

Report on the outcome of the public consultation of the draft BEREC Report on the regulation of physical infrastructure access

5 June 2025



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1. Introduction

This report summarises the responses received from the stakeholders during the public consultation period of the draft BEREC Report on the regulation of physical infrastructure access¹ (hereafter “the Draft Report”), as well as BEREC’s views on the issues raised by the respondents. The public consultation ran from 10 December 2024 to 19 February 2025.

Thirteen respondents contributed to the public consultation, namely:

1. 1&1 (Germany)
2. 4iG Group (Hungary)
3. AIIP - Association of Italian Internet Providers (Associazione Italiana Internet Provider) (Italy)
4. BREKO - The German Broadband Association (Germany)
5. DG - Deutsche Glasfaser (Germany)
6. Ecta - European Competitive Telecommunications Association
7. FTTH Council - FTTH Council Europe
8. GasLINE (Germany)
9. Stokab (Sweden)
10. VATM - Association of German Alternative Providers of Telecommunications and Value-added Services (Germany)
11. Vodafone - Vodafone Group
12. A confidential contributor, further referred as an anonymous operator
13. A confidential contributor, further referred as an anonymous association

At the same time, there were three contributions from natural persons which have been erroneously sent to BEREC. Those have been disregarded in the current document.

Comments, observations, requests and recommendations provided by the respondents are summarised and structured in different sections following the Draft Report’s structure, and BEREC’s views are presented in separate boxes that follow right after. All non-confidential contributions are publicly available and accessible on the BEREC webpage². This report is a summary and it does not explicitly elaborate on comments or observations that are not directly related to the Draft Report subject to this public consultation.

¹ BoR (24) 178, Draft BEREC Report on the regulation of physical infrastructure access, 10 December 2024. <https://www.berec.europa.eu/en/all-documents/berec/reports/draft-berec-report-on-the-regulation-of-physical-infrastructure-access>

² See <https://www.berec.europa.eu/en/public-consultations-calls-for-inputs/public-consultation-on-the-draft-berec-report-on-the-regulation-of-physical-infrastructure-access>



The Report on the outcome of the public consultation is organised following the chapters of the Draft Report³. Additionally, it presents a separate section dedicated to the general observations that refer broadly to the whole BEREC document.

This Report on the outcome of the public consultation complements the final BEREC Report on the regulation of physical infrastructure access⁴, and both reports are being published simultaneously.

2. General view on the feedback received

All the responding stakeholders welcomed the work done by BEREC on the important topic of physical infrastructure access regulation. Some explicitly complimented BEREC for the comprehensive exercise, referring to the “excellent and up-to-date overview of the European situation”.

BEREC is grateful for the appreciation received and values the inputs received. We thank all the contributors for their insights.

In what follows, BEREC presents the general comments, referring to the report as a whole, as well as its position vis-à-vis the observations raised.

1&1 explains that, from their standpoint, the Draft Report misses a “clear emphasis on the most successful approaches and a critical examination of misguided approaches”. They consider that the information presented in the document could be used with certainty to make such inferences.

AIIP explains that the Draft Report is “very much unbalanced” towards PIA in the context of market analysis and the corresponding remedies imposed. However, in their view, the SMP regime “may soon disappear from the market” and, as a consequence, such obligations may become inapplicable.

DG recommends BEREC to be more flexible in its approach towards PIA regulation, namely to analyse the concerned markets individually, in consideration of “a fair treatment” between operators rolling out fibre networks (incumbent vs. alternative) and taking due account of the fact that investment incentives should not be treated as a “given”.

³ A note on the numbering: Please note that the numbering of chapters/sections in this report corresponds to the one in the Draft Report (BoR(24)178) submitted for public consultation. This is by contrast to the final Report (published at the same time as this document), where the numbering of the Executive Summary has been removed (i.e. the numbers of all the other chapters/sections have been decreased by one).

⁴ BoR (25) 77: BEREC Report on the regulation of physical infrastructure access, 11 June 2025. <https://www.berec.europa.eu/en/all-documents/berec/reports/berec-report-on-the-regulation-of-physical-infrastructure-access>

In a different line of thought, **DG** raises methodological concerns, highlighting the fact that the number of responses received on the BEREC questionnaire differs significantly and recommends “a more careful analysis [...] regarding the number of answers given”. The same concern is raised by **BREKO**.

Ecta and **VATM** consider that BEREC should have differentiated the presentation of the findings in the Draft Report between EU Member States and non-EU BEREC members. **Ecta** invites BEREC to present the data for the EU Member States separately in the graphs and figures of the Draft Report.

VATM asks BEREC to explicitly include in the Draft Report a separate section providing an overview of the applicable regulatory framework, in consideration of the following possibilities (i) asymmetric regulation based on the SMP regime, (ii) symmetric regulation based on the EECC’s provisions, (iii) symmetric regulation based on BCRD/GIA.

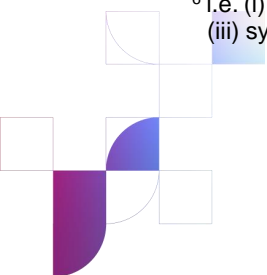
Also, **VATM** calls for BEREC to explicitly state which kind of regulation, from the above-mentioned toolbox, is actually applied in each Member State. Moreover, “a comparative overview of the developments between the last report from 2019⁵ and the current situation” is asked for.

In a similar vein, **ecta** requests that the information included in the Draft Report is always presented with a view to distinguish between applicable regulatory regimes according to the categories (i), (ii) and (iii) mentioned above⁶.

More generally, **ecta** asks BEREC to be “much more explicit” in highlighting that there is “strong evidence” regarding the need to regulate through asymmetric means. Furthermore, based on the information included in the Draft Report, both the Executive summary, as well as the concluding section should reflect the prevalence of the SMP regulation over the symmetric regime as regards the access to physical infrastructure, not only currently but also prospectively. Particularly, BEREC’s conclusions should more firmly state the need for asymmetric regulation going forward. In a similar vein, **VATM** urges that BEREC includes in the Conclusions and in the Executive summary a mention of the great importance that can be attributed to the asymmetric regulation of physical infrastructure access, as “the main and most flexible tool in the regulatory toolbox”, now and for the future. Furthermore, considering the information presented in chapter 6 of the draft Report, BEREC should include a statement on the prevalence of the SMP regime for PIA regulation over the symmetric one.

⁵ BoR (19) 94, BEREC Report on Access to physical infrastructure in the context of market analysis, 19 June 2019. <https://www.berec.europa.eu/en/document-categories/berec/reports/berec-report-on-access-to-physical-infrastructure-in-the-context-of-market-analysis>

⁶ i.e. (i) asymmetric regulation based on the SMP regime, (ii) symmetric regulation based on the EECC’s provisions, (iii) symmetric regulation based on the BCRD/GIA.



FTTH Council highlights that, despite the commendable quality and reporting of the data collected, BEREC could enhance its Draft Report by “deriving clear conclusions and offering actionable recommendations”.

FTTH Council regrets that BEREC’s exercise does not cover the UK as well. Additionally, the fact that the responses are not more exhaustive, with more NRAs answering some of the questions, potentially impedes the inferences that may be made based on the data presented.

In **Stokab’s** view⁷, BEREC could have undertaken a “deeper analysis of the facts”. For instance, they would have liked BEREC to portray the conditions in which PIA is suitable or not, as well as its potential future role. Therefore, “**Stokab** is of the view that in order to understand under which market conditions regulated access to physical infrastructure is likely to be suitable (and when not) the data presented in the Draft Report needs further context and analysis”.

Vodafone is supportive of BEREC providing further guidance to NRAs potentially in the form of common approaches/positions.

BEREC’s response:

Firstly, considering the comments received on the proposed approach, namely the possibilities of BEREC to conclude with best practices and concrete recommendations, to provide its view on the NRAs’ conduct regarding PIA, as well as to analyse each of the markets individually, BEREC would like to kindly remind the respondents that the Draft Report presents a comprehensive overview of the PIA regulation in the countries members of BEREC (as rightly recognized in the contributions received), but it is not focused on any particular market as such.

BEREC neither has a mandate nor the necessary resources to conduct individual market assessments in the member countries, this being an attribute of each NRA overseeing the appropriate functioning of domestic markets⁸. However, BEREC could conclude on certain trends, provide some guiding lines, as well as insights into certain high-level aspects bearing on PIA regulation in Europe. Going into further details at national level would be both inadequate and misleading in BEREC’s view since such potential conclusions would be based on the regulatory result only, missing a careful assessment of the competitive conditions prevailing in the specific jurisdictions⁹.

⁷ To make it's point, **Stokab**, as a municipality owned provider of dark fiber services, explains that, due to the good availability of dark fiber at advantageous prices coupled with the freedom to innovate in terms of services provided over the lines, operators do not need PIA services in the market they operate in. Thus, such kind of relevant explanations could be included to clarify the factual result of lack of interest in PIA services in some countries.

⁸ There are limited circumstances in which BEREC needs to issue an opinion on NRAs’ individual assessments, but these are clearly stipulated in the BEREC Regulation.

⁹ As one of the contributors puts it, “Other approaches might be more relevant elsewhere, but without more extensive analysis it is difficult to compare and contrast the different approaches and experiences throughout Europe”.

At the same time, BEREC is mindful of the local specificities which resulted in one approach or the other in regulating PIA, which is an aspect evident in several parts of the Draft Report. The Draft Report shows how regulation is shaped to particular market contexts.

Secondly, BEREC confirms that the document is focused on PIA regulation through the asymmetric regime, this being the starting point of the work done. Reference to symmetric regulation is made in the context of means to incentivise the rollout of VHCNs, but symmetric regulation is not the focus of this Report. BEREC further clarifies this aspect in the final version of the Report, by including a separate paragraph in the Executive summary explaining the regulatory perspective undertaken in the document.

Thirdly, in what concerns the comments on presenting the information in the Draft Report according to the split between (i) asymmetric regulation based on the SMP regime, (ii) symmetric regulation based on the EECC's provisions, (iii) symmetric regulation based on BCRD/GIA, BEREC stresses once more that the whole work builds on regulation of PIA through the SMP regime, the other possibilities being touched upon at the side, complementarily. Symmetric regulation of PIA may be a topic for deepening BEREC's understanding of the way in which it is used alongside asymmetric regulation in the future, through a different workstream. Furthermore, BEREC starts from the assumption that the legal provisions which may be used for the regulatory treatment of PIA are known, precisely because they have been presented in other documents before – for instance, in chapter 3 of the BEREC Report on access to physical infrastructure in the context of market analysis¹⁰. The only new element is that BCRD is replaced by GIA. As for GIA, the accompanying guidelines (BEREC Guidelines on the coordination of civil works according to Art. 5(6), BEREC Guidelines on the access to in-building infrastructure according to Art. 11(6), Commission's guidance in relation to Art. 3), as well as further orientations (by member states, for instance) are currently under development, and the vast majority of its provisions are applicable as of 12 November 2025.

Considering the methodological comments received, BEREC states its view below:

- with regard to the variable number of operators that responded to questionnaire, while BEREC acknowledges that not all the 29 NRAs provided an answer to each question, it considers that the inferences it makes in its Draft Report are valid and sensible. There is a wide variety of reasons for which the NRAs did not respond to every single question, but BEREC has been careful enough to present the information in a transparent and balanced way, not making statements that are not based on the data;
- concerning the request of presenting the data in the Report with a split between EU and non-EU countries, BEREC stresses the fact that the body of the Draft Report covers the countries members of the organization as a whole, while the split of individual answers is provided in Annex II. The disaggregation in the appendix allows every interested party to

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https://www.berec.europa.eu/sites/default/files/files/document_register_store/2019/6/BoR_%2819%29_94_BEREC_Report__Access_physical_infrastructure_updated.pdf

analyse in detail the data per country and make inferences about the regulatory situation in the EU;

- regarding the inclusion of UK data in the assessment, the NRA of the UK, Ofcom, is not a member (or a participant with voting rights) in BEREC, and so it is not included in the report.

Finally, with regard to **ecta's** and **VATM's** call for strengthening the importance of asymmetric regulation for PIA, BEREC acknowledges the point made and proposes some amendments to the conclusion section of the Draft Report, as the Executive summary merely introduces the Draft Report to the reader.

3. Comments on the Executive Summary

AIIP mentions that PIA, similar to infrastructure sharing, could provide significant environmental benefits, including reduced infrastructure duplication, conservation of resources and materials, improved energy efficiency, and lower CO2 emissions. AIIP therefore recommends that BEREC recognizes the role that PIA could play in this respect.

BEREC's response:

BEREC acknowledges **AIIP's** view regarding the fact that PIA regulation could improve the sustainability of electronic communications networks and services, such as reduced infrastructure duplication, better resource efficiency, and lower CO2 emissions. BEREC supports the recognition of these benefits as part of a broader evaluation of PIA's role in fostering sustainable network development. However, the aim of this Draft Report is not to evaluate or quantify these benefits, other workstreams of BEREC being informative in that area¹¹. For the purpose of the current Draft Report, BEREC would just like to remind its stance that there is a balance to keep between incentivizing infrastructure-based competition and enhancing the sector's sustainability dimension.

4. Comments on Chapter 2 – Overview of access to physical infrastructure in Europe

4iG Group reflects on the fact that regulation of PIA in Europe is “far from uniform”, which is a natural consequence of the “local circumstances”. This is further supported by the evidence in their national market.

¹¹ For instance, BoR (25) 68, BEREC Report on infrastructure sharing as a lever for ECN/ECS environmental sustainability, 10 June 2025. <https://www.berec.europa.eu/en/all-documents/berec/reports/report-on-infrastructure-sharing-as-a-lever-for-ecnecs-environmental-sustainability>

AIIP mentions that BEREC should interpret cautiously the reflection from the questionnaire's answers that access to both telco and non-telco PI is available in almost every country¹². This association indicates that a further analysis is necessary to (i) assess which tool should be adopted and (ii) set the level of granularity and detail in the obligations for PIA.

According to **DG**, BEREC misses an opportunity to describe the market situation, in particular to include "the distribution of physical infrastructure shares", as well as the SMP assessment. **DG** adds that the differences in the fibre rollout among Member States are not taken into account either. **DG** notes that, in countries with a high degree of fibre penetration and rollout, the discussion about the access to the PI could be treated differently as compared to countries where fibre roll-out is still ongoing.

Ecta points to the fact that Table 1 does not include, on the one hand, the regime under which physical infrastructure access has been granted (regulated and by which provisions or voluntary) and, on the other hand, the extent of PIA usage. Thus, **ecta** calls on BEREC to complete the picture. This information is important to eliminate the risk of overestimating the importance of a specific form of regulation over the other or overstate the relevance of non-telecommunications PIA, in **ecta's** view.

BEREC's response:

In response to the observations of **DG**, **AIIP** and **ecta**, BEREC would like to remind the objective of this chapter. It mainly aims to provide an overview, on a rather high level and based on the data collected from NRAs, of the main market trends concerning the take-up and the relative importance of the different physical infrastructures.

As set out in the Draft Report, the collected quantitative data on the demand for the three alternatives (i.e. own PI deployment, access to telco PI and access to non-telco PI) are very limited and are not comparable. This is the reason for which BEREC did not include such information in its Draft Report. Therefore, the analysis as requested by **ecta** and, to a lesser extent, **DG** is not feasible.

Moreover, in response to **ecta**, BEREC stresses that the lack of comparable data on the demand for each alternative limits the scope of the analysis but does not lead to misleading results. On the contrary, BEREC considers the collected data as effectively contributing to show the heterogeneity in the competitive dynamics and the prevalence, at this stage, of the use of telecom PI over non-telecom PI. Furthermore, the access to telecom operators' PI (different from the one of the incumbents) is not found to be particularly relevant either.

In BEREC's view, these findings are well grounded on the qualitative responses provided by NRAs. In fact, they introduce and inform the following chapters of the Draft Report by providing new insights with regards to the competitive landscape in the provision of access to PI in

¹² With reference to the sentence "The access to both telco and non-telco PI was available for the deployment of both fixed and mobile very high-capacity networks (VHCNs) in almost all the countries that contributed to this report (26 out of the 29)." in section 1 of the Report.

Europe. They could also serve as a starting point for a more in-depth analysis that NRAs or any stakeholder could undertake when assessing the level of competition in national markets based on their national circumstances. Also, more detailed information on the relative use of the PI and the concrete applicable regulation may be sought.

5. Comments on Chapter 3 – Physical infrastructure access under ex ante market assessments

1&1 supports the definition of a separate PIA market but does not see it as a substitute for WLA (1/2020) and WDC (2/2020) markets, as it alone will not provide sufficient network expansion of alternative providers to serve all customers.

BREKO queries the specific issue raised by the European Commission or the German national courts on the WDC market as outlined in table 3.

DG recommends that BEREC place a greater emphasis on non-telecom infrastructures such as gas and wastewater in addition to just electricity and transportation infrastructures.

Stokab explains that, in their experience, when access to PI needs to be regulated, the more adequate means to treat it is through an ancillary remedy in the markets established in the EC Recommendation. Both the regulation of a standalone PIA market and obligations imposed through symmetric means provide limited benefits, since, if there is competition and the markets deliver good results for the end-users, then no regulation is needed. This holds true even in the situation when PIA is a monopoly.

Vodafone stresses the importance of PIA in speeding up investments and supporting the rollout of fibre networks deployment. To that end, the consistency of the rules applied together with their predictability are considered of utmost importance. However, setting PIA as a remedy only in market for WLA (1/2020) generates the impossibility of using this type of access for the WDC market (2/2020) or mobile backhaul purposes, which negatively impacts the deployment plans of operators. **Vodafone** therefore asks for “an explicit call to action to at least reduce these situations”, while acknowledging the interdependency of the regulation on the market specificities. Very important from their standpoint is that PIA may be used both for mass-market and business market traffic.

BEREC's response:

BEREC notes that 2 respondents (**1&1** and **Vodafone**) support the definition of PIA as a standalone market, while one respondent (**Stokab**) suggested this was unnecessary. As showed in the Draft Report, the vast majority of NRAs either regulate PIA as a remedy in the WLA and WDC markets or as a self-standing market.

Regarding **1&1's** point that PIA is not a substitute for regulation in the downstream recommended markets, 1 (WLA) & 2 (WDC), BEREC clarifies that each NRA needs to assess each market separately and determine if regulation is required or not while taking account of any regulation upstream such as PIA and judging on its sufficiency to tackle the competition problems identified.

BEREC does not support **Stokab's** argument that regulation of a specific PIA market or symmetric PIA is unnecessary when there is competition and good outcomes for end users. BEREC rather believes that each NRA needs to determine the necessity for a PIA market based on their national circumstances.

On **Vodafone's** point that PIA remedies in separate downstream markets can create restrictions on its use, BEREC agrees that where this is the case, a standalone PIA market would aid remove these restrictions.

BEREC does not place any preference on one type of non-telecom infrastructure over another, as noted by **DG**, but has only reported the frequency with which NRAs have included them in their market definitions of PIA. However, BEREC notes that the role/impact of non-telecoms PI is being assessed more in depth as an increasing number of NRAs define and analyse the PIA standalone markets in Europe. The reason is that, procedurally, NRAs need to check which products or services can be considered as substitutes for the service under focus, PIA in this case. Then, if it is proven that non-telecoms PI can be used interchangeably with the PI built from the outset with the aim to support the rollout of telecoms networks, any type of non-telecoms PI can be included (such as gas or wastewater).

Finally, with regard to **BREKO's** question on the details of issues raised by the European Commission or the German national courts on the WDC market, this is something that should be raised directly with BNetzA.

6. Comments on Chapter 4 – Data collection for the market assessments

An anonymous operator, while supporting “data-driven assessments”, believes that the process could be streamlined “under a symmetrical regime where all operators are subject to the same access obligations”.

BEREC's response:

BEREC acknowledges the comment on data collection but notes that advising NRAs on how to streamline this process falls outside its remit. Data is a crucial element in any assessment conducted by NRAs and serves as a key pillar for a robust evaluation of market conditions and outcomes. BEREC is of the opinion that ensuring accurate and transparent data collection

remains an essential responsibility for NRAs to support well-founded regulatory decisions, these being either of a symmetric or asymmetric nature.

7. Comments on Chapter 5 – Remedies

7.1. General comments on remedies

Ecta stresses that the Draft Report does not contain any information of the effective implementation of the physical access remedies that the NRAs imposed in their national markets. To support its statement, **ecta** points to an example where, despite the regulatory obligations having been imposed, the effective availability is lagging behind.

BEREC's response:

As rightly pointed by all the contributors, BEREC has undertaken an important step towards making transparent the corrective measures applicable to PIA, as an up-to-date stock taking exercise. Delving into details about their effective application into the geographical footprint of its members would warrant another workstream in its own right.

Having said that, BEREC underlines that, for the purpose of preparing this report, NRAs have in general not reported issues relating to the implementation of the remedies. While the examples provided by **ecta** are informative, BEREC is not in a position to make a determination on the points raised by this stakeholder, as they go beyond the scope of the Report.

7.2. Comments related to the wholesale-only operators

According to the **4iG Group**, a possible deregulation process affecting operators that voluntarily separate and offer only wholesale services could encourage the faster, self-sustained development of networks. **4iG** considers that such network operators, irrespective of their ownership structure, have a fundamental interest in attracting as many customers - i.e. other communications providers - as quickly as possible. Thus, **4iG Group** pleads for wholesale-only operators being exempted from as much of the SMP regulation they inherited as possible.

For **Vodafone**, it is of paramount importance that wholesale-only operators resulting from a separation or a joint venture in which the SMP operator is involved do not benefit by default of regulatory relief. In principle, the SMP designation should “spillover to the newly formed wholesale-only operator”. In this case, PIA should be offered if it has been a remedy imposed on the incumbent. On the contrary, for the wholesale-only operators with no connection to the incumbent, no specific obligations may be necessary.

BEREC's response:

BEREC notes that it is up to each NRA to decide, in the context of a market analysis, the specific obligations that may be imposed on a wholesale-only operator that has been declared to have SMP. In this regard, recital (208) of the EECC refers to the beneficial effects that may accrue due to the emergence of wholesale-only operators, while recognizing that the presence of such undertakings does not necessarily lead to effectively competitive retail markets. Thus wholesale-only undertakings can be designated as having SMP with regard to particular product and geographic markets.

In the same vein, recital (208) states that in the case of wholesale-only operators, the regulatory response should be less intrusive, while preserving in particular the possibility to introduce obligations in relation to fair and reasonable pricing. Article 80 of the Code contains specific provisions in this regard.

Regarding the issue of the SMP operator setting up joint ventures / wholesale-only divisions, the specific impact that such instruments may have in the market is an issue that must be assessed individually by each NRA. The EC has in any event stressed that *ex ante* regulation should in principle be extended to cover such investment vehicles, see for example Commission comments letter of 14 March 2022 in case PL/2022/2360: “[...], the Commission would like to stress that UKE should carefully analyse any setting up of legal entities, which were not formally declared to hold SMP but remain under (joint) control of SMP operator (e.g. joint venture companies with OPL’s presence). In case such JVs are under joint control of the SMP operator, obligations imposed on the SMP operator, should apply also to them. The *ex-ante* regulation should not allow a risk that entities set up and controlled by [the SMP operator] could operate in an unjustified regulatory vacuum, for an extended period of time”.

7.3. Comments related to dark fibre, virtual remedies and PIA for the support of the rollout of mobile VHCNs

According to **1&1**, dark fibre should be a mandatory wholesale service, as the availability of this product ensures the right balance between the interests of network owners and alternative network and service providers. **1&1** notes that access to dark fibre could eliminate perceived deficits in the regulated wholesale products and enable the development of competition on an equal footing. Furthermore, in case of PIA unavailability, dark fibre services should be considered as substitutes.

Also, **1&1** is discontent with the fact that PIA in the market in which it operates is restricted solely to fixed networks, its use of PIA for the expansion of mobile networks being prohibited.

On the other hand, **DG** as well as **BREKO** consider that the *ex-ante* regulatory regime should not cover the provision of dark fibre to mobile stations. **BREKO** states that PIA “should only include empty duct access”. Also, **DG** is of the opinion that virtual remedies can and should be considered and applied where construction works are extensive, with “passive access devaluating taken investments”. In the context of the great diversity of market situations, greater flexibility should be applied when setting the remedies, virtual remedies being

considered as an alternative to physical remedies. In the same line, **BREKO** notes that BEREC should assess remedies more flexibly, so that virtual remedies could be imposed.

FTTH Council explains the link between PIA and the lowering of the high barriers to entry in the access markets for the provision of broadband access and notes that, even in those countries where entry has occurred due to PIA regulation, there is a strong geographic limit to the scope of such entry (i.e. in less densely populated areas). Virtual access is essential in such circumstances.

GasLINE holds that dark fibre should not be regulated as an alternative product for the other services included in a relevant market. Specifically, it makes reference to a detrimental situation for the alternative operators if the dark fibre services of the SMP operator are regulated and the regulated price provides them with no possibility to supply the market competitively.

Vodafone supports the view that dark fibre should be considered in the scope of PIA at least as an ancillary remedy in a regulated market, and ideally as a stand-alone regulated product. According to **Vodafone**, having access to dark fibre is in line with the goal to build VHCNs fast and in a minimally invasive way. NRAs should be aware of this aspect and include it into their decision-making practice.

BEREC's response:

Stakeholders have expressed different, sometimes opposing views regarding the prospects of introducing dark fibre access remedies when reviewing PIA. The inclusion of dark fibre as an auxiliary remedy to PI is also not uniform, with 12 out of the 20 NRAs that replied to the survey indicating that dark fibre is regulated, for instance in cases where access to a specific PI asset is not available.

It thus remains the responsibility of NRAs to decide whether to include dark fibre under the PIA conditions and to determine the extent and form of the remedy (whether as a stand-alone regulated product or as a subsidiary remedy, whether as a remedy available for all types of VHCN deployments or not, etc.).

On the other hand, the potential use of virtual access wholesale products as an alternative to the imposition of PIA remedies is not an issue that has been covered by this Report. There may be room for a combination of passive and active access remedies, but BEREC notes that this is again a topic that should be considered by NRAs on an individual basis, in the context of their market analyses and attending to national circumstances.

7.4. Regulation of the entire physical network



DG as well as **BREKO** do not consider it necessary that physical infrastructure access regulation covers the entire physical network (e.g. including the backbone segment).

BEREC's response:

As it is the case with the views of stakeholders on other types of remedies, it is worth reiterating that it is up to NRAs to decide, in the context of a market analysis, the specific obligations that may be imposed on an SMP operator. In this regard, the report notes there are different views amongst NRAs regarding regulation of the entire physical network, with half of the NRAs having replied that they regulate access to the entire physical network within the scope of ex-ante regulation. Furthermore, BEREC would like to refer to another document published in 2022 on the regulatory treatment of fixed and mobile backhaul¹³.

7.5. Pricing of wholesale access to physical infrastructure

DG welcomes the good comparison of prices for physical infrastructure in different Member States and notes the wide range of approaches and the difference in applied prices. Despite that, **DG** is sceptical about the prospect of further harmonization of the approaches. In their view, "further price harmonization will be very difficult and should be avoided". The calculation of a specific WACC for physical infrastructure is supported.

Similarly, **BREKO** observes the heterogeneity of prices and pricing practices as regards PIA but points out that further price harmonisation will be very difficult and incur the risk of hampering infrastructure investments. The need for prices to allow for a sufficient return on investment is highlighted.

FTTH Council also welcomes that the BEREC report presents useful data, however notes a lack of consistency in the pricing measurements that apply in different countries where PIA is regulated asymmetrically. It is suggested that "standardising these measurements could enhance the clarity and comparability of the data".

While **Vodafone** recognizes the specificities of the markets, it considers it paramount to better understand the reasons for the application of different methodologies by NRAs and to strive for more harmonization of approaches in pricing of physical infrastructure. In **Vodafone's** view, the aspects to take into account when judging the scope for harmonization of PIA pricing are related to:

- The one-off fees, as PIA has a low-tech nature;
- The price level across the EU, considering that a tariff that exceeds significantly the benchmark may be an indication of excess;
- The pricing components, which need to be kept at a minimum without a component to account for the impact on the SMP's operator business case.

¹³ <https://www.berec.europa.eu/en/document-categories/berec/reports/berec-report-on-the-regulatory-treatment-for-fixed-and-mobile-backhaul>



BEREC's response:

BEREC notes that stakeholders are unanimous in (i) welcoming the data provided on pricing and (ii) underscoring the wide variety of approaches taken in different Member States. Yet there are split views regarding the need for further harmonization of approaches and the risks that such steps would entail. While some uphold a harmonized approach, others are of the opinion that this may actually be detrimental to the market. In any event, context remains essential, even more when deciding on PIA pricing and creating the appropriate incentives for operators to undertake investments in networks that provide good services, at an adequate quality and at a price that is equitable for all the participants.

Moreover, while BEREC acknowledges the views expressed by stakeholders on price benchmarking and the adoption of standardized measurements to improve data clarity and comparability, it notes that producing directly comparable data from NRAs' inputs is challenging due to differences in pricing across Member States. However, BEREC remains of the view that prices for access to PI can be a topic where further harmonization could be envisaged, but this can only be done in consideration of national specificities and the impact of potential future work on the topic for the deployment of VHCNs.

To conclude, in the future, BEREC may consider conducting a targeted exercise to identify best practices or provide recommendations on pricing. As for the purpose of the current Report, based on the views expressed on pricing of access to PI, there is no need to amend the document. In particular, BEREC does not evaluate individual approaches taken by Member States in the context of the current Report.

8. Comments on Chapter 6 – Regulatory measures relating to physical infrastructure access for incentivizing VHCNs rollout

8.1. Specific comments

Regarding Figure 3 of the Draft Report, **DG** stresses that it would be more informative to show how many lines were deployed with the support of the PIA remedies. In a similar vein, **BREKO** states that the number of operators is not informative of the lines or the number of customers.

BREKO further notes that only 2 NRAs reported that significant changes to the access regime related to pricing were made in the last 3 years. In the context of this question, **BREKO** wonders why BNetzA did not provide an answer to the question.

BEREC's response:

BEREC thanks for the comments on the specifics of this chapter and takes the opportunity to clarify that, while there is room for improvement of the data portrayed in the Draft Report, the information is presented in a comparable and well-grounded manner.

As for non-responses to the mentioned question, it is advisable that the stakeholder approaches the NRA directly. Also, BEREC would like to clarify that BNetzA has introduced asymmetric regulation of PIA in 2022 and, in view of the fact that the time horizon considered in BEREC's question was of 3 years, this development however was not considered a change.

8.2. Comments on the interplay between symmetric and asymmetric regulation

1&1 considers ex ante regulation as necessary until a fully competitive fibre market will have been achieved and, by contrary, the lack of usefulness of symmetric regulation in dealing with situations in which “big discrepancies in the distribution of market shares” are present. Therefore, it pleads for the importance of regulation of the SMP operator and for avoidance of a symmetric approach, illustrating its point of view with an example. **1&1** explains that symmetric regulation is not suitable to deal with SMP situations, the more in a context in which the risk of “a transfer of market power and re-monopolization” is present. The same standpoint is upheld by **BREKO**.

AIIP requires that BEREC should give more weight to the symmetric regulatory regime, in a context in which “the basis of imposition of asymmetric regulatory measures might soon become no longer applicable”. Moreover, **AIIP** argues that the asymmetric framework may not be sufficiently robust to address competition issues in oligopolistic market settings. **AIIP** considers that, even in competitive markets, oligopolistic market settings present some regulatory blind spots that may necessitate intervention but simultaneously are complex to address.

AIIP further notes that most NRAs consider the BCRD/GIA a complementary or subsidiary instrument to SMP regulation. Given the complementary nature of the instruments, **AIIP** considers it to be very important that “BEREC focuses on detailing and harmonizing the set of obligations to be applied to the entities controlling the specific infrastructures considered by BCRD/GIA”. Concretely, BEREC should be detailing the PIA obligations under the BCRD/GIA.

Additionally, **AIIP** goes on to explain that all physical infrastructure appropriate for fibre deployment should fall under the PIA obligations (especially the one of non-telecom operators) and lists the aspects which have a bearing on how obligations may be shaped (disaggregated access, access to passive elements of networks when PIA is not possible, transparency provisions attached and litigation).

On the contrary, **DG** recommends maintaining SMP regulation and avoiding any kind of symmetrical treatment, since otherwise the alternative fibre operators would be disadvantaged. Moreover, the higher the imbalance between the alternative operators, on the one hand, and the incumbents, on the other hand, the less likely it is that symmetrical regulation would even the level playing field.

BREKO recalls that the Draft Report states that if ex ante regulation was lifted, transparency would likely decrease. Asymmetric transparency obligations are generally seen as more effective.

FTTH Council states that the section on symmetric regulation is informative and that, surprisingly, the SMP obligations “appear to remain crucial for resolving issues related to setting specific prices and conditions for in-building access, which symmetric instruments alone do not seem capable of addressing”. Thus, it concludes with the observation on the lack of readiness of NRAs “to move from SMP based remedies to remedies based on symmetrical regulation”. Therefore, in their view, “it would be premature to move to symmetrical remedies and retaining access market(s) remains important”.

In the same vein, **GasLine** explains that a shift from the asymmetric to the symmetric regulatory regime would undermine the developments in markets that do not feature a very good coverage of fixed VHCNs by introducing uncertainty in the markets, undermining investments. Where market failures are identified, the SMP regime should be applicable.

VATM calls on sharpening the following statement: “both symmetric and asymmetric regimes need to go hand-in-hand as regulatory tools for NRAs to resolve competition problems identified in their national markets” by attributing the right (higher) weight to asymmetric regulation.

Vodafone considers that the asymmetric regulation is still needed to address market dominance, which is clearly upheld by the data in the Draft Report. Reliance on “horizontal regulation” is appropriate only in situations in which the bargaining power of the competitors is similar. This is clearly not the case of access to PI, in **Vodafone’s** view. Moreover, some of the advantages of the SMP regime (only) are related to the cost-oriented price for PIA and the possibility to have a reference offer, while a disadvantage for the symmetric setting lies with “the need to resort to dispute resolution instead of being able to rely on clearcut obligations”. Finally, **Vodafone** sees symmetric regulation as a complement to the SMP regime, with the latter having precedence over the first.

An anonymous association takes the opportunity to comment on the regulatory approach rather than on the Draft Report. It states that the characteristics of today’s markets require a fundamentally reformed regulatory framework in which ex post competition law and the Gigabit Infrastructure Act (GIA) should become the default regime applicable to telecoms. It is claimed that the current market analysis process is overly complex, subjective and backward-looking and, therefore, the right approach would be to make use of the symmetrical regulation instead. Moreover, the symmetric regime should take prevalence over the asymmetric one. Additionally, the contributor follows up with some aspects meant to support the NRAs regulating PIA primarily through symmetric means.

An anonymous operator strongly upholds the application of symmetrical regulation because of (i) promoting investment, competition and “fairness across all operators”, (ii) the possibility to address non-telecoms operators PI, (iii) the lower complexity and higher transparency when



compared to the SMP regime, (iv) easier data collection process, (v) enhanced predictability, (vi) reduction of entry barriers in underserved areas. Furthermore, NRAs should focus on enforcing long-term wholesale contracts. Overall, it is believed that the regime would provide “a more sustainable long-term solution”.

BEREC’s response:

Firstly, while stakeholders’ perspectives on PIA regulation may be different, along with BEREC they recognize that PIA plays a critical role in the deployment of fibre networks by facilitating access, now and in the future. However, the varied responses from NRAs highlight that the way this role translates into continued deployment depends on NRAs’ assessments of their national circumstances.

Secondly, another point of common agreement is that both asymmetric and symmetrical tools are complementary and that SMP based regulation can be stricter. For example, it is widely recognized that hard-shell pricing obligations are an attribute of asymmetric regulation, as well as more prescribing access obligations coupled with transparency resulting in the obligation to publish a reference offer. Therefore, in direct relation to the magnitude of the competition problems identified, BEREC considers it evident that SMP regulation is better fit to treat acute issues. At the same time, BEREC does observe a recent focus on symmetrical instruments to foster the use of PI, even more in the context in which GIA Regulation is out and contains more detailed, stricter provisions as regards the possibility to regulate symmetrically when compared to the BCRD. However, it is of utmost importance that both symmetrical and asymmetrical tools remain available to NRAs, to grant them flexibility in correcting the markets dysfunctionalities.

Thirdly, the stakeholders’ views on which type of regulation should take prevalence over the other are opposing, which is unsurprising to BEREC when considering the advantages of one approach over the other in different circumstances. For example, when the relative size difference of operators in a market is significant, with one operator by and large controlling a ubiquitous buried VHCN, asymmetric regulation may be the right approach. By contrast, when the market presents an oligopolistic structure, featuring a tight oligopoly, access under a symmetric regime may be more appropriate. However, asymmetric regulation was the regime that helped regulators to move the markets from monopolies to more competitive structures, and these rules are still vital since the progress towards competition in the markets is not seen as irreversible.

Another very important point worth making is that the choice of regulation is not binary – symmetric or asymmetric. NRAs may use a combination of means, for instance regulating in an SMP setting access to PI for the rollout of networks up to the last distribution point and following with symmetric access obligations for the in-building PI. As regards the possibilities to regulate PI owned by non-telecom operators, practice has already showed that it can be done in both settings, not being the sole attribute of one regulatory approach over the other.

Finally, the aspect of the strictness necessity of the remedies has already been explained.

To conclude, while asymmetric regulation remains crucial for setting specific prices and/or transparency obligations, the availability of symmetric remedies should not automatically lead to the dismantling of asymmetric safeguards. The overarching goal should be to create a more predictable and investment-friendly environment for all market participants. In this context, full harmonization may be less effective, restricting the degree of adaptability of the regulation.

Based on the responses received, BEREC does not see the need to amend the text of the report.

9. Comments on Chapter 7 – Expectations for the future

4iG Group underlines as an important future challenge the fact the regulation of access to non-telecommunications PI will be more appropriately done under GIA provisions rather than asymmetric means. Despite that, “there are a number of issues that require attention and for which a long-term solution remains elusive”. For instance, while litigation may provide for a means to settle disputes, the predictability needed when undertaking large-scale investments is not assured.

BREKO is supportive of the recommendation for the application of a more detailed monitoring of the non-discrimination obligations and agrees with the view that the GIA alone may not sufficiently protect alternative VHCN operators, who need access to SMP infrastructure to host their networks.

Vodafone considers that dispute resolution mechanisms may become increasingly complex and advocates for not replacing ex-ante regulation with dispute resolution, as relying on them would shift the burden of proof, undermine competition and weaken alternative operators’ position. BEREC is asked to investigate this issue further and explore measures to prevent dispute resolution from being used as a tool for deregulation.

An anonymous association considers that GIA should be established as the “common EU framework”, as it features a series of advantages over other approaches, such as being a regulation with direct applicability and providing for an opportunity to compare and procure PI elements from a broader range of network operators and sectors, such as electricity.

In a similar vein, **an anonymous operator** supports the view that flexibility and adaptability are essential for maintaining Europe's competitiveness in the digital economy and encourages BEREC to continue promoting investment and simplifying regulation through symmetric measures to support widespread VHCN deployment and respond to competitive pressures from non-European operators.

BEREC’s response:

BEREC is considerate of the valuable insights provided by stakeholders regarding the regulatory framework for PIA and the broader issues surrounding symmetric and asymmetric regulation when going forward. BEREC also notes the views expressed on the potential

limitations of SMP-based regulation in addressing competition issues in oligopolistic market settings and the views outlined on the extent of the shift towards symmetric regulation under the BCRD and the GIA. As GIA is a new regulatory instrument and taking fully into account the various guidelines that are to accompany its application, BEREC is of the opinion that there is no clearly pencilled future prevailing approach. Therefore, BEREC acknowledges the expressed challenges going ahead and considers the possibility to undertake other workstreams to deepen its understanding of symmetric PIA regulation in future.

In any event, it is clear that a close monitoring of the imposed obligations related to PIA will be of utmost importance in deciding the adequate role that the approaches may be put at use for. Moreover, the transition from copper to fibre underscores the importance of consistent and transparent non-discrimination obligations to prevent the transfer of market power.

Regarding concerns raised about reliance on dispute resolution mechanisms and predictability, BEREC underscores the utmost importance of the predictability principle that guides regulation of the telecoms sector and it stands for its preservation. The dispute resolution mechanism should complement and not replace ex-ante regulation. BEREC acknowledges that there is a point in arguing that relying solely on dispute resolution to address competitive imbalances may create uncertainty to the detriment of market competition dynamics. Therefore, it remains essential to maintain a balanced approach where both ex-ante and ex-post measures are available to address market failures effectively.

BEREC also recognizes the challenges outlined in relation to urban and rural VHCN deployment. Ensuring transparent, predictable and timely access to infrastructure - particularly of non-telecom operators where appropriate - remains critical to encouraging investment and closing coverage gaps. BEREC admits that extending certain regulatory tools to non-telecom infrastructure could help enhance predictability and reduce barriers to large-scale network deployment. However, any such measures should be carefully calibrated by NRAs based on national market conditions.

10. Comments on the Conclusions

1&1 highlights, once more, that the best way to incentivize competition is to ensure access to those parts of the networks that cannot be easily duplicated, which should “strongly” be emphasized by BEREC.

Ecta supports ARCEP’s view on the migration to maintenance-focused regulation in a forward-looking perspective. These considerations need to be covered by the concluding section.

At the same time, **ecta** points to the fact that BEREC’s inferences about the consideration of PI access remedies as enough to determine the deregulation of certain downstream markets are not backed up by the evidence provided in the report, since PIA is mostly regulated as an ancillary remedy in other markets.

Additionally, **ecta** stresses the fact that PIA regulation cannot be regarded as a universal solution for all the market failures in the context in which, even nowadays, not all the operators have climbed the ladder of investment up to the last step. Therefore, BEREC is invited to amend its conclusion by stressing the importance of the remedies imposed on the markets 1 or/and 2 in the Recommendation, as well as of Art. 72 EECC.

Vodafone expresses its support for the fact that PIA may be further harmonized as regards the “technical specificities of the product”.

BEREC’s response:

BEREC thanks the respondents for the comments on its concluding section and takes note of the required additions to its Draft Report, keeping them in mind for future reference. However, BEREC points out to the fact that the remarks in the conclusions follow from several aspects analysed and presented in the body of the document and, since no modifications are required to the fact-finding exercise, there is little sense in adjusting the conclusions. The stakeholders’ statements basically do not contradict the information showed in the document.

As per some of **ecta**’s prior observations, BEREC will slightly adjust the text to pinpoint that, according to the current status, a majority of NRAs regulate PIA in an asymmetric manner (see section 2 of the current document).

11. Other comments

BEREC has received a series of other comments which reflect on the regulatory situations in given jurisdictions.

BEREC’s response:

All the comments have been duly noted by BEREC. However, since BEREC does not have regulatory powers over the Member States, it is for the individual NRAs to deep dive into the competitive situation at national level and guard the regulatory balance, to the overall benefit.

From BEREC’s perspective, since the Draft Report does not assess individual situations and their particularities, the document requires no changes in the text.

