



EUROPEAN COMMISSION

Brussels, **XXX**
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COMMISSION RECOMMENDATION

of XXX

**on consistent non-discrimination obligations and costing methodologies to promote
competition and enhance the broadband investment environment**

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(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 292 thereof,

Having regard to Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services¹, and in particular Article 19(1) thereof,

Having regard to Directive 2002/19/EC of the European Parliament and of the Council of 7 March 2002 on access to, and interconnection of, electronic communications networks and associated facilities²,

Having regard to the opinions of the Body of European Regulators for Electronic Communications (BEREC) and of the Communications Committee (COCOM)

Whereas:

(1) [TO BE COMPLETED]

¹ Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services, OJ L 108, 24.4.2002, p. 33, as amended by Directive 2009/140/EC (Better Regulation Directive), OJ L 337, 18.12.2009, p. 37, and Regulation (EC) No 544/2009, OJ L 167, 29.6.2009, p. 12 (Framework Directive).

² Directive 2002/19/EC of the European Parliament and of the Council of 7 March 2002 on access to, and interconnection of, electronic communications networks and associated facilities, OJ L 108, 24.04.2002 p.7, as amended by Directive 2009/140/EC (Better Regulation Directive), OJ L 337, 18.12.2009 (Access Directive).

HAS ADOPTED THIS RECOMMENDATION:

Aim and Scope

1. The aim of this Recommendation is to improve the regulatory conditions to promote competition, enhance the single market for electronic communications networks and services, and to foster investments in next generation access (NGA) networks so as to contribute in a technologically neutral manner to the overall objective of boosting growth and jobs, stimulating innovation and ultimately more efficient services for the end users in the European Union and furthering digital inclusion. This Recommendation aims at increasing legal certainty and predictability in light of the long term horizons of investments in NGA networks.
2. Where in the context of market analysis procedures carried out under Article 15 and 16 of the Framework Directive and in particular in application of Article 16(4) thereof national regulatory authorities (NRAs) determine that a market is not effectively competitive and identify undertakings which individually or jointly have significant market power (SMP) on that market (the 'SMP operator(s)'), they shall impose, amongst others and if appropriate, obligations of non-discrimination pursuant to Article 10 of the Access Directive and of price control and cost accounting, more specifically cost orientation, pursuant to Article 13 of the Access Directive.
3. This Recommendation concerns the application of those obligations and sets out a common approach for promoting their consistent and effective implementation with regard to legacy and NGA networks in so far as they allow for the provision of broadband services.
4. The provisions of this Recommendation provide further guidance on regulatory principles established by the NGA Recommendation³, in particular the conditions under which cost-orientation of wholesale access prices should or should not be applied.
5. The principles enshrined in this Recommendation are applicable to the market for wholesale network infrastructure access (market 4) and to the wholesale broadband access market (market 5)⁴. This includes *inter alia* (i) access to the civil engineering infrastructure, (ii) unbundled access to the copper and fibre loops, (iii) unbundled access to the copper sub-loop, (iv) non-physical or virtual network access, and (v) wholesale broadband access (bitstream services) over copper and fibre networks (comprising ADSL, ADSL2+, VDSL and Ethernet).

³ Commission Recommendation of 20 September 2010 on regulated access to Next Generation Access Networks (NGA) (2010/572/EU) OJ L 251, 25.9.2010, p. 35 (NGA Recommendation).

⁴ Commission Recommendation 2007/879/EC of 17 December 2007 on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (Recommendation on Relevant Markets), OJ L 344, 28.12.2007, p. 65

Definitions

6. Terms defined in the Framework Directive, in the Access Directive and in the NGA Recommendation have the same meaning when used in this Recommendation.

In addition, for the purpose of this Recommendation, the following definitions should apply:

- (a) 'Book value' is the value of an asset as recorded in the audited statutory accounts of an undertaking.
- (b) 'Bottom-up modelling approach' means an approach that develops a cost model starting from the expected demand in terms of subscribers and traffic; it then models the efficient network that is required to meet the expected demand, and assesses the related costs according to a theoretical network-engineering model. The purpose of a bottom-up model is to calculate the cost on the basis of an efficient network using the newest technology employed in large-scale networks. This approach differs from a top-down modelling approach, which is based on the undertaking's accounts. In a hybrid modelling approach the bottom-up model is refined by looking at the results of the top-down model. It is also possible to check the plausibility of some of the results of the top-down model by using the bottom-up model.
- (c) 'Common costs' are shared costs resulting from products or services being produced jointly. Common costs are not attributable to any single product or service (e.g. management costs, overheads, etc).
- (d) 'Current costs' means appraising costs by re-valuing assets at estimates of their current costs, allowing for wear and tear and adjusted for efficiency. Current costs are usually estimated by adopting either the "indexation" approach, whereby appropriate indices are applied to asset book values, or the "absolute valuation" approach, whereby the existing quantity is multiplied by the current acquisition price.
- (e) 'Depreciation methods' are the methods according to which the value of an asset is allocated over the life of the asset, affecting therefore the profile of the allowable earnings for the asset owner in any given period.
- (f) 'Downstream costs' are costs related to retail operations, including marketing, customer acquisition, billing, etc. and other network costs required for such retail operations.
- (g) 'Equivalence of Inputs' means the provision of all services and information to access seekers and to the downstream businesses of the SMP operator on the same terms and conditions (including price and quality of service levels), the same timescales using the same systems and processes. Equivalence of inputs as defined may apply to the access products, associated and ancillary services that are necessary for providing the 'Wholesale inputs' (including on a virtual basis where applicable) to access seekers and to the downstream business of the SMP operator. In this context reference to terms and conditions relating to price should be read in conjunction with Recommend 14.

- (h) 'Equivalence of Output' means the provision of all wholesale inputs to access seekers in a manner, which is comparable, in terms of functionality and price, to those the SMP operator provides to its own downstream businesses, albeit using potentially different systems and processes. In this context reference to terms and conditions relating to price should be read in conjunction with Recommend 14.
- (i) 'Key Performance Indicators (KPIs)' are indicators, which measure the level of performance in the provision of the relevant wholesale services
- (j) 'Long Run Incremental Costs (LRIC)' means the costs that are directly associated with the production of a business increment, i.e. the additional cost of supplying a service over and above the situation where the service was not provided, assuming all other production activities remain unchanged. "Long run" means that all factors of production including capital equipment are variable in response to changes in demand due to changes in the volume or in the structure of production, therefore all investments are considered as variable costs.
- (k) 'Mark-up' means the addition that is made to the incremental cost (e.g. the LRIC cost) of a specific service in order to allocate and recover the common costs through allocation to all the services for which those common costs are relevant.
- (l) 'New retail offer' means any new retail offer of services, including bundles of services, provided by an SMP operator based on already existing or on new regulated wholesale inputs.
- (m) 'NGA-based wholesale layer' means a network layer at which access is granted to access seekers on an NGA-based network. Several 'Wholesale inputs' can be provided at the same layer. The wholesale access products offered at this network layer may consist of active inputs (e.g. bitstream over fibre), of passive inputs (e.g. fibre unbundling in the ODF, in the cabinet, or at the concentration point) or of non-physical or virtual wholesale inputs offering equivalent functionalities to passive inputs.
- (n) 'Non-reusable civil engineering assets' are those legacy civil engineering assets that are used for the copper network but cannot be reused to accommodate an NGA network.
- (o) 'Regulatory Asset Base (RAB)' means the total capital value of the assets used to calculate the costs of the regulated services.
- (p) 'Reusable civil engineering assets' are those legacy civil engineering assets that are used for the copper network and can be reused to accommodate a NGA network.
- (q) 'Service Level Agreements (SLAs)' are commercial agreements according to which the SMP operator is obliged to provide access to wholesale services with a specified level of quality.

- (r) 'Service Level Guarantees (SLGs)' form an integral part of Service Level Agreements and specify the level of compensation payable by the SMP operator if the provision of wholesale services by the SMP operator has a quality that is inferior to that specified in the SLA.
- (s) 'Wholesale inputs' means an access product required for access seekers to supply end-users with a broadband service on a retail market and consisting of an active or a passive product or a virtual access product offering equivalent functionalities to a passive access product. Wholesale inputs can be provided over legacy copper network infrastructures or NGA-based infrastructures.

Application of a Non-Discrimination Obligation

Ensuring Equivalence of Access

7. Effective non discrimination is best achieved by the application of Equivalence of Input, which ensures a level playing field between the SMP operator's downstream businesses and third party access seekers and promotes competition. Where NRAs consider that the imposition of a non-discrimination obligation under Article 10 of the Access Directive is appropriate, proportionate and justified pursuant to Article 16 (4) of the Framework Directive and Article 8 (4) of the Access Directive, NRAs should examine whether it would be proportionate to require SMP operators to provide relevant wholesale inputs on an Equivalence of Input basis.
8. Such an obligation could be disproportionate, in particular where the compliance costs (e.g. through the re-design of existing systems) outweigh potential competition benefits. Providing legacy copper-based wholesale inputs on an Equivalence of Input basis is more likely to be disproportionate due to the higher costs to ensure compliance. Conversely, providing wholesale inputs consisting wholly or partly of optical elements on an Equivalence of Input basis is more likely to be proportionate given the low incremental costs to design new systems that comply with Equivalence of Input. The imposition of Equivalence of Input may in particular be deemed proportionate when it results in the non-imposition of price control obligations based on cost orientation on NGA networks as recommended in Recommends 49 and 50. When assessing proportionality, the imposition of Equivalence of Input can be deemed to be proportionate where an SMP operator informs an NRA on a voluntary basis that it intends to provide wholesale inputs to access seekers on an Equivalence of Input basis, as long as such voluntary offer meets the conditions set out in this Recommendation.
9. Where Equivalence of Input is disproportionate, NRAs should ensure that the SMP operator provides the wholesale inputs to access seekers at least on an Equivalence of Output basis.
10. Where proportionate, Equivalence of Input should be applied to those wholesale inputs, which the SMP operator provides to its own downstream businesses, unless it can be demonstrated to the NRA's satisfaction having sought the views of third party access seekers that there is no reasonable demand for the wholesale input in question.

11. NRAs should ensure that access seekers can use the relevant systems and processes in the same way as the SMP operators' own downstream businesses, with the same degree of reliability and performance.
12. A decision to impose Equivalence of Input where appropriate, justified and proportionate and following a consultation in accordance with Articles 6 and 7 of the Framework Directive is an obligation of non-discrimination pursuant to Article 10 of the Access Directive that is without prejudice to the potential imposition of an obligation for functional separation pursuant to Article 13 a of the Access Directive where an NRA concludes that the appropriate obligations (including non-discrimination obligations such as Equivalence of Input) have failed to achieve effective competition.
13. A decision to impose Equivalence of Input where appropriate, justified and proportionate and following a consultation in accordance with Articles 6 and 7 of the Framework Directive is a non-discrimination remedy that is also without prejudice to the analysis of the conditions of competition in the areas covered by the joint deployment of FTTH networks which is recommended in Recommend 28 of the NGA Recommendation.
14. Volume discounts and/or long-term access pricing agreements can be compatible with an Equivalence of Input and Equivalence of Output approach. However, in view of the need to ensure that market entry by an efficient competitor is possible, NRAs should accept volume discounts by SMP operators to their own downstream businesses only if they do not exceed the highest volume discount that has been granted to a third party access seeker. Equally, NRAs should accept long-term access pricing agreements by SMP operators to their own downstream businesses only if they do not exceed the highest discount for long term access that has been granted to a third party access seeker.

Ensuring technical replicability of the SMP operator's new retail offers as a minimum

15. Where Equivalence of Inputs is not, or not yet fully implemented and thus cannot ensure technical replicability of the SMP operators' retail offers, NRAs should, as a minimum, ensure such technical replicability.
16. In particular, NRAs should require SMP operators that are subject to a non-discrimination obligation, to provide access seekers with regulated wholesale inputs, which allow them to effectively replicate new retail offers of the downstream businesses of the SMP operator.
17. To that purpose and in order to guarantee a level playing field between the SMP operator's downstream businesses and third party access seekers, NRAs should ensure that every access seeker (including the downstream businesses of the SMP operator) has access to the same technical and commercial information regarding the wholesale input. This includes information on new regulated wholesale inputs or on changes to already existing regulated wholesale inputs.
18. The following factors should be taken into account when assessing technical replicability of the SMP operator's new retail offer: (i) the timely availability of corresponding wholesale input(s) for ordering, delivery and repair necessary for an

efficient operator to develop or adapt its own systems and processes in order to offer competitive new retail services, (ii) the availability of corresponding Service Level Agreements (SLAs) and Key Performance Indicators (KPIs).

19. In order to be able to monitor compliance with such an obligation, NRAs should require the SMP operator to conduct a technical replicability test prior to the launch of a new retail offer. In this case the NRA should ask the SMP operator to provide the NRA with the results of the test including all the information necessary to assess that technical replicability is fully ensured, prior to the launch of the new retail offer.
20. Alternatively, NRAs should conduct a technical replicability test. In this case, it should require the SMP operator to notify new retail offers, which consume a relevant regulated wholesale input, with sufficient notice prior to the launch of such retail offers. Such notice should be sufficient for access seekers to replicate the relevant retail offer according to the parameters specified in Annex I. In this context, NRAs should require the SMP operator to notify the details of the retail offer relying on a relevant regulated wholesale input, accompanied with all information necessary for the NRA to perform a detailed replicability evaluation.
21. Where the NRA considers that technical replicability of the new retail offer is not ensured, it should require the SMP operator to amend the wholesale input in a way that ensures technical replicability.
22. In the absence of a formal decision by the NRA before the envisaged launch of the new retail offer, the SMP operator should be allowed to launch the new retail service provided it notified the NRA of the results of the technical replicability test in accordance with Recommend 19 or it has notified the new retail offer with sufficient notice in accordance with Recommend 20.
23. Where the NRA considers that a retail offer which is not technically replicable would result in significant harm to competition, it should make use of its powers under Article 10 of the Authorisation Directive⁵ to require the SMP operator to cease the provision of the relevant retail offer. When the NRA imposes such measure it shall give the SMP operator the possibility to make representations and to propose remedies. If appropriate, the NRA should require in a final measure that the retail offer be withdrawn or the regulated wholesale input modified.

Compliance Monitoring of Non-Discrimination Obligations

Key Performance Indicators

24. When imposing a non-discrimination obligation under Article 10 of the Access Directive, NRAs should impose on the SMP operator the use of Key Performance Indicators (KPIs) in order to monitor effectively compliance with the non-discrimination obligation.

⁵ Directive 2002/20/EC of the European Parliament and of the Council of 7 March 2002 on the authorisation of electronic communications networks and services, OJ L 108, 24.4.2002, p. 21, as amended by Directive 2009/140/EC (Better Regulation Directive), OJ L 337, 18.12.2009, p. 37 (Authorisation Directive).

25. The KPIs should measure performance in relation to the following key elements of the provision of regulated wholesale services:
 - (1) Ordering process;
 - (2) Provision of service;
 - (3) Quality of service, including faults;
 - (4) Fault repair times; and
 - (5) Migration.
26. NRAs should impose KPIs for each of the above-mentioned key elements of the provision of regulated wholesale services. KPIs should allow for comparison of services provided internally to the downstream businesses of the SMP operator and those provided externally to third party access seekers.
27. The specific details of KPIs should be agreed between the SMP operator(s) and third party access seekers under the supervision of the NRA and should be updated on a regular basis as necessary.
28. In imposing the KPIs, the NRA should take account of already existing performance measurements, even when only used for internal purposes of the SMP operator.
29. NRAs should ensure that the KPIs are published in a manner which allows for early discovery of potential discriminatory behaviour. To that purpose, NRAs should publish on their website, at least on a quarterly basis, the performance indicators' measurement in an appropriate form to ensure transparency with regard to the provision of regulated wholesale services.
30. NRAs should ensure that the KPIs are regularly audited by the NRA itself or, alternatively, by an independent auditor. In the latter case, the NRA may consider to apportion the costs of such audits to various electronic communications providers. When the audit indicates that the SMP operator does not comply with the imposed KPIs, the NRA should intervene in order to enforce compliance, for example by imposing dissuasive financial penalties on a periodic basis and/or by ordering that the SMP operator comply with the obligation within a short timeframe. NRAs should make public their decision to remedy non-compliance.

Service Level Agreements and Service Level Guarantees

31. NRAs should require the SMP operator to implement corresponding Service Level Agreements (SLAs) alongside KPIs.
32. NRAs should require the SMP operator to provide corresponding Service Level Guarantees (SLGs) in case of a breach of the SLAs.
33. Payment of financial penalties should, in principle, be made automatic. The level of such penalties should be sufficiently dissuasive to ensure that the SMP operator complies with its delivery obligations.

Costing methodology

The recommended methodology

34. NRAs should adopt a bottom up long run incremental costs plus (BU LRIC+) costing methodology; i.e. the use of a bottom up modelling approach using LRIC as the cost model and with the addition of a mark-up for the recovery of the common costs.
35. NRAs should adopt a BU LRIC+ costing methodology that estimates the current cost that a hypothetically efficient operator would incur to build a modern efficient network, which is in principle an NGA network. This is without prejudice to the question whether any NGA network present in the relevant geographic market is subject to cost-oriented access pricing, which is addressed in Recommend 36 of the NGA recommendation and Recommends 49 and 50 below.
36. When modelling the NGA network NRAs should define a hypothetical efficient NGA network, capable of delivering the Digital Agenda for Europe (DAE) targets, which consists wholly or partly of optical elements.
37. When modelling the NGA network, NRAs should include those existing civil engineering assets that are generally capable of also hosting an NGA network as well as civil engineering assets that will have to be newly constructed to host an NGA network. Therefore, when building the BULRIC+ model from the bottom up NRAs should not assume the construction of an entire new civil infrastructure network for the purpose of deploying an NGA network.
38. NRAs should value all assets constituting the Regulatory Asset Base (RAB) of the modelled network on the basis of full replacement costs, except for reusable legacy civil engineering assets.
39. NRAs should value reusable legacy civil engineering assets and their corresponding RAB on the basis of the indexation method. Specifically NRAs should set such RAB at the book value net of the accumulated depreciation at the time of calculation, indexed by an appropriate price index, such as the retail price index (RPI). NRAs should examine the accounts of the SMP operator where available in order to determine whether they are sufficiently reliable as a basis to reconstruct such book value. They should otherwise conduct a valuation on the basis of a benchmark of best practices in the EU. NRAs should not include reusable legacy civil engineering assets that are fully depreciated but still in use.
40. NRAs should lock-in the RAB corresponding to the reusable legacy civil engineering assets and then roll it forward from one regulatory period to the next.
41. For the purposes of regulatory accounts NRAs should set the lifetime of the civil engineering assets at a level which corresponds to the actual length of utilising the civil engineering network and the corresponding demand profile, which is normally not less than 40 years in the case of ducts.
42. When estimating the cost of wholesale access services that are based entirely on copper, NRAs should adjust the cost calculated for the NGA network to reflect the

less performant features of a copper network. For this purpose, the NRAs should consider an FttC network to be the modern efficient NGA network and should estimate the cost difference between an access product based on FttC and an access product based entirely on copper by making the relevant adjustments in the FttC engineering model, e.g. replacing the optical elements with efficiently priced copper elements, where appropriate.

Timetable of implementation of the costing methodology

43. NRAs should have regard to the principle of regulatory transparency and predictability and to the need to ensure stability when setting access prices, both when developing the recommended costing methodology in Recommends 34 to 42 (the 'recommended methodology') and when implementing it once it is finalised.
44. NRAs should ensure that the recommended methodology is implemented no later than 31 December 2016. On the basis of the most recently observed access prices in Member States applying key features of the recommended methodology, and bearing in mind the potential for limited local cost variations, the Commission expects the average monthly rental access price of the full unbundled copper local loop in the EU which will result from the application of the recommended methodology to fall within a band of prices between €8 and €10 expressed in 2012 prices.
45. In those Member States where monthly rental prices for the full unbundled copper local loop currently fall within such band, as adjusted for subsequent price developments, the NRA should continue applying the costing methodology that it currently uses if it results in stable access prices in real terms within such band, as adjusted, during the period between the entry into force of this Recommendation and the finalisation of the development of the recommended methodology.
46. In those Member States where monthly rental prices for the full unbundled copper local loop fall outside such band, at the time of entry into force of this Recommendation, NRAs should calculate costs and resulting access prices on the basis of the recommended methodology as soon as possible and well in advance of 31 December 2016. Where the difference between the current rate and the target rate resulting from the recommended methodology is significant, the NRA should impose access prices which gradually ensure that such target rate is reached no later than 31 December 2016, taking into account the impact on competition.
47. In exceptional circumstances where an NRA is not in a position, in particular due to limited resources, to finalise the recommended methodology before 31 December 2016, it should set interim access prices on the basis of a benchmark that only considers an average of the access rates set by NRAs implementing the recommended methodology. BEREC, including its related working groups, in cooperation with the Commission, should assist such NRA in implementing the recommended methodology in order to overcome this limitation of resources and, in particular, the cost of implementing the recommended methodology.
48. Once NRAs have finalised the recommended methodology, they should maintain it for the two subsequent market reviews or at least six years, whichever is the longer period, provided they maintain the price control obligation throughout such period. NRAs should update the data inputted into the recommended methodology when

conducting a new market review, in principle after three years. Such update should only adjust such data in line with the real evolution of individual input prices and should ensure the full recovery over time of the costs incurred in the provision of the regulated wholesale access services. NRAs should publish the updated outcome of the costing methodology and resulting access prices over the relevant three-year period.

Non-imposition of cost orientation on NGA networks

49. Where an NRA imposes on the SMP operator non-discrimination obligations concerning passive and active NGA wholesale inputs pursuant to Article 10 of the Access Directive that are consistent with:

- (a) Equivalence of Input following the procedure in Recommend 52 below;
- (b) the obligations relating to technical replicability set out in Recommends 15 to 23 above; and
- (c) the obligations relating to the economic replicability test as recommended in Recommend 53 below

the NRA should decide, in the same measure, not to maintain or impose price control obligations on active NGA wholesale inputs (except those inputs specified in Recommend 50 below), including obligations for cost-orientation, pursuant to Article 13 of the Access Directive on the active NGA wholesale inputs.

50. Where an NRA imposes on the SMP operator non-discrimination obligations concerning passive NGA wholesale inputs or non-physical or virtual wholesale inputs offering equivalent functionalities, pursuant to Article 10 of the Access Directive that are consistent with:

- (a) Equivalence of Input following the procedure in Recommend 52 below;
- (b) the obligations relating to technical replicability in Recommends 15 to 23 above; and
- (c) the obligations relating to the economic replicability test as recommended in Recommend 53 below

the NRA should decide, in the same measure, not to maintain or impose price control obligations on passive NGA wholesale inputs or non-physical or virtual wholesale inputs offering equivalent functionalities, including obligations for cost-orientation, pursuant to Article 13 of the Access Directive on such wholesale inputs provided at least one of the following competitive safeguards is met:

- (d) the NRA can show that a legacy access network product offered by the SMP operator, which is subject to a cost-oriented price control

obligation in accordance with the costing methodology specified at Recommends 34 to 42 above can exercise a significant competitive constraint; or

- (e) the NRA can show that operators providing retail services over at least one alternative infrastructure that is not controlled by the SMP operator can exercise a significant competitive constraint. For the purposes of this condition, 'control' should be interpreted in accordance with competition law principles.

51. In geographic markets where the conditions listed at Recommends 49 and 50 are fulfilled only in some areas within that market, NRAs should differentiate remedies and maintain or impose price control obligations in accordance with Article 13 of the Access Directive only in those areas where such conditions are not fulfilled. NRAs should implement the recommended methodology so that the outcome is not affected by the imposition of differentiated remedies within a particular geographic market.

52. An NRA shall be deemed to impose Equivalence of Input in accordance with Recommends 49(a) and 50(a) when it includes such obligations as a remedy in the same final measure in which the NRA decides not to maintain or impose cost orientation. NRAs should ensure that such final measure has previously been consulted as a draft in accordance with Articles 6 and 7 of the Framework Directive. The measure shall include the details and the timing of the implementation of Equivalence of Input (the 'roadmap'). The roadmap, which will be an integral part of the measure, shall result from a signed commitment by an authorised company officer of the SMP operator (irrespective of whether Equivalence of Input was offered by that operator on a voluntary basis) to implement such obligation in full in a timely manner and no later than the end of the market review period of the regulatory measure in question. The roadmap shall include specific milestones setting out the timetable of implementation of each milestone. The first milestones should, at a minimum, include the obligations to ensure technical replicability and foresee the imposition, as soon as possible, of the most relevant KPIs, SLAs and SLGs necessary for the provision of the key regulated wholesale services. The NRA should ensure that the roadmap takes into account the views of interested parties, such as potential access seekers, provided during the preparation of the roadmap. The roadmap shall clearly state that if the NRA finds that the SMP operator has not complied with one or several milestones held essential for the provision of the regulated wholesale services, the NRA will consider that the non-discrimination conditions for not imposing price control obligations on NGA networks are no longer met.

53. An NRA shall be deemed to impose the economic replicability obligations referred to in Recommends 49(c) and 50(c) above when it includes the elements listed in (a), (b) and (c) below in the same final measure in which the NRA decides not to maintain or impose cost orientation, having consulted such final measure as a draft in accordance with Articles 6 and 7 of the Framework Directive:

- (a) The details of the ex-ante economic replicability test that the NRA will apply, which should specify, *a minima* the following parameters in accordance with the guidance provided in Annex II below:

- the relevant downstream costs taken into account;
- the relevant cost standard
- the relevant regulated wholesale inputs concerned;
- the relevant retail products; and
- the relevant time period for running the test.

- (b) The procedure according to which the NRA will conduct an ex-ante economic replicability test, specifying that the NRA will start such procedure on its own initiative or upon request from third parties no later than three months after the launch of the relevant retail product and will conclude it within the shortest possible time and in any case within four months. The procedure should make clear that the ex-ante economic replicability test to be performed by NRAs in the context of Recommends 49(c) and 50(c) is different from and without prejudice to margin squeeze tests that may be conducted ex-post in the context of competition law enforcement.
- (c) The remedy it will adopt when the test is not passed using the enforcement tools provided under the Regulatory Framework to ensure compliance, including where appropriate the request that the SMP operator shall modify the wholesale price of the relevant NGA-based wholesale access product according to the NRA's guidance and on the basis of the results of the performed ex-ante economic replicability test.

54. Once the measure has been adopted, the NRA should make public on its website the roadmap and the details of the ex-ante economic replicability test together with the final measure. The NRA should use all the enforcement tools provided under the Regulatory Framework to ensure compliance with all aspects of the imposed measures.

55. [Final provisions]

Done at Brussels,

For the Commission
Neelie Kroes
Vice-President

Annex I – Specification of Lead time and provisions of information

When assessing the reasonableness of the required lead time period, NRAs should take into account the following factors:

- (1) if the product is a new product or is an update of an existing product;
- (2) the time necessary to consult and agree on the wholesale processes aiming at the provision of the relevant services;
- (3) the time necessary to create a reference offer and sign contracts;
- (4) the time necessary to modify or up-date relevant IT systems;
- (5) the time necessary to market the new retail offer.

Annex II - Parameters of the ex-ante economic replicability test

When the Equivalence of Input obligations are already implemented or are in the process of being implemented in accordance with Recommend 52 and when technical replicability is ensured, the ex-ante economic replicability test referred to in Recommend 53 assesses whether the margin between the retail price of the relevant retail products and the price of the relevant NGA-based regulated wholesale access inputs covers the incremental downstream costs and a reasonable percentage of common costs.

The parameters referred to in Recommend 53(a) are:

(i) Relevant downstream costs

Downstream costs are estimated on the basis of the costs of the SMP operator's own downstream businesses ('equally efficient competitor' test). NRAs should use the SMP operator's audited downstream costs, provided they are sufficiently disaggregated.

(ii) Relevant cost standard

The incremental cost (equivalently, the avoidable cost) of providing the relevant downstream service is the appropriate standard. An LRIC model should be used, for consistency with the recommended cost model.

(iii) Relevant regulated wholesale input

NRAs should identify the most relevant regulated input used or expected to be used by access seekers at the NGA-based wholesale layer that is likely to be prevalent within the time-frame of the current market review period in view of the SMP operator's rollout plans, chosen network topologies and wholesale offers' take up.

Such input may consist of an active input, a passive input or a non-physical or virtual input offering equivalent functionalities to a passive input.

NRAs should undertake the ex-ante economic replicability test in order to assess the margin earned between the retail product(s) referred to in (iv) below and the most relevant regulated input identified at the chosen NGA-based wholesale layer.

In addition, in case this is justified, in particular when a retail product referred to in (iv) below is launched based on a different input than the one previously identified, or when there is a substantial demand for access at a new NGA-based wholesale layer, NRAs should also assess the margin earned between the retail product and the new NGA-based regulated wholesale input.

If the SMP operator's network characteristics and the demand for wholesale offers greatly vary throughout the territory of a Member State, the NRA should assess the feasibility of differentiating the most relevant NGA-based regulated wholesale layer per geographic area and adapt the test accordingly.

(iv) Relevant retail products

NRAs should assess the most relevant retail products including broadband services ('flagship products') offered by the SMP operator on the basis of the identified NGA-based wholesale access layer. NRAs should identify flagship products on the basis of their current and forward looking market observations, which should include an assessment of retail market shares in terms of volume and value of products based on NGA regulated wholesale inputs and, where available, advertising expenditure. Flagship products are likely to be offered as a bundle. NRAs should assess innovative variations of such bundles, if they are likely to replace the flagship product.

(v) Relevant time period

For the above-mentioned flagship products, NRAs should identify an adequate reference time period to ensure there is a positive margin. 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. The relevant period for this ex-ante economic replicability test should be set in accordance with the estimated customer average lifetime.

The guidance provided for the ex-ante economic replicability test referred to in Recommendation 53 and in this Annex II is limited to the purposes of this Recommendation, which relate to the application of Articles 15 and 16 of the Framework Directive together with Articles 10 and 13 of the Access Directive, and is therefore different in aim and scope and entirely without prejudice to the application of competition rules by the Commission and the relevant national competition authorities, and to its interpretation by the General Court and the Court of Justice of the European Union. This guidance is without prejudice to any action that the Commission may take or any guidelines that the Commission may issue in the future with regard to the application of competition law in the EU.