

FINAL DECISION ON

**THE PRICES OF CAM CIRCUITS AND
INTER-ISLAND CIRCUITS**

ANACOM

2020

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1. Background

In the final decision concerning the high-quality wholesale access market at a fixed location (access and trunk segments¹), ANACOM analysed the connections between Mainland Portugal and the Autonomous Regions of the Azores and Madeira - hereinafter CAM circuits² - and the circuits connecting the different islands of the Azores (inter-island circuits) using submarine cables owned by MEO - Serviços de Comunicação e Multimédia, S.A. (MEO). It decided, *inter alia*, to impose on MEO³ the obligation to control prices, including the obligation of cost orientation of prices⁴.

The main purpose of this decision was to improve competition conditions on the market, to benefit alternative operators and service providers (OSP) to MEO, who need to lease these connections (leased lines⁵) in order to develop their business so that consumers in general, in the Autonomous Regions, enjoy greater retail offer diversity and on terms comparable to those made available to other consumers.

In order to verify compliance with this obligation, this decision also established that an annual review of the prices of the CAM circuits and inter-island circuits would be carried out. For this purpose, MEO would make available on an annual basis, the data relating to the costs and capacity contracted by the OSP and that reserved for MEO itself⁶.

Thus, in 2018, ANACOM analysed the costs of these circuits and decided, on 1 March 2019⁷, to maintain the prices of the traditional circuits in the framework of MEO's Leased Lines Reference Offer (LLRO) and to reduce the (maximum) prices of CAM circuits by 10% and of the inter-island circuits by 6% within the framework of MEO's Reference Ethernet Leased Lines

¹ Respectively, markets 4 and (ex)14 of the European Commission (EC) Recommendation on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation - hereinafter 'market analysis 4'.

² The set of CAM circuits (on the optical infrastructure of the submarine cable) form a ring that connects mainland Portugal, the Azores (RAA) and Madeira (RAM).

³ The designated operator with significant market power - SMP - in the market of leased line trunk segments.

⁴ Decision of 1 September 2016, available at <https://www.anacom.pt/render.jsp?contentId=1395262>.

⁵ In the wholesale component of trunk segments.

⁶ In its decision of 2017, ANACOM also established that the annual review of prices of CAM circuits and inter-island circuits would be made, in the future, in the second half of the year in order to be based on final annual data and not on cost estimates presented by MEO.

⁷ Decision available at <https://www.anacom.pt/render.jsp?contentId=146899>.

Offer (RELLO), until the subsequent annual review of those prices⁸. In this decision, ANACOM also established that the new prices should enter into force on the date of approval of the draft decision, that is, on 7 November 2018.

This document thus substantiates the annual cost analysis and price review of CAM circuits and inter-island circuits of MEO based on the most recent costing data, i.e. for 2018.

In view of the above, and in order to carry out this analysis, on 6 August 2019 ANACOM requested detailed information on the costs of the aforementioned circuits in the year 2018. MEO replied on 30 August 2019, simultaneously by e-mail and by letter.

By decision of the ANACOM Board of Directors of 17 October 2019⁹, the draft decision on the prices of CAM circuits and inter-island circuits (hereinafter DD) was approved.

The aforementioned DD was submitted to prior hearing of the interested parties, under the terms of and for the purposes of articles 121 *et seq.* of the Código de Procedimento Administrativo (Code of Administrative Procedure), as well as the general consultation procedure established in Article 8 of Lei das Comunicações Eletrónicas (Electronic Communications Law - ECL)¹⁰. In both cases, interested parties are given a period of 20 business days in which to reply.

The consultation procedures took place until 20 November 2019, and the following entities submitted comments within the deadline established for this purpose:

- MEO – Serviços de Comunicações e Multimédia, S.A. (MEO);
- NOS, SGPS, S.A. (NOS)¹¹;
- ONITELECOM – Infocomunicações, S.A. (ONI)¹²;
- VODAFONE Portugal – Comunicações Pessoais, S.A. (VODAFONE);

The corresponding report was drawn up of the positions expressed in relation to the DD, and ANACOM's understanding regarding the same, which forms an integral part of this decision.

⁸ The prices of the CAM and Inter-island circuits within the framework of the Leased Lines Reference Offer (LLRO) remain unchanged, given the lack of demand and the small number of circuits.

⁹ Available at <https://www.anacom.pt/render.jsp?contentId=1487781>.

¹⁰ Law no. 5/2004 of 10 February, in its current wording.

¹¹ NOS replied on behalf of its subsidiaries NOS Comunicações, S.A., NOS Açores Comunicações, S.A. and NOS Madeira Comunicações, S.A..

¹² ONI sent a joint reply with NOWO Communications, S.A..

In accordance with paragraph 3(d) of ANACOM's Consultation Procedures¹³, approved by determination of 12 February 2004, this Authority shall make available on its website all the comments received, safeguarding any information of a confidential nature.

By decision of 9 January 2020¹⁴, ANACOM approved the final draft decision concerning the review of the prices of CAM circuits and of inter-island circuits supported on submarine cables owned by MEO, as well as the report of the prior hearing and of the general consultation procedure concerning that draft decision.

In compliance with the applicable procedures, this draft decision has been notified to the European Commission (EC), the Body of European Regulators for Electronic Communications (BEREC) and the national regulatory authorities of the other EU Member States.

On 5 February 2020 the EC communicated that, having examined the notification, it had no comments to make and ANACOM, in accordance with article 7(7) of the Framework Directive, could approve the draft measure.

¹³ Available at <https://www.anacom.pt/render.jsp?contentId=420767>.

¹⁴ Available at <https://www.anacom.pt/render.jsp?contentId=1499811>.

2. Analysis

This analysis uses the data sent by MEO on the annual costs of the submarine cables and transmission systems (CAM ring and inter-island ring) supporting the CAM circuits and the inter-island circuits and associated activities, calculated in the 2018 results of its Analytical Accounting System (AAS)¹⁵.

The same methodology adopted in the analyses and decisions of 2017 and 2018 is used for the analysis of the costs and capacity used in the aforementioned rings.

2.1. Traditional CAM and inter-island circuits

According to the LLRO information available, the traditional circuits were residual at the end of 2018. Accordingly, ANACOM intends to maintain the prices in force for the traditional CAM and inter-island circuits, regulated under the LLRO.

2.2. Ethernet CAM circuits

Based on data provided by MEO regarding the capacity of the network infrastructure supported on MEO's submarine cables, it was estimated that the Ethernet capacity used in the CAM ring was, at the end of 2018, [IIC] [FIC]¹⁶ Gigabit per second (Gbps), with the following breakdown by technology and by contracting OSP:

- (a) [IIC] [FIC] Gbps connected/reserved for MEO on the MPLS network;
- (b) [IIC] [FIC] supported on the SDH network;
- (c) [IIC] [FIC] supported on DWDM.

In response to ANACOM's request for information, MEO again emphasizes its disagreement with the methodology adopted by this Authority to determine the capacity in use in the CAM ring and the inter-island ring, as it looks at the networks differently according to the technology.

¹⁵ The data regarding the investments completed and ongoing in 2019 by MEO on some sections of the inter-island ring and the CAM ring were also analysed.

¹⁶ [IIC]: start of confidential information and [FIC]: end of confidential information.

ANACOM stresses that this is not a new subject matter. On the contrary, it is a matter already analysed and discussed in the last market 4 analysis and in the subsequent decisions on the prices of the CAM and inter-island circuits¹⁷. Thus, and taking into account that MEO again presents the same arguments, ANACOM believes it should maintain the methodology (of accounting for the capacity effectively in use in the CAM and inter-island rings) it implemented in the decision of 1 September 2016¹⁸ and that was the basis for the (various) decisions of this Authority on the prices of the CAM and inter-island circuits, thereby maintaining regulatory certainty and predictability.

Regarding the costs of providing (leased circuit) services on MEO's CAM submarine cable infrastructure of the CAM ring, according to MEO's SCA data for 2018, the costs associated with the 'CAM Submarine Cables' activity were **[IIC]** **[FIC]**¹⁹ euros.

Taking into account the costs of this activity and the capacity used at the end of 2018, as detailed above, of **[IIC]** **[FIC]** Gbps, it is estimated that the annual depreciation cost per Gbps of a CAM circuit associated with the aforementioned activity is **[IIC]** **[FIC]** euros.

The following have to be added to this value:

- the cost of the demultiplexing equipment located in the access centres to the submerged part of the CAM circuits, which amounted to **[IIC]** **[FIC]** euros per Gbps and per section (non-secured);
- a percentage to meet other costs, such as common costs and commercial costs (including handling, invoicing and bill collection), which represent **[IIC]** **[FIC]**% of the network costs of the CAM circuits, translating into costs of **[IIC]** **[FIC]** euros per Gbps; and also
- the capital cost with the transfer of the former Marconi, allocated to the 'CAM Submarine Cables' activities, in the amount of **[IIC]** **[FIC]** euros per Gbps,

¹⁷ See, in particular, the decisions and reports of the consultation and prior hearing of the decisions of 2017 and 2018, available at:

<https://www.anacom.pt/render.jsp?contentId=1409942and>
<https://www.anacom.pt/render.jsp?contentId=1463484>, respectively.

¹⁸ Although (i) in the analysis of prices of the CAM and inter-island circuits contained in the ANACOM decision of 19 December 2014, which approved the draft decision on market 4 of the Recommendation on relevant markets, the adoption of this methodology had already been proposed, and (ii) in the decision of 23 July 2015, concerning the approval of provisional and urgent measures relative to the market for high-quality wholesale access at a fixed location (CAM and inter-island Ethernet circuits), this same methodology was used to ascertain the margins.

¹⁹ This includes investment costs (amortisation and capital costs) and operating and maintenance costs (O&M).

meaning that the total cost of a non-secure CAM circuit²⁰ in 2018 is estimated at [IIC] [FIC] euros per Gbps.

Taking into account that the price of a 1 Gbps CAM circuit in the RELLO is currently 2 281 euros per month, it is noted this price is higher than the respective costs calculated for 2018, of [IIC] [FIC] euros per Gbps per month, with an estimated margin of around 10%, namely [IIC] [FIC] %.

Note that, in its letter of 30 August 2019, MEO reported having carried out an increase in capacity of the CAM ring²¹, and it does not expect to undertake any further expansion in the CAM and inter-island systems in 2019. MEO points out that the expansions in the CAM ring, carried out and ready for service during 2018, were spread over the years 2018 and 2019, in accounting and financial terms²². In the calculation of the cost of the CAM and inter-island circuits, as a time lag exists between the available capacity in the CAM (and inter-island) rings and the reporting of the corresponding investments, due to purely accounting/financial factors, and based on the capacity made available/used in these systems in 2018, the totality of the investments made will have to be taken into account, according to MEO, and not only those reported in 2018.

It should be noted that, according to information from MEO itself, about 76% of the costs of capacity expansion in the CAM ring were already accounted for in 2018, thus reflecting a large part of that investment, according to the accounting information now made available by the company. In addition, the portion of the investment to be accounted for in 2019 represents approximately [IIC] [FIC] of the total annual costs, so the impact of the additional costs of this portion in 2019 (depreciation and cost of capital) will certainly be diluted by reducing the depreciation and cost of capital of the remaining cost portions of the CAM ring.

²⁰ This is a connection/section between mainland Portugal and the Azores Autonomous Region, or between mainland Portugal and Madeira Autonomous Region or between the Azores Autonomous Region and the Madeira Autonomous Region.

²¹ "[IIC] [FIC]. With this upgrade, the total capacity installed in the CAM ring at the end of 2018 was [IIC] [FIC]. It should also be noted that the upgrade [IIC] [FIC]."

²² "In fact, of the total investment made with the CAM ring upgrade [IIC] [FIC] the impact in 2019", according to MEO's letter of 30 August 2019.

It is also noted in this respect that ANACOM decided in the 2017 analysis to change the period in which it carries out the annual review of the prices of the CAM circuits and inter-island circuits, as it considers that the analysis based on final data costs is more accurate and robust. Therefore, in this specific case, the costs accounted for (by MEO) in 2019 will be assessed in detail in the next analysis.

On the other hand, taking into account the estimates for capacity used at the end of that year, ANACOM indicated in its 2018 analysis that this investment might not be considered efficient in view of the (lack of) changes in demand²³.

Effectively, from a short-term perspective, and having confirmed the lack of increased demand from operators despite the price reductions imposed by ANACOM, this investment could not be considered eligible for this analysis.

However, it is accepted that, in the medium to long-term perspective, it should be taken into account that the capacity increase in the ring will, as MEO itself points out, meet an increase in demand without the need for future expansions at network level. **[IIC]** **[FIC]** and "*without the need to involve further inquiries and requests to suppliers*²⁴".

In addition, it is acknowledged that the main component of the investment made in terminal equipment, with a weight greater than 50% of the total costs associated with that investment²⁵, relates to the common parts (rack, matrix, aggregates, among others) that would always be necessary, regardless of the installed capacity.

Therefore, and as ANACOM considers that the continued reduction in the (maximum) prices of the CAM circuits will be expected to lead to an increase in numbers contracted by the operators and, consequently, to greater use of the installed capacity, making the aforementioned investment efficient in the medium-long term, this Authority believes that it is eligible for the determination of the regulated prices. Therefore, it considered the associated costs, reported by MEO, for the purpose of calculating the total costs.

In conclusion, given the above estimated margin for the price of a 1 Gbps CAM circuit defined in the RELLO, taking into account the costs calculated for 2018 and the need to ensure

²³ Although, according to MEO, this investment was an opportunity where **[IIC]**
[FIC].

²⁴ It should also be noted that, according to MEO **[IIC]**
[FIC].

²⁵ Specifically, about **[IIC]** **[FIC]**%.

regulatory predictability and the conditions of the regulated wholesale offers, ANACOM intends to impose a 10% price reduction²⁶ (maximum) per non-secure CAM section/circuit (between any of the central access points to the submerged section), within the framework of the RELLO²⁷. Thus, in summary, the maximum monthly prices per non-secure Ethernet CAM section/circuit are shown in **Table 1**.

Table 1. Maximum monthly price per non-secure CAM section/circuit

Speed	Price (euros) ²⁸
10 Mbps	283
100 Mbps	622
1 Gbps	2 053
10 Gbps	20 523

This reduction allows any insignificant variations in costs to be accommodated, avoiding annual price fluctuations of very small dimensions that are objectively unnecessary, as they would introduce unpredictability and instability in the markets.

2.3. Inter-island Ethernet circuits

The methodology used for inter-island circuits exclusively supported on MEO submarine cables was similar to the one used for the CAM Ethernet circuits (and in the 2017 and 2018 analyses), taking into account the following:

- (a) the costs of the inter-island circuits, associated with the 'Inter-island Submarine Cables' activity;
- (b) the occupation of the sections that make up the inter-island ring of the Azores Autonomous Region (RAA), namely the total number of own circuits and those leased to third parties that use resources in this submarine cable, by section;
- (c) the length of the inter-island ring, by section.

²⁶ This will result in a reduction in the total revenue that MEO obtains from operators of **[IIC]** **[FIC]** euros, calculated for the current circuits contracted by these operators.

²⁷ Prices published in Annex 2 of the RELLO. The prices of the respective terrestrial trunk segments (if applicable) and the prices of the internal extensions and/or terminal segments are to be added to the prices of the Ethernet CAM section/circuit.

²⁸ The relationship currently existing between the monthly prices of the circuits of different speeds is maintained, compared to the price of a circuit of 1 Gbps.

In this context, the capacity used in the entire ring was first calculated, which was estimated to²⁹ be **[IIC]** **[FIC]** Gbps at the end of 2018, with the breakdown by section shown in **Table 2**.

Table 2. Capacity per section of the inter-island ring in 2018 [IIC]

Inter-island sections	2018 Capacity (Gbps)
Santa Maria – São Miguel	[FIC]
São Miguel - Terceira	
Terceira – Graciosa	
Graciosa – São Jorge	
São Jorge - Faial	
Faial - Pico	
Pico – Santa Maria	
Total	

[FIC]

The cost per section of the 'Inter-island Submarine Cables' activity was then determined, considering that the allocation to each of the sections of the total cost of the activities should be based on the respective lengths, which resulted in the cost per section presented in **Table 3**.

Table 3. Cost of the 'Inter-island Submarine Cables' activity (includes operating costs) per non-secure section for 2018³⁰ [IIC]

Inter-island sections	Total (annual) per section (euros)
Santa Maria – São Miguel	[FIC]
São Miguel - Terceira	
Terceira – Graciosa	
Graciosa – São Jorge	
São Jorge - Faial	
Faial - Pico	
Pico – Santa Maria	
Total	

[FIC]

The following must be added to these amounts:

- the cost of the demultiplexing equipment located in the access centres to the submerged part of the inter-island circuits, which amounts to **[IIC]** **[FIC]** euros per Gbps and per section (non-secured);
- common and commercial costs (including invoicing and bill collection) representing **[IIC]** **[FIC]**% of the network costs allocated to the inter-island connections, i.e. the costs

²⁹ Based on the data contained in the MEO letter of 30 August 2019.

³⁰ Includes investment costs (amortisation and capital costs) and O&M costs.

of the 'Inter-island Submarine Cables' activity, operating costs and demultiplexing costs;

- the capital cost of the transfer of the former Marconi, affiliated to this activity, in the amount of [IIC] [FIC] and which, according to MEO, should be allocated to each section on the basis of the respective lengths,

the total annual cost of the inter-island circuits is estimated for 2018 at [IIC] [FIC] euros per Gbps.

In the calculation of the monthly costs per Gbps in each section it can be seen that the prices of the 1 Gbps inter-island circuits currently defined in the RELLO are, on average, higher than the respective costs in 2018. The estimated average margin in this ring is slightly higher than 5%, more specifically [IIC] [FIC] %.

As was the case with the CAM ring, ANACOM asked MEO for information on the investment made in the inter-island circuits. MEO reported that in 2018 it expanded the capacity of the inter-island ring by [IIC]

[FIC]. However, transponders of the terrestrial network were used and the respective cost was not charged to the inter-island ring³¹.

MEO points out that the impact of these upgrades was, at the accounting and financial level, exclusively reported in 2019³². For MEO, given the existence of a time lag between the available capacity in the inter-island ring and the reporting of the corresponding investments, due to purely accounting/financial factors, the calculation of the cost of the inter-island circuits, based on the capacity made available/used in these systems in 2018, will have to mandatorily take into account all the investments made and not only those reported in 2018.

However, and for the same reasons as those provided for the Ethernet CAM circuits, ANACOM considers that the costs that MEO actually reported in the year under review should be considered.

Thus, given the margin estimated above for the prices of the 1 Gbps inter-island circuits defined in the RELLO, taking into account the costs calculated for 2018, ANACOM intends to impose a

³¹ MEO took the decision to expand its network in the inter-island ring for the same reasons mentioned above in relation to the investments in the CAM ring.

³² [IIC] [FIC], even if the respective ready for service (RFS) may have occurred in June 2018.

4% reduction in the current maximum monthly prices of a non-secure Ethernet circuit, for the submarine sections of the inter-island ring, within the framework of the RELLO³³ according to **Table 4:**

Table 4. Maximum monthly price of an inter-island circuit, per section (not secured)

Inter-island sections	Price by speed (euros) ³⁴			
	10 Gbps	1 Gbps	100 Mbps	10 Mbps
Santa Maria – São Miguel	7 628	763	231	105
São Miguel - Terceira	11 765	1 177	356	162
Terceira – Graciosa	6 188	619	188	85
Graciosa – São Jorge	7 058	706	214	97
São Jorge - Faial	5 679	568	172	79
Faial - Pico	5 404	541	163	74
Pico – Santa Maria	15 728	1 573	476	217

For inter-island circuits, this reduction also allows any insignificant variations in costs to be accommodated, avoiding annual price fluctuations of very small dimensions that are objectively unnecessary, as they would introduce unpredictability and instability in the markets.

³³ Prices published in Annex 2 of the RELLO. It should be noted that, as established in this offer: (a) the price of a fully secure circuit in the inter-island ring will correspond to the sum of the prices of the seven sections that make up the ring; (b) the price of a circuit using the inter-island sections in the RAA should correspond to the sum of the prices of the inter-island sections corresponding to the path that occupies the least number of sections between the origin and the destination, based on the structure of MEO's inter-island ring.

As for the CAM circuits, the prices of the respective terrestrial trunk segments (if applicable) on the terminal islands and the prices of the internal extensions and/or terminal segments are to be added to the prices of the inter-island circuits.

³⁴ The relationship currently existing between the monthly prices of the inter-island circuits of the different speeds is maintained, compared to the price of a circuit of 1 Gbps.

3. Determination

In view of the analysis carried out and considering that:

- (a) MEO is subject, as regards the offer of leased circuits and as a result of the analysis of market 4, *inter alia*, to the obligation to control prices, including the obligation of cost orientation of prices;
- (b) following the analysis of that market, ANACOM determined that an annual review of the prices of CAM circuits and inter-island circuits would be carried out in order to verify compliance with this obligation; and
- (c) in accordance with article 68 (3)(a) of the ECL, ANACOM may order the amendment of the reference offers at any time and, if necessary, with retroactive effect in order to make the obligations imposed in accordance with article 66 of the ECL effective;
- (d) by decision of 17 October 2019, the Board of Directors approved the draft decision on the prices of CAM circuits and inter-island circuits, which was submitted to the prior hearing of the interested parties, under articles 121 *et seq.* of the Code of Administrative Procedure, as well as the general consultation procedure established in article 8 of the ECL;
- (e) the contributions received within the framework of these procedures have been analysed in the "Report of the prior hearing and of the general consultation procedure on the draft decision concerning the prices of the CAM and inter-island circuits", which forms an integral part of this Decision,

the Board of Directors of ANACOM, within the scope of the powers provided under paragraphs 1(a), (b) and (h) of article 8 of ANACOM's Statutes, approved by Decree-Law no. 39/2015 of 16 March, in the exercise of the powers provided under paragraph 1(a) of article 9 of the same Statutes and in the pursuit of the objectives and principles of regulation, in particular that provided for in paragraphs 1(a) and 6, both of article 5 of the ECL, and in accordance with article 68 (3) of the same law and in implementation of the measures determined as a result of the analysis of market 4, hereby decides that MEO is required to:

- (a) Maintain the prices of traditional circuits, within the framework of MEO's LLRO regulated offer.

- (b) Reduce the (maximum) prices of CAM circuits by 10% and of inter-island circuits by 4%, within the framework of MEO's RELLO regulated offer. The new prices should enter into force on the date of adoption of the draft decision that preceded this Decision.