

**Monitoring implementation of the BEREC  
Common Positions on Wholesale Local Access  
(WLA), Wholesale Central Access (WCA) and  
Wholesale High Quality Access at a Fixed  
Location (WHQAFL)**

**Phase 2**

7 December 2015

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## I. EXECUTIVE SUMMARY

Over the last three years BEREC has undertaken a programme of work which involved revising its broadband common positions (relating to the relevant markets 4, 5 and 6 as outlined by the Commission Recommendation of 2007)<sup>1</sup> and developing a methodology to monitor how NRAs are implementing these. The third (and final) stage of the work involves undertaking the actual monitoring exercise of whether and how NRAs are following the best practices set in the revised common positions. The monitoring exercise is being carried out over three years to allow for the full cycle of market reviews to be carried out by all NRAs.

In 2014 BEREC carried out its first phase 1 monitoring exercise and the report was adopted in December 2014<sup>2</sup>. This report sets out the results of Phase 2 of the monitoring exercise which was carried out in the first half of 2015. We plan to repeat this exercise for a final time in 2016. Once we have completed the third monitoring exercise, we intend to take stock as to whether there may be a need for any revision to BEREC's broadband common positions.

In this report we refer to the relevant markets using updated descriptions based on the new Commission Recommendation on relevant markets of October 2014, in which the previous Market 4 (WLA) is referred to as Market 3a, the previous Market 5 (WBA) is referred to as Market 3b (WCA) and the previous Market 6 (WLL) is referred to as Market 4 (WHQAFL).

Our analysis in this report focuses on NRAs that have notified decisions relating to market reviews in the relevant WLA, WCA and WHQAFL market since we collected the data for the Phase 1 Report (around the end of March 2014) and up to the end of July 2015. We refer to these NRAs as the 'participants' in each of the relevant markets.<sup>3</sup>

We have broken our analysis down into ten sections, each pertaining to one of the competition objectives identified in the revised common positions and the best practices relevant to these in each of the relevant markets.

In 2014 we said that is probably too early to draw firm conclusions about how participating NRAs are following the best practices set out in the revised common positions. We also recognised that NRAs that have not notified decisions in relation to the relevant WLA, WCA and WHQAFL markets since the common positions were adopted on 7 December 2012 will have implemented many of the best practices. Despite us now being one year on from having completed the Phase 1 work, it is still the case that we do not yet have a complete enough

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<sup>1</sup> Commission Recommendation 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

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:344:0065:0069:en:PDF>

<sup>2</sup> BoR (14) 171, *Monitoring implementation of the BEREC Common Positions on WLA, WBA and WLL, Phase 1*, 4 December 2014,

[http://berec.europa.eu/eng/document\\_register/subject\\_matter/berec/reports/4788-monitoring-implementation-of-the-berec-common-positions-on-wla-wba-and-wll-phase-i](http://berec.europa.eu/eng/document_register/subject_matter/berec/reports/4788-monitoring-implementation-of-the-berec-common-positions-on-wla-wba-and-wll-phase-i)

<sup>3</sup> The participants are as follows: WLA market – Bulgaria, France, Iceland, Luxembourg, Netherlands, Sweden, Turkey ; WCA market – Bulgaria, France, Iceland, Luxembourg, Poland, Sweden, Turkey ; WHQAFL market – Austria, Croatia, Cyprus, France, Iceland, Italy, Latvia, Luxembourg, Turkey .

picture as to how NRAs are implementing the revised common positions. This is because only around half of all NRAs have completed full notifications in these three markets since December 2012. Therefore any conclusions we draw at this stage should be caveated accordingly.

We would expect that when we conduct the Phase 3 monitoring exercise in 2016 we will have a much more complete picture of whether, how and why NRAs are adopting best practices (or not).

The results of the two phases of work we have completed to date are broadly consistent. The main difference we observe is that increasingly more NRAs are implementing EOI, particularly in relation to NGA products.

Based on the results of the two monitoring exercises we have completed to date, we conclude that participants are following the most broad or high level best practices relating to each of the competition objectives. There are some differences in terms of the implementation of some of the more detailed best practices which are driven by the following factors:

- State of competition in the market: e.g. in some markets all or large parts of the WCA market have been deregulated
- The development of NGA
- Basis of competition: e.g. whether competition is predominantly based on active or passive access
- The NGA infrastructure adopted by the SMP and alternative operators: e.g. FTTC versus FTTP.

It is worth noting that certain best practices may only be applicable to certain circumstances (e.g. the deployment of a particular type of network infrastructure) and therefore the fact that an NRA has not implemented a particular best practice does not suggest there may be a concern.

Further, whilst the report discusses whether NRAs have imposed particular best practices under relevant market review procedures, it is not intended to assess whether the reasons for not imposing a particular best practice are justified or not, or what the effect of the imposition or otherwise of a specific best practice by a given NRA might be. Set out below is a high level overview of our analysis by competition objective.

In terms of **assurance of access** all NRAs have imposed obligations requiring SMP operators to provide proportionate access products. In almost all cases these follow the ladder of investment principle and encourage infrastructure competition at the deepest level of the network.

There is more variation in terms of specific access remedies. These differences are starker in the case of NGA relative to LLU based access given the different ways in which NGA networks can be designed (e.g. FTTC versus FTTP).

With respect to **assurance of colocation access points** NRAs have generally imposed obligations in line with best practice which includes clear rules and terms and cost oriented prices for colocation services. In some cases (e.g. France WHQAFL) pricing obligations vary by the degree of competitiveness in a given geography with cost orientation applying where there is no competition and margin squeeze rules applying in areas of emerging competition.

In relation to a **level playing field**, all NRAs have imposed general non-discrimination obligations and provided clarifications on how these should be interpreted either through specific SMP conditions, guidance or a combination of the two.

In the WLA market all NRAs except for Bulgaria have imposed EOI obligations to some degree in particular in relation to NGA access with EOO rules being applied where EOI is not cost justified. In the WCA market only Iceland and Luxembourg have imposed EOI while some NRAs rely on EOI at the upstream / WLA level. In the WHQAFL market NRAs have either imposed EOO or no specific equivalence obligation. The specifics depend on whether NRAs consider there is a lack of demand for wholesale products (e.g. Latvia wholesale leased lines) or the basis on which the SMP operator delivers its wholesale products (e.g. France where the SMP provider relies on passive access to deliver wholesale leased lines. Duct access is subject to EOI under the WLA market).

No NRA has imposed functional separation under the market review process but the Iceland NRA has accepted voluntary undertakings of functional separation by the SMP operators.

With respect to **avoidance of unjustified first-mover advantage**, NRAs have generally imposed requirements that ensure the technical replicability of new downstream service introduced by SMP operators. With respect to economic replicability, some NRAs rely on competition law rather than ex ante rules (e.g. France) while others impose cost orientation (e.g. Luxembourg for wholesale leased lines). NRAs have adopted different practices in relation to notice periods for the launch of new products and new networks and the withdrawal of legacy products.

In some cases NRA pre-approval is required while some NRAs rely on the general access / no undue discrimination obligation or the reference offer process to minimise the risk of unfair advantage.

In terms of **transparency**, all NRAs have required SMP operators to provide clarity around the terms of access through the publication of a Reference Offer.

The best practices regarding the information that is included in the Reference Offer and how this is updated are also adhered to in the main.

Only France and Turkey adhere to the best practice stating that NRAs should consider setting up a civil infrastructure database containing information on the ducts of the SMP operator.

With respect to **reasonable quality of access – technical**, NRAs have imposed requirements to ensure a reasonable technical quality of access, through requiring information to be made available to alternative operators. There is less adherence to the best practice around encouraging SMP operators to adhere to technical standards as this is considered not to be necessary as SMP operators should be incentivised to comply with technical standards.

In terms of **reasonable quality of access – operational**, NRAs have typically imposed requirements relating to service levels (though the use of SLAs, SLGs and KPIs). However, there is less adherence to the best practice that SLAs should take into account different customer requirements because NRAs consider that different technologies are geared towards different types of customers and that technological neutrality should avoid scope for discrimination between different types of customers.

Concerning **assurance of efficient and convenient wholesale switching**, NRAs have tended to impose requirements to ensure that the wholesale switching process is efficient and speedy and that the price of switching does not act as a barrier to competition in the WLA and WCA market (but less so in the WHQAFL market where customers tend to require a new circuit to be installed before removing an old circuit). NRAs have, however, mostly not imposed specific measures relating to bulk wholesale switching processes quoting limited demand for such a process or the fact that operators should be able to plan such bulk switching processes by working with the SMP provider.

In relation to **assurance of efficient migration processes from legacy to NGN/NGA networks**, most NRAs require that switching procedures apply equally between legacy and NGN/NGA products. France does not do so because it considers that the processes are very different as NGA access is based on passive infrastructure. NGA also carries symmetric regulation whereas copper does not.

Regarding notice periods for de-commissioning legacy networks, there is some variation in NRA approaches. Some NRAs specify a period of notice that must be given whilst others require that obligations to supply continue whilst there are still “live” customers on the network. Notice periods can vary (3-5 years is common) with an option for these to be varied following NRA approval.

Lastly, **in relation to fair and coherent access pricing**, all NRAs have imposed some form of price regulation whether explicitly or implicitly through non-discrimination obligations and in some cases margin squeeze guidance. NRAs have generally imposed requirements that ensure (with reasonable certainty) that the price of access will permit an efficient entrant to compete with the SMP operator; and that this incentivises efficient investment and sustainable competition.

Most NRAs have taken explicit steps to ensure that the pricing of NGA products is consistent with that of legacy products and that NGA discounts are not discriminatory.

## II. INTRODUCTION

### 1. Why this work?

This is a monitoring exercise to understand how NRAs are implementing BEREC's revised broadband common positions.

The monitoring exercise relates to the relevant markets 4, 5 and 6 as outlined by the Commission Recommendation of 2007. However, in light of the new Commission Recommendation on relevant markets in October 2014,<sup>4</sup> in this report we have adopted the new terminology for the markets under consideration as per the table below.

Table 1: Revised market descriptions based on Commission Recommendation of Relevant Markets (October 2014)

<b>Revised market descriptions to be referred to in the Phase 2 Report</b>	<b>Previous market descriptions adopted in Phase 1 Report</b>
Wholesale local access at a fixed location (WLA) or Market 3a	Wholesale Local Access Market (WLA) or Market 4
Wholesale central access for mass-market products (WCA) or Market 3b	Wholesale Broadband Access (WBA) or Market 5
Wholesale high-quality access at a fixed location (WHQAFL) or Market 4	Wholesale Leased Lines Market (WLL) or Market 6

The monitoring exercise is being carried out over three years to allow for the full cycle of market reviews to be carried out by all NRAs. This report sets out the results of Phase 2 of the monitoring exercise which was carried out in the first half of 2015. The results presented here therefore include notifications made by NRAs (between circa 31 March 2014 and July 2015). The report also includes an Annex summarising results for both the Phase 1 and Phase 2 monitoring exercises.

A further monitoring exercise is being planned for 2016.

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<sup>4</sup> Commission Recommendation of 9 October 2014 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC <https://ec.europa.eu/digital-agenda/en/news/commission-recommendation-relevant-product-and-service-markets-within-electronic-communications>

## 1.1. The process so far

In 2012, following a public consultation, BEREC adopted its revised Common Positions (CPs) listing the best practice remedies to be used in the following three wholesale markets:

- Revised BEREC Common Position on best practice in remedies on the market for wholesale (physical) network infrastructure access (including shared or fully unbundled access) at a fixed location imposed as a consequence of a position of significant market power (SMP) in the relevant market (the WLA CP).
- Revised BEREC Common Position on best practice in remedies on the market for wholesale broadband access (including bitstream access) imposed as a consequence of a position of SMP in the relevant market (the WCA CP).
- Revised BEREC Common Position on best practices in remedies as a consequence of a SMP position in the relevant markets for wholesale leased lines (the WHQAFL CP).

Application of the best practices contained in the CPs will assist NRAs in designing effective remedies in line with the objectives of the Framework.

Consistent with its work programme for 2013, BEREC then developed a methodology to monitor how NRAs have implemented the BPs recommended in the revised CPs<sup>5</sup>.

In 2014 BEREC carried out its first monitoring exercise. The Phase 1 Report was adopted by BEREC in December 2014<sup>6</sup>.

## 1.2. The focus of the current exercise

Below and in the subsequent sections we briefly summarise the results and key messages emerging from the Phase 2 monitoring exercise. As explained above, the results presented in the main body of this document include notifications made by NRAs subsequent to the compilation of the Phase 1 Report and up to July 2015. These NRAs are referred to as 'participants' in each of the relevant markets. In Annex 3 we also summarise the results of both the Phase 1 and Phase 2 monitoring exercises. This annex includes NRAs that have notified after 7 December 2012 up to the end of July 2015.

## 2. Approach to the analysis

As discussed in the Monitoring methodology which BEREC published in 2013,<sup>7</sup> to assist in this task, BEREC developed a detailed Excel based questionnaire to be completed by individual NRAs.

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<sup>5</sup> BoR (13) 108, *Methodology for monitoring the application of the BEREC common positions on WLA, WCA and WHQAFL*, 16 September 2013,

<sup>6</sup> [http://berec.europa.eu/eng/document\\_register/subject\\_matter/berec/reports/4788-monitoring-implementation-of-the-berec-common-positions-on-wla-wba-and-wll-phase-i](http://berec.europa.eu/eng/document_register/subject_matter/berec/reports/4788-monitoring-implementation-of-the-berec-common-positions-on-wla-wba-and-wll-phase-i)

<sup>7</sup> BoR (13) 108, *Methodology for monitoring the application of the BEREC common positions on WLA, WCA and WHQAFL*, 16 September 2013,



The questionnaires were structured along the competition objectives listed in each CP. In addition, and in order to avoid introducing any unintended bias, at least one question is associated with each BP (in cases where a BP is too long or made up of several elements, further questions were included). Moreover, several questions were added which were more general in nature and which aimed to capture the high level policy considerations underpinning the overall regulatory approach implemented by each NRA.

The information gathered has been provided through a self-certification process. Therefore, although BEREC has considered the accuracy of the information in the round (and sought clarifications where necessary) it has not cross-checked each response against each NRA's published decision.

The Phase 1 Report contains information about the type of questions asked.

The table below sets out the participant NRAs in each of the two phases of the monitoring exercise.

Table 2: Participants in Phase 1 and Phase 2 CP Monitoring exercises<sup>8</sup>

	<b>WLA market</b>	<b>WCA market</b>	<b>WHQAFL market</b>
Phase 1 participant NRAs	Austria, Croatia, Cyprus, Estonia, Ireland, Latvia, Malta, Netherlands, Norway, UK	Austria, Croatia, Cyprus, Estonia, Ireland, Latvia, Malta, Netherlands, Norway, UK	Belgium, Greece, Ireland, Spain, Sweden, UK
Phase 2 participant NRAs	Bulgaria, France, Iceland, Luxembourg, Netherlands, Sweden, Turkey	Bulgaria, France, Iceland, Luxembourg, Poland, Sweden, Turkey	Austria, Croatia, Cyprus, France, Iceland, Italy, Latvia, Luxembourg, Turkey

### 3. Structure of this report

Section III provides our analysis of responses. The section has been split into sub-sections each pertaining to one of the ten Competition Objectives outlined in BERECs Revised CP, as follows:

- Assurance of access;
- Assurance of co-location at the access point (e.g. MDF, street cabinet, concentration point) and other associated facilities;
- Level playing field;

[http://berec.europa.eu/eng/document\\_register/subject\\_matter/berec/regulatory\\_best\\_practices/methodologies/1478-methodology-for-monitoring-the-application-of-the-berec-common-positions-on-wla-wca-and-whqafl](http://berec.europa.eu/eng/document_register/subject_matter/berec/regulatory_best_practices/methodologies/1478-methodology-for-monitoring-the-application-of-the-berec-common-positions-on-wla-wca-and-whqafl)

<sup>8</sup> In most cases, NRAs have notified Markets 3a and 3b together. The Poland NRA has not done so, due to the resource burden involved in conducting the two market review simultaneously. The Dutch regulator, ACM, filled in the questionnaire based on the draft decision. ACM notified its draft WLA decision end of October 2015. Also worth noting is that low quality bitstream is not regulated in the Netherlands.

- Avoidance of unjustified first mover advantage;
- Transparency;
- Reasonable quality of access products – technical issues;
- Reasonable quality of access products – operational aspects;
- Assurance of efficient and convenient wholesale switching;
- Assurance of efficient migration processes from legacy to NGN/NGA network; and
- Fair and coherent access pricing.

Each sub-section is then structured as follows:

- First, we provide a description of the competition issues identified by BEREC.
- Second, we summarise the Best Practice remedies relevant to addressing those competition issues.
- Third, we analyse the evidence pertaining to whether NRAs have imposed the Best Practice in each of the relevant markets. We summarise the responses to the questionnaire (according to each BP) in tables. Where NRAs have not imposed obligations relating to each BP an overview of the reasons for this is provided. In the tables that summarise the responses the following notation is used:

Table 3: Notation used in summary tables

✓	Impose obligations pertaining to BP
✗	Do not impose obligations pertaining to BP
[✓]	No, do not impose obligations, but conform to BP
n/a	Best practice is not applicable. For example, in cases where specific technology relevant to BP is not deployed and therefore BP is not required; or where market is deregulated.
✓/✗	In a limited set of cases a ✓/✗ is given. Where this is the case an explanation is provided in the text.

Annex 1 sets out a description of each of the Best Practices pertaining to the three markets considered in this report.

Annex 2 provides a list of participants in both Phase 1 and Phase 2.

Annex 3 provides an analysis of responses for both the Phase 1 and Phase 2 monitoring exercises.

### III. ANALYSIS OF RESPONSES

#### 1. Introduction

This section provides our analysis relating to whether NRAs are implementing the Best Practice remedies outlined in BEREC's Revised CPs.

We have received 13 responses to the questionnaire issued to NRAs in 2015 (see Annex 1 for a list of respondents). These NRAs are referred to as the 'participants'. In 2014, the number of participants was 14.

#### 2. Competition objective 1: Assurance of access

##### 2.1. Background

The BEREC Common Positions state three competition problems that may arise across all three markets. First, operators with significant market power (SMP) may deny access to their networks. Second, SMP operators may restrict the use of services. Third, SMP operators may refuse to develop new access products on request from alternative operators.

The competition issues identified by BEREC are addressed by the Best Practices 1-15 in the WLA Common Position; Best Practices 1-9 in the WCA Common Position; and Best Practice 1-6 in the WHQAFL Common Position.

##### 2.2. Analysis by best practice

###### 2.2.1. WLA market

Since we collected data for the Phase 1 Report, the WLA market has been reviewed by 7 NRAs ('the WLA participants'). Table 4 summarises the best practice remedies that have been imposed for each of the WLA participants.

Table 4: Best practice remedies imposed by WLA participants

	Bulgaria	France	Iceland	Luxembourg	Netherlands	Sweden	Turkey
<i>General remedy</i>							
BP1: appropriate and proportionate access products	✓	✓	✓	✓	✓	✓	✓
BP2: remedies based on ladder of investment	✗	✓	✓	✓	✓	✓	✓
BP3: encouraging infrastructure competition at deepest level reasonable	✗	✓	✓	✓	✓	✓	✓
BP4: access based on technology neutrality where proportionate	✓	[✓]	✓	✓	✗	✓	✓
BP5: remedy implementation based on viability	✗	✓	✓	✓	✓	✓	✓

	Bulgaria	France	Iceland	Luxembourg	Netherlands	Sweden	Turkey
<i>Access product at specific access point remedy</i>							
BP6a: P2P ODF handover	n/a	n/a	n/a	✓	✓	[✓]	n/a
BP6b(i):MPoP access based on last splitter – P2MP design to take account of splitter location	✗	n/a	✓	✓	n/a	n/a	n/a
BP6b(ii): downstream MPoP access to include product between access point and MPoP	✗	n/a	✓	✓	n/a	n/a	n/a
BP6b(iii): appropriate product between MPoP and access point	✗	n/a	✗	✓	✓	✓	n/a
BP6b(iv): access required if concentration point in building basement	✗	n/a	✗	✓	✗	✗	n/a
BP6b(v): active remedy to replicate unbundling for MPoP until alternatives available	✗	n/a	✗	✓	✗	✓	✓
BP7a: MDF based LLU	✓	✓	✓	✓	✓	✓	✓
BP7b: copper sub-loop unbundling for FTTN	✓	n/a	✓	✓	n/a	✓	✓
BP7c: FTTN active remedy replicating physical unbundling as much as possible	[✓]	n/a	✓	✓	n/a	n/a	n/a
BP8: in-house cabling access if not included in unbundled loop	✓	n/a	✓	✗	n/a	✓	✓
<i>Access products to reach access point remedy</i>							
BP9: access product from MPoP to access point	✓	✓	✗	✓	✓	✓	✓
BP10: regulated remedies for MPoP to operators' infrastructure	✓	✓	✓	✓	✓	✓	✓
BP11: prevention of strategic withholding of capacity	✗	✓	✗	✓	✓	✓	✗
BP12a: access to civil engineering infrastructure (incl manholes and derivation points)	✗	✓	✗	✗	✗	✓	✗
BP12b: rules for optimising duct space	✓	✓	✗	✗	✗	✗	✗
BP12c: cost oriented prices for civil infrastructure	✓	✓	✗	✓	n/a	✓	✓
BP13: dark fibre / leased lines subsidiary to duct access	✓	✓	✗	✓	✓	✓	✓
<i>General remedy</i>							
BP14: network access on reasonable request	✗	✓	✓	✓	✓	✓	✓
BP15: where access to new products not in RO, published process for new network access requests	n/a	n/a	n/a	n/a	✓	✗	n/a
BP15a: details on process for new requests	n/a	n/a	n/a	n/a	✓	n/a	n/a
BP15b: timescales for new requests	n/a	n/a	✓	✓	✓	✓	n/a
BP15c: prompt access to new products where feasible	n/a	n/a	✓	✓	✓	✓	n/a

	Bulgaria	France	Iceland	Luxembourg	Netherlands	Sweden	Turkey
BP15d: SMP obligations to apply to new products when made available	✓	✓	✓	✓	✓	n/a	✓

In relation to BPs 2 and 3, the Bulgaria NRA stated that the ladder of investment scenario is not applicable in Bulgaria because of the existing strong and developing infrastructure competition. . In relation to BP4, the Netherlands removed regulated access to SLU and LLU in favour of VULA on the SMP operator's DSL network. This is, however, not the case for LLU on FTTH networks.

With regard to BP 5, when imposing remedies, no NRA took population density into account. 4 NRAs (France, Iceland, Netherlands, Sweden) took economic factors into account, while the architecture chosen by the SMP operator including the location of the concentration points was taken into account by 4 NRAs (France, Netherlands, Sweden, Turkey). 3 NRAs (France, Iceland, Netherlands) took other factors into account in considering the viability of remedies. The Bulgaria NRA stated that its analysis indicated that was no demand for the SMP operator's wholesale access products.

BP6a and BP6b(i)-(iv) are not applicable for France and Turkey, as there is no access obligation for FTTH. In Iceland and Bulgaria, BP6a is not applicable, because the SMP operator's FTTH network does not have a P2P architecture. BP6b(iii)-(v) are not defined by the Iceland NRA due to the infancy of FTTH access and BP6b(ii)-(v) are not defined in Bulgaria since the relevant details shall be comprised in the SMP operator's RO in case of explicit request of the VULA wholesale product.

Fibre access in Sweden should in principle be provided at the ODF, but also at fibre concentration points where feasible (BP6a). BP6b(i)-(ii) is not applicable in the Netherlands and in Sweden, because the SMP operators' FTTH networks are not P2MP.

BP7b is not applicable in France and the Netherlands, because the SMP operators' networks are not based on FTTN architecture. The same is true for BP7c in France, the Netherlands and Sweden. In relation to BP7c, in Turkey, sub-loop unbundling is regulated on a project basis.

BP8 is not applicable in the Netherlands and France, because access to in-house cabling is included in the unbundled loop.

In Bulgaria, BP9 shall be defined in the RO of the SMP undertaking. BP11 shall be ensured under the obligation of the SMP operator to offer wholesale products on a non-discriminatory basis and under the legislative procedure for approval of the RO in case of effective demand of a VULA product. Regarding BP12a-b, the Iceland NRA imposes a general duct access obligation but does not have prescriptive rules on space optimisation or access to manholes.

In relation to BP12c, SMP operators are obliged to publish a list of planned works. Other operators are allowed to participate in civil engineering, with equal sharing of costs mandated.

With regard to BP12a, in Luxembourg, access to manholes and derivation points is not covered by the NRA's tasks. There are no defined rules for optimising the use of space available in ducts in Luxembourg, but obligations to provide non-discriminatory access are in place (BP12b). BP12a in Bulgaria is ensured under a specific RO for access to the duct infrastructure of the SMP operator. BP12b rules are also implemented under the procedure for approval of the duct access RO by the NRA. In relation to BP12a in the Netherlands, the incumbent is responsible for ensuring that alternative operators can access all points of handover in the network. However, the access products are not specified in such detail to explicitly set out obligations with respect to manholes and derivation points. With regard to BP12b, there are no ducts available in the Netherlands.

In Turkey, there is no regulation related to prevent withholding of capacity (BP11) as well as no rules for accessing manholes (BP12a) and optimising the use of space in ducts (BP12b).

In relation to BP 14, the Bulgaria NRA explained that alternative operators can only choose from the points of access announced by the SMP operator.

In relation to BP15, the Bulgaria, France, Iceland, Luxembourg and Turkey NRAs explained that this was not applicable since access to new products and services is generally included through the review of the Reference Offer. In Sweden, the SMP operator is requested to publish changes to the Reference Offer at least 90 days before coming into force. The NRA does not review new products and services in the Reference Offer.

Regarding BP15b, four NRAs (Luxembourg, Iceland, the Netherlands and Sweden) imposed the obligation to consider wholesale access requests within reasonable time scales. The Luxembourg NRA set it to three months and the Netherlands NRA set it to two weeks. The Iceland and Sweden NRAs do not define what period constitutes a reasonable timescale.

### **2.2.2. WCA market**

Since we collected data for the Phase 1 Report the WCA market has been reviewed by 7 NRAs ('the WCA participants'). Table 5 summarises the best practice remedies that have been imposed for each of the WCA participants.

In Poland, 76 commune areas are excluded from regulation (compared to 12 commune areas having been excluded in 2011).

In Bulgaria and Sweden, regulation has been withdrawn from the WCA market since it was found to be effectively competitive (Bulgaria) or did not pass the three-criteria-test (Sweden).

Table 5: Best practice remedies imposed by WCA participants

	Bulgaria	France	Iceland	Luxembourg	Poland	Sweden	Turkey
BP1: appropriate and proportionate access products	n/a	[✓]	✓	✓	✓	n/a	✓
BP2: remedies based on ladder of investment	n/a	✓	✓	✓	✓	n/a	✓
BP3: encouraging infrastructure competition at deepest level reasonable	n/a	✓	✓	✓	✓	n/a	✓
BP4: access based on technology neutrality where proportionate	n/a	[✓]	✓	✓	✓	n/a	✓
BP5: bitstream access including handover	n/a	✓	✓	✓	✓	n/a	✓
BP6: access product from MPoP to access point	n/a	✓	✓	✓	✓	n/a	✓
BP7: prevention of strategic withholding of capacity	n/a	✗	✗	✓	✗	n/a	✗
BP8: network access on reasonable request	n/a	✓	✓	✓	✓	n/a	✓
BP9: where access to new products not in RO, published process for new network access requests	n/a	n/a	✓	n/a	n/a	n/a	n/a
BP9a: details on process for new requests	n/a	n/a	[✓]	n/a	n/a	n/a	n/a
BP9b: timescales for new requests	n/a	n/a	[✓]	✓	n/a	n/a	✓
BP9c: prompt access to new products where feasible	n/a	n/a	✓	✓	n/a	n/a	n/a
BP9d: SMP obligations to apply to new products when made available	n/a	✓	✓	✓	✓	n/a	✓

In relation to BP7, several NRAs (France, Iceland, Poland and Turkey) did not address strategic withholding of capacity, mostly, because it was not deemed necessary.

In relation to BP9, the France, Luxembourg, Poland and Turkey NRAs address the issue of obtaining access to new access products through reviewing the Reference Offer (as opposed to imposing a specific condition). In Iceland, the NRA imposed an obligation on the SMP operator to publish a description of the process.

With regard to BP 9b, in Iceland the SMP operator must announce new bitstream products with three months' notice time. In Turkey, SMP operators are required to announce new products publicly at least two months before launch.

### 2.2.3. WHQAFL market

Since we collected data for the Phase 1 Report the WHQAFL market has been reviewed by 9 NRAs ('the WHQAFL participants'). Table 6 summarises the best practice remedies that have been imposed for each of the WCA participants.

Table 6: Best practice remedies imposed by WHQAFL participants

	Austria	Croatia	Cyprus	France	Iceland	Italy	Latvia	Luxembourg	Turkey
BP1: appropriate and proportionate access products	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP2: remedies based on ladder of investment	✓	✓	✓	✓	✓	✓	✓	✓	✗
BP3: encouraging infrastructure competition at deepest level reasonable	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP4: access based on technology neutrality where proportionate	✓	✓	✓	✗	✓	✓	✓	✓	✗
BP5: network access on reasonable request	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP6: where access to new products not in RO, published process for new network	n/a	n/a	✓	n/a	n/a	n/a	n/a	n/a	n/a
BP6a: details on process for new requests	n/a	n/a	✓	n/a	n/a	n/a	n/a	n/a	n/a
BP6b: timescales for new requests	n/a	n/a	✓	✓	n/a	n/a	✓	✓	✓
BP6c: prompt access to new products where feasible	n/a	n/a	[✓]	✓	✓	n/a	✓	✓	✓
BP6d: SMP obligations to apply to new products when made available	✓	✓	✓	✓	✓	✓	[✓]	✓	✓

In relation to BP2, the Turkish NRA explained that there was no need to impose an obligation based on the ladder of investment principle in leased line markets.

With regard to BP4, in Turkey there is an access obligation on all wholesale products including partial leased lines. In France, the SMP operator is required to continue to offer and/or develop specific products that correspond to the market's needs.

In relation to BP6, the Austria, Croatia, France, Iceland, Italy, Latvia, Luxembourg and Turkey NRAs do not impose a specific requirement since the process for dealing with requests for access is included in the Reference Offer.

With regard to BP6b, time scales are set in France (the SMP operator has to grant access on the same timescales as for its own downstream arm), Iceland (6 months), Turkey (5 days) and Cyprus (15 working days). For the other countries, this is not applicable, because access to new products and services is included through the review of the Reference Offer.



### 3. Competition objective 2: Assurance of co-location at the access point (e.g. MDF, street cabinet, concentration point) and other associated facilities

#### 3.1. Background

The BEREC Common Position refers to the competition issues relating to SMP operators denying access to associated facilities which are key to the provision of services in the relevant market and artificially restricting the usage of co-location and other associated facilities.

The competition issues identified by BEREC are addressed by the Best Practice 16 in the WLA Common Position; Best Practice 10 in the WCA Common Position; and Best Practice 7 in the WHQAFL Common Position.

#### 3.2. Analysis by best practice

##### 3.2.1. WLA market

Since we collected data for the Phase 1 Report, the WLA market has been reviewed by 7 NRAs ('the WLA participants'). Table 7 summarises whether the best practice remedy in relation to the assurance of co-location at delivery points and other facilities has been imposed for each of the WLA participants.

Table 7: Best practice remedies imposed by WLA participants

	Bulgaria	France	Iceland	Luxembourg	Netherlands	Sweden	Turkey
BP16 – colocation and facilities on regulated, cost oriented terms	✓	✓	✓	✓	✓	✓	✓

##### 3.2.2. WCA market

Since we collected data for the Phase 1 Report the WCA market has been reviewed by 7 NRAs ('the WCA participants'). Table 8 summarises whether the best practice remedy in relation to the assurance of co-location at delivery points and other facilities has been imposed for each of the WCA participants.

In Poland, regulation only applies to some geographic parts of the market. 76 commune areas are excluded from regulation (compared to 12 commune areas having been excluded in 2011).

In Bulgaria and Sweden, regulation has been withdrawn from the WCA market since it was found to be effectively competitive (Bulgaria) or did not pass the three-criteria-test (Sweden).

Table 8: Best practice remedies imposed by WCA participants

	Bulgaria	France	Iceland	Luxembourg	Poland	Sweden	Turkey
BP10: colocation and facilities on regulated, cost oriented terms	n/a	✓	✓	✓	✓	n/a	✓

### 3.2.3. WHQAFL market

Since we collected data for the Phase 1 Report the WHQAFL market has been reviewed by 9 NRAs ('the WHQAFL participants'). Table 9 summarises whether the best practice remedy in relation to the assurance of co-location at delivery points and other facilities has been imposed for each of the WHQAFL participants.

Table 9: Best practice remedies imposed by WHQAFL participants

	Austria	Croatia	Cyprus	France	Iceland	Italy	Latvia	Luxembourg	Turkey
BP7: colocation and facilities on regulated, cost oriented terms	✓	✓	✓	[✓]	✓	✓	✓	✓	✓

In France, prices for co-location and other facilities follow the same pricing obligations as for the main product. In the most competitive areas there is no price regulation. In areas where competition is developing there are margin squeeze rules while in areas with no competition cost-oriented prices apply.

## 4. Competition objective 3: Level playing field

### 4.1. Background

The BEREC Common Position refers to the competition issue of alternative operators being unable to compete on a level playing field which may result in SMP players having an unfair advantage; having an unmatchable advantage; discriminating in favour of its own group business (or between its own wholesale customers); and exhibiting obstructive and foot-dragging behaviour.

The competition issue identified by BEREC is addressed by the Best Practices 17-20 in the WLA Common Position; Best Practices 11-14 in the WCA Common Position; and Best Practices 8-11 in the WHQAFL Common Position.

## 4.2. Analysis by best practice

### 4.2.1. WLA market

Since we collected data for the Phase 1 Report, the WLA market has been reviewed by 7 NRAs ('the WLA participants'). Table 10 summarises the best practice remedies that have been imposed by each of the WLA participants.<sup>9</sup>

Table 10: Best practice remedies imposed by WLA participants

	Bulgaria	France	Iceland	Luxembourg	Netherlands	Sweden	Turkey
BP17: general ND remedy	✓	✓	✓	✓	✓	✓	✓
BP18: clarification of ND case by case	*	n/a	✓	✓	✓	✓	n/a
BP19: equivalence	*	✓	✓	✓	✓	✓	✓
EOI, EOO, or both	n/a	Both	EOI	EOI	Both	Both	EOI
BP20: Functional Separation	n/a	n/a	n/a	n/a	n/a	n/a	n/a

In relation to BP18, the France and Turkey NRAs do not provide further clarification regarding the interpretation of the non-discrimination requirement since no relevant cases have emerged. The Bulgaria NRA has found that general non-discriminatory rules are sufficient. The Iceland, Luxembourg, Netherlands and Sweden NRAs do provide clarification of the interpretation of the non-discrimination requirement on a case-by-case basis typically through the dispute resolution process; although the Netherlands NRA has also imposed a margin squeeze test and has the ability to approve discriminatory conduct that does not hinder competition on a case-by-case basis. The Iceland, Netherlands and Sweden NRAs implemented these clarifications through explicit SMP obligations.

In relation to BP19, all of the WLA participants, apart from Bulgaria, have implemented EOI for at least some of the products within the WLA market. The France, Netherlands and Sweden NRAs have also implemented EOO; the Sweden NRA implemented EOO where it was too expensive to adapt the copper ordering system to EOI. In Bulgaria, this obligation is considered disproportionate because of the lack of effective demand for wholesale physical access products and VULA. In relation to BP20, none of the WLA participants have imposed functional

<sup>9</sup> As already stated in the Phase 1 report, although not included in the WLA participants, the Italy NRA imposes EOO requirements in relation to the WLA market and has accepted a voluntary undertaking of functional separation by the SMP operator. Similarly the UK also imposes EOI and has accepted a voluntary undertaking of functional separation. The Slovenia NRA is also not included in the WLA participants, however, in 2011 it imposed EOI requirements on the SMP operator in relation to access to copper-based LLU (full and shared) and sub-loop unbundling (including access to duct and dark fibre).

separation. However, BP20 is considered a remedy of last resort. The Iceland NRA accepted a voluntary undertaking of functional separation by the SMP operator.

#### 4.2.2. WCA market

Since we collected data for the Phase 1 Report, the WCA market has been reviewed by 7 NRAs ('the WCA participants'). Table 11 summarises the best practice remedies that have been imposed for each of the WCA participants.<sup>10</sup>

In Bulgaria and Sweden, regulation has been withdrawn from the WCA market since it was found to be effectively competitive (Bulgaria) or did not pass the three-criteria-test (Sweden).

Table 11: Best practice remedies imposed by WCA participants

	Bulgaria	France	Iceland	Luxembourg	Poland	Sweden	Turkey
BP11: general ND remedy	n/a	✓	✓	✓	✓	n/a	✓
BP12: clarification of ND case by case	n/a	n/a	✓*	✓	n/a	n/a	n/a
BP13: equivalence	n/a	✓	✓	✓	✓	n/a	✓
EOI, EOO, or both	n/a	EOO	EOI	EOI	EOO	n/a	EOO
BP14: Functional separation	n/a	n/a	n/a	n/a	n/a	n/a	n/a

In relation to BP12, the France, Poland and Turkey NRAs do not provide further clarification regarding the interpretation of the non-discrimination requirement since no relevant cases have emerged. The Iceland NRA will mediate disputes or take a decision if a dispute arises. In relation to BP13, the France, Poland and Turkey NRAs implemented EOO. The most common reason given for the imposition of EOO was that the wholesale product already shares most of the infrastructure and services with the product used by the downstream arm of the SMP operator. The Iceland and Luxembourg NRAs implemented EOI.

In relation to BP14, none of the WCA participants have imposed functional separation. However, BP14 is considered a remedy of last resort. The Iceland NRA accepted a voluntary undertaking of functional separation by the SMP operator.

#### 4.2.3. WHQAFL market

<sup>10</sup> As already stated in the Phase 1 report, although not included in the WCA participants, the Italy NRA imposes EOO requirements in relation to the WCA market and has accepted a voluntary undertaking of functional separation by the SMP operator. Similarly the UK also imposes EOI and has accepted a voluntary undertaking of functional separation. The Slovenia NRA is also not included in the WCA participants, however, in 2011 it imposed EOI requirements on the SMP operator in relation to copper-based and NGA-based bitstream access.

Since we collected data for the Phase 1 Report, the WHQAFL market has been reviewed by 9 NRAs ('the WHQAFL participants'). Table 12 summarises the best practice remedies that have been imposed for each of the WHQAFL participants.

Table 12: Best practice remedies imposed by WHQAFL participants

	Austria	Croatia	Cyprus	France	Iceland	Italy	Latvia	Luxembourg	Turkey
BP8: general ND remedy	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP9: clarification of ND case by case	✓	✓	✓	n/a	✓ x	n/a	✓	✓	n/a
BP10: equivalence	✓	✓	x	✓	x	✓	x	✓	x
EOI, EOO, or both	EOO	EOO	x	EOO	x	EOO	x	EOO	x
BP11: Functional Separation	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

In relation to BP9, the France, and Turkey NRAs have not provided further clarification regarding the interpretation of non-discrimination since no relevant cases have emerged. The Iceland NRA uses past decisions as precedents for disputes. The Italy NRA requires the SMP operator to verify compliance with the general non-discrimination obligation on a case-by-case basis as part of its transparency obligation. The Austria, Cyprus, Latvia and Luxembourg NRAs that did provide further clarification on how the non-discrimination obligations are interpreted on a case-by-case basis did so using either SMP wording or explanatory guidance or a combination of both.

In relation to BP10, the Austria, Croatia, France, Luxembourg and Italy NRAs have implemented EOO. The France NRA explained that it introduced EOO because EOI was not possible because the SMP operator uses passive access to provide leased lines whilst its competitors purchase wholesale leased lines. The Cyprus, Iceland, Latvia and Turkey NRAs have not introduced any equivalence obligation. The Latvia NRA provided a reason for this, stating that there was a lack of demand for the wholesale terminating segments of leased lines. The Iceland NRA also explained that it has imposed a general non-discrimination obligation, as well as SLA, SLG and KPI obligations which it found was adequate and allowed the alternative operators to monitor the fulfilment of their orders and requests against the market average as well as against the SMP operator.

In relation to BP11, none of the WHQAFL participants have imposed functional separation. However, BP11 is considered a remedy of last resort. The Iceland and Italy NRAs accepted a voluntary undertaking of functional separation by the SMP operator.

## 5. Competition objective 4: Avoidance of unjustified first mover advantage

### 5.1. Background

The BEREC Common Position refers to the competition issues of SMP operators having an incentive to discriminate in favour of their own downstream arms (and thereby having an unjustified first mover advantage in downstream markets); the risk of SMP operators commissioning new infrastructure that alternative operators are not able to use (and thereby not allowing all market players the same opportunity to compete for new business in downstream markets); and SMP operators denying access to information relevant for other operators roll-out of NGA.

The competition issues identified by BEREC are addressed by the Best Practices 21-25 in the WLA Common Position; Best Practices 15-20 in the WCA Common Position; and Best Practices 12-15 in the WHQAFL Common Position.

### 5.2. Analysis by best practice

#### 5.2.1. WLA market

Since we collected data for the Phase 1 Report the WLA market has been reviewed by 7 NRAs ('the WLA participants'). Table 13 summarises the best practice remedies that have been imposed for each of the WLA participants.

Table 13: Best practice remedies imposed by WLA participants

	Bulgaria	France	Iceland	Luxembourg	Netherlands	Sweden	Turkey
BP21: downstream technical and economic replicability	x	x	✓	✓	✓	✓	x
BP22: timely information on lead times for new products	✓	✓	✓	[✓]	✓	✓	✓
BP23: competitor ability to influence new SMP products	n/a	✓	✓	✓	✓	x	✓
BP24: lead times for removal of legacy products	n/a	x	✓	✓	✓	✓	x
BP25 (a): timely and ND NGA network information	✓	[✓]	✓	✓	✓	✓	n/a
BP25 (b): periodic update of NGA information	[✓]	[✓]	✓	✓	✓	✓	n/a

In relation to BP21, the France NRA stated that it only imposed a requirement on the SMP operator to ensure the technical replicability of new downstream services. It considered that competition law was adequate to ensure economic replicability. The SMP operator has to prove the technical replicability to the France NRA one month prior to launching the service and to inform competing providers three months ahead. If technical or economic replicability cannot

be achieved, the France NRA can direct the SMP operator to take the necessary steps to ensure replicability.

The Bulgaria and Turkey NRAs have not put in place a regulatory regime which ensures either technical or economic replicability. The Bulgaria NRA considers that such an approach would be disproportionate because of the lack of effective demand for wholesale physical access products and VULA. In relation to BP22, the Luxembourg NRA did not impose an obligation on the SMP operator(s) regarding the timely availability of relevant information according to specific lead times, as the SMP operator is prevented from launching replicable retail products prior to wholesale offers being made available to competing providers. The SMP operator is also under an obligation to update the reference offer accordingly.

In relation to BP23, in Sweden the NRA does not consider it necessary to specify a requirement regarding the ability of alternative operators to influence the decisions regarding the characteristics of new wholesale products and new interfaces.

In Turkey the alternative operators are involved in the assessment of new wholesale products as the whole process is made transparent to the operators and the public. According to the Turkey NRA, there is sufficient time for the operators to influence the SMP operator's wholesale offerings prior to the launching of new services.

In relation to BP24, the France NRA did not impose a requirement in relation to lead times (i.e. notice periods) regarding the removal of existing access products as the removal of existing offers is not dealt with in the market analysis.

In Turkey there has not been a case which made it necessary to impose such a requirement.

In relation to BP25(a), the France NRA and the Turkey NRA did not require the information on the SMP operator(s)' 'newly' rolled-out NGA network to be made available well in advance or on a non-discriminatory basis. In France this issue is covered by symmetric regulation. In Turkey there is no fibre (FTTH-B) regulation. In relation to BP25(b), the France NRA does not require the SMP operator to periodically update the information, but it considers that symmetric regulation deals with this issue, meaning that it is in conformity with BP25.

### **5.2.2. WCA market**

Since we collected data for the Phase 1 Report the WCA market has been reviewed by 7 NRAs ('the WCA participants'). Table 14 summarises the best practice remedies that have been imposed for each of the WCA participants.

In Bulgaria and Sweden, regulation has been withdrawn from the WCA market since it was found to be effectively competitive (Bulgaria) or did not pass the three-criteria-test (Sweden).

Table 14: Best practice remedies imposed by WCA participants

	Bulgaria	France	Iceland	Luxembourg	Poland	Sweden	Turkey
BP15: downstream technical and economic replicability	n/a	✘	✓	✓	✓	n/a	✘
BP16: timely information on lead times for new products	n/a	✓	✓	✓	✓	n/a	✓
BP17: 6 month lead time for NGA product launch	n/a	n/a	✓	n/a	✓	n/a	n/a
BP18: competitor ability to influence new SMP products	n/a	✓	✓	✓	✓	n/a	✓
BP19: lead times for removal of legacy products	n/a	✓	✓	✓	✘	n/a	✓
BP20(a) - timely and ND NGA network information	n/a	✓	✓	✓	✓	n/a	✘
BP20(b): periodic update of NGA information	n/a	✓	✓	✓	✓	n/a	✓

In relation to BP15, the France NRA responded that it had only put in place a regulatory regime which ensures technical (but not economic) replicability. It considered that competition law was sufficient to ensure economic replicability. There is a requirement in place to prove the technical replicability one month prior to launching the service for downstream services that use upstream services for which there is no Eol obligation. The period for making it public to the other operators is three months. SMP operators can be ordered to take the necessary steps to ensure economic or technical replicability should these be subject to disputes between the SMP operator and the competitors.

The Turkey NRA has not imposed a regulatory regime which ensures the technical and economic replicability.

In relation to BP16, the Luxembourg NRA explained that the reference offer process has been reviewed and includes a cost orientation or economic replicability test. The relevant information regarding the provision of new wholesale products includes prices, terms and conditions and technical characteristics.

In relation to BP17, the France NRA did not set lead times as no operators had been designated to have SMP in the relevant market for NGA network so far. The Luxembourg NRA did not set lead times because they are part of the reference offer process. The Turkey NRA had not included NGA in its market analysis and therefore no lead times were imposed.



In relation to BP19, the Poland NRA did not impose a requirement on the SMP operator in relation to lead times regarding the removal of existing wholesale inputs, because the SMP operators has ensure access in any case until the access seeker makes use of it.

In relation to BP20(a) the Turkey NRA explained that according to a decision the SMP operator has to provide resale and bitstream access at the wholesale level on its fibre network on a non-discriminatory basis and is required to notify the wholesale tariffs beforehand.

### 5.2.3. WHQAFL market

Since we collected data for the Phase1 Report the WHQAFL market has been reviewed by 9 NRAs ('the WHQAFL participants'). Table 15 summarises the best practice remedies that have been imposed for each of the WHQAFL participants.

Table 15: Best practice remedies imposed by WHQAFL participants

	Austria	Croatia	Cyprus	France	Iceland	Italy	Latvia	Luxembourg	Turkey
BP12: downstream technical and economic replicability	✓	✓	✓	✓	✓	✗	✗	✗	✓✗
BP13: timely information on lead times for new products	✓	✓	✓✗	✓	✓	✓✗	✓✗	✓	✓
BP14: competitor ability to influence new SMP products	✗	✓	n/a	✓	✓	✓	✗	✓	✗
BP15: lead times for removal of legacy products	✗	✓	n/a	✓	✓	✓	n/a	✓	✓

In relation to BP12, the Italy NRA explained that the current replicability test does not include wholesale leased line services. Retail leased lines are not subject to ex-ante regulation and wholesale leased lines are not considered as an input for an efficient alternative operator to replicate the retail access offers of the incumbent.

In Latvia, the SMP operator has to offer access to WHQAFL and to amend its reference offer should it launch a new retail service. Currently the Latvia NRA does not apply a technical or economic replicability test due to the lack of demand for the wholesale service. Alternative operators have deployed their own networks and can partly offer more attractive or better services than the SMP operator. The Latvia NRA has not received any complaints from alternative operators on the SMP operator's wholesale services or prices so far. The alternative operators also have not indicated that they would want to use the SMP operator's wholesale terminating segments. Although a regulatory regime on replicability is not in place, the Latvia NRA publishes several principles and rules, for instance a cost accounting principle. In cases where replicability cannot be achieved by using the available wholesale product, the SMP operator has an obligation to amend the existing wholesale product.

The Luxemburg NRA has imposed a cost orientation obligation.

The Turkey NRA has not put in place a regulatory regime which ensures technical and economic replicability. However, to ensure replicability of the services at the retail level a sufficient margin between the wholesale and the retail prices was implemented. The Turkey NRA explained that there were no cases which required imposing an obligation in cases where replicability cannot be achieved by using the available wholesale products.

In relation to BP13, the Cyprus NRA requires the SMP operator to provide information on prices, terms and conditions and technical characteristics when it offers a new wholesale product. According to the Cyprus NRA the information provided allows the alternative operators to effectively assess the impact on their own process as the SMP operator is required to offer comprehensive information.

The Italy NRA did not impose an obligation on the SMP operator regarding the timely availability of relevant information according to lead times, because this is dealt with under competition law. Nevertheless, the SMP operator is required to provide information on prices, terms and conditions and technical characteristics. The information provided includes the technical and economic conditions of a new wholesale product in order for the alternative operators to effectively assess the impact on their own process.

The Latvia NRA did not specify the lead times and considered such an obligation disproportionate in light of infrastructure competition and lack of demand. The Latvia NRA explained that all obligations imposed on the SMP operator would allow the alternative operators to effectively assess the impact in their own process. Similar to the aforementioned two NRAs, the SMP operator has to provide information on prices, terms and conditions and technical characteristics.

In relation to BP14, in Austria the introduction of new or adapted wholesale products is mainly covered by the non-discrimination obligation. In Latvia the alternative operators can initiate a formal dispute procedure where there is a disagreement with the SMP operator.

In relation to BP15, in Austria the SMP operator cannot withdraw those existing wholesale products where it has an obligation to provide them. The Latvia NRA explained that there is lack of demand for the wholesale products.

## **6. Competition objective 5: Transparency**

### **6.1. Background**

The BEREC Common Position refers to the competition issues of SMP operators not providing sufficient clarity or transparency on the terms and conditions of access; SMP operators delaying the provision of a Reference Offer (RO) to alternative operators, SMP operators not taking into account the views of wholesale customers when developing the RO; and SMP operators having preferential access to key information compared to alternative operators.

The competition issues identified by BEREC are addressed by the Best Practices 26-28 in the WLA Common Position; Best Practices 21-22 in the WCA Common Position; and Best Practices 16-17 in the WHQAFL Common Position.

### **6.2. Analysis by best practice**

### 6.2.1. WLA market

Since we collected data for the Phase 1 Report the WLA market has been reviewed by 7 NRAs ('the WLA participants'). Table 16 summarises the best practice remedies that have been imposed for each of the WLA participants.

Table 16: Best practice remedies imposed by WLA participants

	Bulgaria	France	Iceland	Luxembourg	Netherlands	Sweden	Turkey
BP26: RO publication	✓	✓	✓	✓	✓ x	✓	✓
BP26a: RO to reflect reasonable customer views	x	✓	x	✓	✓	x	x
BP26b: RO timely publication	✓	✓	✓	✓	✓	✓	✓
BP26c: RO timely update	✓	✓	✓	✓	✓	✓	✓
BP26d: RO minimum information	✓	✓	✓	✓	✓	✓	✓
BP26e – Contractual changes following RO obligations removal	n/a	✓	n/a	n/a	n/a	n/a	✓
BP27: timely information to all operators	✓	✓	✓	✓	✓	✓	✓
BP28: Civil infrastructure database	x	✓	x	x	x	x	✓

In relation to BP26a, the Sweden and Turkey SMP operators are not subject to a requirement to take into account any reasonable views of wholesale customers in their RO. In Sweden there is no such requirement as in this market competition is based only on passive fibre. In Turkey it is the NRA that takes account of views of wholesale customers, during the national consultation of the RO approval decision.

In relation to BP26e, with the exception of the France and Turkey NRAs, NRAs have not imposed a condition because they have not removed any obligations in relation to a RO.

In relation to BP27, all NRAs imposed an obligation to make public information about KPI measurements and changes in infrastructure architecture. However, the Luxembourg NRA states that there could be some exceptions where the information is deemed to be commercially sensitive.

In relation to BP28, only the France and Turkey NRAs have required the SMP operator to set up a civil infrastructure database containing information relating to all ducts and in the case of Turkey, all operators are required to provide information to the NRA about their infrastructure.

### 6.2.2. WCA market

Since we collected data for the Phase 1 Report the WCA market has been reviewed by 7 NRAs ('the WCA participants'). Table 17 summarises the best practice remedies that have been imposed for each of the WCA participants.

In Bulgaria and Sweden, regulation has been withdrawn from the WCA market since it was found to be effectively competitive (Bulgaria) or did not pass the three-criteria-test (Sweden).

Table 17: Best practice remedies imposed by WCA participants

	Bulgaria	France	Iceland	Luxembourg	Sweden	Poland	Turkey
BP21: RO publication	n/a	✓	✓	✓	n/a	✓	✓
BP21a: RO to reflect reasonable customer views	n/a	✓	✓	✓	n/a	✓	*
BP21b: RO timely publication	n/a	✓	✓	✓	n/a	✓	✓
BP21c: RO timely update	n/a	n/a	✓	✓	n/a	✓	✓
BP21d: RO minimum information	n/a	✓	✓	✓	n/a	✓	✓
BP21e: Contractual changes following RO obligations removal	n/a	✓	n/a	n/a	n/a	✓	✓
BP22: timely information to all operators	n/a	✓	✓	✓	n/a	✓	✓

In relation to BP21, BP21b and BP21c the Poland NRA stated that it had implemented the relevant obligations. It also noted, in response to the European Commission's letter regarding the modification of the Reference Offer for this market (and for market 3a), that the delay in publishing the Reference Offer was due to the wide scope and complexity of the issues at stake, as well as the extensive representations made by the entities engaged in the proceedings.<sup>11</sup>

In relation to BP21e the France, Poland and Turkey NRA indicated that they have ensured that the SMP operator made provisions for the change in the contractual decisions with a transition period. Only the Luxembourg NRA answered that this was not applicable since no obligation with respect to publication of RO was lifted.

In relation to BP22, all NRAs imposed an obligation to make public information about KPI measurements and changes in infrastructure architecture.

### 6.2.3. WHQAFL market

<sup>11</sup> This refers to the European Commission letter concerning Case PL/2015/1734: modification of Reference Offer concerning markets 3a and 3b in Poland.

Since we collected data for the Phase 1 Report the WHQAFL market has been reviewed by 9 NRAs ('the WHQAFL participants'). Table 18 summarises the best practice remedies that have been imposed for each of the WHQAFL participants.

Table 18: Best practice remedies imposed by WHQAFL participants

	Austria	Croatia	Cyprus	France	Iceland	Latvia	Luxembourg	Italy	Turkey
BP16: RO publication	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP16a: RO to reflect reasonable customer views	✗	✓	✓	✓	✓	n/a	✓	✓	✓
BP16b: RO timely publication	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP16c: RO timely update	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP16d: RO minimum information	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP16e: Contractual changes following RO obligations removal	✓	✓	✗	✓	✗	n/a	n/a	✓	✓
BP17: timely information to all operators	✓	✓	n/a	✓	✓	✓	✓	✓	✓

In relation to BP16a, the Austria NRA did not impose the obligation to take into account reasonable views of wholesale customers as such an obligation would not be considered to be sufficiently precise to guarantee legal certainty. In Latvia, wholesale customers can bring forward their views on the RO through dispute settlement or in the national consultation of the SMP decision.

In relation to BP16e, the Austria, France, Italy and Turkey NRAs have imposed transition periods, whereas the Cyprus, Iceland and Luxembourg NRAs have not imposed a condition since they have not removed any obligations in relation to a RO. The Croatia NRA ensures that contractual conditions are automatically updated. The Latvia NRA would only remove the obligation to publish a reference offer following a finding that the market is effectively competitive.

In relation to BP17, all NRAs set specific timescales regarding the provision of information to operators, although the Cyprus NRA did not provide an answer to this question in the questionnaire it completed.

## 7. Competition objective 6: Reasonable quality of access products - technical issues

### 7.1. Background

The BEREC Common Position refers to the competition issues of SMP operators restricting the usage of services in the relevant markets; not providing access products of reasonable quality; arbitrarily limiting forms of access; or providing forms of access that are over specified.

The competition issues identified by BEREC are addressed by the Best Practices 29-31 in the WLA Common Position; Best Practices 23-24 in the WCA Common Position; and Best Practices 18-21 in the WHQAFL Common Position.

### 7.2. Analysis by best practice

#### 7.2.1. WLA market

Since we collected data for the Phase 1 Report the WLA market has been reviewed by 7 NRAs ('the WLA participants'). Table 19 summarises the best practice remedies that have been imposed for each of the WLA participants.

Table 19: Best practice remedies imposed by WLA participants

	Bulgaria	France	Iceland	Luxembourg	Netherlands	Sweden	Turkey
BP29: RO publication and requirement to meet all reasonable requests	✓	✓	✓	✓	✓	✓	✓
BP29: RO reviewed?	✓	✓	✓	✓x	x	✓	✓
BP30: Detailed information on access products	✓	✓	✓	✓	✓	✓	✓
BP31: rules on prevention of signal interference	✓	✓	✓	✓	x	x	✓

In relation to BP29 all the NRAs review the RO whenever changes are made to the RO except the Netherlands NRA. The France NRA also undertakes an RO review as part of the market review process. The Netherlands NRA does not approve the RO before its publication but will make determinations based on disputes relating to the RO. The Luxembourg NRA does not periodically review the RO, but does so when any changes are made.

In relation to BP31, the Sweden NRA considered it unnecessary to put in place rules to prevent mutual interference of signals since technical standards fulfil this role. The Netherlands NRA considered that the prevention of mutual interference of signals falls within the incumbent responsibilities.

#### 7.2.2. WCA market

Since we collected data for the Phase 1 Report the WCA market has been reviewed by 7 NRAs ('the WCA participants'). Table 20 summarises the best practice remedies that have been imposed for each of the WCA participants.

In Bulgaria and Sweden, regulation has been withdrawn from the WCA market since it was found to be effectively competitive (Bulgaria) or did not pass the three-criteria-test (Sweden).

Table 20: Best practice remedies imposed by WCA participants

	Bulgaria	France	Iceland	Luxembourg	Sweden	Poland	Turkey
BP23: RO publication and requirement to meet all reasonable requests	n/a	✓	✓	✓	n/a	✓	[✓]
BP23: RO Reviewed?	n/a	✓	✓	✓*	n/a	✓	✓
BP24: Detailed information on access products	n/a	*	✓	✓	n/a	✓	✓

In relation to BP23, the Luxembourg NRA does not periodically evaluate the regulated reference offers of the SMP operator. However, the NRA can impose modifications to the reference offers in case this is considered necessary.

In relation to BP24, although Poland and Turkey NRAs require that information regarding the technical characteristics of the product is provided to alternative operators the type (and extent) of information provided is not uniform across the NRAs.

The France NRA does not require any information regarding the technical characteristics of the product is provided to alternative operators since the RO already contains detailed information about the characteristics of the access product.

### 7.2.3. WHQAFL market

Since we collected data for the Phase 1 Report the WHQAFL market has been reviewed by 9 NRAs ('the WHQAFL participants'). Table 21 summarises the best practice remedies that have been imposed for each of the WHQAFL participants.

Table 21: Best practice remedies imposed by WHQAFL participants

	Austria	Croatia	Cyprus	France	Iceland	Italy	Latvia	Luxembourg	Turkey
BP18: RO to include relevant technical information	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP19: standards adherence	✓	✓	✓	✓	✓	*	✓	✓	✓

BP20: wide availability of leased line interconnection points	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP21: end to end leased lines where interconnection not feasible or economic (excl trunk)	✓	n/a	✓	✓	✓	✓	n/a	✓	n/a

In relation to BP19, the Austria and Italy NRAs do not include a requirement that operators adhere to European or global technical standards since this is considered unnecessary (or since European or global technical standards are assumed to be used).

## 8. Competition objective 7: Reasonable quality of access products – operational aspects

### 8.1. Background

The BEREC Common Position refers to the competition issue of SMP operators having an incentive to discriminate in favour of their own downstream operations in relation to the quality of wholesale access products.

The competition issues identified by BEREC are addressed by the Best Practices 32-34 in the WLA Common Position; Best Practices 25-27 in the WCA Common Position; and Best Practices 22-24 in the WHQAFL Common Position.

### 8.2. Analysis by best practice

#### 8.2.1. WLA market

Since we collected data for the Phase 1 Report the WLA market has been reviewed by 7 NRAs ('the WLA participants'). Table 22 summarises the best practice remedies that have been imposed for each of the WLA participants.

Table 22: Best practice remedies imposed by WLA participants

	Bulgaria	France	Iceland	Luxembourg	Netherlands	Sweden	Turkey
<i>Requirement for SLAs</i>							
BP32: reasonable QoS	x	✓	✓	✓	✓	✓	✓
BP32a: SLAs for specific areas	✓	✓	✓	✓	✓	✓	✓
BP32b: SLAs available to wholesale operators	x	✓	✓x	✓	✓	✓	x
BP32c: NRA SLA oversight	x	✓	✓	✓	✓	x	✓
BP32d: SLAs to reflect customer differences	x	✓	x	x	✓	✓	x
<i>Requirement for SLGs</i>							



BP33: SLG requirement	x	✓	✓	✓	✓	x	✓
BP33a: SLGs to cover specific areas	n/a	✓	✓	✓	✓	n/a	✓
BP33b: SLG payments without delay	n/a	x	n/a	✓	✓	n/a	✓
BP33c: NRA oversight of SLGs	n/a	✓	✓	x	x	n/a	✓
BP33d: SLGs available to all wholesale operators	n/a	✓	✓	✓	✓	n/a	✓
<i>Requirement for KPIs</i>							
BP34: Generic KPI requirement	✓	✓	✓	✓	✓	✓	✓
BP34a: KPIs to cover specific areas	✓	✓	✓	✓	✓	✓	✓
BP34b: KPIs available to all operators	✓	✓	✓	✓	✓	✓	✓
BP34c: NRA oversight of KPI setting	✓	✓	✓	✓	✓	✓	✓x

In relation to BP32 and BP33, the Bulgaria NRA stated that service levels are defined within contracts and there are penalties for failure to fulfil obligations.

In relation BP32b, the setting of SLAs is underway for the Iceland NRA.

In relation to BP32c, the Sweden NRA does not oversee the process of setting SLAs since the market circumstances have not given rise to particular concerns about discriminatory behaviour. In Bulgaria, operators may request the assistance of the NRA in the event of a dispute.

In relation to BP32d, the Luxembourg NRA does not impose a requirement for the SLAs to take into account differences in customer requirements since technological neutrality is applied. Indeed the different technologies fulfil the different customer requirements. The Turkey NRA also stated that the same products are used by both business and residential customers. The Iceland NRA commented that market circumstances do not justify such a distinction.

In relation to BP33, the Sweden NRA has does not imposed a specific SLG requirement on the SMP operators. However, if the SMP-operator fails to fulfil SLAs, it has an obligation to pay a reasonable amount in compensation. In relation to BP33c, the Netherlands NRA stated that the incumbent operator has an obligation to set SLGs for WLA services, although SLG payments are not made proactively. A proactive system is currently planned for implementation. The Luxembourg NRA also stated that the incumbent operator is obliged to provide SLGs and to provide the NRA with the agreements regarding SLAs/SLGs that are made with alternative operators, but the NRA does oversee the process of setting SLGs.

In relation to BP33d, the setting of SLGs is underway for the Iceland NRA.

In relation to BP34c, the setting of KPIs is underway for the Turkey NRA.

### 8.2.2. WCA market

Since we collected data for the Phase 1 Report the WCA market has been reviewed by 7 NRAs ('the WCA participants'). Table 23 summarises the best practice remedies that have been imposed for each of the WCA participants.

In Bulgaria and Sweden, regulation has been withdrawn from the WCA market since it was found to be effectively competitive (Bulgaria) or did not pass the three-criteria-test (Sweden).

Table 23: Best practice remedies imposed by WCA participants

	Bulgaria	France	Iceland	Luxembourg	Sweden	Poland	Turkey
<i>Requirement for SLAs</i>							
BP25: reasonable QoS	n/a	✓	✓	✓	n/a	✓	✓
BP25a: SLAs for specific areas	n/a	✓	✓	✓	n/a	✓	✓
BP25b: SLAs available to wholesale operators	n/a	✓	✓	✓	n/a	✓	✓
BP25c: NRA SLA oversight	n/a	✓	✓	✓	n/a	✓	✓
BP25d: SLAs to reflect customer differences	n/a	✓	✗	✗	n/a	✓	✗
<i>Requirement for SLGs</i>							
BP26: SLG requirement	n/a	✓	✓	✓	n/a	✓	✓
BP26a: SLGs to cover specific areas	n/a	✓	✓	✓	n/a	n/a	✓
BP26b: SLG payments without delay	n/a	✓	✓	✓	n/a	n/a	✓
BP26c: NRA oversight of SLGs	n/a	✓	✓	✗	n/a	n/a	✓
BP26d – SLGs available to all wholesale operators	n/a	✓	✓	✓	n/a	n/a	✓
<i>Requirement for KPIs</i>							
BP27: Generic KPI requirement	n/a	✓	✓	✓	n/a	✓	✓
BP27a: KPIs to cover specific areas	n/a	✓	✓	✓	n/a	✓	✓
BP27b: KPIs available to all operators	n/a	✓	✓	✓	n/a	✓	✓
BP27c: NRA oversight of KPI setting	n/a	✓	✓	✓	n/a	✓	✓

In relation to BP25d, the Iceland and Luxembourg NRAs do not impose a requirement for the SLAs to take into account differences in customer requirements since technological neutrality is applied. Indeed the different technologies fulfil the different customer requirements.

In relation to BP26c, the Luxembourg NRA stated that the incumbent operator is obliged to provide SLGs and to provide the NRA with the agreements regarding SLAs/SLGs that are made with alternative operators, but the NRA does not oversee the process of setting SLGs.

### 8.2.3. WHQAFL market

Since we collected data for the Phase 1 Report the WHQAFL market has been reviewed by 9 NRAs ('the WHQAFL participants'). Table 24 summarises the best practice remedies that have been imposed for each of the WHQAFL participants.

Table 24: Best practice remedies imposed by WHQAFL participants

	Austria	Croatia	Cyprus	France	Iceland	Italy	Latvia	Luxembourg	Turkey
<i>Requirement for SLAs</i>									
BP22: reasonable QoS	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP22a: SLAs for specific areas	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP22b: SLAs available to wholesale operators	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP22c: NRA SLA oversight	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP22d: SLAs to reflect customer differences	✓	✗	✗	✓	✗	✓	✗	✗	✗
<i>Requirement for SLGs</i>									
BP23: SLG requirement	✓	✓	✓	✓	✓	✓	✗	✓	✓
BP23a: SLGs to cover specific areas	✓	✓	✓	✓	✓	✓	n/a	✓	✓
BP23b: SLG payments without delay	✓	✓	✓	✓	n/a	✓	n/a	✓	✗
BP23c: NRA oversight of SLGs	✓	✓	✓	✓	✓	✓	n/a	✗	✓
BP23d: SLGs available to all wholesale operators	✓	✓	[✓]	✓	✓	✓	n/a	✓	✓
<i>Requirement for KPIs</i>									
BP24: Generic KPI requirement	✓	✓	✗	✓	✓	✓	✗	✓	✓
BP24a: KPIs to cover specific areas	✓	✓	✗	✓	✓	✓	✗	✓	✓

	Austria	Croatia	Cyprus	France	Iceland	Italy	Latvia	Luxembourg	Turkey
BP24b: KPIs available to all	✓	✓	✗	✓	✓	✓	✗	✓	✓
BP24c: NRA oversight of KPI setting	✓	✓	✗	✓	✓	✓	✗	✓	✗

In relation to BP22d, the Luxembourg NRA does not impose a requirement for the SLAs to take into account differences in customer requirements since technological neutrality is applied with the different technologies fulfilling the different customer requirements. The Croatia NRA explained that, since residential customers do not take leased lines, this distinction was not needed.

There is no demand for differentiated SLAs in Latvia.

The Cyprus NRA also considered that its market circumstances do not justify such differentiation, but noted that SLAs are available to all alternative operators as part of the Reference Offer. In relation to BP23d, it explained that SLGs are also made available to all alternative operators. With regard to BPs 24-24c, it stated that no KPIs have been imposed so far, but they will be considered as part of the process of amending the Reference Offer, which is currently taking place.

In relation to BP23 and BP24, the Latvia NRA does not impose a requirement for the SMP operator to provide SLGs or KPIs since the demand for wholesale products is very low.

## 9. Competition objective 8: Assurance of efficient and convenient wholesale switching

### 9.1. Background

The BEREC Common Position identifies the competition issue of SMP operators having an incentive to discriminate in favour of their own downstream operations which may result in wholesale customers being unable to switch wholesale products and/or wholesale providers without the minimum delay or disruption.

The competition issues identified by BEREC are addressed by the Best Practice 35 in the WLA Common Position; Best Practice 28 in the WCA Common Position; and Best Practice 25 in the WHQAFL Common Position.

## 9.2. Analysis by best practice

### 9.2.1. WLA market

Since we collected data for the Phase 1 Report the WLA market has been reviewed by 7 NRAs ('the WLA participants'). Table 25 summarises the best practice remedies that have been imposed for each of the WLA participants.

Table 25: Best practice remedies imposed by WLA participants

	Bulgaria	France	Iceland	Luxembourg	Netherlands	Sweden	Turkey
BP35: wholesale switching processes	x	✓	✓	✓	✓	✓	✓
BP35a: minimum downtime during switching	x	✓	x	x	✓	✓	x
BP35b: price of switching not a barrier	x	✓	✓	✓	✓	✓	✓
BP35c: bulk switching processes	x	x	x	x	x	✓	✓
BP35d: low switching transaction time	x	✓	✓	x	✓	✓	✓
BP35e: switching SLAs / SLGs / KPIs	x	✓	✓	✓	✓	[✓]	✓

All WLA participants, apart from Bulgaria, imposed an obligation to ensure efficient switching between operators (BP 35). The Bulgaria NRA stated that no services were provided under LLU and that VULA will be provided after requests for such a service.

The WLA participants also indicate that it is required, when necessary, that the price of switching does not act as a barrier to wholesale switching processes (BP 35b). The Luxembourg NRA stated that it has imposed an obligation on the SMP operator to provide reasonable user migration means between different wholesale products. However, it has not imposed specific obligations concerning maximum allowed downtime during wholesale switching (BP 35a) or concerning the transaction time in the wholesale switching process (BP 35d).

Most WLA participants did not impose specific obligations for bulk switching (BP35(c)). The Luxembourg NRA considered this as unnecessary, while the France NRA said that the SMP operator had put in place a wholesale switching process for other providers and reports on these processes during multilateral meetings facilitated by the NRA. The Netherlands NRA stated that it had not put in place specific measures related to bulk migrations, but the incumbent operator must comply with any reasonable demand for such services and must offer all regulated WLA services on a non-discriminatory basis. The Iceland NRA also explained that no specific measures were imposed for bulk switching requests. However, the SMP operator must process all requests in a non-discriminatory manner.

In relation to BP35(e), the Sweden NRA has not required the SMP operator to introduce SLAs/SLGs and KPIs relating to the switching process, but it considers this remains in conformity with the BP, since it has evidence that these are unnecessary or would not be cost-effective.

### 9.2.2. WCA market

Since we collected data for the Phase 1 Report the WCA market has been reviewed by 7 NRAs ('the WCA participants'). Table 26 summarises the best practice remedies that have been imposed for each of the WCA participants.

In Bulgaria and Sweden, regulation has been withdrawn from the WCA market since it was found to be effectively competitive (Bulgaria) or did not pass the three-criteria-test (Sweden).

Table 26: Best practice remedies imposed by WCA participants

	Bulgaria	France	Iceland	Luxembourg	Poland	Sweden	Turkey
BP28: wholesale switching processes	n/a	✓	✓	✓	✓	n/a	n/a
BP28a: minimum downtime during switching	n/a	✓	✓	✗	✗	n/a	✗
BP28b: price of switching not a barrier	n/a	✓	✓	✓	✗	n/a	✓
BP28c: bulk switching processes	n/a	✗	✗	✗	✓	n/a	✓
BP28d: low switching transaction time	n/a	✓	✓	✗	✓	n/a	✓
BP28e: switching SLAs/SLGs / KPIs	n/a	[✓]	✓	✓	✓	n/a	✓

In relation to BP 28, among the WCA participants, the Turkey NRA did not specify whether it imposes an obligation to ensure an efficient switching process.

Three NRAs signal that they do not impose a requirement relating to the maximum allowed downtime during wholesale switching (BP28a). More precisely, the Luxembourg NRA explained that there is no differentiation between characteristic of end-user.

The Turkey NRA explained that wholesale SLAs specify overall service availability requirements and that therefore no further requirements are necessary. However, if a customer requires a higher level of service it can purchase such an option at a higher price.

In Poland, alternative operators have not raised issues relating to the maximum allowed downtime during wholesale switching nor have they expressed concerns that the price of the switch acts as a barrier to switching (BP 28b).

In relation to BP28c, the France NRA explained that there are no specific measures as the operators are already able to plan, with the SMP operator, for bulk wholesale switching as and when required. Specific KPIs are imposed in Poland in order to facilitate switching. In Luxembourg switching is considered as being facilitated through EoI and non-discrimination

obligations. The Luxembourg NRA also stated that it has imposed an obligation on the SMP operator to provide reasonable user migration means between different wholesale products, but it does not impose a specific obligation relating to bulk wholesale switching processes. The Turkey NRA explained that there is a framework to facilitate bulk migration. The SMP operator has to apply these timescales for all operators in a non-discriminatory manner. Within 20 days, the SMP operator shall submit the project it has prepared for bulk wholesale switching to the alternative operator. The maximum lead time for a bulk migration to occur is 15 days.

In relation to BP 28d the Luxembourg NRA does not impose a specific obligation for the transaction time associated with the wholesale switching process.

In relation to BP 28e the France NRA does not require the SMP operator to introduce SLAs /SLGs and KPIs. It specifies that the measure is considered unnecessary: the switching process is not included in the reference offer but the different parts of switching process (termination, ordering and delivery) are covered under SLA/SLG and KPI requirements.

### 9.2.3. WHQAFL market

Since we collected data for the Phase 1 Report the WHQAFL market has been reviewed by 9 NRAs ('the WHQAFL participants'). Table 27 summarises the best practice remedies that have been imposed for each of the WHQAFL participants.

Table 27: Best practice remedies imposed by WHQAFL participants

	Austria	Croatia	Cyprus	France	Iceland	Italy	Latvia	Luxembourg	Turkey
BP25: wholesale switching processes	✓	✓	✗	[✓]	✓	✗	✓✗	✓	✗
BP25a: minimum downtime during switching	✓	✓	n/a	✓	✓	✗	✓✗	✗	✗
BP25b: price of switching not a barrier	✓	✓	✗	✓	✓	✗	✓✗	✓	✗
BP25c: bulk switching processes	[✓]	[✓]	✗	[✓]	✓	✓	✓✗	✗	✗
BP25d: low switching transaction time	✓	✓	n/a	[✓]	✓	✗	✓✗	✗	✗
BP25e: switching SLAs/SLGs / KPIs	✓	✓	✗	[✓]	✓	✗	✗	✓	✗

In relation to BP25, specific obligations to ensure a speedy and efficient wholesale switching process have been imposed, with regard to the WHQAFL market, in Austria, Croatia, Iceland, Latvia and Luxembourg. The Latvia NRA explained that demand for wholesale switching is not sufficiently developed. To guarantee speedy and efficient wholesale switching, the Latvia NRA is elaborating the information for wholesale switching to be included in the RO, if such need appears in the future.

Some NRAs did not impose the specific BPs 25(a) to (e) mainly because it was considered unnecessary or not applicable. The Turkey NRA explained that there is no approved migration process. The France NRA facilitates regular meetings between the SMP and alternative operators to improve the switching process. The Italy NRA explained that the switching procedures have not been considered a major issue in market no. 4. The Cyprus NRA responded that there are no specific obligations for the specific purpose of wholesale switching, but noted that, with regard to BP25a, the service availability target set in SLAs is 99.5%. It also stated that the wholesale switching processes will be further discussed with the SMP operator as part of the process to amend the Reference Offer which is currently taking place. Also in relation to BP 25a, the Luxembourg NRA stated that it has imposed an obligation on the SMP operator to provide reasonable user migration means between different wholesale products. However, it has not imposed specific obligations concerning maximum allowed downtime during wholesale switching.

With specific regard to BP 25c, the WHQAFL participants have not imposed specific obligations mainly because they consider that demand for such processes is not significant or because they can be achieved by other means.

In relation to BP 25e, the Austria NRA explained that in order to ensure efficient switching process, the general SLAs and SLGs for ordering and delivery apply.

## **10. Competition objective 9: Assurance of efficient migration processes from legacy to NGN/NGA network**

### **10.1. Background**

The BEREC Common Position identified the competition issue of SMP operators not providing migration procedures from legacy to NGN/NGA networks that enable competitors to provide retail services based on the new network to compete with the SMP operator.

The competition issues identified by BEREC are addressed by the Best Practices 36-40 in the WLA Common Position; Best Practices 29-33 in the WCA Common Position; and Best Practices 26-29 in the WHQAFL Common Position.

### **10.2. Analysis by best practice**

#### **10.2.1. WLA market**

Since we collected data for the Phase 1 Report the WLA market has been reviewed by 7 NRAs ('the WLA participants'). Table 28 summarises the best practice remedies that have been imposed for each of the WLA participants.



Table 28: Best practice remedies imposed by WLA participants

	Bulgaria	France	Iceland	Luxembourg	Netherlands	Sweden	Turkey
BP36: switching processes apply equally to NGN/NGA	x	x	✓	✓	✓	✓	✓
BP37: migration framework for legacy network decommissioning	✓x	✓x	✓x	✓x	✓	✓x	[✓]
BP38: existing obligations only removed when migration agreed and finished	n/a	✓	✓	n/a	✓	✓	✓
BP39: Notice periods for legacy networks to reflect various factors	n/a	[✓]	✓	✓	✓	[✓]	x
BP40: MDF decommissioning of 5 years	n/a	✓	✓	✓	x	✓	x

In relation to BP36, the France NRA does not impose switching procedures that apply equally between legacy and NGN/NGA wholesale products. The wholesale processes of access to the infrastructure, eligibility, incident management and after-sales service, are completely distinct: asymmetric regulation on the one hand for copper vs symmetric regulation on the other one for FttH, and no regulation on cable. The Bulgaria NRA stated that no services were provided under LLU and that VULA will be provided after requests for such a service.

With regard to BP37, the Netherlands NRA imposed all of the specific SMP obligations listed in the question, while the Bulgaria, France, Iceland, Luxembourg and Sweden NRAs imposed a subset of obligations. According to the Turkish Reference Offer Agreement the SMP operator must provide information about decommissioning to the alternative operators if there are existing live circuits in an MDF area and must leave LLU copper in place for the end users of alternative operators. If there are no LLU subscribers in an MDF area, then the SMP operator is not obliged to give notice.

In relation to BP38, the France NRA requires that existing obligations remain in place until a passively unbundled optic local loop has been rolled out fully within the same zone. In Sweden obligations are in place, but alternative network operators must consider that the lease is limited in time. In Turkey, if an end user wants to churn to another alternative operator, he/she can go directly to the new operator and request a switch. Once a switch has been agreed, the losing provider is responsible for all SLAs until the migration process has been completed. In Iceland, 5 years lead time on complete decommissioning is required and in the Netherlands, the legacy and NGA products must overlap (in principle) for a year in order to facilitate a smooth migration. The Luxembourg NRA states that it is not applicable and stated instead that new obligations must be respected. It did not make any reference to a migration path, except that timeframes should be respected, since it imposed obligations on each technology which include lead-times for decommissioning of the various traditional technologies plus the obligation not to take away access once granted. The Bulgaria NRA stated this BP is not applicable.

In relation to BP39, the France NRA takes into account the availability of a full-fledged alternative and the Sweden NRA takes into account a reasonable timeframe to allow full depreciation of stranded assets. The Luxembourg NRA, in addition taking into account the availability of a full-fledged alternative and whether a reasonable NGA access product is available at the same location, it also takes into account whether an alternative operator is present or not in the area when imposing an obligation related to a notice period. The Bulgaria NRA did not impose an obligation relating to a notice period for phasing out legacy networks, so the BP was not applicable.

In relation to BP40, the 5 year notice period may be modified by the France NRA depending on the availability of alternatives. In the case of the Iceland NRA, the notice period can be modified following a local consultation process. For the Luxembourg NRA, it varies from 5 years if an alternative operator is present in the MDF to 1 year if no alternative operator is present. In the Netherlands' case, the notice period is one year if the VULA alternative is readily available. The Turkey NRA did not give information on the length of the period for decommissioning but explained that notice periods may be shorter than 5 years where all investments by alternative operators are written off. It also explained that there are no specific notice periods for decommissioning MDFs.

### 10.2.2. WCA market

Since we collected data for the Phase 1 Report the WCA market has been reviewed by 7 NRAs ('the WCA participants'). Table 29 summarises the best practice remedies that have been imposed for each of the WCA participants.

Table 29: Best practice remedies imposed by WCA participants

	Bulgaria	France	Iceland	Luxembourg	Poland	Sweden	Turkey
BP29: switching processes apply equally to NGN / NGA	n/a	✗	✓	✓	✓	n/a	✓
BP30: migration framework for legacy network decommissioning	n/a	✓✗	✓	✓✗	✓✗	n/a	✓
BP31: existing obligations only removed when migration agreed and finished	n/a	n/a	✓	✗	✓	n/a	✓
BP32: notice periods for legacy networks to reflect various factors	n/a	✓	✓	✓	✓	n/a	✓✗
BP33: replacement network active before MDF decommissioning	n/a	✗	✓	✓	n/a	n/a	✓

In Bulgaria and Sweden, regulation has been withdrawn from the WCA market since it was found to be effectively competitive (Bulgaria) or did not pass the three-criteria-test (Sweden).

In relation to BP29, in France there are 2 NGA wholesale products: i) WBA VDSL (still on the legacy network under the same treatment as other WBA offers); and ii) Fibre wholesale products under a symmetrical regulation and on different fibre networks.

In relation to BP30, the Iceland and Turkey NRAs imposed all of the specific SMP obligations listed, while the France, Luxembourg and Poland NRAs imposed a subset of obligations. The Luxembourg NRA explained that it has imposed on the SMP operator the obligations concerning a notice period as well as the obligation to provide all relevant information on network modification. However, it does not impose any obligation relating to a framework for migration.

In relation to BP31, the case has never occurred in France, so in principle, the obligation remains in place until the end of the notice period. The Luxembourg NRA has not imposed the specific obligation described in the BP, but it has imposed an obligation on the SMP operator to provide at least an equivalent product when an alternative operator is changing its network or a specific line. Additionally, when the SMP operator is changing its network, it must give a notice period varying from 5 years if an alternative operator is present in the MDF to 1 year if no alternative operator is present.

In relation to BP32, the France NRA takes into account whether a reasonable NGA access product is available at the same location. Moreover, a 5 years notice period is imposed on the SMP operator in case of decommissioning of its legacy network. This period can only start when all the area covered by the MDF is fully overbuilt by a fibre network. If necessary, others elements could be taken into account by the NRA, for example, equivalence of technical and economic conditions for the new fibre network access. In Poland notice period only apply to unused and not shared access points; the SMP operator is required to retain unused capacity available for access seekers to fulfill future demand. The Turkey NRA takes into account that the notice period is likely to be longer for locations than for access products as a new access product may be available at the same location. The Iceland, Luxembourg and Poland NRAs take various factors into account when imposing a notice period to phase out legacy networks.

In relation to BP33, fibre network is symmetrically regulated and there are no obligations for active products in France. The Poland NRA states that it is not applicable and explains that the SMP operator should keep access granted for as long as the access seeker needs it and that there is a general obligation for the SMP operator to grant access to new wholesale products 6 months before it launches a new retail product.

### **10.2.3. WHQAFL market**

Since we collected data for the Phase 1 Report the WHQAFL market has been reviewed by 9 NRAs ('the WHQAFL participants'). Table 30 summarises the best practice remedies that have been imposed for each of the WHQAFL participants.

Table 30: Best practice remedies imposed by WHQAFL participants

	Austria	Croatia	Cyprus	France	Iceland	Italy	Latvia	Luxembourg	Turkey
BP26: switching processes apply equally to NGN / NGA	✓	✓	n/a	✓	✓	✗	[✓]	✓	✗
BP27: migration framework for legacy decommissioning	n/a	✓	✓	✓	✓	✗	✗	✓✗	✗
BP28: existing obligations removed only when migration agreed and finished	n/a	✓	✓	✓	✓	✗	✗	✗	✗
BP29: notice periods for legacy networks to reflect various factors	n/a	✓	n/a	[✓]	✓	✗	n/a	✓	✗

In relation to BP26 to BP29, in Turkey there is no approved migration process yet. In Italy, since obligations imposed on the SMP operator in Market 4 concern both copper and fibre networks and the SMP operator has not decommissioned its legacy network yet, the Italy NRA has not considered necessary to define migration rules. Also, the circumstance that the SMP operator has the obligation to publish a Reference Offer and any economic and technical changes to its network and services as well as to notify the Supervisory Board, the Italy NRA and alternative operators its fixed access network building plans, makes further obligations not strictly necessary.

In Latvia, there is no demand for wholesale products and hence there is no need for specific rules regarding migration. The Latvia NRA is however in the process of elaborating rules for migration to be included in the RO if demand for wholesale migration emerges in future.

In relation to BP27-BP29, obligations with regard to changes in the access network are imposed in the WLA market by the Austria NRA.

In relation to BP27, the SMP operator in Iceland must inform market players of all changes to the arrangements of leased line access that are likely to alter companies' competitiveness on the market with five years' notice. Deviation may be made from the above period of notice on receipt of advance endorsement by the Iceland NRA. The Luxembourg NRA stated that it had imposed obligations on the SMP operator concerning notice periods and the provision of information on network modifications, but it had not imposed an obligation relating to a framework for migration.

In relation to BP28, in France, if the majority of buildings in an area are connected to fibre, the SMP operator would be allowed to close the MDF (providing they announced its closure 5 years in advance). A request for copper access from operators would no longer be considered as a reasonable request of access. Until then, existing obligations remain. In Iceland, the advance notice period can be shortened with prior approval of the NRA. The Luxembourg NRA has not imposed the specific obligation described in the BP, but it has imposed an obligation on the SMP operator to provide at least an equivalent product when an alternative operator is

changing its network or a specific line. Additionally, when the SMP operator is changing its network, it must give a notice period varying from 5 years if an alternative operator is present in the MDF to 1 year if no alternative operator is present.

In relation to BP29, the Latvia NRA did not impose an obligation relating to a notice period. In France, as long as the SMP operator offers a product on the retail market, it will be obliged to provide the necessary wholesale inputs to allow an efficient alternative operator to offer equivalent products in the retail market. In the case of the closure of the retail product, the SMP operator has to respect (generally) a minimum three years delay.

## 11. Competition objective 10: Fair and coherent access pricing

### 11.1. Background

The BEREC Common Position identifies the risk of alternative operators in the market facing uncertainty as to the price of wholesale services in the relevant market with SMP operators creating arbitrage opportunities between different wholesale inputs that may dis-incentivise efficient investment by alternative operators. The Common Position also makes reference to SMP operators engaging in margin squeeze and engaging in predatory pricing.

The competition issues identified by BEREC are addressed by the Best Practices 41-59 in the WLA Common Position; Best Practices 34-50 in the WCA Common Position; and Best Practices 30-37 in the WHQAFL Common Position. These can be summarised as follows:

### 11.2. Analysis by best practice

#### 11.2.1. WLA market

Since we collected data for the Phase 1 Report the WLA market has been reviewed by 7 NRAs ('the WLA participants'). Table 31 summarises the best practice remedies that have been imposed for each of the WLA participants.

Table 31: Best practice remedies imposed by WLA participants

	Bulgaria	France	Iceland	Luxembourg	Netherlands	Sweden	Turkey
BP41: pricing based on efficient entrant	✓	✓	✓	✓	✓	✓	✓
BP42: pricing incentives (competition / investment)	✓	✓	✓	✓	✓	✓	✓
BP43: pricing obligations for regulated products	✓	✓	✓	✓	✓	✓	✓
BP44: pricing reflective of regulatory and market conditions	✓	✓ x	✓ x	✓	✓ x	✓	✓ x
BP45: price controls allow recovery of efficiently incurred costs and follow cost causality	✓	✓	✓	✓	✓	✓	✓
BP46: competitive neutral pricing signals	x	✓	✓	✓	✓	✓	x

	Bulgaria	France	Iceland	Luxembourg	Netherlands	Sweden	Turkey
BP47: remedies for excess profitability	✓	✓	✓	✓	✓	✓	✓
BP48: ND pricing	✓	✓	✓	✓	✓	✓	✓
BP49: margin squeeze obligations	x	x	✓	✓x	✓	✓	x
BP50: sufficient margin to facilitate competitive investment	n/a	x	✓	✓	✓	✓	n/a
<i>BPs applicable to pricing of NGA WLA only</i>							
BP51: NGA input pricing in line with legacy products	x	✓	x	✓	n/a	✓	x
BP52: NGA access pricing consistent with legacy	n/a	✓	✓	✓	✓	✓	n/a
BP53: cost allocation rules for duct access	n/a	✓	✓	✓	n/a	✓	n/a
BP54: separate NGA risk adjustment	n/a	✓	n/a	n/a	✓	n/a	n/a
BP55: prices to reflect differences in risk	n/a	x	x	✓	x	x	n/a
BP56: risk balance considerations for long term contracts	n/a	✓	x	✓	✓	x	x
BP57: ND discounts	x	n/a	✓	✓	✓	✓	n/a
BP58 –volume discounts aimed at higher penetration / lower unit costs	n/a	n/a	n/a	n/a	✓	✓	n/a
BP59: volume discounts not to foreclose market	n/a	n/a	n/a	✓	✓	n/a	✓

In relation to BP43, all NRAs use cost orientation as pricing obligation.

In relation to BP44, the Bulgaria, Luxembourg and Sweden NRAs have taken account of both the prioritisation of regulatory objectives and the prevailing market conditions. The Netherlands and Turkey NRAs have taken account of the regulatory objectives only, and the France NRA has taken account of the market conditions. The Iceland NRA stated that the cost base is historical cost.

In relation to BP 46, the Turkey NRA answered that this was not implemented.

In relation to BP49, the Bulgaria, France and Turkey NRAs have not imposed a remedy preventing SMP operators engaging in a margin squeeze. The France NRA considers competition law is sufficient, and the Turkey NRA has ongoing studies regarding margin squeeze. The Bulgaria NRA considers it is not necessary in case of WLA products as competitors do not use them in order to provide services in the retail market. The margin squeeze issues related to duct (if any) will be solved on case by case base. It also noted that

the duct products may be used by competitors in order to roll-out their NGA's networks. The prices for VULA access products are not an object of regulation. The Luxembourg NRA applies a margin squeeze test only for NGA. The Swedish NRA will introduce an economic replicability test (ERT) when EoI is implemented on fibre.

In relation to BP50, the France NRA replied that the costing methodology is consistent along the product value chain. The Turkey NRA stated that this BP had not been implemented for WLA products.

BP51-59 concerns pricing issues applicable to NGA-based wholesale local access only. In Turkey, NGA access products are not regulated, hence these BPs are not applicable. The Iceland NRA does not price regulate fibre local loop. In the Netherlands, duct access is not regulated.

In relation to BP 52, the Luxembourg NRA makes reference to the copper anchor.

In relation to BP53, regarding the cost allocation rules for the pricing of ducts, the French NRA uses the number of subscribers while the Sweden NRA uses the number of cables.

In relation to BP54, the France, Luxembourg and the Netherlands NRAs have identified an NGA specific risk, while the Sweden NRA has not identified any such risk. The Luxembourg NRA also noted that its costing remedy foresees an economic replicability test for NGA products, therefore this BP is not applicable for Luxembourg.

In relation to BP55, only the Luxembourg NRA has set prices based on the risks faced by the investor.

In relation to BP55 and BP56, the Sweden NRA states that the pricing schemes of the incumbent are based on general commercial principles and are designed to promote long time leases. These principles have been applied on non-discriminatory terms for many years in the provision of leased lines and dark fibre.

In relation to BP57, no discounts have been introduced in France. The Bulgaria NRA does not consider this BP to be necessary due to sufficient competition.

In relation to BP 58, volume discounts based on the volumes applying to individual operators, as well as discounts based on the total market volume, are accepted by the Luxemburg and the Netherlands NRAs. The Sweden NRA only accepts discounts based on the volume of individual operators. In Iceland and Turkey, volume discounts are not permitted.

### **11.2.2. WCA market**

Since we collected data for the Phase 1 monitoring report the WCA market has been reviewed by 7 NRAs ('the WCA participants'). Table 32 summarises the best practice remedies that have been imposed for each of the WCA participants.

In Bulgaria and Sweden, regulation has been withdrawn from the WCA market since it was found to be effectively competitive (Bulgaria) or did not pass the three-criteria-test (Sweden).

Table 32: Best practice remedies imposed by WCA participants

	Bulgaria	France	Iceland	Luxembourg	Poland	Sweden	Turkey
BP34: pricing based on efficient entrant	n/a	✓	✓	✓	✓	n/a	✓
BP35: pricing incentives (investment / competition)	n/a	✓	✓	✓	✓	n/a	✓
BP36: pricing obligations for regulated products	n/a	✓	✓	✓	✓	n/a	✓
BP37: pricing reflective of regulatory and market conditions	n/a	✓ <sup>x</sup>	✓ <sup>x</sup>	✓	✓ <sup>x</sup>	n/a	✓ <sup>x</sup>
BP38: price controls allow recovery of efficiently incurred costs and follow cost causality	n/a	✓	✓	✓	✓	n/a	✓
BP39: competitive neutral pricing signals	n/a	✓	✗	✓	✓	n/a	✓
BP40: ND pricing	n/a	✓	✓	✓	✓	n/a	✓
BP41: No ex ante pricing if EOI / margin squeeze test	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BP42: margin squeeze obligations	n/a	✓	✓	✓	✓	n/a	[✓]
BP43: sufficient margin to facilitate competitive investment	n/a	✓	✓	✓	✓	n/a	✓
<i>BPs applicable to pricing of bitstream based on NGA only</i>							
BP44: NGA access pricing consistent with legacy	n/a	✗	✓	✓	✓	n/a	✓
BP45: separate NGA risk adjustment	n/a	✗	✗	n/a	✗	n/a	✗
BP46: prices to reflect differences in risk	n/a	✗	n/a	✓	✓	n/a	✗
BP47: risk balance considerations for long term contracts	n/a	✗	n/a	✓	✗	n/a	✗
BP48: ND discounts	n/a	✗	✗	✓	✓	n/a	✓
BP49: volume discounts aimed at higher penetration / lower unit costs	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BP50: volume discounts not to foreclose market	n/a	n/a	✓	✓	✓	n/a	✓

In relation to BP35 and 36, the Luxembourg NRA has used an economic replicability test costing methodology to incentivise efficient investment and sustainable competition.

In relation to BP 37, the Luxembourg NRA has taken account of both the prioritisation of regulatory objectives and the prevailing market conditions. The France, Poland and Turkey NRA have taken account of market conditions. The Iceland NRA has taken account of regulatory objectives.



In relation to BP39, the Iceland NRA uses historical costs, which may differ from efficiently incurred costs and the approach cannot guarantee that the outcome would mimic the outcome of a competitive market.

In relation to BP42, the Turkey NRA is in the process of developing a margin squeeze test which it intends to put in place.

BPs 44-50 concern pricing issues applicable to NGA-based wholesale central access only. The France NRA has not regulated NGA bitstream yet, hence these BPs do not apply.

In relation to BP45, the Iceland NRA considers VDSL more of an upgrade of ADSL, while GPON over FTTH is not price regulated. The Poland NRA answered no and the Turkey NRA stated that this BP was not applicable, since no specific NGA-risk has been found. The Luxembourg NRA has imposed an economic replicability test for the relevant products, therefore this BP is not applicable for Luxembourg.

In relation to BP46, the Luxembourg and Poland NRAs have assessed pricing schemes based on differences in risk faced by the investor. The Turkey NRA explains that there is no such assessment procedure.

In relation to BP48 and 50, the Iceland, Poland and Turkey NRAs do not allow volume discounts. The Luxembourg NRA accepts non-discriminatory volume discounts based on the volume of individual operators, as well as on total market volume.

Our questionnaire did not pose questions relating to BP41 and BP49. Therefore, these are blocked out in Table 32.

### 11.2.3. WHQAFL market

Since we collected data for the Phase 1 Report the WHQAFL market has been reviewed by 9 NRAs ('the WHQAFL participants'). Table 33 summarises the best practice remedies that have been imposed for each of the WHQAFL participants.

Table 33: Best practice remedies imposed by WHQAFL participants

	Austria	Croatia	Cyprus	France	Iceland	Italy	Latvia	Luxembourg	Turkey
BP30: pricing based on efficient entrant	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP31: pricing incentives (competition / investment)	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP32: pricing obligations for regulated products	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP33: pricing reflective of regulatory and market conditions	✓	✓ x	✓ x	✓ x	✓ x	✓ x	✓ x	✓	✓ x
BP34: price controls allow recovery of efficiently incurred costs and follow cost causality	✓	✓	✓	✓	✓	✓	✓	✓	✓

	Austria	Croatia	Cyprus	France	Iceland	Italy	Latvia	Luxembourg	Turkey
BP34a: ensuring services that are technically similar are priced consistently	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP34b: obligations relating to cost accounting and/or accounting separation	✓	✓	✓	✓	✓ x	✓	✓	✓	✓
BP35: ND pricing	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP36: margin squeeze obligations	✓	x	✓	[✓]	✓	x	x	x	✓
BP37: ND discounts	✓	✓	✓	✓	x	✓	x	x	✓

In relation to BP32, the France NRA explains that the price regulation differs depending on competitive conditions: no price regulation in the most competitive areas, non-price squeezing in areas where competition is able to develop and cost-oriented prices in areas where there is a monopoly. However, for traditional interface leased lines, cost-oriented prices are used regardless of the degree of competitiveness.

In relation to BP33 (NRAs should determine the costing methodology taking account of the prioritisation or regulatory objectives and the prevailing market conditions), only the Austria and Luxembourg NRAs say they have taken account of both these objectives. The Croatia, Cyprus, France, Iceland and Italy NRAs say that their costing methodology takes account only of regulatory objectives, while the Latvia and Turkey NRAs have taken account of market conditions only.

In relation to BP34b the Iceland NRA imposed obligations on cost accounting. The other NRAs imposed obligations on both cost accounting and accounting separation.

In relation to BP36, the France NRA states that in the most competitive areas, it is assumed that there is no margin squeeze. In all other areas, the different pricing obligations depending on the level of competition of the area prevent the SMP operator from engaging in a margin squeeze. . The Italy NRA states that the current replicability test does not take into account wholesale leased line services. The Croatia NRA stated that it had not found it necessary to implement this obligation and it had not been requested by other operators. The Latvia NRA is currently elaborating the principles for a margin squeeze test. The Luxembourg NRA uses BULRIC+ cost model and stated that no margin squeeze test was needed.

In relation to BP37, the Iceland NRA does not allow volume discounts. The Italy NRA states that the SMP operator is allowed to apply volume discounts under the condition that discounts are transparent and non-discriminatory. In addition, the regulator has to approve volume discounts in advance. It also states that the current replicability test does not take into account wholesale leased line services and that wholesale leased lines are not considered as an input of an efficient alternative operator to replicate the retail access offers of the incumbent. The

Latvia NRA states that currently the principles are being developed. The Luxembourg NRA states that this is not applicable since it has imposed cost orientation.

## **12. Innovative approaches to regulation**

As part of this exercise, we posed the following questions to NRAs:

*“Please describe how your NRA sees the potential for regulatory innovation in relation to [WLA/WBA/ WHQAFL] markets, detailing any significant measure you may have put in place in that area”.*

The aim of this question was to try and capture any innovative regulatory approaches adopted by NRAs which could potentially be considered as part of any future revision or update of the BEREC BPs.

The France NRA is trying to take into account fixed-mobile convergence on the use of remedies. Alternative operators can use the local loop unbundling RO and all its ancillary services to interconnect their remote network elements (including BTS).

This suggests that remedies imposed under Market 3a can also facilitate the development of adjacent markets beyond fixed local access, in particular mobile backhaul.

## Annex 1: Description of best practices

### Competition objective 1: Assurance of access

Description of best practice remedy	WLA	WCA	WHQAFL
NRAs should impose the appropriate and proportionate access products to reflect national circumstances	BP1	BP1	BP1
NRAs' remedies should be based on the ladder of investment principle	BP2	BP2	BP2
NRAs should encourage infrastructure competition at the deepest level where it is reasonable	BP3	BP3	BP3
To avoid competitive distortions, access should be mandated regardless of technical solution (insofar as it is proportionate)	BP4	BP4	BP4
When imposing remedies, implementation should take account of the viability of the remedy	BP5	n/a	n/a
NRAs should impose bitstream access products including the appropriate level of handover	n/a	BP5	n/a
<b>Access products at specific access points:</b> Unbundled access to the fibre loop in the case of FTTH. For P2P the ODF is the appropriate access point	BP6a	n/a	n/a
<b>Access products at specific access points:</b> Unbundled access to the fibre loop in the case of FTTH For P2MP, the access point is typically an access point downstream from the MPoP	BP6b	n/a	n/a

Description of best practice remedy	WLA	WCA	WHQAFL
The last splitter is the unique access point for physical unbundled access (as long as no alternative for unbundling at the MPoP is available). The design of P2MP needs to take account of the location of the splitter	BP6b (i)	n/a	n/a
Whenever the access point is downstream of the MPoP the remedies imposed need to encompass the access point in combination with an appropriate product between the access point and the MPoP	BP6b (ii)	n/a	n/a
Until any feasible technologies allowing physical unbundling at the MPoP become available, the NRA should consider imposing an active remedy replicating as much as possible physical unbundling	BP6b (iii)	n/a	n/a
<b>Access products at specific access points:</b> NRAs should impose unbundled access to the copper loop at the MDF	BP7a	n/a	n/a
<b>Access products at specific access points:</b> In the case of FTTN, the copper loop is properly accessed at a concentration point downstream of MPoP	BP7b	n/a	n/a
<b>Access products at specific access points:</b> NRAs may consider imposing an active remedy providing access at the MPoP replicating as much as possible physical unbundling	BP7c	n/a	n/a
<b>Access products at specific access points:</b> In case access to in-house cabling is not included in the (copper) loop it should be granted if applicable under private law	BP8	n/a	n/a
<b>Access products to reach access point:</b> NRAs should impose an obligation for an access product to reach the access point from the MPoP	BP9	BP6	n/a
<b>Access product to reach the bitstream access point:</b> NRAs should impose an obligation ensuring that the bitstream access point can be reached with an appropriate remedy			
<b>Access products to reach access point:</b> NRAs should impose an obligation to ensure that the MPoP can be connected to the operators infrastructure with an appropriate remedy	BP10	n/a	n/a
<b>Access products to reach access point or Access product to reach the bitstream access point:</b> Obligations to reach the access point should be designed to prevent strategic withholding of capacity	BP11	BP7	n/a

Description of best practice remedy	WLA	WCA	WHQAFL
<b>Access products to reach access point:</b> Access to civil engineering infrastructure between the MPoP and the customer premises should be ensured by the NRA	BP12	n/a	n/a
This should take into account access to manholes and derivation points	BP12a	n/a	n/a
The NRA should define rules for optimising space	BP12b	n/a	n/a
Prices should be cost oriented	BP12c	n/a	n/a
<b>Access products to reach access point:</b> Where necessary NRAs should impose dark fibre/leased lines as an independent measure or subsidiary measure to duct access	BP13	n/a	n/a
NRAs should require SMP operators to provide network access where an alternative operator reasonably requests it	BP14	BP8	BP5
If access to new products and services is not included through the review of the Reference Offer (RO), NRAs should impose an obligation on SMP operators requiring them to publish the process specifying how they will deal with requests	BP15	BP9	BP6
The process should detail how to make the request, the information required and timescales	BP15a	BP9a	BP6a
NRAs should impose timescales for dealing with requests	BP15b	BP9b	BP6b
If considered feasible, access should be given to new products promptly	BP15c	BP9c	BP6c
When new services and products are made available, NRAs should ensure that they are captured by the relevant SMP obligations already imposed on the SMP operator	BP15d	BP9d	BP6d

**Competition objective 2: Assurance of co-location at the access point (e.g. MDF, street cabinet, concentration point) and other associated facilities**

Description of best practice remedy	WLA	WCA	WHQAFL
NRAs should impose obligations with regard to the provision of co-location and other associated facilities on a cost-oriented basis under clear rules and terms approved by the regulator	BP16	BP10	BP7

**Competition objective 3: Level playing field**

Description of best practice remedy	WLA	WCA	WHQAFL
NRAs should impose a general obligation of non-discrimination	BP17	BP11	BP8
NRAs should further clarify how the non-discrimination obligation is interpreted on a case-by-case basis	BP18	BP12	BP9
NRAs should impose an obligation on SMP operators requiring equivalence and justify the form of equivalence imposed	BP19	BP13	BP10
NRAs should consider imposing functional separation as remedy of last resort	BP20	BP14	BP11

**Competition objective 4: Avoidance of unjustified first mover advantage**

Description of best practice remedy	WLA	WCA	WHQAFL
NRAs should put in place a regime that ensures the technical and economic replicability of the new downstream services introduced by SMP players	BP21	BP15	BP12
Where SMP operators need to supply a new wholesale product, NRAs should impose an obligation on SMP operators regarding the timely availability of information according to lead times	BP22	BP16	BP13
In relation to NGA 6 months might be reasonable	n/a	BP17	n/a
NRAs should ensure that alternative operators have the ability to influence the decisions regarding the characteristics of the new wholesale product	BP23	BP18	BP14
Where relevant, NRAs should impose a requirement in relation to lead times regarding the removal of existing wholesale inputs	BP24	BP19	BP15
Information on an SMPs newly rolled out NGA network should be available (a) well in advance and on a non-discriminatory basis; and (b) periodically updated if necessary	BP25	BP20	n/a



**Competition objective 5: Transparency**

Description of best practice remedy	WLA	WCA	WHQAFL
NRAs should require SMP operators to provide clarity of terms and conditions by publishing a RO. The key element of which should be specified or approved by the NRA	BP26	BP21	BP16
NRAs should require SMP operators to take account any reasonable views of wholesale customers in their RO	BP26a	BP21a	BP16a
NRAs should require SMP operators to publish RO within a reasonable time of access being granted	BP26b	BP21b	BP16b
NRAs should require SMP operators to update the RO as necessary in a timely manner	BP26c	BP21c	BP16c
Where applicable, NRAs should impose an obligation on SMP operators in relation to the minimum amount of information to be made available in the RO	BP26d	BP21d	BP16d
After lifting an obligation on the RO, NRAs should ensure that SMP operators provide provisions for the change in the contractual conditions on the basis of that RO	BP26e	BP21e	BP16e
NRAs should require SMP operators to make certain information available to all operators within a reasonable period of time i.e. KPIs, planned changes to infrastructure	BP27	BP22	BP17
NRAs should consider setting up a civil infrastructure database containing information of all ducts of the SMP operator	BP28	n/a	n/a

**Competition objective 6: Reasonable quality of access products - technical issues**

Description of best practice remedy	WLA	WCA	WHQAFL
NRAs should chose appropriate measures of control including: (a) An obligation to publish RO; and (b) obligation to meet all reasonable requests and which is periodically reviewed by NRA	BP29	BP23	n/a
NRAs should ensure that detailed information about the characteristics of the access product are available to alternative operators (including which technologies are allowed at each site)	BP30	BP24	n/a
NRAs should ensure that rules are in place to prevent mutual interference of signals	BP31	n/a	n/a
NRAs should require that SMP operators provide a RO which includes relevant technical information	n/a	n/a	BP18
NRAs should encourage SMP operators to adhere to European or global technical standards (where feasible)	n/a	n/a	BP19
NRAs should require the interconnection of leased lines is possible at a wide range of convenient locations	n/a	n/a	BP20
For wholesale leased line services that exclude trunk segments, NRAs should ensure that end-to-end wholesale leased lines are available in circumstances where interconnecting lines would be technically infeasible or uneconomic	n/a	n/a	BP21

**Competition objective 7: Reasonable quality of access products – operational aspects**

<b>Description of best practice remedy</b>	<b>WLA</b>	<b>WCA</b>	<b>WHQAFL</b>
NRAs should require SMP operators to provide a reasonable defined level of service	BP32	BP25	BP22
SLAs should cover specific areas	BP32a	BP25a	BP22a
SLAs should be made available to wholesale operators	BP32b	BP25b	BP22b
NRAs should take oversight for the process of setting SLAs	BP32c	BP25c	BP22c
SLAs should take into account differences in customer requirements	BP32d	BP25d	BP22d
NRAs should impose a requirement on SMP operators to provide SLGs	BP33	BP26	BP23
SLGs should cover all necessary specific areas	BP33a	BP26a	BP23a
SLG payments should be made without undue delay (with a pre-established process for payment and billing)	BP33b	BP26b	BP23b
NRAs should take oversight for the process of setting SLGs	BP33c	BP26c	BP23c
SLGs should be made available to all alternative operators (irrespective of the size of purchases)	BP33d	BP26d	BP23d
NRAs should impose a generic requirement on SMP operators to provide KPIs as a means of monitoring non-discrimination and compliance obligations	BP34	BP27	BP24
KPIs should cover all necessary specific areas	BP34a	BP27a	BP24a
The results of monitoring KPIs should be made available to all operators in the market	BP34b	BP27b	BP24b
NRAs should take oversight for the process of setting KPIs	BP34c	BP27c	BP24c

**Competition objective 8: Assurance of efficient and convenient wholesale switching**

Description of best practice remedy	WLA	WCA	WHQAFL
NRAs should impose obligations to ensure that wholesale switching processes are speedy and efficient	BP35	BP28	BP25
NRAs should require that the maximum allowed downtime during wholesale switching is the lowest possible	BP35a	BP28a	BP25a
NRAs should require that the price of the switch does not act as a barrier to switching	BP35b	BP28b	BP25b
Where necessary, NRAs should put in place measures to facilitate bulk wholesale switching process and ensure these are non-discriminatory	BP35c	BP28c	BP25c
NRAs should require that the transaction time required to process wholesale switching is as low as possible	BP35d	BP28d	BP25d
NRAs should require SMP players to introduce SLAs/SLGs and KPIs to ensure the efficiency of the switching process	BP35e	BP28e	BP25e

**Competition objective 9: Assurance of efficient migration processes from legacy to NGN/NGA network**

Description of best practice remedy	WLA	WCA	WHQAFL
NRA should require that switching procedures equally apply between legacy and NGN/NGA wholesale products	BP36	BP29	BP26
Where an SMP intends to decommission its legacy network the NRA should impose obligations in relation to the framework for migration; notice period and an obligation for incumbent to provide all relevant information	BP37	BP30	BP27
NRA should require that existing obligations remain in place until migration path is agreed and finished	BP38	BP31	BP28
When imposing a notice period for phasing out a legacy network the NRA should consider the notice period is likely to be longer for locations; the availability of a full-fledged alternative; and reasonable migration period for a switch of wholesale products	BP39	BP32	BP29
A notice period of 5 years for decommissioning MDFs may be appropriate	BP40	n/a	n/a
The replacement network is active in adequate advance of the decommissioning of MDFs	n/a	BP33	n/a

**Competition objective 10: Fair and coherent access pricing**

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Description of best practice remedy	WLA	WCA	WHQAFL
NRAs should ensure that with reasonable certainty the price of access will permit an efficient entrant to compete with the SMP operator	BP41	BP34	BP30
When determining pricing regulation, NRAs need to consider that it incentivises both efficient investment and sustainable competition	BP42	BP35	BP31
Where appropriate and proportionate, NRAs should require SMP operators to provide regulated products based on an explicit pricing obligation	BP43	BP36	BP32
NRAs should determine the costing methodology taking account of the prioritisation of regulatory objectives; and prevailing market conditions	BP44	BP37	BP33
When setting a cost oriented price control obligation, NRAs should consider the relevant costing methodology to be used for setting charges. This must allow the recovery of efficiently incurred costs and follow cost causality	BP45	BP38	BP34
Prices for services that are technically similar should be priced similarly	n/a	n/a	BP34a
Where prices are cost oriented, NRAs should impose obligations in relation to cost accounting and/or accounting separation	n/a	n/a	BP34b
The access price should send the correct economic signals i.e. should be competitively neutral;	BP46	BP39	n/a
NRAs should impose regulatory remedies that avoid excessive profitability	BP47	n/a	n/a
The effective price granted by the SMP operator should not be discriminatory	BP48	BP40	BP35
An ex ante pricing remedy may be unnecessary if there is no risk of excessive pricing due to strong indirect constraints or remedies imposed in markets 4 and 5 regarding EOI and a margin squeeze test	n/a	BP41	n/a
NRAs should put in place obligations preventing SMP operators engaging in margin squeeze	BP49	BP42	BP36

Description of best practice remedy	WLA	WCA	WHQAFL
NRAs may need to take steps to ensure that the margin between upstream and downstream services is sufficient to facilitate investment (by alternative operators)	BP50	BP43	n/a
<b>NGA WLA only:</b> NRAs should ensure that the pricing of inputs to NGA access products is in line as the same products when used for legacy access products	BP51	n/a	n/a
<b>NGA WLA/WCA only:</b> NRAs should ensure that the pricing of NGA access products is consistent with the pricing of legacy access products to set efficient incentives to invest	BP52	BP44	n/a
<b>NGA WLA only:</b> Regarding duct access, the NRA may consider different cost allocation rules	BP53	n/a	n/a
<b>NGA WLA/WCA only:</b> The NRA should consider whether to separate the risk borne by the SMP operator in operating its NGA network from other services	BP54	BP45	n/a
<b>NGA WLA/WCA only:</b> Price differences should reflect differences in risk faced by the investor	BP55	BP46	n/a
<b>NGA WLA/WCA only:</b> When assessing long-term contracts NRAs should strike a balance between lowering the risk for the SMP operator and transferring the risk to other operators	BP56	BP47	n/a
NRAs should ensure that discounts are not discriminatory	BP57	BP48	BP37
<b>NGA WLA/WCA only:</b> The main objective of volume discounts is to increase penetration and lower unit costs	BP58	BP49	n/a
<b>NGA WLA/WCA only:</b> When considering volume discounts, NRAs should consider whether the threshold for minimum efficient scale may curtail competition and foreclose the market	BP59	BP50	n/a

**Annex 2: List of Phase1 and Phase 2 participants**

Country	NRA	NRAs included in Phase 1			NRAs included in Phase 2 Report		
		WLA participant	WCA participant	WHQAFL participant	WLA participant	WCA participant	WHQAFL participant
Austria	RTR	✓	✓				✓
Belgium	BIPT			✓			
Bulgaria	CRC				✓	✓	
Croatia	HAKOM	✓	✓				✓
Cyprus	OCECPR	✓	✓				✓
Estonia	ECA	✓	✓				
France	ARCEP				✓	✓	✓
Greece	EETT			✓			
Iceland	PTA				✓	✓	✓
Ireland	Comreg	✓	✓	✓			
Italy	AGCOM						✓
Latvia	SPRK	✓	✓				✓
Luxembourg	ILR				✓	✓	✓
Malta	MCA	✓	✓				
Netherlands	ACM	✓	✓		✓		
Norway	NPT	✓	✓				
Poland	UKE					✓	
Spain	CNMC			✓			
Sweden	PTS			✓	✓	✓	
Switzerland	BAKOM						
Turkey	BTK				✓	✓	✓
UK	OFCOM	✓	✓	✓			



## Annex 3: Analysis of Phase 1 & 2 responses by best practice

### 1.1 WLA responses

	Austria	Bulgaria	Croatia	Cyprus	Estonia	France	Iceland	Ireland	Latvia	Luxembourg	Malta	Netherlands	Norway	Sweden	UK	Turkey
<i>General remedy</i>																
BP1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP2	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP3	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP4	✓	✓	✓	✓	✓	[✓]	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓
BP5	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Access product at specific access point remedy</i>																
BP6a	n/a	n/a	n/a	n/a	✓	n/a	n/a	✗	✓	✓	n/a	✓	✓	[✓]	n/a	n/a
BP6b(i)	✓	✗	✓	n/a	✗	n/a	✓	n/a	✓	✓	✓	n/a	✓	n/a	✗	n/a
BP6b(ii)	✗	✗	✓	n/a	✗	n/a	✓	✗	✗	✓	✗	n/a	✓	n/a	✗	n/a
BP6b(iii)	✓	✗	✓	n/a	✓	n/a	✗	✓	✓	✓	✗	✓	✓	✓	✓	n/a
BP7a	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP7b	✓	✓	✓	✓	n/a	n/a	✓	✗	✓	✓	✓	n/a	✓	✓	✓	✓
BP7c	✓	[✓]	✓	[✓]	n/a	n/a	✓	✓	✗	✓	[✓]	n/a	[✓]	n/a	✓	n/a
BP8	✓	✓	✓	[✓]	✓	n/a	✓	n/a	✗	✗	n/a	n/a	✓	✓	✗	✓
<i>Access products to reach access point remedy</i>																
BP9	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP11	✓	✗	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✗
BP12a	✗	✗	✓	✓	✗	✓	✗	✓	✓	✗	✗	✗	✓	✓	✓	✗

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	Austria	Bulgaria	Croatia	Cyprus	Estonia	France	Iceland	Ireland	Latvia	Luxembourg	Malta	Netherlands	Norway	Sweden	UK	Turkey
BP12b	x	✓	✓	x	✓	✓	x	x	✓	x	x	x	x	x	✓	x
BP12c	✓	✓	✓	✓	✓	✓	x	✓	✓	✓	x	n/a	✓	✓	✓	✓
BP13	✓	✓	✓	✓	x	✓	x	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>General remedy</i>																
BP14	✓	x	✓	✓	✓	✓	✓	x	✓	✓	✓	✓	✓	✓	✓	✓
BP15	x	n/a	n/a	✓	n/a	n/a	n/a	n/a	n/a	n/a	n/a	✓	✓	x	✓	n/a
BP15a	x	n/a	n/a	✓	n/a	n/a	n/a	n/a	n/a	n/a	n/a	✓	✓	n/a	✓	n/a
BP15b	x	n/a	n/a	✓	n/a	n/a	✓	✓	n/a	✓	✓	✓	✓	✓	✓	n/a
BP15c	x	n/a	n/a	✓	n/a	n/a	✓	✓	n/a	✓	✓	✓	✓	✓	x	n/a
BP15d	x	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	n/a	✓	✓
BP16	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP17	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP18	✓	x	✓	n/a	n/a	n/a	✓	✓	x	✓	n/a	✓	✓	✓	✓	n/a
BP19	✓	x	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
EOI, EOO, or both	EOO	n/a	EOO	Both	EOO	Both	EOI	EOO	EOO	EOI	EOO	Both	EOO	Both	Both	EOI
BP20	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	[✓]	n/a
BP21	✓	x	✓	✓	x	x	✓	✓	x	✓	✓	✓	✓	✓	✓	x
BP22	✓	✓	✓	✓	x	✓	✓	✓	x	[✓]	x	✓	✓	✓	✓	✓
BP23	x	n/a	✓	✓	✓	✓	✓	✓	x	✓	x	✓	✓	x	✓	✓
BP24	n/a	n/a	✓	✓	x	x	✓	✓	✓	✓	x	✓	✓	✓	✓	x
BP25 (a)	✓	✓	✓	✓	x	[✓]	✓	✓	✓	✓	x	✓	✓	✓	✓	n/a
BP25 (b)	✓	[✓]	[✓]	x	[✓]	[✓]	✓	✓	✓	✓	✓	✓	✓	✓	x	n/a
BP26	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓x	✓	✓	✓	✓
BP26a	x	x	✓	✓	x	✓	x	x	✓	✓	x	✓	✓	x	x	x
BP26b	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

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	Austria	Bulgaria	Croatia	Cyprus	Estonia	France	Iceland	Ireland	Latvia	Luxembourg	Malta	Netherlands	Norway	Sweden	UK	Turkey
BP26c	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP26d	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP26e	✓	n/a	✗	✗	✓	✓	n/a	✗	✗	n/a	✗	n/a	✗	n/a	✗	✓
BP27	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓
BP28	✗	✗	✓	✓	✗	✓	✗	✗	✓	✗	✗	✗	✗	✗	✗	✓
BP29	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP29: RO reviewed?	✓	✓	✓	✓	✗	✓	✓	✗	✓	✓✗	✓	✗	✓	✓	✓	✓
BP30	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓
BP31	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✗	✓	✗	✓	✓
<i>Requirement for SLAs</i>																
BP32	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗/✓	✓
BP32a	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓
BP32b	✓	✗	✓	✓	✓	✓	✓✗	✓	✓	✓	✓	✓	✓	✓	✓	✗
BP32c	✓	✗	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓	✗	✓	✓
BP32d	✓	✗	✓	✗	✓	✓	✗	✓	✗	✗	✗	✓	✗	✓	✗	✗
<i>Requirement for SLGs</i>																
BP33	✓	✗	✓	✓	✗	✓	✓	✓	✗	✓	✗	✓	✓	✗	✓	✓
BP33a	✓	n/a	✓	✓	✗	✓	✓	✓	✗	✓	✗	✓	✓	n/a	✓	✓
BP33b	✓	n/a	✓	✓	✗	✗	n/a	✓	✗	✓	✗	✓	✓	n/a	✓	✓
BP33c	✓	n/a	✓	✓	✗	✓	✓	✓	✗	✗	✗	✗	✓	n/a	✓	✓
BP33d	✓	n/a	✓	✓	✗	✓	✓	✓	✗	✓	✗	✓	✓	n/a	✓	✓
<i>Requirement for KPIs</i>																
BP34	✓	✓	✓	✓	[✓]	✓	✓	✓	✓	✓	[✓]	✓	✓	✓	✓	✓
BP34a	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓
BP34b	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓

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	Austria	Bulgaria	Croatia	Cyprus	Estonia	France	Iceland	Ireland	Latvia	Luxembourg	Malta	Netherlands	Norway	Sweden	UK	Turkey
BP34c	✓	✓	✓	✓	✗	✓	✓	✓	✗/✓	✓	✗	✓	✓	✓	✓	✓/✗
BP35	✓	✗	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP35a	✓	✗	✓	✓	✗	✓	✗	✗	✓	✗	✗	✓	✓	✓	✓	✗
BP35b	✓	✗	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP35c	✓	✗	[✓]	✓	[✓]	✗	✗	✓	✓	✗	[✓]	✗	[✓]	✓	✓	✓
BP35d	✗	✗	✓	✓	✗	✓	✓	✗	✗	✗	✓	✓	✓	✓	✓	✓
BP35e	[✓]	✗	✓	[✓]	[✓]	✓	✓	[✓]	[✓]	✓	[✓]	✓	[✓]	[✓]	✓	✓
BP36	✓	✗	✓	✗	✓	✗	✓	✓	✓	✓	✗	✓	✓	✓	✗	✓
BP37	✓	✓✗	✓	✓	✓	✓✗	✓✗	✓	✓	✓✗	✓	✓	✓	✓✗	✗	[✓]
BP38	✓	n/a	✗	✗	✗	✓	✓	✗	✓	n/a	✗	✓	✓	✓	✗	✓
BP39	✓	n/a	✗	✗	✗	[✓]	✓	✗	✓	✓	✗	✓	✓	[✓]	✗	✗
BP40	✗	✗	✗/✓	✗	✗	✓	✓	✗	✗	✓	✗	✗	✗	✓	✗	✗
BP41	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓
BP42	✓	✓	✓	✓	✓	✓	✓	✓	n/a	✓	✓	✓	✓	✓	✓	✓
BP43	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP44	✓	✓	✓	✓	✓	✓✗	✓✗	✓	n/a	✓	✗	✓✗	✓	✓	✓	✓✗
BP45	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓
BP46	✓	✗	✓	✓	✗	✓	✓	✓	n/a	✓	✓	✓	✓	✓	✓	✗
BP47	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP48	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP49	✓	✗	✓	✓	✗	✗	✓	✓	✓	✓✗	✗	✓	✓	✓	✓	✗
BP50	✓	n/a	✓	✓	✗	✗	✓	✗	✗	✓	✗	✓	✓	✓	✗	n/a
<i>BPs applicable to pricing of NGA WLA only</i>																
BP51	✓	✗	✓	✓	✓	✓	✗	✓	✗	✓	✗	n/a	✓	✓	✗	✗
BP52	✓	n/a	✓	✗	✓	✓	✓	✓	✗	✓	✗	✓	✓	✓	✗	n/a

	Austria	Bulgaria	Croatia	Cyprus	Estonia	France	Iceland	Ireland	Latvia	Luxembourg	Malta	Netherlands	Norway	Sweden	UK	Turkey
BP53	✓	n/a	✓	✓	✓	✓	✓	✓	✗	✓	✗	n/a	✓	✓	✓	n/a
BP54	n/a	n/a	✓	✗	✗	✓	n/a	✗	✗	n/a	✗	✓	n/a	n/a	✗	n/a
BP55	n/a	n/a	✗	✗	✗	✗	✗	✗	✗	✓	✗	✗	✓	✗	✗	n/a
BP56	n/a	n/a	✗	✗	✗	✓	✗	✗	✗	✓	✗	✓	✓	✗	✗	✗
BP57	n/a	✗	✗	✗	✓	n/a	✓	✗	✗	✓	✗	✓	✓	✓	✗	n/a
BP58	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	✓	n/a	✓	n/a	n/a
BP59	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

## 1.2 WCA (as was WBA) responses

	Austria	Bulgaria	Croatia	Cyprus	Estonia	France	Iceland	Ireland	Latvia	Luxembourg	Malta	Netherlands	Norway	Poland	Sweden	Turkey	UK
BP1	✓	n/a	✓	✓	✓	[✓]	✓	✓	✓	✓	n/a	✓	✓	✓	n/a	✓	✓
BP2	✓	n/a	✓	✓	✓	✓	✓	✓	✓	✓	n/a	✓	✓	✓	n/a	✓	✓
BP3	✓	n/a	✓	✓	✓	✓	✓	✓	✓	✓	n/a	✓	✓	✓	n/a	✓	✓
BP4	✓	n/a	✓	✓	✓	[✓]	✓	✓	✓	✓	n/a	✓	✓	✓	n/a	✓	✓
BP5	✓	n/a	✓	✓	✓	✓	✓	✓	✓	✓	n/a	✓	✓	✓	n/a	✓	✓
BP6	✓	n/a	✓	✓	✓	✓	✓	✓	✓	✓	n/a	✓	[✓]	✓	n/a	✓	✓
BP7	✗	n/a	✓	✓	✓	✗	✗	✓	✓	✓	n/a	✓	[✓]	✗	n/a	✗	✓
BP8	✓	n/a	✓	✓	✓	✓	✓	✓	✓	✓	n/a	✓	✓	✓	n/a	✓	✓
BP9	✗	n/a	n/a	n/a	n/a	n/a	✓	✗	n/a	n/a	n/a	n/a	✓	n/a	n/a	n/a	✗
BP9a	✗	n/a	n/a	✓	✓	n/a	[✓]	✗	n/a	n/a	n/a	n/a	✓	n/a	n/a	n/a	✓

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	Austria	Bulgaria	Croatia	Cyprus	Estonia	France	Iceland	Ireland	Latvia	Luxembourg	Malta	Netherlands	Norway	Poland	Sweden	Turkey	UK
BP9b	✘	n/a	n/a	✓	✓	n/a	[✓]	✓	n/a	✓	n/a	n/a	✓	n/a	n/a	✓	✓
BP9c	✘	n/a	n/a	✓	✓	n/a	✓	✓	n/a	✓	n/a	n/a	✓	n/a	n/a	n/a	✘
BP9d	✘	n/a	✓	✓	✓	✓	✓	✓	✓	✓	n/a	✓	✓	✓	n/a	✓	✓
BP10	✘	n/a	✘	✓	✓	✓	✓	✓	✓	✓	n/a	✓	✓	✓	n/a	✓	✘
BP11	✓	n/a	✓	✓	✓	✓	✓	✓	✓	✓	n/a	✓	✓	✓	n/a	✓	✓
BP12	✓	n/a	✓	n/a	✓	n/a	✓✘	n/a	✘	✓	n/a	✓	✓	n/a	n/a	n/a	n/a
BP13	✓	n/a	✓	✘	✓	✓	✓	✓	✘	✓	n/a	✓	✓	✓	n/a	✓	✓
EOI, EOO, or both	EOO	n/a	EOO	✘	EOO	EOO	EOI	Both		EOI	n/a	EOO	EOO	EOO	n/a	EOO	EOI
BP14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BP15	✓	n/a	✓	✓	✘	✘	✓	✓	✘	✓	n/a	✓	✓	✓	n/a	✘	✓
BP16	✓	n/a	✘	✓	✘	✓	✓	✓	✘	✓	n/a	✓	✓	✓	n/a	✓	✓
BP17	✓	n/a	[✓]	✘	✘	n/a	✓	✓	✘	n/a	n/a	✓	✓	✓	n/a	n/a	✘
BP18	✘	n/a	✓	✓	✘	✓	✓	✓	✘	✓	n/a	✘	✓	✓	n/a	✓	✓
BP19	n/a	n/a	✓	✓	✘	✓	✓	✘	✓	✓	n/a	✘	✓	✘	n/a	✓	✘
BP20(a)	✓	n/a	✓	✓	✘	✓	✓	✓	✓	✓	n/a	✓	✓	✓	n/a	✘	✘
BP20(b)	✓	n/a	[✓]	✘	✘	✓	✓	✓	✓	✓	n/a	✓	✓	✓	n/a	✓	✘
BP21	✓	n/a	✓	✓	✓	✓	✓	✓	✓	✓	n/a	✓	✓	✓	n/a	✓	✓
BP21a	✘	n/a	✓	✓	✓	✓	✓	✓	✘	✓	n/a	✓	✓	✓	n/a	✘	✓
BP21b	✓	n/a	✓	✓	✓	✓	✓	✓	✓	✓	n/a	✓	✓	✓	n/a	✓	✓
BP21c	✓	n/a	✓	✓	✘	n/a	✓	✓	✓	✓	n/a	✓	✓	✓	n/a	✓	✓

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	Austria	Bulgaria	Croatia	Cyprus	Estonia	France	Iceland	Ireland	Latvia	Luxembourg	Malta	Netherlands	Norway	Poland	Sweden	Turkey	UK
BP21d	✓	n/a	✓	✓	✓	✓	✓	✓	✓	✓	n/a	✓	✓	✓	n/a	✓	✓
BP21e	✓	n/a	✗	✗	✓	✓	n/a	✗	✗	n/a	n/a	✗	✗	✓	n/a	✓	✗
BP22	✓	n/a	✓	✓	✗	✓	✓	✓	✓	✓	n/a	✓	✓	✓	n/a	✓	✓
BP23	✓	n/a	✓	✓	✓	✓	✓	✓	✓	✓	n/a	✓	✓	✓	n/a	[✓]	✓
BP23: RO Reviewed?	✓	n/a	✓	✓	✓	✓	✓	✓	✓	✓✗	n/a	✗	✓	✓	n/a	✓	✓
BP24	✓	n/a	✓	✓	✗	✗	✓	✓	✓	✓	n/a	✗	✓	✓	n/a	✓	✗
<i>Requirement for SLAs</i>																	
BP25	✓	n/a	✓	✓	✓	✓	✓	✓	✗	✓	n/a	✓	✓	✓	n/a	✓	✓
BP25a	✓	n/a	✓	✓	✓	✓	✓	✓	✗	✓	n/a	✓	✓	✓	n/a	✓	✓
BP25b	✓	n/a	✓	✓	✓	✓	✓	✓	✗	✓	n/a	✓	✓	✓	n/a	✓	✓
BP25c	✓	n/a	✓	✓	✓	✓	✓	✓	✗	✓	n/a	✓	✓	✓	n/a	✓	✗
BP25d	✓	n/a	✓	✗	✓	✓	✗	✗	✗	✗	n/a	✓	✗	✓	n/a	✗	✓
<i>Requirement for SLGs</i>																	
BP26	✓	n/a	✓	✓	✗	✓	✓	✓	✗	✓	n/a	✓	✓	✓	n/a	✓	✓
BP26a	✓	n/a	✓	✓	✗	✓	✓	✓	✗	✓	n/a	✓	✓	n/a	n/a	✓	✓
BP26b	✓	n/a	✓	✓	✗	✓	✓	✓	✗	✓	n/a	✗	✓	n/a	n/a	✓	✗
BP26c	✓	n/a	✓	✓	✗	✓	✓	✓	✗	✗	n/a	✓	✓	n/a	n/a	✓	✓
BP26d	✓	n/a	✓	✓	✗	✓	✓	✓	✗	✓	n/a	✓	✓	n/a	n/a	✓	✓
<i>Requirement for KPIs</i>																	
BP27	✓	n/a	✓	✓	✗	✓	✓	✓	✗	✓	n/a	✓	✓	✓	n/a	✓	✗

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	Austria	Bulgaria	Croatia	Cyprus	Estonia	France	Iceland	Ireland	Latvia	Luxembourg	Malta	Netherlands	Norway	Poland	Sweden	Turkey	UK
BP27a	✓	n/a	✓	✓	✗	✓	✓	✓	✗	✓	n/a	✓	✓	✓	n/a	✓	✗
BP27b	✓	n/a	✓	✓	✗	✓	✓	✓	✗	✓	n/a	✓	✓	✓	n/a	✓	✗
BP27c	✓	n/a	✓	✓	✗	✓	✓	✓	✗	✓	n/a	✓	✓	✓	n/a	✓	✗
BP28	✓	n/a	✓	✓	n/a	✓	✓	✓	✓	✓	n/a	✓	✓	✓	n/a	n/a	✗
BP28a	✓	n/a	✓	✓	n/a	✓	✓	✗	✓	✗	n/a	✓	✓	✗	n/a	✗	✗
BP28b	✓	n/a	✓	✓	n/a	✓	✓	✓	✓	✓	n/a	✓	✓	✗	n/a	✓	✗
BP28c	[✓]	n/a	[✓]	✓	n/a	✗	✗	✓	✓	✗	n/a	✓	[✓]	✓	n/a	✓	✗
BP28d	✗	n/a	✓	✓	n/a	✓	✓	✓	✗	✗	n/a	✓	✓	✓	n/a	✓	✗
BP28e	✓	n/a	✓	[✓]	n/a	[✓]	✓	✓	[✓]	✓	n/a	✓	[✓]	✓	n/a	✓	✗
BP29	n/a	n/a	✓	✗	✓	✗	✓	✗	✓	✓	n/a	✓	✓	✓	n/a	✓	✓
BP30	n/a	n/a	✓	✓	✓	✓✗	✓	✓	✓	✓✗	n/a	✓	✓	✓✗	n/a	✓	✗
BP31	n/a	n/a	✗	✗	✗	n/a	✓	✗	✓	✗	n/a	✓	✓	✓	n/a	✓	✗
BP32	n/a	n/a	✗	✗	✓	✓	✓	✗	✓	✓	n/a	✓	✓	✓	n/a	✓✗	✗
BP33	n/a	n/a	✗	✗	✗	✗	✓	✓	✓	✓	n/a	✗	✓	n/a	n/a	✓	✗
BP34	✓	n/a	✓	✓	✓	✓	✓	✓	✗	✓	n/a	✓	✓	✓	n/a	✓	✓
BP35	✓	n/a	✗	✓	✓	✓	✓	✓	✗	✓	n/a	✓	✓	✓	n/a	✓	✓
BP36	✓	n/a	✓	✓	✓	✓	✓	✓	✓	✓	n/a	✓	✓	✓	n/a	✓	✓
BP37	✓	n/a	✓	✓	✓	✓✗	✓✗	✓	✗	✓	n/a	✓	✓	✓✗	n/a	✓✗	✓
BP38	✓	n/a	✓	✓	✓	✓	✓	✗	✗	✓	n/a	✗	✓	✓	n/a	✓	✓
BP39	✓	n/a	✓	✓	✗	✓	✗	✗	✗	✓	n/a	✓	✓	✓	n/a	✓	✓
BP40	✓	n/a	✓	✓	✓	✓	✓	✓	✗	✓	n/a	✓	✓	✓	n/a	✓	✓
BP41																	



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	Austria	Bulgaria	Croatia	Cyprus	Estonia	France	Iceland	Ireland	Latvia	Luxembourg	Malta	Netherlands	Norway	Poland	Sweden	Turkey	UK
BP42	✓	n/a	✓	✓	✗	✓	✓	✓	✗	✓	n/a	✓	✓	✓	n/a	[✓]	✓
BP43	✓	n/a	✓	✓	✓	✓	✓	✓	✗	✓	n/a	✓	✓	✓	n/a	✓	✓
<i>BPs applicable to pricing of bitstream based on NGA only</i>																	
BP44	✓	n/a	✗	✓	✓	✗	✓	✓	✗	✓	n/a	✓	✓	✓	n/a	✓	✓
BP45	n/a	n/a	✓	n/a	✗	✗	✗	n/a	✗	n/a	n/a	n/a	n/a	✗	n/a	✗	n/a
BP46	n/a	n/a	✗	n/a	✗	✗	n/a	n/a	✗	✓	n/a	n/a	✓	✓	n/a	✗	n/a
BP47	n/a	n/a	✗	✗	✗	✗	n/a	✗	✗	✓	n/a	✓	✓	✗	n/a	✗	✗
BP48	✓	n/a	✗	✓	✓	✗	✗	✗	✗	✓	n/a	✓	✓	✓	n/a	✓	✓
BP49																	
BP50	✓	n/a	n/a	✓	n/a	n/a	✓	✓	n/a	✓	n/a	n/a	✓	✓	n/a	✓	✓

**1.3 WHQAFL (as was WLL) responses**

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	Austria	Belgium	Croatia	Cyprus	France	Greece	Iceland	Ireland	Italy	Latvia	Luxembourg	Spain	Sweden	Turkey	UK
BP1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✓
BP3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓
BP4	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓
BP5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP6	n/a	n/a	n/a	✓	n/a	n/a	n/a	✓	n/a	n/a	n/a	✓	n/a	n/a	✓
BP6a	n/a	n/a	n/a	✓	n/a	n/a	n/a	✓	n/a	n/a	n/a	✓	n/a	n/a	✓
BP6b	n/a	✓	n/a	✓	✓	n/a	n/a	✓	n/a	✓	✓	✓	✓	✓	✓
BP6c	n/a	n/a	n/a	[✓]	✓	n/a	✓	✓	n/a	✓	✓	✓	✓	✓	✗
BP6d	✓	✓	✓	✓	✓	✓	✓	✓	✓	[✓]	✓	✓	✓	✓	✓
BP7	✓	✓	✓	✓	[✓]	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓
BP8	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP9	✓	n/a	✓	✓	n/a	n/a	✓✗	✓	n/a	✓	✓	✓	n/a	n/a	✓
BP10	✓	✓	✓	✗	✓	✓	✗	✓	✓	✗	✓	✓	✗	✗	✓
EOI, EEO, or both	EEO	EEO	EEO	✗	EEO	EEO	✗	EEO	EEO	✗	EEO	EEO	✗	✗	Both
BP11	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	[✓]
BP12	✓	✓	✓	✓	✓	✓/✗	✓	✓	✗	✗	✗	✓	n/a	✓✗	✓

## BoR (15) 199

	Austria	Belgium	Croatia	Cyprus	France	Greece	Iceland	Ireland	Italy	Latvia	Luxembourg	Spain	Sweden	Turkey	UK
BP13	✓	✓	✓	✓ x	✓	x	✓	✓	✓ x	✓ x	✓	✓	✓	✓	✓
BP14	x	✓	✓	n/a	✓	✓	✓	✓	✓	x	✓	✓	x	x	✓
BP15	x	✓	✓	n/a	✓	x	✓	✓	✓	n/a	✓	✓	✓	✓	✓
BP16	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	x	✓	✓
BP16a	x	✓	✓	✓	✓	✓	✓	✓	✓	n/a	✓	✓	n/a	✓	x
BP16b	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	n/a	✓	✓
BP16c	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	n/a	✓	✓
BP16d	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP16e	✓	✓	✓	x	✓	x	x	x	✓	n/a	n/a	✓	x	✓	x
BP17	✓	✓	✓	n/a	✓	✓	✓	x	✓	✓	✓	✓	✓	✓	✓
BP18	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	x	✓	✓
BP19	✓	x	✓	✓	✓	✓	✓	x	x	✓	✓	✓	x	✓	✓
BP20	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP21	✓	✓	n/a	✓	✓	✓	✓	x	✓	n/a	✓	✓	x	n/a	✓
BP22	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	x	✓	✓
BP22a	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	x	✓	✓
BP22b	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	x	✓	✓
BP22c	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	x	✓	✓

## BoR (15) 199

	Austria	Belgium	Croatia	Cyprus	France	Greece	Iceland	Ireland	Italy	Latvia	Luxembourg	Spain	Sweden	Turkey	UK
BP22d	✓	✓	✗	✗	✓	✗	✗	✗	✓	✗	✗	✓	✗	✗	✗
BP23	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✗	✓	✓
BP23a	✓	✓	✓	✓	✓	✓	✓	✓	✓	n/a	✓	✓	✗	✓	✓
BP23b	✓	✗	✓	✓	✓	✓	n/a	✓	✓	n/a	✓	✓	✗	✗	✓
BP23c	✓	✓	✓	✓	✓	✓	✓	✓	✓	n/a	✗	✓	✗	✓	✓
BP23d	✓	✓	✓	[✓]	✓	✓	✓	✓	✓	n/a	✓	✓	✗	✓	✓
BP24	✓	✓	✓	✗	✓	✓	✓	✓	✓	✗	✓	✓	[✓]	✓	✗
BP24a	✓	✓	✓	✗	✓	✓	✓	✓	✓	✗	✓	✓	✗	✓	✗
BP24b	✓	✓	✓	✗	✓	✓	✓	✓	✓	✗	✓	✓	✗	✓	✗
BP24c	✓	✓	✓	✗	✓	✓	✓	✓	✓	✗	✓	✓	✗	✗	✗
BP25	✓	✗	✓	✗	[✓]	✓	✓	✗	✗	✓✗	✓	✓	✗	✗	✗
BP25a	✓	✗	✓	n/a	✓	✗	✓	✗	✗	✓✗	✗	✓	✗	✗	✗
BP25b	✓	✗	✓	✗	✓	✓	✓	✗	✗	✓✗	✓	✓	✗	✗	✓
BP25c	[✓]	[✓]	[✓]	✗	[✓]	[✓]	✓	✗	✓	✓✗	✗	[✓]	✗	✗	✗
BP25d	✓	✗	✓	n/a	[✓]	✗	✓	✗	✗	✓✗	✗	✓	✗	✗	✗
BP25e	✓	[✓]	✓	✗	[✓]	[✓]	✓	✗	✗	✗	✓	[✓]	✗	✗	✗
BP26	✓	✗	✓	n/a	✓	✗	✓	✗	✗	[✓]	✓	✓	✗	✗	✗
BP27	n/a	✓	✓	✓	✓	✓	✓	✗	✗	✗	✓✗	✓	✗	✗	✓

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	Austria	Belgium	Croatia	Cyprus	France	Greece	Iceland	Ireland	Italy	Latvia	Luxembourg	Spain	Sweden	Turkey	UK
BP28	n/a	✓	✓	✓	✓	x	✓	x	x	x	n/a	✓	x	x	x
BP29	n/a	✓	✓	n/a	[✓]	x	✓	x	x	n/a	✓	✓	x	x	x
BP30	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	x	✓	✓
BP31	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	x	✓	✓
BP32	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	x	✓	✓
BP33	✓	✓	✓x	✓x	✓x	✓	✓x	✓	✓x	✓x	✓	✓	x	✓x	✓
BP34	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	x	✓	✓
BP34a	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP34b	✓	✓	✓	✓	✓	✓	✓x	✓	✓	✓	✓	✓	x	✓	✓
BP35	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BP36	✓	✓	x	✓	[✓]	✓	✓	✓	x	x	x	✓	x	✓	✓
BP37	✓	✓	✓	✓	✓	✓	x	✓	✓	x	x	✓	✓	✓	✓