and the frequency, as well as accounting for the necessary time. **It is clear to BEREC, that this aspect may disclose the true complexity of the CSO process and will call for further assessments for complexity reduction, for which BEREC is willing to support.**

Secondly, in line with the current stage of the DNA proposal, BEREC consistently proposes to account for the market review according to Article 73(1), together with the associated implementation of remedies, by amending Article 54(4) and, consistently, Article 60(3) as follows:

- Article 54(4)

  "4. For the purposes of paragraphs 1 and 2, Member States shall mandate the copper switch-off by adopting a binding legal act. Each such legal act shall set a start date for the copper switch-off, which shall be no later than ~~one~~ ***two*** *year**s** after its adoption and shall require that the copper switch-off be completed within three years from that start date.* ***The three years duration for the copper switch-off completion can be extended up to five years if the national regulatory authorities assess that new remedies require additional time for implementation.*** *For mandates pursuant to paragraph 1, the legal act shall be adopted within six months of the publication of a list referred to in Article 58(3)**.** For mandates pursuant to paragraph 2, the legal act shall be adopted by 31 December 2035 at the latest."*

- Article 60(3)

  3. The national regulatory authority shall ~~assess the plans within~~ ***conduct a market analysis according to Art. 73(1) and assess the plans of the operators within one year and*** *–two months from their receipt and shall either approve them or approve them subject to amendments.*

[6] BEREC considers that concrete operators plans for migration and switch-off in the associated areas need to be readily available at the start of the proceeding.

Figures 1, 2 and 3 depict how the timeline of the current DNA proposition would be modified according to the above BEREC proposal. For simplicity, only the first CSO iteration initiated by the first CSO area list publication is depicted. This process is repeated for the final legal act by the end of 2035, and for any legal act that is issued by the Member States between the first and the final legal act dates.

It is clarified in the figures that the proposed amendment in Article 54(4) from one year to two years of the time between the legal act and the implementation of the CSO is due to the market review, indicative duration of up to 1 year according to Article 73. BEREC finally notes that such duration may vary depending on the scope and complexity of the relevant market, and that the co-legislator shall take this aspect into account.

The duration up to 2 years for the implementation of the remedies is proposed based on the ambitious but realistic estimation of the needed time (e.g. in the case where a fibre operator is obliged by the NRA to implement a new wholesale access prior to the CSO).

Figure 1 – CSO timeline according to the current DNA proposition.

Figure 2 - CSO timeline according to the BEREC proposal to account for the market review indicative duration of 1 year.

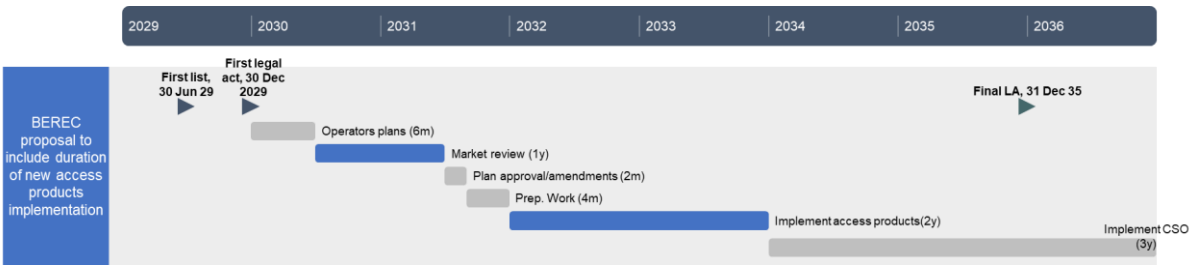

Figure 3 – CSO timeline according to the BEREC proposal, in case new remedies require up to 2 years of implementation.

5. Timing, complexity and administrative costs

a. Timing of the DNA process

BEREC notes that the timing of required administrative steps, even prior to the final switch-off date, is very ambitious. **The foreseen dates certainly would require adjustment in light of the final adoption date of the DNA.** Moreover, there needs to be sufficient time between the adoption of Commission Guidance – which should be developed in cooperation with BEREC (and will also require enough time due to the complexity of the exercise) –and the moment at which Member States and NRAs are expected to apply such guidance in practice.

b. Complexity and administrative costs

The CSO process encompasses an extremely complex **iterative** process involving: NRA CSO areas assessments (with ad-hoc data collections and analysis), "transition to fibre plan" and associated (regional) markets reviews; European Commission transition plan examination; the CSO formal mandate of the member states; possible imposition, implementation and monitoring of market remedies; the plan of the copper operator and the amendments to it by the NRA; the monitoring, and enforcement by the NRA; the implementation by all stakeholders involved, including an effective communication to the end-users and among stakeholders/access seekers. BEREC notes that the complexity of this process involving different parties will become particularly critical and overwhelming in terms of feasibility and administrative costs if considered together with the ambitious timing. **A simplification of the process and/or more flexibility in terms of time scale is therefore strongly recommended to reduce the risks of failure of the policy.**

BEREC does not have, at this stage, further concrete proposals to address the issue of complexity and administrative costs associated with the CSO articles 53-61; however, it is willing to provide support in this matter.

6. End-user protection - also for customers of access seekers

End-user information about migration and copper switch-off is of critical importance to make the process a success. Many actors have to play important roles to ensure that end-users have all the information required. BEREC deems it important that RSPs (Retail Service Providers), which have a direct relationship with their customers, shall plan how they migrate their customers and how they address the needs of those customers potentially at risk of any adverse impacts in the migration (such as vulnerable end-users or those with specific requirements). **In preparation for any withdrawal of copper-based ECS, it is envisaged that RSPs shall provide adequate, appropriate and timely communication with their customers, ensuring a smooth transition for customers.** These efforts by RSPs, however, should be complemented by effective communication of public bodies.

Concerning transparency measures for copper switch-off, the DNA proposals only target Member States (see Article 59(1)), BEREC notes that its recent report on the CSO[7] topic clearly highlights the significant benefits of coordinated information campaigns involving NRAs, public authorities, providers and operators to ensure effective end-user awareness and protection. These experiences should be taken into account by the co-legislators while addressing the concerns described in this section.

[7] Ibid footnote 1

Recital 157 of the proposal explains, "*Member States should provide for appropriate safeguards prior to the copper switch-off. Those safeguards should include clear and timely information, as well as measures to ensure the continuity or migration of critical service*". Further, Recital 158 of the proposal explains that NRAs *"ensure that operators comply with approved switch off plans, timelines and communication obligations".* Regarding the governance aspect, Article 115 (1) (d) and (h) formally assign the task of "*implementing the measures for the transition to fibre*" and "*contributing to the protection of end-user rights in the electronic communications sector*" to NRAs.

However, **it remains unclear to what extent Member States and NRAs have flexibility to impose requirements on providers at the retail level to ensure the protection of copper-based end-users** before, during or after copper switch-off is mandated**. Given that** Article 2 defines an operator as an undertaking providing or authorised to provide a public electronic communications network or associated facility, and that **Article 60 applies specifically to operators, there may be a gap regarding obligations on providers holding the direct end-user relationship.**

Alternative proposal: Place explicit obligations on both involved operators and providers or grant necessary powers to the Member States to impose them.

BEREC considers it is important to amend the DNA such that either:

- **obligations are explicitly placed on both operators and retail level providers** to ensure clear and timely information, continuity of service, and the effective migration of copper-based end-users and users of critical services to functionally equivalent alternatives;
  or
- **Member States should be granted the necessary powers to introduce and enforce such measures.**

Member States that are exempted from the copper switch-off -according to the amendments to Article 53 that BEREC proposes in this paper- shall be able to apply these rules in relation to the ongoing CSO plan in their country.