



Brussels, XXX
[...] (2023) XXX draft

ANNEX 1

ANNEX

to the

Commission Recommendation

on the regulatory promotion of Gigabit connectivity

ANNEX I

Application of non-discrimination obligations pursuant to point [26] of the Recommendation

Key performance indicators ('KPIs')

- (1) KPIs should measure performance in relation to at least the following key elements in the provision of regulated wholesale services:
 - (a) ordering process;
 - (b) Service provision;
 - (c) quality of service, including faults;
 - (d) fault repair times; and
 - (e) migration between different regulated wholesale inputs (excluding one-off bulk migrations).
- (2) National regulatory authorities ('NRAs') should impose KPIs for each of the key elements listed in point 1 in the provision of regulated wholesale services. KPIs should allow for comparison between services provided internally to the downstream retail arm, of the significant market power ('SMP') operator and services provided externally to third-party access seekers.
- (3) The specific details of KPIs imposed by the NRA in accordance with point 2 of this Annex can be agreed between the SMP operator and third-party access seekers
- (4) In determining the KPIs, the NRA should take account of existing performance measurements, even when only used by the SMP operator for internal purposes.
- (5) The process of monitoring KPIs should be fully transparent. To ensure that potentially discriminatory behaviour in the provision of regulated wholesale services is discovered early, and to ensure transparency, NRAs should publish KPIs at least every quarter, in an appropriate form either on the NRA's website or on the website of an independent third party designated by the NRA.
- (6) NRAs should ensure that the KPIs are regularly audited either by the NRA itself or by an independent auditor.

Service level agreements ('SLAs') and Service level guarantees ('SLGs')

- (7) NRAs should require the SMP operator to implement corresponding SLAs alongside KPIs.
- (8) NRAs should require the SMP operator to provide corresponding SLGs in case of a breach of the SLAs.
- (9) NRAs should ensure that penalty payments for failure to fulfil SLGs are, in principle, made without undue delay and follow a pre-determined process for payment and billing. The level of such penalties should be sufficiently dissuasive to ensure that the SMP operator complies with its delivery obligations.
- (10) Penalties for failure to meet KPIs should be proportional, but should be high enough to be dissuasive. To determine whether penalty is sufficiently dissuasive, NRAs should consider whether a breach of wholesale obligations by the SMP operator would cause the alternative operator that uses the wholesale access product problems at retail level. If so, the penalty should be high enough to cover the retail indemnity.

- (11) NRAs should monitor any delays in the payment of penalties so as to ensure their dissuasive effect.



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ANNEX II

Application of the principle of equivalence for access to the civil-engineering infrastructure of the SMP operator in accordance with point 35 of the Recommendation.

Principle of equivalence

- (1) Access to the civil-engineering infrastructure of the SMP operator can be a key input for the deployment of VHCNs. To create a level playing field among other market participants and the SMP operator, it is important that such access is provided on a strictly equivalent basis. NRAs should require that the SMP operator provides access to its civil engineering infrastructure to third-party access seekers under the same conditions as for internal access seekers. In particular, the SMP operator should share all necessary information on infrastructure characteristics, and apply, in principle the same procedures for access ordering and provisioning. Reference offers, KPIs, SLAs and SLGs are instrumental in ensuring a proper application of the principle of equivalence. Conversely, it is important that any asymmetric knowledge the SMP operator possesses on the rollout plans of third-party access seekers is not used by the SMP operator itself to gain any commercial advantage.

Information on the civil-engineering infrastructure and the distribution points

- (2) The SMP operator should provide third-party access seekers with the same level of information on its civil-engineering infrastructure and distribution points as is available internally. This information should cover the organisation of the civil-engineering infrastructure as well as the technical characteristics of the different elements included in the infrastructure. The geographical location of those elements, including ducts, poles and other physical assets (e.g. maintenance chambers) should be provided, as should the available space in ducts and, where feasible, on poles. The geographical location of distribution points and a list of connected buildings should also be provided.
- (3) The SMP operator should specify all rules and technical conditions for access to and use of all elements of its civil-engineering infrastructure and of distribution points. The same rules and conditions should apply to third-party access seekers as to internal access seekers.
- (4) The SMP operator should provide effective information tools, such as easily accessible directories, data bases or web portals. Such information should be regularly updated to take account of infrastructure developments and new information, in particular on fibre deployment projects carried out by the SMP operator or by other access seekers. Where the relevant tool(s) contain(s) confidential information, the NRA should ensure that this circumstance does not unduly delay the provision by the SMP operator of information on its civil-engineering infrastructure and distribution points.
- (5) When other legal provisions require the SMP operator to provide all or some of the above information via or as part of a directory, database or web portal managed by a third party, the NRA should assess whether the transparency requirements are still met. Factors for the NRA to consider include: (i) the data the SMP operator is required to provide; (ii) the level of detail and the regularity of updates; and (iii) the conditions under which the information in the directory, data base or web portal managed by a third-party is available for access seekers. If the transparency recommendations provided for by this Section are

already fulfilled through other legal provisions, the NRA should consider whether it is appropriate to rely on those legal provisions alone.

- (6) If the NRA deems it necessary to impose on the SMP operator a transparency obligation as regards its civil-engineering infrastructure, it should further consider whether it is appropriate to require the information to be presented in a relevant directory, data base or web portal managed by a third-party. The NRA should apply a consistent approach when imposing the transparency obligation so as not to place unnecessary administrative burdens on the SMP operator and on access seekers.

Ordering and provisioning of access

- (7) The SMP operator should implement the procedures and tools necessary for ensuring efficient access and use of all elements of its civil-engineering infrastructure and of distribution points. In particular, the SMP operator should provide third-party access seekers with end-to-end ordering, provisioning and fault management systems equivalent to those provided to internal access seekers. This should include an appropriate and non-discriminatory process to carry out the decongestion of currently used ducts.
- (8) Requests for information on, access to and use of all elements of the civil-engineering infrastructure and of the distribution points by third-party access seekers should be processed within the same timeframe as equivalent requests submitted by internal access seekers. The same level of visibility on the progress of such requests should also be provided, and refusals to provide access should be objectively justified.
- (9) The SMP operator's information system(s) should keep track of the handling of requests and such records should be available to the NRA.

Specific key performance indicators (KPIs)

- (10) Access to civil-engineering infrastructure requires a specific set of KPIs to ensure compliance with the non-discrimination obligation. Such KPIs should include: (i) measurements of reply delays to requests for information on the availability of certain infrastructure elements, including ducts, poles, other physical assets (e.g. manholes), or distribution points; (ii) measurements of replay to requests on the feasibility of using certain infrastructure elements; (iii) responsiveness in handling requests for access to and use of certain infrastructure elements; (iv) responsiveness for fault resolution processes.



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ANNEX III

Parameters of the *ex-ante* economic replicability test referred to in point 43 of the Recommendation.

When the national regulatory authority (NRA) decides not to impose or maintain regulated wholesale access prices on VHC wholesale inputs, pursuant to Article 74 of Directive (EU) 2018/1972, the *ex-ante* economic replicability test referred to in [point 43] of this Recommendation assesses whether the margin between the retail price of the relevant retail products and the price of the relevant VHCN-based regulated wholesale access inputs covers the incremental downstream costs and a reasonable percentage of common costs. When setting the parameters of the *ex-ante* economic replicability test, NRAs should ensure that the significant market power (SMP) operator is neither put at an advantage nor at a disadvantage as compared with access seekers regarding the sharing of the investment risk.

The parameters referred to in [point 43(a)] of this Recommendation are:

Relevant downstream costs

- (1) Downstream costs are estimated on the basis of the costs of the SMP operator's own downstream businesses (Equally efficient Operator test). NRAs should use the SMP operator's audited downstream costs, provided that they are sufficiently disaggregated.
- (2) Where market entry or expansion has been impeded in the past (as shown for example, by past behavioural findings) or where very low numbers of lines and a significantly limited geographic reach as compared to the SMP operator's VHCN indicate that objective economic conditions do not favour the acquisition of scale by alternative operators, NRAs may, taking into account the level of competition on the retail market and competitive dynamics as identified in the market analysis, make adjustments for scale to the SMP operator's downstream costs in order to ensure that economic replicability is a realistic prospect. In such cases, the reasonably efficient scale identified by the NRA should not go beyond that of a market structure with a sufficient number of qualifying operators to ensure effective competition, bearing in mind also competition from other platforms. In conducting that assessment, NRAs should, in particular, take into account the following elements, as appropriate:
 - (a) the size of the largest competitors relative to that of the SMP operator;
 - (b) the number of competitors that are likely to be sustainable at each level of the value chain;
 - (c) the current HHI¹ at each level of the value chain and its expected evolution over time;
 - (d) the size of the VHCN market in the Member State (which might influence the number of competitors that can be economically sustainable).

Relevant cost standard

- (3) The incremental cost of providing the relevant downstream service is the appropriate standard. A long run incremental cost plus (LRIC+) model should be used to calculate

¹ The Herfindahl-Hirschman Index (HHI) is a commonly accepted measure of market concentration. It is calculated by squaring the market share of each firm competing in a market and then summing the resulting numbers. It can range from close to zero to 10,000.

the incremental cost (including sunk costs) and to add a mark-up for common costs related to the downstream activities.

Relevant regulated wholesale inputs and the relevant reference prices

- (4) NRAs should identify the most relevant regulated inputs used, or expected to be used, by access seekers, at the VHCN-based wholesale layer that is likely to be prevalent within the current market review period. The prevalent VHCN layer will depend on the SMP operator's rollout plans and chosen network topologies, as well as the take-up of wholesale offers.
- (5) Such an input may be active or passive. It may also be non-physical or virtual input offering equivalent functionalities to a passive input.
- (6) NRAs should carry out the *ex-ante* economic replicability test in order to assess the margin earned between the retail product(s) referred to in point 4 and the most relevant regulated input identified at the chosen VHCN-based wholesale layer.
- (7) In addition, where justified, in particular when a retail product referred to in point (iv) is launched based on a different input than the one previously identified, or when there is a substantial demand for access at a new VHCN-based wholesale layer, NRAs should also assess the margin earned between the retail product and the new VHCN regulated wholesale input.
- (8) If the SMP operator's network characteristics and the demand for wholesale offers vary greatly throughout the territory of a Member State, the NRA should assess the feasibility of differentiating the most relevant VHCN-based regulated wholesale layer by geographic area and adapt the test accordingly.
- (9) When identifying the relevant reference wholesale price, NRAs should consider the access price that the SMP operator effectively charges third-party access seekers for the relevant regulated wholesale input. Those wholesale access prices should be equivalent to the prices that the SMP operator charges to its own retail arm. In particular, in order to ensure the right balance in national circumstances between incentivising efficient and flexible pricing strategies at the wholesale level and at the same time ensuring a sufficient margin for access seekers to maintain sustainable competition, NRAs should give due weight to the presence of volume discounts and/or long-term access pricing agreements between the SMP operator and access seekers, in particular where a significant part of access seekers are actually receiving wholesale services at discounted prices.

Relevant retail products

- (10) NRAs should assess the most relevant retail products that include broadband services ('flagship products') offered by the SMP operator on the basis of the identified VHCN-based wholesale access layer. NRAs should identify flagship products on the basis of their current and forward-looking market observations, in particular taking account of their relevance for current and future competition. That should include an assessment of retail market shares in terms of the volume and value of products based on VHC network regulated wholesale inputs and, where available, advertising expenditure.
- (11) Flagship products are likely to be offered as a bundle. In the context of identifying flagship products and in the assessment of whether a bundled offer (containing offers including non-regulated components such as access to premium audio-visual content) constitutes a flagship product, NRAs should take into account the national circumstances such as the prevalence and nature of bundled offers in the specific market. Furthermore,

NRAs should assess innovative variations of such bundles, if they are likely to replace the flagship product.

- (12) NRAs should determine the level of aggregation (product-by-product or portfolio of products) that is appropriate for the economic replicability test, in the light of the assessment of competition problems identified in the market analysis. In contestable markets, leaving more flexibility to the SMP operator through a portfolio approach may be justified. However, in markets in which the SMP operator has a high degree of concentration or a very high degree of market power, or both, a product-by-product assessment may be necessary to avoid cross-subsidisation between products and to enable alternative operators to compete on the various segments of the market.
- (13) In addition, NRAs should consider whether a particular retail product, which may not be among the most relevant retail products of the SMP operator, is particularly attractive to alternative operators that may focus on a certain niche or lower quality retail products. NRAs may decide to include such a product among the flagship products.

Relevant time period

- (14) NRAs should evaluate the profitability of the flagship products on the basis of a dynamic multi-period analysis, such as the discounted cash flow (DCF) approach. NRAs should identify an adequate reference time period over which to assess whether the margin between the retail price of the flagship product and the price of the relevant wholesale VHC access input allows for the recovery of downstream costs (including a reasonable percentage of common costs) calculated on the basis of points (1) and (2).
- (15) The relevant period for this *ex-ante* economic replicability test should be set in accordance with the estimated average customer lifetime. Such average customer lifetime would be the period of time over which the customer contributes to the recovery of both of the following categories:
- (16) The downstream costs that are annualised according to a depreciation method that is appropriate to the asset in question and the economic lifetime of the corresponding assets required for the retail operations (including network costs that are not included in the wholesale VHC access service);
- (17) Other downstream costs that are normally not annualised (typically subscriber acquisition costs) and which the operator incurs in order to gain customers, which it seeks to recover over customers' average lifetime.
- (18) When estimating the average customer lifetime, NRAs should take due account of the different characteristics and competitive conditions of the provision of services over VHC network compared to the legacy copper network, where these are likely to result in users of VHC network having different average customer lifetimes compared to users of the copper network.
- (19) The guidance provided for the *ex-ante* economic replicability test referred to in point 43 of this Recommendation and in this Annex is limited to the scope of this Recommendation, and therefore applies in different circumstances than *ex-ante* margin squeeze tests applied on regulated wholesale access prices. It is without prejudice to the application of the competition rules by the Commission and/or national competent authorities, and to their interpretation by the General Court and the Court of Justice of the European Union. This guidance is also without prejudice to any action that the Commission may take or any guidelines that the Commission may issue in the future on the application of competition law in the Union.



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ANNEX IV

Long-term access pricing and volume discounts as referred to in point 61 of the Recommendation.

Criteria to assess long-term access pricing for VHCN deployments, in particular FTTH

- (1) Access prices adjusted for risk based on long-term access may vary depending on the period over which access commitments are made. Long-term access contracts may be priced at a lower level per access line than short-term access contracts. Long-term access prices should only reflect the reduction of risk for the investor and therefore should not be lower than the cost-oriented price to which no higher risk premium reflecting the systematic risk of the investment is added. Under long-term contracts, entrants would acquire full control of physical assets, which would also give them the possibility to engage in secondary trading. Short-term contracts would be available without long commitments and would therefore normally be priced higher per access line, with access prices reflecting the benefit to the access seeker in terms of greater flexibility.
- (2) There is a risk, however, that the SMP operator would abuse the long-term access pricing over time by selling its retail services at an insufficient margin compared to its regulated wholesale price (since it would charge its own downstream retail arm lower long-term commitment prices), thereby foreclosing the market. Furthermore, alternative providers with smaller customer bases and unclear business perspectives face higher levels of risk. These providers may be unable to commit to purchasing over a long period, and may therefore have to stagger their investments and purchase regulated access at a later stage.
- (3) For those reasons, long-term access pricing should be acceptable only if NRAs ensure that both the following conditions are met:
 - (a) long-term commitment prices only reflect the reduction of risk for the investor; and
 - (b) over an appropriate timeframe there is a sufficient margin between wholesale and retail prices to allow for market entry by an efficient competitor in the downstream market.

Criteria to assess volume discounts in case of VHCN, in particular FTTH, deployments

- (4) Access prices adjusted for risk based on volume discounts reflect the fact that investment risk decreases with the total number of fibre loops already sold in a given area. Investment risk is closely tied to the number of fibre loops which remain unused. The higher the share of used fibre loops, the lower the risk. Access prices could therefore vary depending on the volume purchased. A single level of discount should be authorised, available at a uniform price per line to all qualifying operators. NRAs should identify the volume of lines which need to be purchased in order to get access to such volume discount, taking into account the estimated minimum operating scale for an access seeker to compete efficiently in the market and the need to maintain a market structure with a sufficient number of qualifying operators to ensure effective competition. The volume discount should only reflect the reduction of risk for the investor and therefore should not result in access prices that are lower than the cost-oriented price to which no higher risk premium reflecting the systematic risk of the investment is added. Considering that the risk premium should normally decrease following the overall increase in met retail and wholesale demand, the volume discount should also decrease accordingly and may no longer be justified once retail and wholesale demand are at high levels.

- (5) A volume discount should only be accepted by NRAs if of the following conditions are met:
- (a) a single volume discount is calculated per area as appropriately sized by the NRA taking account of national circumstances and network architecture, and applies equally to all access seekers who, in the area concerned, are willing to purchase at least the volume of lines giving access to the discount; and
 - (b) the volume discount only reflects the reduction of risk for the investor; and
 - (c) over an appropriate timeframe there is a sufficient margin between wholesale and retail prices to allow for market entry by an efficient competitor.