



OFFICE FOR COMMUNICATIONS
PRINCIPALITY OF LIECHTENSTEIN

Your letter
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Notification to ESA

DECISION

The Office for Communications, by virtue of its administrative procedure concerning

Measures of Special Regulation on the Wholesale Market of Call Termination on the Public Telephone Network at a Fixed Location of

[Telecom Liechtenstein AG / Backbone Solutions AG / Nexphone AG]

Street No

Postcode City

at the TT. month 2020

has decided as follows:

RULING

1. The relevant product and geographic market for the present procedure is defined on the basis of Art. 21 para. 1 KomG as the wholesale market for call termination on the public telephone network provided at a fixed location of the party to the procedure. The market covers the entire national territory of Liechtenstein.
2. In accordance with Art. 22 para. 1 KomG, it is determined that there is no effective competition on the wholesale market for call termination in the public telephone network provided at a fixed location and that the party to the procedure has significant market power on its own in accordance with Art. 22 para. 1 letter b KomG.
3. In order to remedy the competition deficiencies and problems identified, the following specific obligations (special regulatory measures) are imposed on the party to the procedure on the wholesale market in question on the basis of Article 23 para. 1 let. d KomG:
 - a. Under Art. 37 para. 1 let. h VKND, the party to the procedure must grant any other operator of a public communications network access to its public telephone network provided at a fixed location upon request by means of direct and indirect interconnection for the purpose of call termination.
 - b. According to Art. 34 para. 2 VKND, the party to the procedure must, with regard to quality, grant each requesting operator the same conditions for access to wholesale termination services as it grants to itself, affiliated or other companies.
 - c. According to Art. 34 para. 2 VKND, the party to the procedure must grant each requesting operator the same conditions for access to wholesale termination services as affiliated or other companies with regard to charges.
 - d. Pursuant to Art. 34 para. 3 and Art. 35 VKND, the party to the procedure must publish a standard offer regarding "Termination in its public fixed network" on its website no later than 3 months after notification of this ordinance and keep it up to date. The contents of the reference offer must be based on the Office for Communications' template "Reference offer for network interconnection", which can be found on the website of the Office. Planned changes to the reference offer have to be submitted to the Office for Communications before their application with a lead time of at least six weeks.
 - e. Pursuant to Art. 38 para. 1 and 2 VKND, the party to the procedure must charge a maximum rate for the interconnection service "Termination in its public fixed network" from 1 January 2021 onwards in the amount of the costs of an efficient operator, based on the international benchmarking of termination rates specified by the Office for Communications. For the interconnection service "Termination of voice calls in the fixed public telephone network" of the party to the procedure, a termination rate cap of 0.09 CHF centimes per minute (excl. VAT) will apply from 1 January 2021 pursuant to

Art. 38 para. 1 and 2 VKND. This maximum termination rate applies to calls originating in Liechtenstein or in another EEA country.

4. The party to the procedure shall inform its interconnection partners to whom a change in termination rates applies of the imminent reduction in their termination rates within 14 days of the date of notification of this ordinance.
5. [only for Telecom Liechtenstein AG: The present decision replaces the decision of 24 August 2010 on the wholesale market for call termination on the public telephone network at fixed locations in Liechtenstein (M3), which concluded that the party to the procedure has significant market power on its own and imposed appropriate special regulatory measures.]
6. Based on Art. 100 para. 1 LVG in conjunction with Art. 116 para. 3 let. a and para. 8 LVG, the suspensive effect of any appeal against this ordinance is withdrawn.
7. The costs of this decision remain with the Land.

FACTS

A. Course of Process

A.1 Market analysis and public consultation

In the run-up to the present market analysis procedure, the Office for Communications (Amt für Kommunikation, hereinafter referred to as "AK") clarified in October 2019 whether the party to the procedure planned adjustments of the termination rates, which would lead to a rapid reduction of the termination rates to the level of the EEA countries, whereby the BEREC report "Termination rates at European level - January 2019"¹ was used as a basis for comparison. The feedback made it clear that no adjustment was expected that would result in a rapid achievement of EEA-compliant rates.

Within the framework of the national consultation on the bases and planning of the new market analysis round ("Market Analysis 2019+") from 13 December 2019 to 7 February 2020, the party to the procedure was informed about the analysis of the fixed network termination markets planned by the AK and the expected reduction of the upper limit of the fixed network termination rate. The AK received comments inter alia from Telecom Liechtenstein AG and Swisscom (Schweiz) AG and included them in the final document.²

In accordance with Article 21 (2) of the Act on Electronic Communications of 17 March 2006 (Communications Act; KomG; LGBl. 2006 No. 91), the AK initiated an ex officio investigation into the competitive conditions on the wholesale market for call termination on individual public telephone networks at a fixed location in February 2020, as contained in the EFTA Surveillance Authority's³ Recommendation on relevant product and service markets (hereinafter referred to as "Market Recommendation 2016").

On 18 May 2020, the AK published its official analysis of the operator-specific wholesale markets for "Termination in individual public telephone networks at a fixed location" (hereinafter referred to as "fixed network termination market") and invited interested parties within the framework of a public consultation pursuant to Art. 24 (1) in connection with Art. 46 (1) KomG, to submit comments on specific consultation questions as well as on other contents of the analysis and in particular on the planned measures of special regulation by 26 June 2020. The AK also offered consultation participants the opportunity to hold an information event to

¹ BEREC, BoR (19) 91, Termination rates at the European level January 2019, available at https://berec.europa.eu/eng/document_register/subject_berec/download/0/8701-berec-report-on-termination-rates-at-the_0.pdf

² The final document "Market Analysis Planning 2019 plus V2.0" was published on 3 March 2020 together with a news item on the AK website and on 5 March it was sent to all registered providers and operators by electronic mailing. The document is available at <https://www.llv.li/inhalt/118681/amtstellen/grundlagen-und-planung-marktanalyse-2019>

³ EFTA Surveillance Authority Decision No 93/16/COL of 11 May 2016: EFTA Surveillance Authority Recommendation on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with the Act referred to at point 5cl of Annex XI to the EEA Agreement (Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communication networks and services), as adapted to the Agreement by Protocol 1 thereto and by the sectoral adaptations contained in Annex XI thereto [2017/608], available at <https://eur-lex.europa.eu/legal-content/DE/TXT/PDF/?uri=OJ:L:2017:084:FULL&from=FR>

discuss specific questions before issuing their statement. The event took place in the form of a video conference on 10 June 2020. Subsequently, the AK informed about the essential topics of the video conference on 15 June 2020 by electronic mailing to the registered providers. In this Communication, the AK requested comments on the topic of uniform regulation of the termination rate with regard to the country of the origination network: "The topic 'uniform termination prices regardless of the place of origin' seems to be the only one at present to the AK, in which different views could exist among the market participants. Therefore, the AK requests the market participants to clearly state and justify their positions in statements on this topic and to present the effects on the operator as well as on the Liechtenstein base as a whole.

The operators Telecom Liechtenstein AG and Salt (Liechtenstein) AG submitted comments within the deadline. The AK evaluated the comments received in the document "Evaluation of the comments within the framework of the national consultation on the analysis of fixed network termination markets". The comments were taken into account in the preparation of the final version of the market analysis insofar as they were of importance in the opinion of the AK or had to be followed. All interested parties involved in the consultation procedure, including the party to the procedure subject to the decision, were granted a (pure) right to be heard. According to Art. 47 (1) KomG, "participation in a public consultation [...] shall not give rise to any further legal claims".

The evaluation of the comments, the comments themselves, as far as they are not subject to a confidentiality obligation, and the final version of the market analysis are published on the AK website^{4, 5}. The consultation procedure was concluded with the publication of the final version of the market analysis in accordance with Art. 41 (1) b) of the Communications Act.

A.2 Special regulatory procedure in question

The present procedure of "special regulation" within the meaning of Art. 23 (1) KomG, within the framework of which the AK imposes "obligations by decree (measures of special regulation)" on the party to the procedure as a company with market power, must be clearly distinguished from the preceding informal, public consultation procedure.

In order to formally initiate the special regulatory procedure in question and to preserve the right to be heard, the AK notified the party to the procedure of the planned measures of special regulation in the market in question in a letter dated 9 September 2020 for a formal reply with a deadline of 24 September 2020. The party to the procedure didn't make any counter statement. So, the AK had no reasons to modify the planned measures.

⁴ The market analysis is available at <https://www.llv.li/inhalt/1713/amtstellen/aktueller-stand>

⁵ The opinions and the evaluation document are available at <https://www.llv.li/inhalt/118827/amtstellen/marktanalysen-mobilterminierung-und-festnetzterminierung>

A.3 Procedure before the EFTA Surveillance Authority

From the TT. month to TT. month 2020, an EEA-wide consultation took place in accordance with Art. 24 para. 2 KomG by submitting the planned measures of the special regulation to the EFTA Surveillance Authority (hereinafter referred to as "ESA") and forwarding them to the EEA regulatory authorities.

By letter from the TT. month 2020, the ESA informed after examination of the draft measures submitted by the AK that [it has no objections against their entry into force].

ESA published the notified documents on its website in English and arranged for their transmission to the EU side of the EEA Agreement.

A.4 Data basis

The most important data, which form the basis for the present report, were collected by the AK within the framework of statistical data collection. This takes place annually in the first half of each year for the previous calendar year.

In order to be able to base the present procedure on data that are as up-to-date as possible, on 7 July 2020 the AK carried out an extraordinary update of the statistical data, which in principle are regularly queried once a year. The party to the procedure delivered the respective data for the first half of 2020 and for the cut-off date 30 June 2020 in due time.

In addition, the AK keeps the market in question, like other relevant markets, under continuous observation.

A.5 Types of operators

In order to clearly differentiate between different types of operators and providers⁶, the following terminology is used in this market analysis of call termination on the public telephone network at fixed locations ("fixed network"):

- A fixed network operator is a communications network operator that operates its own access network and core network at service level. A fixed network operator may provide telephone services to subscribers at retail level and/or offer wholesale services to service providers. Fixed network operators as pure wholesale providers do not have subscribers at the retail level, but provide wholesale access and/or calls to service providers who offer telephone services to subscribers at the retail level via their broadband access network. Fixed network operators have sufficient proprietary components of a core network to

⁶ According to Art. 3(1)(2) KomG the term "provider" is the generic term to the terms "service provider" and "operator". A service provider is anyone who provides an electronic communications service to third parties on a commercial basis; an operator is anyone who provides networks and/or associated facilities to third parties on a commercial basis or has the corresponding authorisation.

allow them to control call routing. This includes in particular the possibility of setting termination rates autonomously.

- Service providers access wholesale products (access and calls) provided by a fixed or pure wholesale operator. These products are then sold to end-users in their own name and on their own account. Service providers differentiate themselves from fixed network operators by the fact that they do not have full control of the telephone lines and call routing and - decisive for the present analysis - cannot control call termination rates.
- In this market analysis, the term operator is used in the following to refer to (undifferentiated) all types of communications network operators. Fixed network operators are covered by this term in the same way as mobile network operators and MVNOs.
- In the following, a fixed network provider is defined as either a fixed network operator or a service provider.

B. Established Facts

B.1 Market analysis procedure

The procedure initiated and carried out by the AK by virtue of its administrative duties to analyse the competitive conditions on the wholesale markets for the termination of calls to individual fixed public telephone networks in Liechtenstein was concluded with the publication of the final version of the market analysis. The market analysis examines the competitive situation on the fixed network termination markets in Liechtenstein, but does not include any specific individual administrative measures.

The final version of the market analysis "Analysis of the fixed network termination markets in Liechtenstein - Wholesale markets for call termination in individual public telephone networks at a fixed location (M1-2016)" of 7 September 2020 as well as the documents of the public consultation held on this subject are published on the AK website⁷.

The market analysis examined the markets for call termination on the network of fixed network operators in Liechtenstein and the competitive conditions prevailing on these markets. The data and facts collected and reproduced in these proceedings are assumed to be known to the authorities in the present proceedings.

⁷ available at <https://www.llv.li/inhalt/118827/amtsstellen/marktanalysen-mobilterminierung-und-festnetzterminierung>

B.2 The party to the procedure

The party to the procedure offers, among other things, fixed network telephone services and is entered in the register⁸ of providers and operators in accordance with Art. 43 KomG. It is subject to the obligation to provide information (Art. 44 KomG) and, within the framework of statistical data collection, regularly provides the AK with information on its activities and infrastructures in Liechtenstein.

[Backbone Solutions⁹ entered the market in 2019 with VoIP wholesale services but without its own subscribers (Figure 1). / Nexphone entered the market with VoIP wholesale services but without its own subscribers in 2020 (Figure 1). / TLI is active at both retail and wholesale levels of the telephony market (Figure 1). In addition to the retail level, from 2019 it offered wholesale access to the public telephone network via VoIP (wholesale VoIP).]

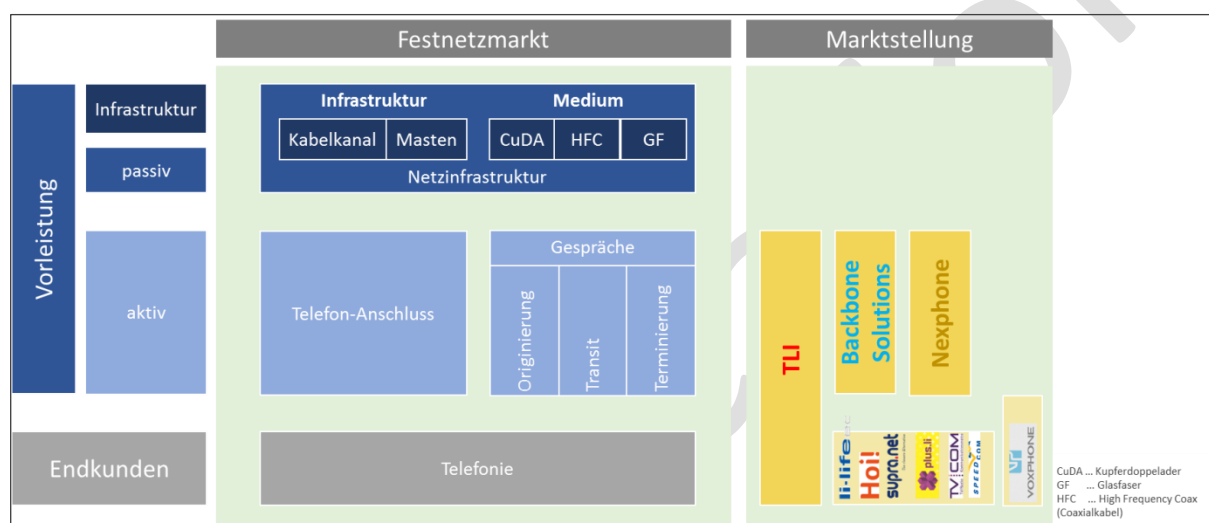


Figure 1: Market position of fixed network operators Telecom Liechtenstein, Backbone Solutions and Nexphone
[Source: AK]

After the abolition of the concession regime in 2006, the service is provided on the basis of the notification pursuant to Art. 43 KomG of the party to the procedure.

The present proceedings and the special regulatory measures ordered relate exclusively to the provision of fixed network services by the party to the procedure in Liechtenstein. Activities of the party to the procedure abroad or on the basis of licenses granted abroad, in particular in Switzerland, are not part of the present proceedings or market. Therefore, unless expressly stated otherwise, references to the party to the procedure refer exclusively to this company as a fixed network operator in Liechtenstein notified under Art. 43 KomG.

The termination services provided by the party to the procedure include traffic originating outside the network and handed over for termination by other operators, as well as traffic

⁸ available at <https://www.llv.li/files/ak/pdf-llv-ak-melderegister.pdf>

⁹ available at <https://www.backbone.ch/>

accepted for termination on behalf of third parties and own services in the context of the termination of internal calls.

According to the collection of statistical data, the party to the procedure delivered (terminated) ----- minutes of traffic in its fixed network in 2019. This traffic includes ----- off-net minutes from national mobile and fixed networks, ----- minutes from abroad and ----- minutes on-net traffic, i.e. termination services which the party to the procedure provides itself in its own network. The total traffic in the first half of 2020 amounted to ----- minutes, of which ----- minutes from national networks and ----- minutes from foreign networks.

B.3 On the definition of the relevant market

Termination (call termination) in fixed networks is a basic interconnection service and is used to ensure the mutual accessibility of subscribers (or telephones) within the own network and across network boundaries. Fixed termination is a wholesale service which consists of terminating calls to the selected telephone line (Figure 2), regardless of where the call originates and regardless of the telephone network technology used.

The relevant services on the market include traffic originating outside the network and handed over for termination by other operators at a predefined network transfer point (interconnection), as well as traffic accepted for termination on behalf of third parties and own services provided for the termination of calls within the network (on-net). The termination services for third parties and the corresponding traffic are to be included in the termination market of the party to the procedure, as it has a de facto monopoly on termination for calls to these numbers, concludes interconnection agreements and sets termination rates vis-à-vis other network operators.

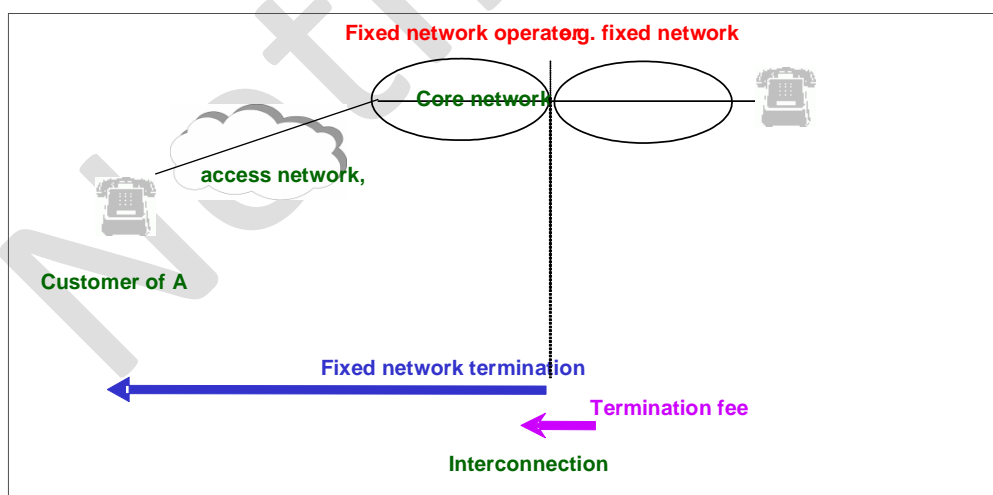


Figure 2: Standard case of interconnection and fixed network termination [Source: AK]

Demand for fixed network termination services is provided by both domestic and foreign fixed and mobile operators. The service of termination in one's own fixed network is an interconnection service and defines an operator-specific termination market.

The inquiring network operator must pay a fee (termination rate) to the termination network operator for the termination service. The source network operator requesting the service - directly or indirectly - bills all costs of a call (including the termination rate) to its customer (the calling subscriber) within the scope of the retail prices. Under this billing principle, known as the Calling Party Pays principle (CPP), the calling party bears the full cost of a call; the called party bears no costs. In Liechtenstein, as in other European countries, this principle is applied by all operators, which leads to externalities and subsequently to market failures.

In the case of termination, the barriers to entry are infinitely high and potential competition does not exist: No one other than the fixed network operator to whose network the called telephone is connected can terminate a call, i.e. the fixed network operator has a termination monopoly in its network according to the current state of the art. The termination service provided by a new entrant has no consequences for the structure of the existing individual (monopoly) termination markets and in turn constitutes a separate market.

The relevant geographic area of the termination market is the entire territory of Liechtenstein.

B.4 On the market analysis

The markets for termination on individual fixed public telephone networks are monopoly markets. Therefore, the party to the procedure has a constant market share of 100% on its individual termination market.

From an economic point of view, the party to the procedure has significant market power on the present (its) termination market (as do the other termination network operators). As the party to the procedure is the only operator on "its" market, it is not necessary to assess whether two or more companies jointly have significant market power.

For the selection and design of measures to be imposed by special regulation, it is of central importance which specific market failures and competition problems would be expected in connection with unregulated fixed network termination services according to the greenfield approach.

The causes of market failures in the market subject to the procedure are in particular the following two structural characteristics of termination services:

- (1) Monopoly: The termination service to a specific telephone (subscriber) is a monopoly service and cannot be provided by any operator other than the one with which the telephone or number is provided.
- (2) Absence of a disciplining regulatory mechanism: The entire costs of a call to a subscriber (origination, transit and termination) are borne by the calling subscriber according to the Calling Party Pays principle (CPP). No costs are incurred by the called subscriber. This tariff system is responsible for the following externality: The decision on which network to terminate a call (and thus also what the delivery costs are) is made by the called subscriber, but the costs are borne by the calling subscriber. The termination provider can increase the termination rate without fear of disciplinary action by its subscribers.

For this reason, a rational provider of termination services will set the charge at least at the level of the "monopoly price" for calls to fixed networks.

In the event of non-regulation of termination rates, the following four actual or potential competition problems can therefore be expected:

- (1) Allocative market distortions due to excessive termination rates for calls from mobile to fixed networks. Subsidisation of fixed network subscribers by mobile callers.
- (2) Allocative market distortions due to excessive termination rates for calls between fixed networks and price discrimination between on-net and off-net calls (distorted pricing structures).
- (3) Exclusion strategies vis-à-vis small fixed network operators, but in particular new entrants. These can take the form of non-price tactics such as refusal or delay strategies for interconnection, unjustified conditions or inferior quality, as well as price tactics such as excessive termination fees, strong price discrimination between on-net and off-net calls (margin squeeze). This is linked to the risk of market power being transferred to the retail level. This competition problem is particularly relevant in the context of the entry of new operators.
- (4) Distortions of competition in favour of fixed network operators and to the detriment of mobile operators, where business areas overlap (fixed-mobile convergence, increase in substitution between fixed and mobile networks) This results in the risk of market power being transferred to fixed and convergent markets or the risk of foreclosure strategies.

However, the allocative distortions of competition due to too high termination rates for calls to the fixed networks are by far the most significant competition problem in the opinion of the AK.

B.5 Demand-side countervailing power

In resistant monopoly markets, the market counterpart (the demanders) is ultimately the only remaining force that could discipline the market power associated with monopoly markets (the single supplier). For this reason, demand-side bargaining power (Art. 31 (1) (c) VKND) is ultimately the key criterion for assessing market power on operator-specific termination markets.

Demand-side countervailing power is the bargaining power of customers vis-à-vis the supplier of a product/service. A buyer only has negotiating power if it has a credible and effective threat potential. The threat to purchase the service from another supplier or to provide it itself is not available to a purchaser of wholesale termination services, as only the operator to whose network the called telephone is connected can terminate a call. The demand-side bargaining power is therefore severely limited.

As regards buyer power at the retail level on the termination side, it is not possible to enforce lower termination rates, as the net balance of such a reduction will in any case be negative for

the fixed network operator, the passing on of a reduction in termination costs by the origination network operators cannot be sufficiently ensured and it is cheaper, more rational and more effective for both the buyer and the fixed network operator concerned to find alternative solutions to circumvention. Retail callers, on the other hand, have no alternatives (the call to a particular telephone cannot be substituted by another call to another network), nor can and will the termination operator negotiate termination rates. In conclusion, this means that retail customers do not have buyer power either.

B.6 The current fixed network termination rates (EEA comparison)

Liechtenstein's fixed network operators currently charge a uniform fixed network termination rate of CHF 0.029 per minute.

In Liechtenstein, no peak/off-peak distinction, no weekend tariffs, no call set-up charges or other surcharges or fees are applied to the termination of voice calls. Charges are uniform, irrespective of whether the call originates inside or outside the EEA.

The Body of European Regulators for Electronic Communications (hereafter "BEREC") collects detailed data on termination rates in Europe by sending a data collection questionnaire to national regulatory authorities every six months and by consolidating and analysing the collected data at country and European level. The Figure 3 is taken from the latest BEREC Report on Termination Rates in Europe¹⁰.

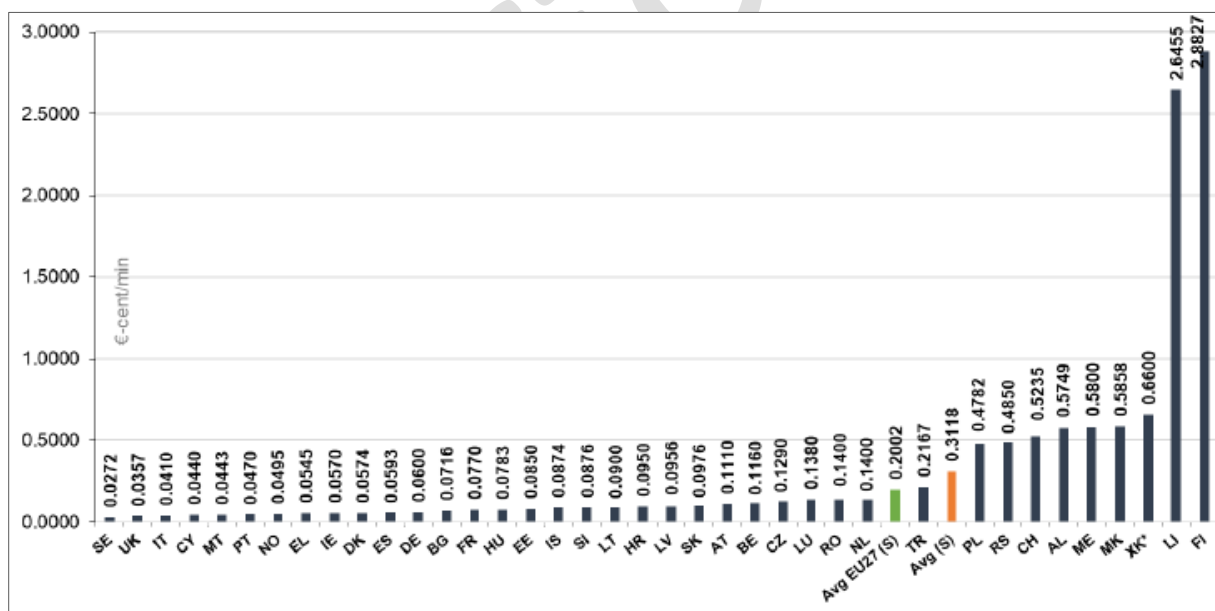


Figure 3: Fixed network termination rates in a European comparison as of 1 January 2020 (EUR cents per minute), [Source: BEREC Report of 11 June 2020, BoR (20) 97 "Termination rates at the European level January 2020"]

¹⁰ available under https://berec.europa.eu/eng/document_register/subject_matter/berec/reports/9285-termination-rates-at-the-european-level-january-2020

The Figure 3 shows the lowest national termination rates for the 1 January 2020 deadline. The chart covers the 27 EU Member States, Liechtenstein and the 2 other EFTA-EEA countries Iceland and Norway, as well as Switzerland, the United Kingdom, Albania, Montenegro, Northern Macedonia, Serbia Turkey and Kosovo. The charge shown is the average per minute of a 3 minute call¹¹. The national figures are average values weighted by the market shares of the operators. For countries outside the euro zone, the average exchange rates of the 4th quarter 2019 have been used in accordance with BEREC specifications¹² (for Liechtenstein and Switzerland: CHF/EUR 1,0962). The figure also shows the simple averages ("S" for simple, i.e. unweighted) for the 38 countries as a whole and for the 27 EU countries.

Analysis of the available data shows that the fixed termination rate in Liechtenstein, at 2.65 eurocents per minute, is more than 10 times the simple EEA average of 0.20 eurocents per minute.

C. Evaluation of Evidence

The findings on the market for termination in the public telephone network at a fixed location, in particular with regard to delineation, competitive conditions and the individual indicators of market power, result from the detailed, coherent and comprehensible investigation carried out in the market analysis of 7 September 2020.

After a basic explanation of the market analysis and the market analysis procedure, the document describes in detail the market situation in Liechtenstein and addresses the specificities of Liechtenstein.

The relevant market is defined and delineated both regarding product/service and geographically, following a coherent and comprehensible explanation of the performance of fixed network termination.

In the analysis of market power, the individual criteria which may be relevant to the assessment within the meaning of Article 31(1) VKND will first be examined to determine whether an undertaking holds a position equivalent to dominance. The market analysis explains in a comprehensible manner why not all indicators are relevant for the assessment of the competitive conditions on a monopoly market and that the indicators market shares and countervailing buyer power are of particular relevance in the context of the analysis of the competitive conditions on the monopoly market "fixed network termination".

As the existing regulatory framework does not regularly allow anti-competitive behaviour to be identified, potential competition problems that would exist in the absence of regulation are also examined. On the basis of the analysis of the individual market power indicators and the identification of the structural characteristics of the fixed network termination market in

¹¹ When calculating the average termination rate per operator, any peak/off-peak tariffs in a ratio of 50%-50% as well as any connection set-up charges are taken into account and the average of a 3-minute call is formed.

¹² see <http://sdw.ecb.europa.eu/browse.do?node=9691296> or for CHF exchange rate directly at http://sdw.ecb.europa.eu/quickview.do?SERIES_KEY=120.EXR.Q.CHF.EUR.SP00.A

question, it is clear that competition problems would exist in the case of non-regulation of the (fixed) termination service(s). The market analysis therefore concludes that from an economic point of view there is no self-sustaining competition and that regulation (the imposition of specific obligations) is necessary.

In their comments on the market analysis, the respondents to the consultation either did not substantively address the market definition and analysis or confirmed the market analysis.

The market analysis identifies and balances possible regulatory options before issuing a reasoned recommendation.

REASONS FOR DECISIONS

D. Legal Assessment

D.1 The legal basis of the procedure

According to Art. 20 para. 1 KomG, the AK has to examine ex officio whether there is effective competition on the markets of electronic communications in Liechtenstein. If there is no effective competition, i.e. if one or more providers have significant market power, the Office has to take the necessary measures of special regulation according to Art. 20 para. 2 KomG in connection with Art. 23 KomG and Art. 34 to 43 VKND in order to eliminate or reduce the competition problems identified.

The scope of the service or product markets to be examined within the scope of this review is to be delimited by the AK according to Art. 21 para. 1 KomG, taking into account the Market Recommendation 2016.

The existence of significant market power - which corresponds to a dominant position under general EEA competition law - must be assessed in particular on the basis of the criteria laid down in Article 31 VKND. From an economic point of view, significant market power refers to the power of an undertaking to increase charges without suffering significant loss of revenue. According to the equivalence theory of the ESA and the European Commission, where no undertaking has significant market power on a market, effective competition exists on that market.

According to Art. 20 para. 1, second sentence, KomG and Art. 6 para. 2 RKV, the AK has to take recommendations of the ESA on the harmonisation of the internal market for electronic communication into account as far as possible when performing its tasks.

In particular, the "EFTA Surveillance Authority Recommendation of 13 April 2011 on the regulation of fixed and mobile termination rates in the EFTA States"¹³ is relevant for the determination of termination rates. According to this Recommendation, the determination of

¹³ available at <https://op.europa.eu/en/publication-detail/-/publication/08101044-29a1-11e2-9209-01aa75ed71a1/language-de>

the termination rate has to be based on the incremental costs of an efficient operator, i.e. calculated with the pure BU LRIC cost standard (pure bottom-up Long Run Incremental Cost), or, in case of scarce resources, determined by benchmarking, namely on the basis of the EEA countries using their own pure BU LRIC models.

In connection with the market analysis of the termination markets and the regulation of fixed network termination charges, the following legal bases are particularly relevant:

ESA recommendations

- EFTA Surveillance Authority recommendation of 13 April 2011 on the regulation of fixed and mobile termination rates in the EFTA States¹⁴, hereinafter referred to as "2011 Termination Recommendation".
- EFTA Surveillance Authority Decision No 93/16/COL of 11 March 2003 2016: EFTA Surveillance Authority Recommendation on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with the Act referred to at point 5cl of Annex XI to the EEA Agreement (Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communication networks and services), as adapted to the Agreement by Protocol 1 thereto and by the sectoral adaptations contained in Annex XI thereto [2017/608], hereinafter referred to as "Market Recommendation 2016"¹⁵.
- EFTA Surveillance Authority Recommendation of 2 December 2009 on notifications, time limits and consultations provided for in Article 7 of the Act referred to at point 5cl of Annex XI to the Agreement on the European Economic Area (Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services), as adapted to the EEA Agreement by Protocol 1 thereto, hereinafter referred to as "2009 Notification Recommendation"¹⁶.
- EFTA Surveillance Authority Guidelines of 14 July 2004 on market analysis and the assessment of significant market power under the Agreement on electronic communications networks and services set out in Annex XI to the Agreement on the European Economic Area (2006/C 101/01), hereinafter referred to as "SMP guidelines"¹⁷.

EEA Guidelines

The following EEA Directives, which have been implemented in Liechtenstein by the KomG and the ordinances based on it, must be taken into account:

¹⁴ available at <https://op.europa.eu/en/publication-detail/-/publication/08101044-29a1-11e2-9209-01aa75ed71a1/language-de>

¹⁵ available at <https://eur-lex.europa.eu/legal-content/DE/TXT/PDF/?uri=OJ:L:2017:084:FULL&from=FR>.

¹⁶ available at <https://op.europa.eu/de/publication-detail/-/publication/d5da7711-0c21-495f-b929-50b72cfed46b/language-de/format-PDF/source-107590473>

¹⁷ available at <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2006:101:0001:0029:de:PDF>.

- Directive 2002/19/EC of the European Parliament and of the Council of 7 March 2002 on access to, and interconnection of, electronic communications networks and associated facilities ("Access Directive"; EEA: Annex XI - 5cj.01).¹⁸ hereafter referred to as the "Access Directive".
- Directive 2002/20/EC of the European Parliament and of the Council of 7 March 2002 on the authorisation of electronic communications networks and services ("Authorisation Directive"; EEA: Annex XI - 5ck.01).¹⁹ hereafter referred to as the "Authorisation Directive".
- Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services ("Framework Directive"; EEA: Annex XI - 5cl.01).²⁰ hereinafter referred to as the "Framework Directive".
- Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services ("Universal Service Directive"; EEA law: Annex XI - 5cm.01)²¹ hereinafter referred to as the "Universal Service Directive".

Other recommendations and guidelines

- European Commission Communication of 7 May 2018, Guidelines on market analysis and the assessment of significant market power under the EU regulatory framework for electronic communications networks and services (Text with EEA relevance) (2018/C 159/01).²²
- European Commission Communication of 27 April 2018, Commission Staff Working Document accompanying the document Communication from the Commission Guidelines on market analysis and the assessment of significant market power under the EU regulatory framework for electronic communications networks and services (Text with EEA relevance) {C(2018) 2374 final}.²³

Uniform EU-wide termination rates based on the European Code

On 11 December 2018, the European Union adopted Directive 2018/1972 on the European Electronic Communications Code²⁴. According to Article 75 of this Directive, the European Commission is to adopt, by 31 December 2020, a delegated act setting maximum EU-wide charges for the termination of voice calls in the European Union ("Eurorates").

¹⁸ available at <https://eur-lex.europa.eu/legal-content/DE/ALL/?uri=CELEX%3A32002L0019>.

¹⁹ available at <https://eur-lex.europa.eu/legal-content/DE/ALL/?uri=CELEX%3A32002L0020>.

²⁰ available at <https://eur-lex.europa.eu/legal-content/DE/ALL/?uri=CELEX%3A32002L0021>.

²¹ available at <https://eur-lex.europa.eu/legal-content/de/ALL/?uri=CELEX:32002L0022>.

²² available at [https://eur-lex.europa.eu/legal-content/DE/TXT/HTML/?uri=CELEX:52018XC0507\(01\)&from=EN](https://eur-lex.europa.eu/legal-content/DE/TXT/HTML/?uri=CELEX:52018XC0507(01)&from=EN)

²³ available at <https://ec.europa.eu/digital-single-market/en/news/staff-working-document-guidelines-market-analysis-and-assessment-smp-under-eu-regulatory>.

²⁴ Directive 2018/1972 of the European Parliament and of the Council of 11 December 2018 on the European Electronic Communications Code, text with EEA relevance <https://eur-lex.europa.eu/legal-content/DE/TXT/?uri=CELEX:32018L1972>

The draft delegated act, which the Commission made available for public consultation on its "Have your say"²⁵ website from 25 August to 22 September 2020, sets out the likely rules on the single maximum mobile termination rate, the single maximum fixed termination rate, the system adjustment and transition periods, glide path rules and the restriction of price regulation to calls originating and terminating in the Union.

The Code and therefore the delegated act have not yet been incorporated into the EEA Agreement. They will be incorporated into Liechtenstein legislation or will be directly applicable after the completion of the incorporation procedure.

D.2 On competence

According to Art. 55 KomG in connection with Art. 3 of the ordinance of 3 April 2007 on the tasks and powers of the regulatory authority in the electronic communications sector (RKV), LGBl. 2007 No. 68, the AK as the competent regulatory authority is responsible for the fulfilment of all regulatory tasks in accordance with Art. 56 KomG in the electronic communications sector. These tasks include in particular the promotion and monitoring of effective competition pursuant to Art. 56 para. 1 letter a KomG and the ordering of special regulatory measures pursuant to Art. 56 para. 1 letter h KomG.

D.3 On the national and EEA-wide consultation

If the AK intends to take measures of special regulation, which are likely to have a considerable impact on the market concerned, it has to notify interested parties of this in accordance with Art. 24 para. 1 KomG and give them the opportunity to comment within a reasonable period of time. According to Art. 46 KomG, this can be done within the framework of a public consultation.

Within the framework of the national consultation on the basis and planning of the new market analysis round ("Market Analysis 2019+") from 13 December 2019 to 7 February 2020, the fixed network operators were informed about the steps planned by the AK, which would lead to a reduction of the termination rates within the framework of the present procedure. The AK received comments from TLI and Swisscom, among others, and included them in the final document.²⁶

The specific analysis of the fixed network termination markets in Liechtenstein as well as the planned regulatory measures were submitted by the AK from 18 May to 26 June 2020 to all notified operators and providers for consultation. The comments were taken into account in the preparation of the final version of the analysis of the fixed network termination markets, to

²⁵ Available at <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/1958-Voice-call-termination-rates-in-the-EU-Eurorates->

²⁶ The final document "Market Analysis Planning 2019 plus V2.0" was published on 3 March 2020 together with a news item on the AK website and on 5 March it was sent to all registered providers and operators by electronic mailing. The document is available at <https://www.llv.li/inhalt/118681/amtstellen/grundlagen-und-planung-marktanalyse-2019>

the extent that the Office's opinion required them to be followed. In order to ensure transparency, the AK drafted and published an evaluation document of the comments received.

The draft of the present decision was then sent to the party to the procedure in order to preserve the right to be heard on 9 September 2020 with the request to submit any comments on the analysis and the planned measures of the special regulation by 24 September 2020 at the latest.

The party to the procedure didn't submit any counter-statement. So, the AK had no reasons to modify the planned measures.

If the AK intends - as in the present case - to take measures of special regulation, which are likely to have an effect on trade between EEA Contracting States, it has to consult the ESA and the other national regulatory authorities in the EEA in advance, in addition to the national consultation, in accordance with Article 24 (2) KomG and Article 7 of the Framework Directive 2002/21/EC. For this purpose, the AK submitted the draft of the present decision to the ESA on TT. Month 2020. On TT. Month 2020 the ESA informed that it agrees to the entry into force of the submitted measures.

The relevant procedural provisions have been followed.

D.4 The EFTA Surveillance Authority's opinion

In its letter from the TT. month 2020, the EEA points out that [the EEA regulatory framework in principle allows benchmarking with other countries as a method for setting tariffs, as long as it ensures the promotion of efficiency and sustainable competition in the interest of final consumers. In benchmarking, termination rates are to be aligned with those of those EEA countries which already use pure BU LRIC cost accounting methods leading to efficient termination rates. It also recalls that termination rates must be set symmetrically.]

In the light of the above comments, the ESA agrees to the entry into force of the present regulatory measures.]

D.5 The market under investigation

D.5.1 On market definition

According to the SMP guidelines, the definition of the relevant product market must be based on a test of demand-side and supply-side substitutability of the product or service in question. All those products which are regarded as sufficiently substitutable from the consumer and supplier point of view belong to the same market. A generally accepted method for this is the so-called SSNIP test (small but significant non-transitory increase in price - SSNIP) or hypothetical monopolist test.

In its Market Recommendation 2016, the ESA has identified those relevant product and service markets in accordance with Article 15 of the Framework Directive which are susceptible to ex ante regulation. As the ESA has already assessed the fulfilment of the relevant criteria, it can be

assumed that these markets are also susceptible to ex ante regulation in Liechtenstein. The AK, as the competent regulatory authority, therefore does not have to carry out this examination again, unless it has justified doubts about their specific fulfilment in a national context or the definition of the relevant national product market deviates from the recommended one. According to Art. 21 para. 1 KomG, the service or product markets to be examined within the scope of the market analysis are to be delimited by the AK with consideration of the Market Recommendation 2016 of the ESA.

D.5.2 Definition of the relevant product market

In accordance with the ESA's Market Recommendation 2016, the AK defines the relevant product market for the present proceedings based on Art. 21 para. 1 KomG as the wholesale market for "Call termination on individual public telephone networks provided at a fixed location" (hereinafter also referred to as "fixed network termination").

Call termination in fixed networks is a basic interconnection service and is used to ensure the mutual accessibility of subscribers (or telephones) within the own network and across network boundaries.

Demand for fixed network termination services is provided by both domestic and foreign fixed and mobile operators.

The demand for wholesale termination by a communications network operator is derived from the demand of the subscriber at the retail level: Each subscriber of a telephone service requires wholesale call termination in order to make a call to another subscriber, whether connected to the same or another communications network.

The relevant services on the market include traffic originating outside the network and handed over for termination by other operators at a predefined network transfer point (interconnection) (off-net call), as well as traffic accepted for termination on behalf of third parties and own services provided for the termination of calls within the network (on-net call).

Fixed network operators provide a self-provision of termination services within each internal network connection, even if the terminating traffic is not routed to the network termination point via an exchange capable of interconnection with other networks. This is the case regardless of whether termination as a wholesale component of a retail product is offered to the own communications service provider or to a third party as an external wholesale service.

Since termination cannot be provided by any other fixed network operator than the operator to whose network the called subscriber is connected, these are operator-specific termination

markets.²⁷ In other words, under the current state of the art, the relevant network operator has a termination monopoly in its network.

The termination of calls in networks of different technology generations and network architectures must be treated equally. From the point of view of the calling party and the called subscriber or the network operator, there is no difference in the way a voice call is handled using one or the other technology or network architecture. Substitution studies and explanations on the termination monopoly apply equally to all networks and technologies.

The relevant product market is therefore in line with market no. 1 of the Market Recommendation 2016 and the European Commission's Market Recommendation of 9 October 2014.²⁸ From the AK's point of view, there are no indications that the relevant market does not fulfil the criteria for a possible ex ante regulation in Liechtenstein or that its product dimension would have to be defined differently due to the national circumstances.

D.5.3 Definition of the relevant geographic market

The relevant geographic market pursuant to Art. 21 (1) KomG is the geographical area in which the interconnection service "Call termination on individual public telephone networks provided at a fixed location" is offered and demanded under sufficiently similar or homogeneous competitive conditions. Areas in which the conditions of competition are heterogeneous, i.e. in which substantially different conditions exist, cannot be regarded as a single market.

It follows from §§56-61 of the SMP guidelines that the definition of the relevant geographic dimension of the market under investigation must be based on an analysis of the substitution relationships on the demand and supply sides.

According to §60 and prevailing practice, the network and the existing legal and administrative instruments are the two main criteria for geographic market definition. With regard to the network, according to the SMP guidelines, this normally corresponds to the area in which an operator is allowed to operate. According to §61, geographic markets can be defined as local, regional, national or transnational for areas covering two or more countries.

The right of the party to the procedure to become active in Liechtenstein is based in particular on Articles 3 and 4 VKND in conjunction with Art. 43 KomG (obligation to notify). Through its interconnection agreements, the party to the procedure has the possibility to control access and the charges for the termination of calls to the fixed network it operates on this basis.

The conditions of supply and demand at the wholesale level (the conditions of competition) are homogeneous within Liechtenstein, but differ significantly from those in neighbouring countries

²⁷ See Commission Staff Working Document, European Commission *Explanatory Note* (SEC(2007)/1483/2), available at <https://ec.europa.eu/transparency/regdoc/rep/2/2007/EN/2-2007-1483-EN-2-1.PDF>, on Commission Recommendation 2007/879/EC of 17 December 2007 on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services, OJ L 344, 28.12.2007, p. 65f

²⁸ European Commission Recommendation 2014/710/EU, available at <https://op.europa.eu/de/publication-detail/-/publication/6cd57dfc-510e-11e4-a0cb-01aa75ed71a1>

due to the different legal bases and regulatory frameworks, which is one reason why a national definition of the relevant market is appropriate. This definition thus excludes the existence of a transnational market within the meaning of Art. 21 (3) KomG.

The relevant geographic dimension of the operator-specific fixed network termination market of the party to the procedure is therefore to be defined on the basis of Article 21 (1) KomG as the extension of the network of the party to the procedure on the territory of Liechtenstein. This is consistent with the small size of the national territory due to the homogeneous conditions of supply and demand prevailing there.

D.6 Competitive conditions

D.6.1 On market power

According to Art. 3 (1) (3) KomG, an "undertaking with significant market power" is defined as "an undertaking which either individually or jointly with others has a position equivalent to dominance, that is to say a position of economic strength affording it the power to behave to an appreciable extent independently of competitors, customers and ultimately consumers". Art. 3(1)(3) KomG is in line with the relevant EEA law provisions of Art. 14(2) of the Framework Directive.

In assessing whether one company alone has significant market power, the AK "in particular" has to take into account the market power indicators laid down in Art. 31 (1) VKND.

Both the national and the EEA legal framework explain the relation between "significant market power" within the meaning of Article 3 (1) and (3) of the Commission's Act and "effective competition" within the meaning of Article 20 (1) of the Commission's Act with the so-called "equivalence thesis", according to which there is no effective competition if at least one company with significant market power exists. For example, in its SMP guidelines, the ESA states in §§19 and 113 that the conclusion that there is effective competition on a relevant market is tantamount to a finding that no operator is dominant on that market, either individually or jointly with others. "Effective competition" is defined as the absence on the relevant market of an undertaking which is dominant individually or jointly with others (see recital 27 of the Framework Directive).

The SMP guidelines are relevant for the conduct of the market power assessment. In contrast to general competition law, sector-specific regulation takes an ex-ante approach. The assessment of competitive conditions is based on the premise that there is no regulation.

Where an undertaking has significant market power on a specific market, it may also be deemed to have significant market power on horizontally and vertically or geographically adjacent markets, where the links between the two markets are such as to allow the market power held in one market to be leveraged into the other market, thereby strengthening the market power of the undertaking as a whole (Art. 22(2) KomG).

D.6.2 On the assessment of market power indicators

The markets for call termination on individual fixed public telephone networks are by (market) definition monopoly markets. This has a number of consequences for the present proceedings: Firstly, the individual operator markets are to be examined only for the existence of a single dominant position. Since each new fixed network operator entering the fixed network sector constitutes a new individual termination market for itself, the existence of a collective dominant position on the termination markets is outside of the conceivable. On the other hand, the market definition reduces the examination of a solely dominant position of the party to the procedure to very few indicators of significant market power according to Art. 31 (1) VKND:

- Barriers to market entry (Art. 31(1)(b) VKND) are infinitely high in the case of termination by (market) definition and potential competition does not exist or is excluded. The termination service of a new provider has no effect on the structure of the existing (monopoly) termination markets and in turn constitutes a separate market. For these reasons, a further analysis of the barriers to market entry in the termination markets is not necessary.
- The markets for termination in individual fixed public telephone networks are by definition monopoly markets which exist irrespective of the size of the operator and also irrespective of the market phase. The operator has a constant market share of 100% on its individual termination market. Again, there is no need for a further analysis of the absolute size, which is measured here as the size of the respective operator-specific termination markets (Art. 31 para. 1 a VKND). Similarly, it is not necessary to examine the market phase criterion (Art. 31(1)(e) VKND).
- Similarly, SMP indicators based on the size ratio of the potentially single largest company to its (strongest) competitors on the market concerned are not relevant. This concerns the following SMP indicators (Art. 31(1)(f), (g), (h), (l), (i), (m) VKND): technological advantage, advantages in sales and distribution organisation, existence of economies of scale, economies of scope and density, access to finance, degree of vertical integration and control over infrastructure which is not easily replaceable. These criteria will not be analysed further below.
- Since termination is a monopoly service and there are no sufficient substitutes for the (operator-specific) termination service, the indicators demand and supply elasticities and the extent of product differentiation are not relevant either (Art. 31 para. 1 d, k VKND).

In resistant monopoly markets, the market counterpart (the demanders) is ultimately the only remaining force that could discipline the market power associated with monopoly markets (the single supplier). For this reason, demand-side bargaining power (Art. 31 (1) c) VKND) is ultimately the key criterion for assessing market power on operator-specific termination markets.

D.6.3 Demand-side countervailing buyer power

Demand-side countervailing buyer power is generally understood as the bargaining power of customers vis-à-vis the supplier of a product/service. This may manifest itself in the fact that customers have a significant influence on the supplier's pricing behaviour, so that the supplier is not able to behave to a significant extent independently of its customers.²⁹

Demand-side countervailing buyer power could, where appropriate, take effect at the wholesale or retail level. In order for demand-side countervailing power to be created, the buyer must have an effective and credible threat potential, i.e. a sufficiently large volume of demand and credible alternatives to enforce its demand interests. A threat is only credible if it is rational for the buyer to implement it if the supplier does not give in to the demands. A central element of demand-side countervailing power (as it significantly underlines credibility) is the existence of alternatives: A credible threat to purchase the product from another supplier, to produce it itself or to refrain from consumption can put considerable pressure on the supplier.³⁰

Demand-side countervailing buyer power of other suppliers' calling retail customers

In this case, the calling customer is not in a direct contractual relationship with the terminating fixed network operator. A retail customer - even if he has a very large call volume - is unlikely to be able to exercise direct demand-side bargaining power vis-à-vis the terminating fixed network operator. Apart from the fact that the latter cannot and will not negotiate termination rates with him and that the involvement of his own provider (which sets retail prices) is always required, the caller does not have any significant bargaining power, as he has no alternative to calling the fixed operator's network.

Demand-side countervailing power of operators

Wholesale customers potentially have more bargaining power as they bundle the demand (of end users) for fixed network termination services and negotiate interconnection terms with providers. The threat to source the service from another supplier or to produce it itself is not available to a purchaser of wholesale termination services because of the de facto monopoly on termination, which significantly limits its bargaining power. Potentially, only large operators with their own subscribers (and also operators with interconnections to other network operators) have the potential to threaten very small operators or new entrants to impose demand interests. This is based on the threat of refusing or delaying interconnection or of charging prohibitively high fees. However, the potential for buyer power is limited to the very short period of market entry. Once an operator has an appropriate subscriber base, refusing interconnection with that operator is no longer rational, and therefore the threat is not

²⁹ See Case 27/76 United Brands v Commission [1978] ECR 207.

³⁰ The extent to which this threat can be considered realistic must be assessed on a case-by-case basis. Entering the market may involve considerable costs and time, unit costs may be higher than those of the former monopolist (*minimum efficient scale*) and the private label would have to be built up first. For mobile termination, the barriers to market entry are of course absolute, so that there are no alternatives to the termination service in demand: it can neither be purchased from another supplier nor produced by the company itself.

credible, because of the inconvenience or harm it would cause to the own subscribers concerned, whose calls would be made impossible.

In addition, the threat of refusing interconnection must be rejected, in particular on the basis of the interconnection obligation under Art. 18 (1) KomG in conjunction with Art. 44 (1) VKND, according to which every operator of a public communications network is obliged to make ³¹an interconnection offer to other operators of such networks, with the aim of enabling and improving communication between users of different networks. If no agreement can be reached, the regulatory authority can be called upon (Art. 46 VKND in connection with Art. 27 KomG) to order (subsidiary) interconnection. This obligation derives from the economic interest in ensuring accessibility between all networks and structurally safeguarding competition. This severely restricts operators in their ability to use interconnection as a tool to enforce demand interests, and threats related to interconnection (e.g. refusal) lose credibility.

Furthermore, the question arises whether fixed network operators could agree on an efficient level of termination rates in negotiations on termination rates. If one operator sets its charges at a monopoly level by abusing its dominant position, the other operator can also only react by setting an excessive charge in order not to suffer losses. Therefore, the outcome of the negotiations cannot be expected to be economically efficient.

In conclusion, it can therefore be concluded that demand-side bargaining power does not have a sufficiently disciplining effect on the price-setting scope associated with termination monopolies.

Countervailing power of the called subscriber

The analysis of retail buyer power shows that the called party would probably have the most important option - in terms of buyer power - to enforce demand interests, namely to switch to another network operator with lower termination rates. The analysis shows that even very large companies or organisations (which potentially have bargaining power vis-à-vis the fixed operator) will not be able to enforce lower termination rates, as the net balance of such a reduction will in any case be negative for the fixed operator, the passing on of a reduction in termination costs by the origination network operators cannot be sufficiently ensured and it is cheaper, more rational and more effective for both the subscriber and the fixed operator concerned to find alternative solutions to circumvention (on-net tariffs, toll-free number, etc.).

Inelasticity of demand

The more a company is able to raise its charges above (marginal) costs (and thus has market power in the economic sense), the more inelastic the individual demand function (the residual demand) is. In the case of a monopoly market, the individual demand function coincides with the total market demand. In this case the pricing latitude - in the absence of competing products - depends exclusively on the elasticity of overall market demand and only in the extreme case of very elastic market demand does the company in question have no appreciable pricing latitude (and thus no market power). Wholesale demand for fixed termination is directly derived from retail demand for calls to fixed networks and wholesale elasticity is lower, but in

³¹ For a legal definition of "interconnection" see Art. 3 (1) No. 27 KomG and Art. 45 VKND.

any case not higher, than the elasticity of retail demand for calls to fixed networks. Therefore, if retail demand elasticity is normal for telecommunications markets, it can be excluded that the demand for fixed termination is sufficiently elastic to constrain the pricing behaviour of a monopoly provider of termination services such as the party to the procedure.

D.6.4 The party to the procedure as an undertaking with market power

For the above reasons, the AK states that there is no effective competition within the meaning of Article 20 (1) and Article 22 (1) (a) KomG on the operator-specific market for termination in the public fixed network of the party to the procedure and that the party to the procedure is an undertaking with significant market power within the meaning of Article 22 (1) (b) KomG.

The ESA, in its letter of the TT. month 2020, [has also taken note and accepted the proposed designation of the party to the procedure as dominant company.]

D.7 Competition problems

The termination service is characterised by the following structural features:

- The termination service to a specific terminal (subscriber) is a monopoly service and cannot be provided by any operator other than the one to whose network the terminal is connected.³²
- Lack of a disciplining regulatory mechanism: Due to the *Calling Party Pays* (CPP) principle described above, the calling party bears the entire costs of a call (origination, transit and termination). The called subscriber does not incur any costs. The termination provider can increase the termination rate without having to fear disciplinary measures by its subscribers.³³

Due to these structural particularities, a provider of fixed network termination services is not sufficiently constrained in its pricing behaviour either by the caller or by the called party and has a (monopoly) pricing latitude.

It is true that the called party could potentially exert more price pressure because it would have the choice between operators with different termination rates in the context of the subscription decision. However, the criterion of low cost accessibility plays only a very minor role compared to other criteria, in particular the costs to be actively borne. This is mainly due to the fact that a reduction in termination rates must be at least partially compensated by an increase in prices to be borne by the subscriber himself. Thus this decision-making criterion at retail level is not reflected in a high operator-specific elasticity of demand for subscriptions.

³² The effectiveness of possible substitutes (SMS, e-mail, fixed network calls, etc.) does not need to be discussed in detail here, as the relevant markets already defined by means of substitution considerations in accordance with the ESA recommendation are used as the starting point for the investigation. There is no reason to assume that the same substitution analysis should lead to different results in a national context.

³³ It is not examined in detail here to what extent the called parties internalise these external effects when choosing a network (e.g. within families). This question is already answered by the market definition.

D.7.1 Fixed-mobile interconnection

The framework conditions for pricing in connection with *mobile-to-fixed* termination services can be characterised as follows:

- There are only limited substitution relationships between (national) fixed and mobile telephony. Consequently, there is only limited direct competition between pure mobile and pure fixed network operators.

Exclusion or collusion strategies are thus relegated to the background and the most important incentive for pricing results from the calculation to maximise the margins of termination services. A profit maximising fixed network operator will set termination rates at the level of the monopoly price, irrespective of how competitive the fixed network retail market is.³⁴

Allocative distortions / welfare losses for mobile phone subscribers and overall

As fixed termination rates have a direct impact on the cost structure of a mobile operator, excessive termination rates of a profit maximising fixed network operator lead to excessive charges for calls from mobile networks to fixed networks. It is important to note that the associated allocative distortions (welfare losses due to too little volume and too high charges) also occur when competition on the fixed network retail market is intense and margins are eroded in competition for retail customers. Even if fixed network subscribers benefit from these subsidies (from mobile subscribers), the associated positive effect is less than the negative welfare effects due to the allocative distortions of calls from mobile to fixed networks. It can therefore be expected that the optimal fixed termination rate from a welfare economics point of view (even taking into account network externalities and ³⁵*Ramsey pricing*) is lower than the termination rate that a (profit maximising) fixed network operator would set.³⁶

Conclusion: The central competition problem is therefore not only the (overall generated) excess profits of fixed network operators, but also the market distortions (welfare losses) in connection with calls from mobile to fixed networks or the subsidisation of fixed network subscribers by mobile subscribers.

³⁴ The monopoly price is determined by the usual *trade-off* of a price increase: increase in the contribution margin (revenue minus costs) and decrease in the quantity sold. The *trade-off* is ultimately determined by the elasticity of the derived end customer demand.

³⁵ *Ramsey pricing* means that in the case of multiple products, the overhead costs are added in inverse proportion to the respective elasticities of the products. Such tariffs are referred to as "*2nd best*", since prices at marginal cost ("*1st best*") are not possible if there are significant overheads or fixed costs under the premise of profitability (revenues cover all costs).

³⁶ Even if the operator itself allocates its overheads according to the "Ramsey principle", the result does not (necessarily) correspond to the "*2nd best*" result. This is because the elasticities of the individual company demand functions do not (necessarily) match the elasticities of overall market demand for the relevant products. Especially in the context relevant here, this is not the case.

D.7.2 Fixed-fixed interconnection

In contrast to fixed-mobile interconnection, the interconnection partners of fixed-fixed interconnection are direct competitors on the (fixed) retail market. This changes the incentive structure of companies in that termination rates could be used as a tool for exclusionary strategies vis-à-vis smaller and new entrant fixed network operators.

The interconnection of large incumbent operators with "small" operators is particularly important, especially for new entrants³⁷. It is clear that for large operators or vis-à-vis new entrants the advantages of non-cooperation (less competition at retail level) outweigh any disadvantages (a few subscribers are not reachable). In addition to non-price mechanisms (refusal or delay strategies for interconnection, unjustified terms and conditions, inferior product quality, etc.), (prohibitively) high access charges or the practice of *margin squeeze* can play a central role, especially if there is an obligation to interconnect but the charges can be set freely:

High proportion of off-net calls from small fixed network operators

Termination rates determine the cost of *off-net calls*, which is a significant competitive disadvantage for a small operator or new entrant that has to handle almost 100% of calls as *off-net calls*. This effect means that a small operator - in the case of excessive termination rates - has to face much higher average marginal costs than large incumbent operators with a high proportion of *on-net calls*.

Lower tariffs to compensate for the disadvantage of small networks (network externalities)

A new entrant is forced to offer more attractive tariffs during the entry phase (not least because of the significant economies of scale of established operators³⁸) in order to increase its market share.

Non-reciprocal termination rates between differently sized operators

It is not likely that reciprocal (symmetric) termination rates would occur in a non-regulated environment. In principle, each company has an incentive to set its own termination rates as high as possible while at the same time purchasing termination at the lowest possible rates. In an unregulated environment, a large operator would be able to impose higher charges than a small operator or new entrant because of its bargaining power.

Conclusion: Excessively high termination rates can be used as an exclusionary instrument (by practising a *margin squeeze*) against small operators, but especially new entrants. With regard

³⁷ Most of the theoretical work on *two-way access* is based (among others) on two assumptions: (1) a market with developed competition is assumed (market entry and market foreclosure strategies are generally faded out). (2) it is (almost always) assumed that termination rates (ordered by regulators) are reciprocal. This means that one major competition problem and reason for regulatory intervention is not covered by interconnection charges, namely *foreclosure strategies* vis-à-vis new entrants.

³⁸ Telecommunication networks are characterised by pronounced network externalities. The more participants a network has, the more interesting it is for the users. Price discrimination, i.e. more favourable on-net than off-net tariffs, creates "price-induced" network externalities (tariff-mediated network externalities) which make the network of a smaller operator less attractive because it is more attractive for end customers to be a subscriber to a large network. Price discrimination between on-net and off-net calls is primarily an instrument of competition, price differences (to the extent observed) cannot be explained either by cost differences or by Ramsey pricing.

to small operators already active on the market, this problem loses importance as market share is gained, but remains relevant for possible future market entrants.

D.7.3 International interconnection

The framework conditions for pricing in connection with termination services for international interconnection partners can be characterised as follows:

- There is no direct competition between the national fixed network operator and the international operator (fixed or mobile).

Conclusion: Thus the most important incentive for pricing results from the calculation to maximise the margins of the termination service. A profit maximising fixed network operator will set termination rates at the level of the monopoly price, regardless of how competitive the national fixed network customer market is.

D.7.4 Current and potential competition problems

In the event of non-regulation of termination rates, the following actual or potential competition problems can therefore be expected:

- Allocative market distortions due to excessive termination rates for calls from mobile networks to fixed networks. Subsidisation of fixed network subscribers by mobile callers (**competition problem W1**).
- Allocative market distortions due to excessive termination rates for calls between fixed networks and price discrimination between *on-net* and *off-net calls* (distorted pricing structures) (**competition problem W2**).
- Exclusionary strategies vis-à-vis small operators, but especially new entrants. These can take the form of non-price tactics (interconnection denial/delay strategies, unjustified conditions or inferior quality) or price tactics, namely excessive termination rates and strong price discrimination between *on-net* and *off-net calls* (*margin squeeze practice*). Linked to this is the risk of market power being transferred to the retail level. This competition problem is particularly relevant in the context of new entrants' market entry (**competition problem W3**).
- *Distortions of competition in favour of fixed network operators and to the detriment of mobile operators, where business areas overlap* (fixed-mobile convergence, increase in substitution between fixed and mobile networks) As a result, there is a risk of market power being transferred to fixed and convergent markets or the risk of exclusionary strategies vis-à-vis mobile network operators (**competition problem W4**).

Conclusion: The allocative distortions of competition due to too high termination fees for calls from (domestic and foreign) fixed and mobile networks to domestic fixed networks represent the most important competition problems in the AK's view.

D.8 Regarding the measures imposed by the special regulation

Art. 20 para. 1 KomG obliges the AK to take the necessary measures to eliminate or reduce the negative consequences of a lack of effective competition in the electronic communications markets. For this purpose, the Office imposes one or more of the measures of special regulation provided for in Articles 34 to 42 VKND on operators with significant market power on the basis of Articles 20 para. 2 and 23 KomG.

In the absence of regulation, the Office expects the competition problems identified in Chapter D.7 regarding fixed termination services into the network of the party to the procedure, with the problem of excessive termination rates being the most significant problem.

The operator-specific termination markets are - and remain - resistant monopoly markets, so that the primary objective of the imposition of regulatory instruments cannot be to promote competition on the termination markets themselves, but rather to eliminate the identified competition problems with their negative effects on competition on downstream markets, in particular for end-users.

A regulatory instrument is therefore primarily "effective" if it can sufficiently influence the price. Only if it can be ensured that the termination rate is close to the costs of efficient service provision, allocative distortions will no longer occur and the competition problems W1 and W2 can be considered to be eliminated. Competition problems W3 and W4 (foreclosure strategies and transfer of market power) have both a "price" and a "non-price" component. The transfer of market power can for example take place through the practice of margin squeeze.

In addition to pricing, the dominant company has a number of other instruments at its disposal to restrict competition and transfer market power. For example, it could provide its competitors on the downstream market with lower quality termination, deny them access to certain necessary information, refuse or delay interconnection or impose unreasonable contractual conditions, thereby increasing competitors' costs. In particular, where a cost-oriented access price is set, it can be expected that the dominant undertaking will seek to increase its profits or competitive advantage through such "non-price" behaviour. This is relevant in the context of the foreclosure problem W3.

The following section discusses the selection and design of the measures of special regulation which are imposed on the party with market power in order to counteract the competition shortcomings identified. In assessing the regulatory instruments, a distinction is made between "price-related" and "non-price related" aspects of the competition problems identified.

D.8.1 Access obligation

The basic purpose of an access obligation (Art. 37 VKND) is to prevent refusal of access / interconnection and - if a specific access variant does not yet exist - to specify the conditions of access / interconnection (the wholesale product). To this end, Art. 37 VKND contains detailed provisions on what obligations can be imposed on an undertaking (technical interfaces, collocation, etc.) to ensure access. The access obligation is an effective instrument to remedy

the general refusal to interconnect or to prevent non-price anti-competitive practices and should therefore be imposed (against the background of exclusion problem W3 and, where appropriate, W4).

Against the background of the economic importance of interconnection (efficiency gains through accessibility between all networks) and taking into account the fact that incumbent operators have an incentive to pursue exclusionary strategies (refusal, delay, etc.) vis-à-vis new entrants, an obligation to interconnect must in any case be considered proportionate.

Since the general interconnection obligation of Art. 26 KomG and Art. 44 et. seq. VKND applies in principle to every operator of a public communications network, the further weighing of the proportionality of this obligation may, however, take a back seat: It can be assumed that a general legal provision which is aimed at a wide range of addressees is in principle proportionate and in the public interest.

For these reasons, based on Art. 23 (1) (d) KomG and Art. 37 (1) (h) VKND, the party to the procedure is obliged to grant any other operator of a public communications network, upon request, direct and indirect interconnection with its fixed public network for the provision of the service "termination in its fixed public network". The specific form of this obligation depends on the request of the interconnection partner.

D.8.2 Obligation of non-discrimination

The non-discrimination obligation under Art. 34 VKND serves to prevent discrimination between different purchasers of a service with regard to the parameter price (price discrimination) and to parameters other than price (quality discrimination) (competition problems 3 and 4).

The internal and external non-discrimination obligation with regard to quality parameters can ensure that the dominant company offers the input product to all customers with the same quality as it offers itself. In order to prevent possible distortive effects on competition through external price discrimination and the transfer of market power, a price discrimination ban must also be imposed.

However, the external (price) discrimination ban alone or in combination with the measures examined above is not suitable to eliminate the allocative distortions (cf. competition problems W1 and W2), as such an obligation does not restrict the pricing leeway of the dominant company. Such an obligation only ensures that all customers receive the service at the same (possibly excessive) price and thus guarantees equal opportunities for competition among these on the respective retail markets.

Furthermore, the obligation to publish a standard offer pursuant to Art. 34 para. 3 VKND serves to concretise or operationalise the equal treatment obligation. In the view of the AK, the obligation to publish a reference offer which contains the essential legal, technical and economic conditions of interconnection does not constitute a disproportionate intervention in the sphere of the operator, as these contracts - against the background of the obligations for

interconnection and interoperability - already exist and a practice in dealing with interconnection contracts and -negotiations has been in place for years.

In order to ensure the effectiveness of the regulation, the party to the procedure is therefore subject to an obligation of non-discrimination (both internal and external) with regard to the quality of the termination service, an external non-discrimination obligation with regard to the price for the termination service, and an obligation to publish a reference offer on the website (transparency obligation). The advantage of such an obligation is not only the effective elimination of discrimination practices but also the reduction of transaction costs (especially for smaller customers).

The AK is authorised to influence the design of a standard offer and to set guidelines. According to Art. 34 (4), the AK can order changes to the standard offer to ensure the objectives of the special regulation. Art. 35 para. 2 VKND authorises the AK to determine which specific information is to be published by the company subject to special regulation. This includes the level of detail and the form in which the publications are to be made.

In order to clarify which regulations a reference offer has to contain in order to ensure equal treatment and to fulfil the access obligation, the AK publishes a model template "Reference offer for network interconnection" on the AK website, on which the reference offer has to be based in terms of content. This template is intended to help the operators to orientate their reference offers accordingly and thus to avoid or minimise interventions of the AK on the basis of Art. 34 (4) and Art. 35 (2) VKND in reference offers published by the operators.

If necessary, the AK will refer to the model template in a possible review of the reference offer - e.g. in the case of disputes between the parties regarding terms and conditions of the reference offer, where the regulatory authority is called upon to arbitrate the dispute pursuant to Art. 59 KomG.

The imposition of an internal non-discrimination obligation with regard to charges, i.e. an obligation to offer all external customers the termination service at the same price as for themselves or their own retail arm (cf. on-net termination), will not be imposed as it is not suitable to eliminate the competition problems associated with excessive charges.

For all these reasons and on the basis of Art. 23 (1) KomG, the party to the procedure is subject to the obligations set out in the ruling points 3.a., 3.b., 3.c. and 3.d.

D.8.3 Transparency obligation

The basic purpose of a transparency obligation under Art. 35 VKND is to ensure vertical market transparency (between suppliers and buyers) and thus reduce transaction costs and intensify (price) competition. If access price regulation exists and companies have an incentive to switch to non-price action parameters, the transparency obligation can be an effective instrument in conjunction with other obligations such as the non-discrimination obligation (in the form of a standard offer for network interconnection) to make such non-price tactics more difficult. In

addition, a transparency obligation supports the AK in monitoring (possible) anti-competitive behaviour.

Since fixed network termination is a monopoly service and there is no substitute at wholesale level, a transparency obligation alone is not suitable to address the competition problems identified, in particular the problem of excessive charges. As the obligation to publish a standard interconnection offer is treated by the regulatory authority as part of the non-discrimination obligation pursuant to Art. 34 (3) VKND and not of the transparency obligation pursuant to Art. 35 VKND, reference is made to the relevant explanations in chapter D.8.2 above.

D.8.4 Price control and cost accounting

The imposition of cost-oriented prices directly addresses the identified competition problem of excessive charges: No other instrument is appropriate in situations where the SMP operator can charge excessive prices and where market power is not constrained in the longer term by competitive forces, such as in the present case of resistant, operator-specific termination monopolies. Since, as has been shown above, no other instrument than the setting of cost-oriented termination rates is suitable to eliminate the identified allocative inefficiencies (excessive charges), which are particularly detrimental to end-users, and since the measure is specifically provided for in the 2011 Termination Recommendation, the principle of proportionality is also fulfilled.

Art. 38 VKND provides that the AK can impose obligations on operators with market power regarding price control and cost accounting. On the basis of these obligations, the Office can set the efficient access prices for termination services. The AK can impose a cost accounting system on the operator which is independent of the operator's cost accounting.

Art. 13 of the Access Directive requires the regulatory authorities to design measures concerning cost accounting and price controls in such a way that they serve to promote efficiency and sustainable competition and maximise the interests of end users.

If an obligation to base its termination prices on the costs of efficient service provision, including an appropriate return on investment, is imposed on a company with significant market power in accordance with Art. 38 VKND, the question arises as to which procedure should be used to determine or review the cost orientation of the prices. A number of regulatory authorities in the EEA use cost accounting systems that are independent of the operators, based on the principle of pure BU LRIC cost standard. This cost accounting procedure is prescribed by the ESA (as well as by the European Commission) in its Recommendation on the calculation of termination rates.

Although pure BU LRIC based cost accounting systems have a number of advantages, they also have numerous disadvantages. In particular, the main disadvantage is the very high time, personnel and cost expenditure associated with the implementation of such a cost accounting model, both for the operator concerned and for the regulatory authority. Moreover, the application of such a cost accounting model must be expected to take a considerable amount of time before termination rates are set. The above-mentioned disadvantages are even more

pronounced in the special context of the small size of the circumstances in Liechtenstein and are, in the opinion of the AK, clearly disproportionate to the size of the market, the operators and the regulatory authority. In this context, other methods of setting cost-oriented prices, and in particular benchmarking, stand out with great advantages.

Art. 38 para. 2, last sentence, VKND provides that the AK can also take into account prices that apply on comparable markets that are open to competition when determining cost-oriented prices. This comparative, international methodology of setting charges is benchmarking. The main advantages of the application of this methodology are the low intervention intensity for the companies concerned, the low associated use of resources, the rapid determination of the termination rates in terms of time as well as their transparency and reliability.

In the 2011 Recommendation on Termination, the ESA recommends in particular that national regulatory authorities impose cost-effective termination rates by 31 December 2012 and introduce a pure BU LRIC cost accounting model for this purpose. In cases where it would be objectively disproportionate for a scarce national regulatory authority to apply the recommended cost accounting methodology after that date, it may continue to apply an alternative methodology until the date of the review of the Recommendation. This is provided that the result of the alternative method does not exceed the average termination rates set by the national regulatory authorities applying the cost accounting methodology recommended by the ESA.

The AK is of the opinion that the introduction of a pure BU LRIC cost accounting model would be disproportionate for the market participants and the AK. The AK therefore intends to make use of the exemption provided for in the recommendation for precisely these cases and to apply international benchmarking as an alternative method until further notice.

For the above reasons, the AK considers it appropriate to use international benchmarking as the preferred methodology for setting cost-oriented fixed network termination rates in Liechtenstein, taking into account the provision for alternative methods given in the ESA 2011 Termination Recommendation. Therefore, there is no obligation for the party to the procedure to set a cost-oriented termination rate based on a pure BU LRIC cost accounting model.

On the basis of Art. 23 para. 1 KomG, the party to the procedure is imposed the obligation to charge a rate for the interconnection service "Termination in its public fixed network" pursuant to Art. 23 para. 1 letter d KomG and Art. 38 para. 1 and 2 VKND, which is based on the costs of an efficient operator, measured against an international benchmark of the termination rates specified by the AK.

D.8.5 On the proportionality of the regulatory measures

Article 33 VKND, in explicit formulation of the general principle of proportionality under administrative law, stipulates that measures of special regulation must be appropriate to the nature of the problem arising and must be appropriate and justified in the light of the regulatory principles pursuant to Article 5 (2) KomG.

The suitability of the special regulatory measures to be taken to likely remedy the identified competition problems within the meaning of Art. 22 (1) (c) KomG was examined in detail and conclusively in the market analysis carried out by the AK in advance and presented further ahead in this chapter. There the various available measures of special regulation were examined in order to determine whether they represent the least intrusive means that are still capable of eliminating the competition problems identified.

Finally, when assessing the question of the proportionality of the measures in the narrower sense, their reasonableness or intensity of intervention must be discussed. This is ensured in particular by the choice of benchmarking as a price-setting mechanism. The other measures to be taken, namely the imposition of obligations to ensure equal treatment, transparency and access to the fixed networks for the purpose of call termination as such, either constitute per se minor interventions in the private autonomy of the party to the procedure or are a concrete expression of independently existing legal obligations, such as those to ensure end-to-end connectivity.

The decision of the AK to impose the measures of the special regulation mentioned in the ruling is therefore based on a dutiful exercise of discretion. The discretion exercised is oriented towards the purpose of the authorisation and does not exceed the legal limits that apply to the exercise of discretion.

D.8.6 Further obligations under Art. 43 VKND

On the basis of Article 43 VKND, the regulatory authority may also impose access obligations other than those laid down in Articles 34 to 42 VKND. These are either obligations at the retail level or, in exceptional circumstances, obligations not specified in the KomG. The competition problems identified in the present procedure are clearly wholesale problems. The application of measures at retail level would therefore neither be economically reasonable nor - in the light of the premise of the regulatory framework "wholesale regulation before retail regulation" - proportionate.

In the present proceedings, therefore, no obligations other than those mentioned in the KomG will be examined, as in the AK's view there are neither exceptional circumstances which would justify the use of such obligations nor are there other instruments available which are suitable to eliminate the competition problems identified and which would be more appropriate.

D.9 The setting of termination rates

D.9.1 The current fixed network termination rates in Liechtenstein

The current development of termination rates in Liechtenstein since 2015 is as follows:

Development of fixed termination rates in Liechtenstein	CHF centimes per minute
from 1 January 2015 until 30 April 2016	4.00
from 1 May 2016	3.90
from 1 June 2017	2.90

Table 1: Fixed network termination rates in Liechtenstein in CHF centimes per minute [Source: AK]

In Liechtenstein, no *peak/off-peak distinction*, *weekend tariffs*, *call set-up charges* or other charges or surcharges are currently applied in connection with the termination of voice calls. Termination rates are uniform, irrespective of whether the call originates inside or outside the EEA.

D.9.2 Fixed termination rates in European comparison

BEREC collects detailed data on termination rates in Europe every six months. The following analyses and presentations are based on the latest report published by BEREC on termination rates in Europe³⁹.

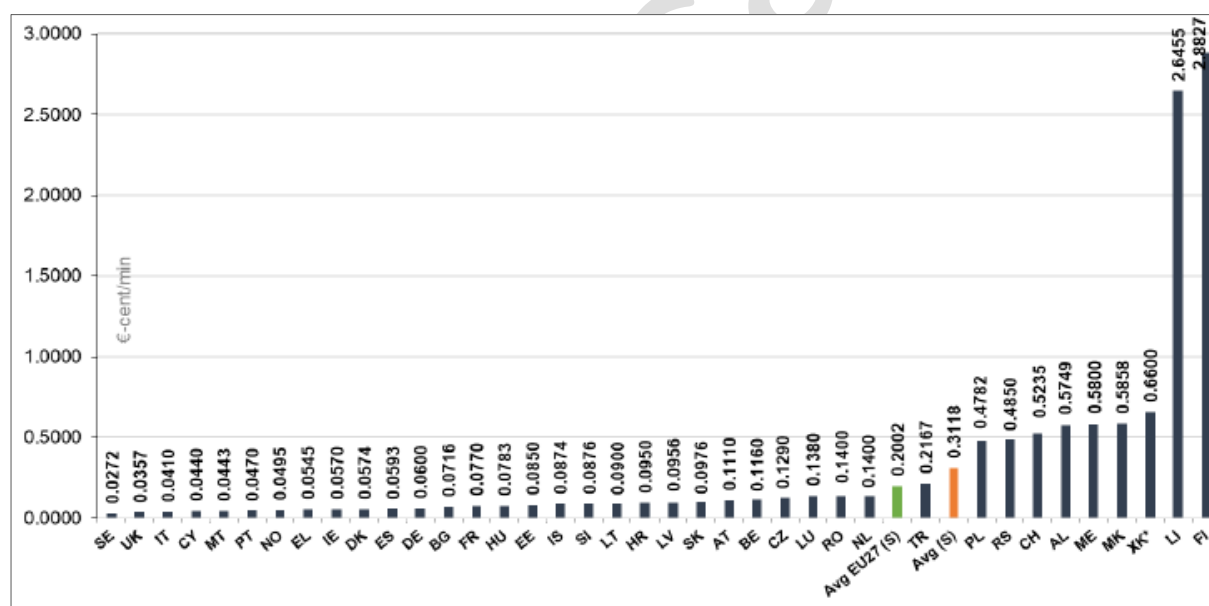


Figure 4: Fixed termination rates in a European comparison as of 1 January 2020 (EUR cents per minute), [Source: BEREC Report of 11 June 2020, BoR (20) 97, "Termination rates at the European level January 2020"]

³⁹ available at https://berec.europa.eu/eng/document_register/subject_matter/berec/reports/9285-termination-rates-at-the-european-level-january-2020

The Figure 4 shows the average fixed termination rates of the countries or analysis participants for the 1 January 2020 deadline. The chart covers the 27 EU Member States, Liechtenstein and the 2 other EFTA-EEA countries Iceland and Norway, as well as Switzerland, the United Kingdom, Albania, Montenegro, Northern Macedonia, Serbia Turkey and Kosovo. The rate shown is the average per minute of a 3 minute call⁴⁰. The figures collected are average values weighted by the market shares of the operators. For countries or analysis participants outside the euro zone, the average exchange rates of the 4th quarter 2019 have been used in accordance with BEREC specifications⁴¹ (for Liechtenstein and Switzerland: CHF/EUR 1,0962). The figure also shows the simple averages ("S" for simple, i.e. unweighted) for the 38 countries or analysis participants as a whole, and for the 27 EU countries.

The analysis of the available data shows that the fixed termination rate in Liechtenstein, at 2.65 eurocents per minute, is more than 10 times the simple EEA average of 0.20 eurocents per minute.

D.9.3 Benchmarking as a method for setting prices

As explained above in Chapter D.8.4, the AK determines the termination rate with benchmarking. The termination rate is determined as the average value of the rates set by the national regulatory authorities of the EEA, which apply the pure BU LRIC cost standard.

D.9.4 Reference values and countries

ESA's 2011 Termination Recommendation states that the regulated termination rate must not exceed the average of the charges of those national regulators already using the recommended pure BU LRIC cost accounting systems.

The AK is therefore obliged to refer to EEA countries, which already apply pure BU LRIC, when benchmarking and not to impose termination rates in Liechtenstein, which exceed this average value.

A cost-oriented rate determination on the basis of historical full cost accounting supplemented by benchmarking in accordance with point 2.2 of the decision⁴² of 24 August 2010 of the last market analysis procedure is no longer permissible, in particular due to the fact that further

⁴⁰ When calculating the average termination rate per operator, any peak/off-peak tariffs in a ratio of 50%-50% as well as any connection set-up charges are taken into account and the average of a 3-minute call is formed.

⁴¹ see <http://sdw.ecb.europa.eu/browse.do?node=9691296> or for CHF exchange rate directly at http://sdw.ecb.europa.eu/quickview.do?SERIES_KEY=120.EXR.Q.CHF.EUR.SP00.A

⁴² The AK decision in the administrative case of Telecom Liechtenstein AG concerning measures of specific regulation on the market for call termination on its public telephone network at a fixed location (fixed network termination market) is available at: https://www.llv.li/files/ak/pdf-llv-ak-20100824_verfuegung_festnetz-terminierungsmarkt_m3_esigniert-4.pdf

regulations such as Roam-like-at-Home⁴³ in 2017 and intra-EEA communications⁴⁴ in 2019 were introduced, which in turn are based on regulated termination rates in accordance with the 2011 termination recommendation.

According to the BEREC report "Termination rates at the European level January 2020", the regulatory authorities of 23 EEA states currently use a pure BU LRIC cost accounting system in line with the ESA / European Commission recommendation on the determination of fixed network termination rates. The simple average ("Avg(S)") of the termination rates as of 1 January 2020 of the EEA countries with pure BU LRIC cost standard is 0.0804 EUR cent per minute (Figure 5).

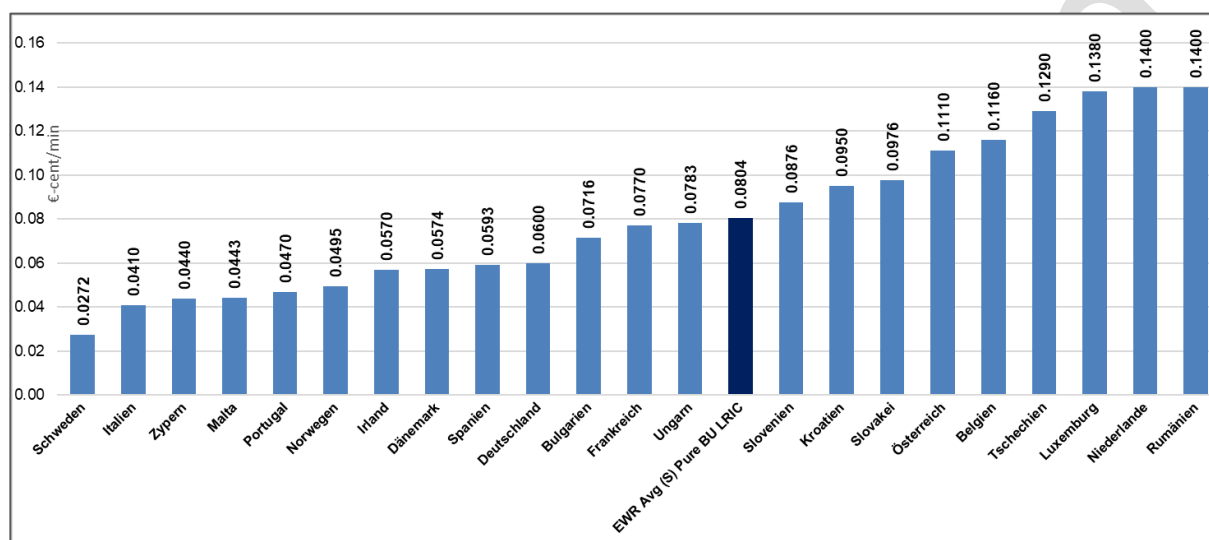


Figure 5: Fixed network termination rates in EEA countries with pure BU LRIC cost accounting systems. Source: BEREC Report of 11 June 2020, BoR (20) 97, "Termination rates at the European level January 2020"]

D.9.5 Limiting the scope to calls originating in the EEA

As explained in section D.1 above, article 75 of the European Electronic Communications Code⁴⁵ provides that the European Commission will adopt a delegated act by 31 December 2020 setting

⁴³ Regulation (EU) 2017/920 of 17 May 2017 amends Article 7(1) and (2): with effect from 15 June 2017, the average wholesale charge that the operator of a visited network may levy from a roaming operator for the provision of a regulated roaming call originating on that visited network, including inter alia origination, transit and termination costs, shall not exceed a safeguard ceiling of EUR 0.032 per minute. "

⁴⁴ Article 5a(5) of Regulation (EU) 2015/2120 as amended by (EU) 2018/1971: "From 15 May 2019, retail charges (excluding VAT) levied on consumers for regulated intra-EU communications shall not exceed EUR 0.19 per minute for calls and EUR 0.06 per SMS", available at <https://eur-lex.europa.eu/legal-content/DE/TXT/PDF/?uri=CELEX:02015R2120-20181220&from=EN>

⁴⁵ Directive 2018/1972 of the European Parliament and of the Council of 11 December 2018 on the European Electronic Communications Code, text with EEA relevance, available at <https://eur-lex.europa.eu/legal-content/DE/TXT/?uri=CELEX:32018L1972>

a maximum EU-wide level for voice call termination rates ("eurorate"). This is a regulation with EEA relevance, i.e. it will also apply in Liechtenstein once the procedure for its incorporation into the EEA Agreement is completed.

The draft delegated act, which the Commission made available for public consultation on its "Have your say" website⁴⁶ from 25 August to 22 September 2020, indicates that the single eurorate will apply only to calls originating and terminating within the EEA.

In the accompanying Staff Working Document, the Commission states that as of June 2020, 26 of the 27 Member States⁴⁷ of the Union already explicitly exempt the termination of calls originating outside the Union from price regulation (19 countries) or allow operators (7 countries) to set termination rates under certain conditions.

In BEREC's statement on the draft of the delegated act available to the AK, it can be seen that the charging regulations on calls with origination outside the EU are in line with the principles formulated by BEREC.

In recitals 8 and 9 of the draft delegated act, the Commission sets out its considerations leading to this regulation, which applies exclusively to EU/EEA internal calls, as follows (in italics):

- *Regulated voice termination rates should apply to calls originating and terminating in the Union, because if calls originating in third countries and terminating in the Union are included, there is a risk that the objectives of this Regulation, in particular the objectives of the integration of the internal market, may be undermined where third country operators charge termination rates that are higher than the eurorate or where such termination rates are not regulated according to cost efficient principles.*
- *The combination of low regulated termination rates for calls terminated in the Union and high and not cost-effective termination rates for calls to operators in third countries would likely lead to higher termination rates for calls originating in the Union and terminated in third countries, with negative effects on retail tariffs in the Union and on the cost structure of operators in the Union.*
- *The varying degrees of exposure of Union operators to calls terminated by those third country operators that charge high and not cost-effective termination rates would create imbalances in the cost structure of Union operators due to factors beyond the control of the operators themselves.*
- *This would be likely to prevent the emergence of pan-European retail offers including calls to certain countries outside the Union, as calls to these countries are subject to higher termination rates, which could have a negative impact on consumers and in particular businesses in the Union.*

⁴⁶ available at <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/1958-Voice-call-termination-rates-in-the-EU-Eurorates->

⁴⁷ Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Greece, Hungary, Italy, Latvia, Lithuania, Luxembourg, Malta, Poland, Slovenia and Slovakia and Sweden do not apply price regulation to mobile calls made outside the Union; France, Germany, Ireland, the Netherlands, Portugal, Romania and Spain allow operators to set termination rates, subject to certain conditions, usually that the rates are no higher than those charged by their non-EU counterparts.

- *It would also distort competition, as the asymmetric effects of high termination rates for calls terminated in countries outside the Union would lead to different competitive conditions for different operators in the Union, which would ultimately also distort investment capacity and incentives to invest throughout the Union (both investment in operators and investment by operators).*
- *All these effects would clearly run counter to the objectives of the Regulation, which are to promote the integration of the internal market by removing distortions between operators due to termination rates that are significantly higher than costs.*

The Commission's reasoning focuses on the two-sidedness of the termination relationship between interconnected network operators and examines the (negative) consequences for EU operators if the third country counterpart does not charge regulated tariffs according to the same cost-oriented principles. The Commission found not only distortions to the detriment of the operators concerned, but also disadvantages for the development of the internal market.

A clear basic regulatory principle is that regulatory decisions must be forward-looking. This avoids inefficiencies on the part of both operators and authorities.

In view of the practice, already implemented by almost all EU regulatory authorities, that only calls originating within the EU are subject to regulated rates, and due to the fact that the delegated act is to be incorporated into the EEA Agreement and thus the regulation of termination rates will be applicable in Liechtenstein in accordance with the delegated act, the AK is aligning the Liechtenstein termination regulation in the same way, in a forward-looking manner. I.e. the termination rate is only regulated for calls originating within the EEA and in case of calls originating outside the EEA, the operators are free to negotiate and set the termination rate. This is the only way to ensure that market uncertainties are avoided, that the efforts on the part of both operators and the AK remain as low as possible and that the transition from the termination rate regulation planned from 1 January 2021 to the follow-up regime of the delegated act can be carried out easily and without major changeover efforts on the part of the operators.

D.9.6 Consideration of special circumstances

The regulation of fixed network termination rates in Liechtenstein continues to take into account *Decision of the EEA Joint Committee No 11/2004 of 6 February 2004 adopting the Access Directive 2002*. The Decision stipulates that the Access Directive 2002 applies for the purposes of the EEA Agreement with the following adaptation: *"Liechtenstein and its national regulatory authority will make all reasonable efforts to implement the provisions of this Directive, but the assessment of the implementation must take into account the **specific situation of Liechtenstein and the particular circumstances of its very small telecommunications network, market structure, small number of customers, market potential and the possibility of market failure**".*

The AK can therefore take "the special situation of Liechtenstein" into account within the framework of access regulation according to the Access Directive 2002 - and this includes the regulation of termination rates.

Extent of the lowering

The regulation of the Liechtenstein termination rate leads to an extraordinarily high reduction from the currently charged termination rate of 2.9 CHF centimes per minute to the European level of approx. 0.08 EUR cents per minute, which is determined by the pure BU LRIC cost standard (Figure 5). In view of this special situation, regulation should be kept as conservative as possible.

The termination rate set by benchmarking shall not exceed the average value of the rates set by national regulatory authorities in accordance with the cost accounting methodology recommended by the ESA in the 2011 Termination Recommendation. With regard to the average calculation method, either a simple average or an average weighted by the national number of subscribers may be calculated. In the report on termination rates in Europe, BEREC uses both averaging methods in its analysis of European mobile termination rates. The ESA's 2011 Termination Recommendation does not further specify which type of averaging method should be used. The AK will therefore use both methods in the average calculation and apply the less intervention-intensive, more conservative result to determine the upper limit of the termination rate.

Purchasing Power Parities

There are considerable and persistent differences in purchasing power between Liechtenstein and the EEA countries, which result on the one hand from the use of the Swiss franc (CHF) as the national currency and Liechtenstein's integration into the Swiss customs territory, and on the other hand from the position of the Swiss economy in the international economic structure, which is characterised by comparatively high prices and wages and low taxes and interest rates. In purchasing power values of Eurostat⁴⁸, the analytical category "GDP - Gross Domestic Product" for Switzerland in the period 2011 - 2018 results in a value range of 1.87 (2011) to 1.72 (2018) compared to the reference EU27-2020 with a value of 1.00. The pure BU LRIC cost standard, on which the benchmarking values of the AK are based, covers not only the variable costs, but above all the incremental procurement costs of network elements, which are necessary for termination service. With regard to purchasing power-related differences in termination costs, equipment-specific purchasing power values must therefore be taken into account. Eurostat maintains a purchasing power table⁴⁹ for the analytical category "A050102 Electrical and optical equipment", which consists of "Information and Communication equipment", "Other electronic and optical products" and "Electrical Equipment", which is appropriate to the context of termination. For the period 2011 to 2018, this table shows a value range for the CHF area and thus for Liechtenstein from 1.50 (2011) to 1.16 (2018) compared to the reference EU27-2020 with a value of 1.00. Here too, there are non-negligible differences compared to EU countries that cannot be influenced by the fixed network operators.

However, the ESA confirmed to the AK, that the 2011 Termination Recommendation does not provide for benchmarking taking into account purchasing power differences leading to different costs for operators. Thus, purchasing power differences cannot be included in the calculation

⁴⁹ Values from the Eurostat database Purchasing Power Parities (PPP) and comparative price level indices for European System of Accounts (ESA) 2010 aggregates (prc_ppp_ind), available in April 2020 at <https://ec.europa.eu/eurostat/de/web/purchasing-power-parities/data/database>. The most recent values are shown for the year 2018.

of the benchmarking, but the AK has to include the nominal termination rates (in EUR cents) in the average calculation.

Market size

Despite the small size of the Liechtenstein market, there is no need for size-related adjustments to the benchmark. In this context, the ESA recommendation is explicit with the pure BU LRIC approach, i.e. the efficient termination rate should be determined without taking into account individual setups of fixed network operators.

D.9.7 Calculation of the termination rate

Procedure

For the calculation of the termination rate to be prescribed, the AK uses the half-yearly reports on the development of termination rates in Europe published by BEREC (see Chapter D.9.2). From this data source the AK can reliably derive all relevant values for benchmarking on the basis of EEA countries with own pure BU LRIC calculations.

- The AK-Benchmarking uses information of the recently published BEREC Report on Termination Rates in Europe.
- The data of those EEA states whose regulatory authorities have set termination rates on the basis of the pure BU LRIC cost standard by a formal decision are taken into account. The AK uses the values determined for the first half of 2021 or, if these are not available, currently valid values.
- For the determination of the termination rate in Liechtenstein, the simple and subscriber-weighted average of the national termination rates is calculated and the higher result is used.
- For the conversion of EUR cents into CHF centimes, the AK applies the CHF/EUR exchange rate of the BEREC report, which the AK uses as a data source for benchmarking.

Calculation

The following Table 2 displays the benchmark-based calculation of the simple and subscriber-weighted average termination rate. All termination rates are quoted per minute. The higher of the two averages is the benchmark value at 0.09 CHF centimes per minute.

Country		lowest regulated FTR in EUR cents per minute	period	Line Total
AT	Austria	0.1110	H1-2020	3'111'530
BE	Belgium	0.1160	H1-2020	3'930'410
BG	Bulgaria	0.0716	H1-2020	1'054'894
CY	Cyprus	0.0440	H1-2020	320'756
CZ	Czech Republic	0.1290	H1-2020	Confidential
EN	Germany	0.0600	H1-2020	38'220'000

Country		lowest regulated FTR in EUR cents per minute	period	Line Total
DK	Denmark	0.0574	H1-2020	472'463
EL	Greece	-	H1-2020	4'706'366
ES	Spain	0.0593	H1-2020	19'511'193
FR	France	0.0770	H1-2020	N/A
HR	Croatia	0.0950	H1-2020	1'335'562
HU	Hungary	0.0783	H1-2020	3'049'000
IE	Ireland	0.0570	H1-2020	1'401'321
IT	Italy	0.0410	H1-2020	19'621'082
LU	Luxembourg	0.1380	H1-2020	270'800
MT	Malta	0.0443	H1-2020	287'164
NL	Netherlands	0.1400	H1-2020	5'982'500
NO	Norway	0.0495	H1-2020	502'706
PT	Portugal	0.0470	H1-2020	5'128'698
RO	Romania	0.1400	H1-2020	3'375'644
SE	Sweden	0.0272	H1-2020	1'924'972
SI	Slovenia	0.0876	H1-2020	Confidential
SK	Slovakia	0.0976	H1-2020	764'446
Exchange rate 1,0962 CHF/EUR		[EUR cent/min]	[CHF centimes/min]	
simple average value:		0.0804	0.0881	
weighted average value:		0.0669	0.0733	
Benchmarking value, regulated upper limit:			0.09	

Table 2: Calculation of the FTR for Liechtenstein from pure BU LRIC regulated values of the EEA [Source: AK].

D.9.8 Specific regulation of the termination rate

The maximum termination rate

Based on the explanations on procedure and calculation, the AK orders a termination rate upper limit of 0.09 CHF centimes per minute.

This maximum termination rate is exclusive of value added tax. The rate is independent of traffic volume. No additional charges are to be levied for unsuccessful connections. The actual rate to be paid is based on a to-the-second billing of the connection that has been established.

If termination rates are differentiated according to peak and off-peak times or other criteria or if call set-up fees are charged, it must be demonstrated that the upper limit for termination rates is actually complied with on average.

The termination rate will be set symmetrically, i.e. the same for each operator, in accordance with Recommendations 1 and 11 of the 2011 Termination Recommendation.

The regulation of termination rates applies to calls originating and terminating within the EEA.

Date of entry into force

Based on Article 23 (1) (d) KomG and Article 38 (1) and (2) VKND, the party to the procedure is obliged to comply with the fixed upper limit for termination rates from 1 January 2021.

Review of rates

In order to find a solution for the Liechtenstein market and the Regulatory Authority that is compatible with size, the AK will recalculate and set the termination rate every 3 years as long as the Code has not been incorporated into the EEA Agreement. This is without prejudice to the possibility for market players to request a review in advance for important reasons.

If other charges for access to the termination service, which are not specified in the present decision, such as for the establishment and operation of network interconnection, turn out to be competition-distorting, the AK will oblige the party to the procedure according to Art. 38 (1) VKND to offer the corresponding services based on an international benchmarking procedure at charges in the amount of the costs of an efficient operator.

Predictability of the decision

Based on Article 23 (1) (d) KomG and Article 38 (1) and (2) VKND, the party to the procedure is obliged to comply with the fixed upper limit for termination rates from 1 January 2021.

This reduction is urgent and justified in the light of the absolute level of current fixed termination rates in Liechtenstein compared to the EEA.

The AK informed the party to the procedure already on 21 October 2019 about the comparative values in Europe published by BEREC in the report BoR (19) 91 for 1 January 2019. BEREC calculated the simple average value of the EU Member States at 0.1982 EUR cent per minute.

The party to the procedure was then informed within the framework of the national consultation on the bases and planning of the new market analysis round ("Market Analysis 2019+") from 13 December 2019 to 7 February 2020 about the steps planned by the AK, which would lead to a reduction of the termination rates within the framework of the market analysis procedure at hand. The AK received comments from Telecom Liechtenstein and Swisscom, among others, and included them in the final document.⁵⁰

Thus, the planned reduction does not come as a surprise, but was announced by the AK more than one year in advance. The fixed network operators thus had enough time to adjust their business planning accordingly.

D.10 Time horizon

Article 21 (2) KomG stipulates that the competitive conditions in the delineated markets are to be regularly reviewed by the AK. The time horizon of market analyses is defined in Art. 16 (6) of the Framework Directive with a three-year period. The successor Directive (EU) 2018/1972 of 11 December 2018 on the European Code of Electronic Communications, which will be valid in the Union from 21 December 2020, provides for an extended time horizon of five years in Art. 67 (5) (a) and justifies the extended deadline compared to the Framework Directive with

⁵⁰ The final document "Market Analysis Planning 2019 plus V2.0" was published on 3 March 2020 together with a news item on the AK website and on 5 March it was sent to all registered providers and operators by electronic mailing. The document is available at <https://www.llv.li/inhalt/118681/amtstellen/grundlagen-und-planung-marktanalyse-2019>

greater stability and improved regulatory predictability. The AK continues to keep the underlying markets under observation and will therefore recalculate and determine the termination rate on the basis of the present market analysis with regard to stability and predictability of regulation every 3 years, as long as the uniform determination of the termination rate applicable in the EU by means of a delegated legal act according to Art. 75 of the Codex⁵¹ has not yet been incorporated into the EEA Agreement. Should significant market changes occur in the EEA before the entry into force of the uniform termination rate, the AK will renew the entire market analysis.

D.11 Cost claim

No fees or costs will be charged or reimbursed for this procedure.

For all these reasons, the decision had to be made in accordance with the ruling.

INFORMATION ON LEGAL REMEDIES

An appeal against this decision may be lodged with the Complaints Commission for Administrative Matters within 14 days of notification.

The complaint must contain:

- the name of the contested decision;
- a statement whether the decision is contested in its entirety or only in part;
- in the latter case, the exact designation of the contested part;
- the grounds of appeal;
- the applications;
- the evidence to support and prove the grounds of appeal, and
- the signature of the complainant.

Vaduz, the **TT. month 2020**

File number 731.3/2020-1138 / GSI

goes to: **Telecom Liechtenstein AG / Backbone Solutions AG / Nexphone AG**

OFFICE FOR COMMUNICATIONS

Dr. Rainer Schnepfleitner
Director

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