

FINAL DECISION ON

AMENDMENTS TO LLRO AND RELLO

ANACOM

2017

– PUBLIC VERSION –

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1. FRAMEWORK

Under ANACOM's decision on the analysis of the wholesale market for high-quality electronic communications at a fixed location (access and trunk segments)¹, published on 01.09.2016, MEO was required to amend LLRO² and RELLO³, within 30 days, and to publish a new Ethernet offer at layer 2 of the OSI model (or adapted RELLO offer), within 90 days from notification of the final decision.

In summary, according to that decision:

- (a) Obligations on terminating segments of leased lines in C Routes are withdrawn, following a transitional period of 18 months.
- (b) Obligations on trunk segments in new C Routes are withdrawn following a transitional period of 6 months.
- (c) Obligations on analogue lines and on new requests for digital lines in the scope of LLRO with higher speed (34 Mbps and 155 Mbps) are immediately withdrawn⁴.
- (d) The obligation to establish cost-oriented prices is withdrawn in CNC Areas⁵, although the price control obligation is maintained in these areas⁶.
- (e) MEO is required to amend RELLO within 30 calendar days, defining prices of non-secured Ethernet MAM and inter-island lines and of lines for access to international submarine cables (backhaul) as specified in the referred analysis⁷.
- (f) MEO is required to decrease by at least 66% the price of MAM lines up to 2 Mbps, inclusively, provided in the scope of LLRO, within 30 calendar days.
- (g) MEO is required to publish a new fibre-based Ethernet offer at layer 2 of the OSI model⁸ with limited contention and with symmetric or asymmetric speed (namely including accesses at 10 Mbps, 100 Mbps e 1 Gbps, on the downstream, in the case of asymmetric accesses), and allowing local and central access, within 90 calendar days from notification of the final decision on the referred market analysis, according to obligations imposed, including (cost-oriented) prices of high-quality access in NC

¹ Referred to as Market 4 in Commission Recommendation of October 2014 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation. This decision is hereinafter referred to as 'Analysis of Market 4'.

Vide <https://www.anacom.pt/render.jsp?contentId=1395261>.

² Leased Lines Reference Offer - version 19.

³ Reference Ethernet Leased Lines Offer - version 14.

⁴ Except for lines for access to international submarine cables.

⁵ Currently Not-Competitive Areas.

⁶ MEO not being allowed to define wholesale prices that lead to a margin squeeze on the downstream.

⁷ MEO is also required to submit to ANACOM, within the same deadline, grounds for prices of lines for access to international submarine cables.

⁸ Or to adapt RELLO so as to include that service.

Areas⁹, and with the negotiation of technical conditions with operators who have expressed visible interest.

In conformity therewith, MEO:

- (a) Published new versions of LLRO and RELLO¹⁰.
- (b) Submitted to ANACOM, on 03.10.2016, a proposal of prices applying to LLRO and RELLO for the backhaul line service, as well as the respective grounds.
- (c) Published¹¹ a new RELLO version¹² that integrates a new layer 2 Ethernet connectivity service.

Meanwhile, ONI, by letter of 04.10.2016, informed ANACOM of the contribution sent to MEO which included technical and operational proposals for the definition of the fibre-based layer 2 Ethernet offer.

In 2014, ONI¹³ and Vodafone¹⁴ had already submitted to ANACOM proposals for amendments to, among other offers, LLRO and RELLO, having Vodafone restated these proposals in 2015¹⁵, and insisted on these same proposals in 2016, in the scope of the response to the public consultation to the Analysis of Market 4¹⁶. On its turn, NOS submitted to ANACOM, in 2012 and 2013, its main concerns as far as wholesale line offers are concerned¹⁷.

Without prejudice to the above-mentioned proposals, on 24.10.2016, ANACOM sought, from all beneficiaries of LLRO and RELLO, specific proposals for improvement of the referred offers, duly substantiated in the light of the drop in demand for leased lines which has been registered, and of the fact that such demand is more meaningful in remote and/or less densely populated areas, indicating whether such proposals had already been negotiated with MEO. ANACOM received responses¹⁸ from:

- (a) AR Telecom, which informed that letters had been exchanged with MEO on contributions for the wholesale layer 2 Ethernet offer.
- (b) ONI, which informed that most proposals for amendments to LLRO and RELLO submitted in January 2014 remain valid, except for some specific proposals for which the respective revision was submitted.
- (c) VODAFONE informed that none of the amendments introduced by MEO to LLRO and RELLO includes changes required to provide the market with greater competitiveness

⁹ And to submit to ANACOM grounds for these prices within the same deadline.

¹⁰ On 03.10.2016 at its wholesale portal.

¹¹ On 02.12.2016 at its wholesale portal.

¹² Version 15.

¹³ By letter of 15.01.2014, with reference 004/ GRL/2014.

¹⁴ By letter of 15.09.2014 with reference 20140915_Alt_OR.

¹⁵ By letter of 16.12.2015, with reference 20150409_Alt_OR_II.

¹⁶ Vide http://www.anacom.pt/streaming/VODAFONE_M4.pdf?contentId=1389744&field=ATTACHED_FILE.

¹⁷ By letters of 01.10.2012 and 24.04.2013.

¹⁸ All responses were received by email of 15.11.2016, except for NOS' response which was received on 07.12.2016.

and improved operational efficiency of use, thus it fully restated the proposals for amendments to LLRO and RELLO submitted in September 2014 to ANACOM.

- (d) NOS considered ANACOM's initiative to promote the update of LLRO and RELLO to be positive, and submitted its contributions for analysis in the scope of the revision of those offers.

By determination of 23.03.2017, ANACOM decided to submit the draft decision¹⁹ on amendments to LLRO and RELLO to the prior hearing of stakeholders and to the general consultation procedure, which ran up to 04.05.2017²⁰. Comments received, the respective analysis and grounds for the decision are set out in the "Report of the public consultation and prior hearing on amendments to the Leased Lines Reference Offer (LLRO) and Reference Ethernet Leased Lines Offer (RELLO)", which is deemed to be an integral part hereof.

The draft final decision was notified on 01.09.2017 to the Commission, BEREC and NRA of other Member States, under paragraph 1 of article 57 of ECL and for the purpose of article 7 of the Framework Directive. On 12.09.2017, the Commission sent a request for information to ANACOM, which was replied to on 15.09.2017. Finally, under paragraph 3 of article 7 of the Framework Directive, on 28.09.2017, the Commission reported that, having examined notifications, it had no comments, thus the Authority was entitled to approve the draft decision.

This document analyses the most recent versions of LLRO and RELLO, bearing in mind the proposals made by stakeholders, as well as the responses submitted in the scope of the prior hearing.

¹⁹ Vide <https://www.anacom.pt/render.jsp?contentId=1409126>.

²⁰ On 20.04.2017, and at the request of stakeholders, ANACOM determined an extension by 5 working days to the period for sending comments in the scope of the prior hearing and consultation to which the DD had been submitted.

2. ANALYSIS

2.1 New versions of LLRO and RELLO

Following the analysis of Market 4, MEO informed ANACOM of amendments introduced to LLRO - version 19, of 03.10.2016 - and RELLO - version 14, of 03.10.2016 -, aimed to improve, clarify and simplify their operation, the following amendments having been highlighted:

- (a) Amendments in the coverage of offers, being excluded lines in C Routes and in C Areas, specifically:
 - lines without main section (MS)²¹ the local extensions of which (LE)²² end in C Areas;
 - lines with main sections in C Routes;
 - Inter-island lines²³ in the Madeira-Porto Santo, Graciosa-Corvo, Corvo-Flores and Flores-Faial connections.
- (b) Introduction of amendments at the level of procedures (Annex 5), the use of email with several new forms and the reduction of telephone contacts being highlighted²⁴.
- (c) Update of operational procedures for exchange of information on fault repair based on emails, including specifications of several templates used by operators and by MEO, according to current practises on exchange of information.
- (d) Clarification of some aspects related to the processing of parameters of quality of service as regards the reporting of faults occurred: (i) during programmed cuts notified to operators; and (ii) the underwater part of submarine cables.
- (e) Update of the list of local exchanges that are the endpoints of C Routes and inclusion of the list of parishes in C and CNC Areas.
- (f) Exclusion of prices of CNC Areas (not applicable to lines and/or accesses the Network Termination Points (NTP) of which are located in these areas).
- (g) Update of prices of MAM and inter-island lines (including conditions associated to the underwater part of these lines), taking effect on 1 October 2016.

²¹ Main Section – MS, name of trunk segments of leased lines.

²² Local extension – LE, name of terminating segments of leased lines.

²³ As far as RELLO is specifically concerned, coverage applies to Ethernet lines up to 10 Gbps in MAM and inter-island Routes, with the possibility of extension to Land routes (where appropriate) and internal and/or external local extensions in the context of MAM and inter-island lines and Ethernet backhaul lines exclusively at 10 Gbps (on account of the absence of interface of a lower capacity).

²⁴ According to the offers, in case of a failure of the communication system, via email, provided for fault report purposes, communications between the OSP and the TELO must take place via telephone, in the scope of the fault repair procedure. As such, the telephone is used as a contingency plan.

Specifically, as regards LLRO:

- (h) Digital end-to-end and part circuits above 2 Mbps, as well as all references to analogue lines, have been removed.
- (i) The type of pool of lines known as “Basic” was removed, having been incorporated in the type of pool known as “Line Network”, for the purpose of offer simplification and SLA processing, which is to the benefit of operators, given that SLAs that apply to the “Line Network” type are greater than those set formerly for the “Basic” type.
- (j) Former Annex 2 (Specifications) was removed, having its contents been transferred to the Technical Standards item in Annex 1, which led remaining Annexes to be renumbered.
- (k) Prices of backhaul lines were updated.

As far as RELLO is concerned:

- (l) Conditions of the backhaul line offer were included.

Overall, MEO fulfilled obligations imposed in the analysis of Market 4, within the deadlines set, without prejudice to the analysis of specific conditions defined by MEO in LLRO and RELLO, which are analysed in sections below.

In compliance with transitional periods set out in the analysis of Market 4, it has been provided for in LLRO and RELLO that lines existing on 2 September 2016:

- (a) With MS in new C Routes, remain in LLRO and RELLO under the conditions of the previous version of offers, for a transitional period, up to 2 March 2017 (6 months); and
- (b) without main section and whose LE end in C Areas, remain in LLRO and RELLO under the conditions of the previous version of offers, for a transitional period, up to 2 March 2018 (18 months).

However, as regards RELLO, it was found that the list of C and CNC Areas did not match the one set out in the Analysis of Market 4²⁵, having MEO assumed that all RELLO lines would be high speed, including 10 Mbps lines, which had been however defined by ANACOM in that analysis as low speed lines (speed not exceeding 24 Mbps).

This means that the list of parishes in C, CNC and NC Areas for 10 Mbps lines (low-speed market) must differ from the list of parishes for 100 Mbps, 1 Gbps and 10 Gbps lines (high speed market).

As such, in its DD, ANACOM established that “*D 1. MEO is required to amend RELLO so as to adopt, for 10 Mbps lines, the list of parishes defined in the Analysis of Market 4 for low-speed lines.*”

²⁵ Specifically, in the definition of C and CNC Areas in Annex 1 to Analysis of Market 4.

In relation to the rest of amendments introduced by MEO:

- (a) Aspects concerning the amendment in procedures, both in LLRO and RELLO, namely the reduction in the use of the telephone, being replaced by the use of emails, seem in principle to bring about improvements in the exchange of communications between MEO and beneficiaries, leading to greater security and control of fault repair deadlines.
- (b) the removal in LLRO of the “Basic” class of lines (up to 10 lines), which were included in the next class (“Network”), seems in principle to be positive as this class of lines presents greater availability of service.
- (c) In some of the annexes to LLRO and RELLO, amendments were made to the so-called “normal working hours”, which seems to have introduced some inconsistencies²⁶. As this issue is not absolutely clear, ANACOM established in the DD that “*D 2. MEO is required to clarify in LLRO and RELLO the periods of time associated to “normal working hours” in the various processes.*”

On 31.05.2017, further to the DD, MEO published new versions of LLRO (v20) and RELLO (v16), having corrected aspects identified above.

2.1.1 Prices of the backhaul line service

On 03.10.2016, MEO submitted to ANACOM grounds for prices included in LLRO and RELLO for the backhaul service (traditional and Ethernet lines).

Under ANACOM’s decision on the Analysis of Market 4, MEO is required to include in RELLO the service of lines for access to international submarine cables (backhaul lines) up to 10 Gbps, covering secured and non-secured options, with cost-oriented prices.

In this scope, RELLO should include backhaul lines at 10 Mbps, 100 Mbps, 1 Gbps and 10 Gbps. However, according to MEO, systems of international submarine cables that make landfall at its Submarine Landing Stations (SLS) are not currently able to provide Ethernet (E), Fast Ethernet (FE) and Gigabit Ethernet (GE) interfaces, only the 10 GE interface, reason for

²⁶ Vide the following examples:

- Annex 2 (LLRO, pg. 11): (footnote No.3) “*normal working hours mean the period of time between 9 am and 1 pm and between 2 pm and 6 pm on working days*”.

(Additional notes) “*assume that technical work to be carried out takes place on normal working hours, namely on working days between 9 am and 5 pm*”.

- Annex 2 (RELLO, pg. 13): “*normal working hours mean the period of time between 9 am and 12:30 pm and between 2 pm and 6 pm on working days*”.

(6. Additional notes): “*on normal working hours, namely on working days between 9 am and 12:30 pm and between 2 pm and 6 pm*”.

- Annex 3 (LLRO and RELLO, pg. 4): “*To measure repair time, indicators accounted for as working hours shall take account of normal working hours of operational teams, between 9 am and 1 pm and between 2 pm and 6 pm on working days*”.

which the offer only includes, at this stage, the 10 Gbps speed, which is the sole speed that may (currently) be supplied²⁷.

Moreover, according to MEO, the secured option concerns only the securitisation of the IAC route²⁸, the operator being granted, in a single interface, two accesses per totally different layouts between MEO's SLS (Carcavelos or Sesimbra) and MEO's ITC²⁹ (that is, MEO's exchange in Picoas or the POP in Carrier House Itconic located at Prior Velho).

The installation price and monthly prices proposed for the 10 Gbps backhaul lines IAC are as follows:

Table 1. Price of the backhaul lines IAC

SLS	Speed	Installation price	Monthly prices	
			Secured option	Non-secured option
Carcavelos	10 Gbps	3,000	11,470	7,445
Sesimbra				9,185

Where the POP of the operator is co-located in one of MEO's ITC, the backhaul line prices correspond only to prices indicated for the IAC.

In other situations, the installation and monthly prices of the NAC³⁰ correspond to prices of an Ethernet line between MEO's exchange in Picoas and the network node/PoP of the operator, according to prices applicable to the installation and monthly price of other Ethernet lines set out in Table 1 of Annex 2 to RELLO.

According to MEO, given that its Cost Accounting System (CAS) does not cover the determination of costs of backhaul lines (traditional and Ethernet), the company checked the investment associated to the implementation of a 40 Gbps DWDM structure between MEO's SLS and ITC, considering an occupation rate by 100% (that is, the cost per 10 Gbps corresponding to ¼ of the total value calculated for 40 Gbps).

Annual operational costs were determined by MEO on the basis of the following assumptions:

- (a) Depreciation period: for the purpose of simplification, the company considered **[beginning of confidential information - hereinafter BCI] [end of confidential information - hereinafter ECI]** years. There is active equipment depreciated over **[BCI] [ECI]** years, equipment of the transport network and transmission systems equipment depreciated over **[BCI] [ECI]** years and fibre optic depreciated over **[BCI] [ECI]** years.
- (b) Annual operation and maintenance (O&M) costs: **[BCI] [ECI]** on the investment.

²⁷ MEO refers that backhaul Ethernet lines are only provided at 10 Gbps speed, given that international systems of submarine cables that make landfall at MEO's SLS do not make available lower speed Ethernet interfaces. MEO refers that it will update RELLO in case changes occur in interfaces of international submarine cable systems that would justify such updates - *vide* section 3.3 of RELLO.

²⁸ International Access Component of the backhaul service.

²⁹ International Transmission Centre.

³⁰ National Access Component.

- (c) Annual commercial and billing and collection (B&C) costs: **[BCI] [ECI]** on the depreciation of the investment and on O&M costs.
- (d) Annual common costs: **[BCI] [ECI]** on the depreciation of the investment, on O&M costs and on B&C costs.
- (e) Corporation Tax (IRC): 26.5%.
- (f) Annual capital cost: **[BCI] [ECI]**.

According to MEO, prices were defined taking into account costs determined and current market practises, to enable an appropriate return to be obtained, in terms of the net present value (NPV), in a time horizon of **[BCI] [ECI]** years. Notwithstanding, just like other RELLO lines, backhaul lines are only subject to a minimum contract duration of 12 months and, in case the operator seeks to dismantle the line before the minimum contract duration has elapsed, under RELLO it is required to pay monthly amounts due up to 12 months of operation of the connection.

Bearing in mind that IAC costs differ according to the SLS concerned (Carcavelos or Sesimbra), MEO opted to break down prices of non-secured lines on the basis of the SLS involved.

Table 2. 10 Gbps backhaul line – secured IAC

[BCI]

	BEGINNING	YEAR 1	YEAR 2	YEAR 3
CAPEX				
Equipment				
FO support				
Depreciation				
REVENUE				
OPEX (OPERATING COSTS)				
O&M costs				
Commercial and B&C costs				
common costs				
EBITDA				
EBIT				
CORPORATION TAX - IRC				
NET RESULT				
OPERATION CASH FLOW (NR + DEPRECIATION)				
TOTAL CASH FLOW (OPERATION + INVESTMENT)				
NPV (Net Present Value)				

[ECI]

Table 3. 10 Gbps backhaul line – Carcavelos SLS IAC - non-secured ITC

[BCI]

	BEGINNING	YEAR 1	YEAR 2	YEAR 3
CAPEX				
Equipment				
FO support				
Depreciation				
REVENUE				
OPEX (OPERATING COSTS)				
O&M costs				
Commercial and B&C costs				
common costs				
EBITDA				
EBIT				
CORPORATION TAX - IRC				
NET RESULT				
OPERATION CASH FLOW (NR + DEPRECIATION)				
TOTAL CASH FLOW (OPERATION + INVESTMENT)				
NPV (Net Present Value)				

[ECI]

Table 4. 10 Gbps backhaul line – Sesimbra SLS IAC - non-secured ITC

[BCI]

	BEGINNING	YEAR 1	YEAR 2	YEAR 3
CAPEX				
Equipment				
FO support				
Depreciation				
REVENUE				
OPEX (OPERATING COSTS)				
O&M costs				
Commercial and B&C costs				
common costs				
EBITDA				
EBIT				
CORPORATION TAX - IRC				
NET RESULT				
OPERATION CASH FLOW (NR + DEPRECIATION)				
TOTAL CASH FLOW (OPERATION + INVESTMENT)				
NPV (Net Present Value)				

[ECI]

In the case of RELLO, prices that applied to the IAC³¹ supplied with route securitisation between SLS (Carcavelos or Sesimbra) and ITC (MEO's exchange in Picoas or POP in Carrier House Itconic located at Prior Velho) were as follows:

³¹ In the former version of LLRO.

Table 5. Former IAC prices (ECS – Picoas / Prior Velho)

Speed	Installation price	Monthly price
2M	750.00	235.95
34M / 45M	1,000.00	1,615.20
155M	1,500.00	2,648.80

Bearing in mind prices proposed for 10 Gbps in the scope of RELLO, MEO revised prices of backhaul lines IAC under LLRO in order to guarantee the alignments between the various speeds, namely for the following values:

Table 6. Revised IAC prices (ECS – Picoas / Prior Velho)

Speed	Installation price	Monthly price
2M	750.00	235.95
34M / 45M	1,000.00	1,095.20
155M	1,500.00	1,810.80

In the scope of LLRO, where the operator PoP is not co-located in one of MEO's ITC, the installation price and the NAC monthly price will be added to the IAC price. The NAC monthly price of lines at 34/45 Mbps and 155 Mbps is calculated by respectively applying the 6.84 and 11.22 coefficients, as is the case today, on the monthly price that would result for an equivalent 2 Mbps line, at prices presented in table 2 of Annex 2 to LLRO.

There are no separate backhaul costing data in MEO's cost accounting system. In this scope, MEO's approach to define prices for backhaul lines is possible, although some of the assumptions on which the company is based, or the reason for a distinction between the price of these lines and the price of other RELLO lines for a similar connection, may be questioned.

Without prejudice, MEO shows a negative margin for the overall RELLO product thus the application of prices currently defined in RELLO would worsen the situation, which is not advisable or desirable.

As such, ANACOM has no data available that could lead to the decrease of the price of backhaul lines, that would not require an overall assessment of prices.

In any event, so as to have real - and auditable - data on costs of backhaul lines, namely in the context of RELLO, MEO is required to include in its cost accounting system a separate profit and loss account for this type of lines (all relevant elements being broken down), which will enable a closer monitoring and substantiate a possible future intervention on this matter.

D 1. MEO is required to include in its cost accounting system a separate profit and loss account for backhaul lines, in the scope of RELLO.

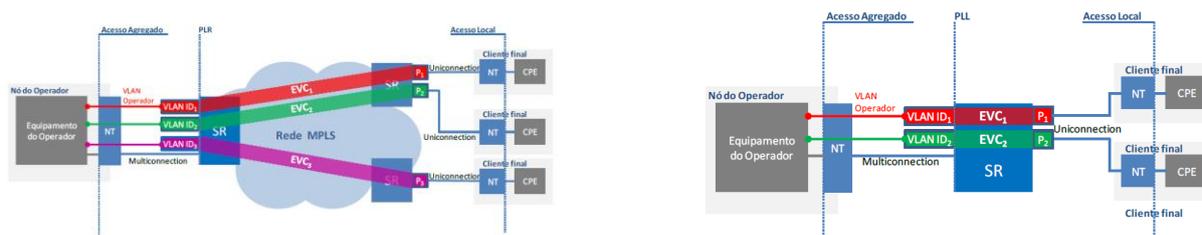
2.1.2 Ethernet connectivity offer

On 02.12.2016, MEO published a new RELLO version³², including the Ethernet connectivity service, and submitted to ANACOM grounds for prices, a summary of features requested by operators and the responses thereto given by MEO³³.

The Ethernet connectivity service consists of the provision of Layer 2 Ethernet point-to-point logical links of the OSI Model, established between aggregated accesses (terminating on the operator’s network) and local accesses (terminating on premises of end customers of the operator), over MEO’s MPLS network to which the referred accesses are connected. Ethernet logical links may be set for one of the three alternative classes of service (P1, P2 e P3, differing in terms of frame delay, frame delay variation and frame loss ratio).

Figures below show in a simplified way the architecture of the Ethernet connectivity service with (i) connection at regional level (figure on the left³⁴) and (ii) connection at local level (figure on the right³⁵).

Figure 1. Architecture of the Ethernet connectivity service with connection at regional level (figure on the left) and connection at local level (figure on the right)



Source: RELLO.

The aggregated access (AA) corresponds to the physical circuit that is made up of a point-to-point fibre pair between MEO’s MPLS network and the NT equipment located in the network facilities of the operator. Aggregated accesses connect network points at two aggregation levels, namely, at local level to 156 Local Connection Points (LCP) and at regional level at 12 Regional Connection Points (RCP).

MEO provides the E, FE, GE and 10GE physical interfaces, the latter being provided only in aggregated accesses connected to RCP, feasibility of connection to LCP being subject to analysis.

The relation between each LCP and the respective RCP (as well as the RCP to be used for redundancy purposes) is included in an excel file³⁶.

³² Version 15.

³³ By letter dated 02.12.2016.

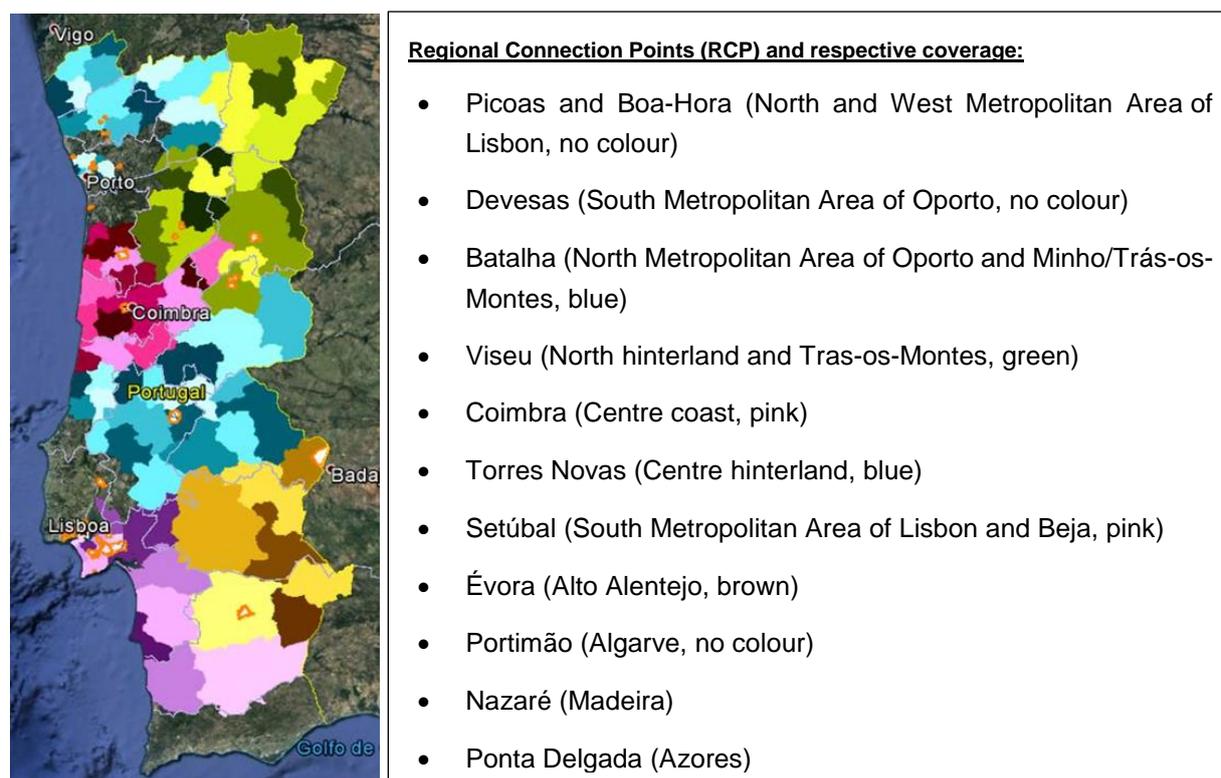
³⁴ Which represents an AA connected in a RCP, three LA and three EVC associated to the respective LA.

³⁵ Which represents an AA connected in a LCP, three LA and two EVC associated to the respective LA of the same SR.

³⁶ File “20161202_ORCE_Tabelas_v15” made available by MEO in the restricted access area of the wholesale portal.

In order to complement the above-mentioned information, MEO provides RELLO beneficiaries with a KMZ³⁷ format file, with geo-referenced maps structured at three levels, namely level 1 (territory divided into parishes, with identification of NC parishes), level 2 (MEO Exchange Areas influencing LCP and RCP) and level 3 (geographic location of SR³⁸).

Figure 2. Regional Connection Points and respective coverage



This coverage information allows beneficiaries, on the basis of geographic coordinates of a given address of an end-customer, to know (i) whether that address has coverage in NC parishes, (ii) which is the LCP associated to that address and (iii) which is the RCP associated to that address.

Local access corresponds to the physical circuit made up of a point-to-point fibre pair between MEO's MPLS network and the NT equipment located in the facilities of the operator's end customer.

Installation prices³⁹ of aggregated accesses (AA) and local accesses (LA) correspond to installation prices of LE of N1 Ethernet lines (Ethernet leased lines). Monthly prices of internal AA correspond to monthly prices of internal LE of N1 Ethernet lines. Monthly prices of external AA and of type A or type B LE resulted from the weighing of several types of external LE

³⁷ File "201261202_ORCE_Cobertura_v15" made available in the restricted access area of the wholesale portal.

³⁸ Service Routers – Equipment of MEO's MPLS network where aggregated accesses terminate.

³⁹ Vide table 4 of annex 2 to RELLO.

currently made available in RELLO. Type A accesses do not include a MS. Monthly prices of type C and D local accesses correspond to the sum of monthly prices of the external LE of remaining Network Groups (NG) of the country (Urban and Regional) and the monthly price of a MS (Intra-NG route in other areas of the country, Urban and Regional).

As regards virtual connections (EVC), MEO calculated a monthly average cost per Mbps⁴⁰, defining monthly prices for 9 types of EVC, namely Local and regional EVC, each with 3 speed profiles (symmetrical, asymmetrical 100%/20% and asymmetrical 100%/10%) and with 3 classes of service (P1 up to 1 Gbps, P2 up to 500 Mbps and P3 at 100 Mbps).

ANACOM wishes operators to comment on the new Ethernet connectivity offer before this Authority takes any position. As far as this offer is concerned, it is relevant to take into account that, as referred in the Analysis of Market 4, MEO is required to bear needs of beneficiary operators in mind, particular as regards speed, QoS or SLA profiles, these operators having been required to submit to MEO, in due time, their technical proposals for the purpose of discussion, and also of inclusion in the reference offer, if deemed to be technically viable.

According to information made available by MEO, proposals were made on this offer by AR Telecom, NOS and ONI. In summary, proposals were as follows:

Table 1. Summary of features requested in technical proposals of operators and MEO's response thereto

	Technical proposals of interested operators	MEO's response
(a)	Support also over MEO's GPON network	No
(b)	Sharing of aggregated accesses of other offers.	No
(c)	Aggregation at central level (Picoas and Batalha).	No
(d)	Access terminating in Media Converter (MC).	No ¹
(e)	LAG and MC-LAG redundancy solutions.	No
(f)	QoS – Service restoration: 2 levels of service with higher/lower quality.	No
(g)	Quality of service for local access: installation in five working days.	No
(h)	Quality of service for aggregated access: 100% of incidents.	No
(i)	Inclusion of 10 Mbps/100 Mbps and 1 Gbps/10 Gbps interfaces.	Yes ²
(j)	Minimum MTU of 2.000 Bytes for the service.	Yes ³
(k)	Transparency to the LACP protocol.	Yes ⁴
(l)	RELLO including aligned penalties for non-compliance.	Yes ⁵
(m)	Information on coverage (maps of parishes, local and regional aggregation).	Yes
(n)	Co-location in buildings of local and regional aggregation points.	Yes
(o)	Classes of service of logic connections with more than 2 levels.	Yes
(p)	Speeds in excess of 60 Mbps included in P3 class of service.	Yes
(q)	Asymmetry by 10% and 20% in the upstream.	Yes
(r)	Aggregated access overbooking.	Yes
(s)	Transparency and provision of the list of exceptions.	Yes
(t)	Redundancy solutions of local accesses and aggregated accesses	Yes
(u)	RELLO including aligned supply and restoration processes.	Yes

¹ Terminating in NT, which may or may not be an MC.

² 10 Gbps for aggregated access at regional level only. At local level, an analysis on a case-by-case basis is undertaken.

³ Only 1.426 Bytes are guaranteed. Other cases are subject to a feasibility analysis.

⁴ Subject however to a feasibility analysis for local access.

⁵ However only for physical accesses for supply and restoration of the service.

⁴⁰ Which does not change with the type of Local/Regional EVC, with the speed profile (symmetrical vs asymmetrical) or with the Class of Service.

It was found that beneficiaries proposed some matters which MEO rejected, among which the support over MEO's GPON network.

ANACOM requested beneficiaries of the offer to submit duly substantiated contributions in the scope of the Ethernet connectivity offer, which shall be duly weighted in a separate decision on this matter.

2.2 Amendments to LLRO and RELLO proposed by beneficiaries

2.2.1 Geographic information on covered area according to MEO's local exchange

ONI and VODAFONE propose that MEO provides information on the geographic area covered according to each exchange area, in the case of ONI by reference to 7-digit post codes. This information should be available both for LLRO and for RELLO, and according to ONI, this would be relevant, for example, for an appropriate planning of requests for leased lines, taking into account the coverage of exchanges where the company is already co-located.

On 15.11.2016, ONI further justified the above-mentioned proposal in the light of ANACOM's analysis to Market 4, under which C and NC areas were defined on a parish basis. According to ONI, the listing of post codes (CP7) in the range of each of MEO's exchanges would facilitate the assessment of the coverage by LLRO and RELLO of customer addresses were concerned, when the operator is co-located in a given exchange. Moreover, ONI suggested that an official list of the distribution of CP7 according to parishes was published, so that a single and commonly accepted reference was made available, for the determination of addresses located in C and NC Areas.

Additionally, according to VODAFONE, as MEO is not required to connect the requested line to the closest exchange, nor to substantiate the decision to establish a connection (to a different exchange), the beneficiary is not able to scrutiny MEO's decision, which is able to entail tariff discrepancies (monthly payments determined according to the distance, according to Annex 2 to RELLO) due to the type of connection involved, that is, the connection to a given exchange to the detriment of the closest one. Additionally, according to VODAFONE, there is no mechanism that enables the operator to examine the distance presented and billed by MEO.

Consequently, VODAFONE proposes the following amendments:

- (a) LLRO must explicitly lay down on MEO the obligation to make available a tool that enables the beneficiary to know in advance the exchange that will serve each NTP of the line and which will serve as a basis for the billing of the line concerned.

- (b) The same tool must cover relevant information to enable the calculation of the distance of each main section. A mechanism must be in place to allow the beneficiary to check the accuracy of information on distance presented by MEO.
- (c) Where it is demonstrated that a technical impossibility prevents the connection of the line to the nearest exchange, LLRO must explicitly set out that MEO is required to appropriately substantiate its technical decision to select a specific MEO exchange to the detriment of the closest one.

NOS stated that the subject of the absence of transparency about the exchange to which customers are connected had already been notified to ANACOM on 2012 and 2013, interactions having been established with MEO to reach an agreement, even outside the scope of the offer, on a process that could meet that need, which has serious impact on the capacity of operators to estimate the reliability of associated costs⁴¹ and, thus, to define offers for the business market. NOS refers that, notwithstanding its efforts, operators still lack a tool that ensures the necessary transparency, restating the need for a solution/procedure that allows operators to obtain:

- (a) A full layout of lines, as regards the respective points of connection to main sections, or, at least,
- (b) in a timely manner and prior to the conclusion of the contract, a revision of the architecture (MS+LE) proposed by MEO, without any administrative amount being charged.

In the scope of leased lines, although the connection to a given local exchange is in principle based on a criterion of proximity, in practise this is not always the case, thus operators should be better informed by MEO in situations where the terminating segment/local extension is not connected to the closest exchange. This situation could be aggravated with the geographic segmentation of terminating segments (C, CNC and NC Areas) and of trunk segments (C and NC Routes) where certain segments are regulated and others are not. The relevance of operators being aware in advance of costs they would incur in engaging a specific line is thus acknowledged, so that they are able to take an informed decision on the investment to be made, either on self-owned infrastructure or via LLRO or RELLO.

In this context, as referred in section 2.3 of Annex 1 to RELLO, concerning the Ethernet connectivity offer, MEO makes available⁴², in the restricted access area of the wholesale portal, a KMZ format file, with geo-referenced maps and geographic coverage information of exchange areas and LCP/RCP⁴³. This coverage information allows beneficiaries, on the basis of

⁴¹ Costs related to the change of NTP and which include monthly payments falling due in the case of non-compliance with binding periods and new installation.

⁴² As from version 15 of RELLO, of 02.12.2016.

⁴³ Geo-referenced maps structured at three levels, namely with the territory divided into parishes, NC parishes being identified, MEO exchange areas influencing 156 LCP and 12 RCP, and geographic location of SR.

geographic coordinates of a given address of an end-customer, to know (i) whether that address is covered in parishes of C, NCN or NC areas and (ii) which is the LCP or RCP associated to that address. This means that the coverage information may now be accessed in digital and geo-referenced format, and so the provision of this file is sufficient to meet the request of beneficiaries to know in advance the exchanges held by MEO that constitute the ends of the line. However, information concerned is accessible in the scope of RELLO (Ethernet connectivity offer), and its use should be extended to other RELLO services and also in the scope of LLRO.

As regards information on distances, as referred in RELLO (Annex 2), the MS distance corresponds to the distance between terminating local exchanges to which NTP are connected, measured in Km. In its response to the DD, MEO proposed to make available a triangular matrix with distances in a straight line to serve as reference to the billing of trunk segments/MS, which enable beneficiaries to calculate prices of lines in the scope of LLRO. As far as RELLO is concerned, prices of RELLO lines do not depend on the distance (in Km).

D 2. MEO is required to provide beneficiaries with geographic information (in SIG format) on the coverage of its exchange areas, both in the scope of RELLO and of LLRO, as well as a triangular matrix with distances in a straight line to serve as reference to the billing of trunk segments (in the scope of LLRO).

D 3. MEO is required to justify, on a case-by-case basis, any situations of connections to an exchange area other than the one that covers the NTP concerned and, in this case, it must give the beneficiary the opportunity to terminate the contract on the line concerned at no additional cost (except for any administrative costs the company may have incurred in, duly justified).

Lastly, geographic coverage information (in SIG format) of MEO's exchange areas is more comprehensive than 7-digit post code information for each exchange area. Also in this respect, it must be referred that it is not possible to easily associate a post code to an exchange area, nor it is incumbent on MEO to perform such association. It falls on operators, on the basis of coverage maps of exchanges provided by MEO in SIG format, to undertake the intended analyses, using both information in SIG format of parish areas made available by CAOP (the Official Administrative Map of Portugal) and information in SIG format of the location of post codes (CP7) which may be purchased from CTT, this issue not being the responsibility either of MEO or of ANACOM.

2.2.2 Installation/supply

Coordinated supply between MEO and the beneficiary

ONI proposes the revision of the process of LLRO and RELLO service supply, with a view to minimize errors and make it more efficient, allowing the coordination between MEO and the

beneficiary, including joint testing to ensure the correct functioning of installed means, namely when technical employees of both companies must travel to the location and a time frame must be scheduled with an end-customer.

It is currently set out that, further to a request (for a line) from a beneficiary, MEO is required to install the service, travelling to the facilities of the end customer of the beneficiary where necessary. The beneficiary is only able to undertake its own tests, including any trip of its technical employee to such facilities, where necessary, after receiving information that MEO concluded the installation.

ONI's intention seems to concern the performance of joint tests also at the stage of supply (in the same way as is already the case with joint intervention for the purpose of the checking of faults) in order to minimize the disturbance of (business) end-customers, namely by decreasing the volume of scheduling both with MEO and with the beneficiary.

The service supply including a trip from MEO's technical employees is required where it is necessary to install equipment at the facilities of the end-customer, and it is deemed useful that trips from MEO's and the beneficiary's technical employees are coordinated and do not take place at different points in time.

In fact, in situations where the presence of the end-customer of the beneficiary is required at the facility (to provide MEO with access thereto), it is deemed that the beneficiary should be able to justifiably request the re-scheduling of the installation on the part of MEO on the basis of the availability of such customer, the deadline then remaining 'customer pending' (which would be the case in case MEO's technical employee visited the facility and the beneficiary's customer was absent).

As such, the amendment of supply procedures currently defined in LLRO and RELLO, in the sense that MEO is required to inform the beneficiary reasonably ahead (e.g. at least 1 day) of the time when MEO's technical employee is scheduled to arrive at the facility of the (business) end-customer to conclude the supply of lines, contributes towards the reduction of multiple trips at different times.

This amendment does not bring about a significant complexity in the current procedure for supply, nor does it result in longer supply times. Additionally, given that in the scope of LLRO and RELLO there is no API/Information System (IS) for supply purposes, this change will also not involve extra costs.

Having weighted the benefit for the end-customer and the absence of relevant increased complexity, it is deemed that LLRO and RELLO must be amended as far as this issue is concerned.

In conclusion:

D 4. MEO is required to amend procedures currently defined in LLRO and RELLO, informing the beneficiary reasonably ahead (e.g. at least 1 day) of the time when MEO's technical employee is scheduled to arrive at the facility of the end-customer to conclude the supply of lines. In situations where the presence of the end-customer of the beneficiary is required at the facility (to provide MEO with access thereto), it is deemed that the beneficiary should be able to justifiably request the re-scheduling of the installation on the part of MEO on the basis of the availability of that customer, the deadline then remaining 'customer pending'.

Specific installation procedures for special cases

VODAFONE supports that LLRO and RELLO should include a Premium service, with specific procedures for special cases, when the beneficiary intends to install a specific line with more demanding promptness, QoS or other criteria, taking into account the demands of its business customers, who are not always attuned to the means of transmission required for the supply of the service.

As such, VODAFONE proposes that LLRO and RELLO establish specific and separate procedures (e.g. as regards prices) characterized by greater promptness, namely Premium installation, with a reduced deadline (e.g. one week), accordingly remunerated (e.g. 25% above the standard procedure).

As regards the definition of a Premium service in LLRO and RELLO, ANACOM in its decision of 12.06.2012 on amendments to LLRO and RELLO, concluded that "*without prejudice to future developments, [...] there seems to be no need for the time being to define classes of Premium service or more demanding levels of service in LLRO*". More recently, in the analysis of Market 4, ANACOM did not identify such need, nor did other operators.

Without prejudice, there is nothing preventing any beneficiary from proposing to MEO (or preventing MEO from deciding on its own initiative) the introduction of new classes of service stricter than those currently provided for in offers. It must be added that levels of service (installation and repair times) in force in these offers are already acknowledged to be demanding. Several situations may also be identified, such as requests for lines in remote locations, where no network has yet been installed, the provision of which could take even longer.

Additionally, it is verified that the number of installations requested by operators is already quite low, thus the resort to the Premium service could become the norm. As such, in case VODAFONE's proposal was adopted, MEO could be required to comply with even more demanding installation deadlines than those currently in force, which are already quite strict, by comparison to deadlines established in other Member States. Moreover, this prioritisation could have a negative impact on current levels of service.

Requests for line installation with budget

ONI proposes that, in the case of lines deemed to be of unreasonable supply, the budget presented by MEO is duly justified.

VODAFONE considers it extremely burdensome that the beneficiary may be subject to the payment of installation and supply costs where the respective request is cancelled (for a reason other than a delay over 15 days on the part of MEO), thus it proposes that a beneficiary may be entitled to cancel, without penalty, any request for installation of an Ethernet line in the scope of RELLO, where the budget presented by MEO shows that the installation is not economically feasible for the beneficiary.

According to NOS, contrary to the situation of backhaul lines, there is no deadline in RELLO for feasibility analysis of inter-island lines⁴⁴ and, consequently, neither is there compensation for non-compliance. Moreover, according to NOS, a maximum deadline and respective compensation for non-compliance⁴⁵ should be defined to meet any request concerning feasibility. As regards this maximum deadline, NOS considers that it should not exceed 10 days, as is the case with backhaul services, for 100% of cases (given the limited number of requests).

Moreover, NOS identified gaps as regards: (i) the deadline for notification by MEO that a request is unreasonable (which may occur after installation has begun); (ii) absence of detail in the billing of these request and absence of levels of service, having presented the following proposals:

- (a) Definition of a maximum deadline to report that a request is deemed to be unreasonable, upon expiry of which the line is deemed to be covered by the scope of lines to which the different levels of service of offers apply.
- (b) Definition of a maximum deadline for submitting a detailed budget following a request from the beneficiary and of the respective compensation for non-compliance.
- (c) Explicitly setting out in the text of the offer that the rejection of the budget implies the cancelling of the order at no cost to the beneficiary.
- (d) Identification of cost items considered in the budget of unreasonable requests and breakdown thereof in budgets submitted.

⁴⁴ By way of example, NOS informed ANACOM that on 17.05.2016 it sought a response from MEO on a set of requests concerning viability for migration of its pool of Level 1 Ethernet lines to RELLO, having MEO replied only on 06.12.2016 (around 7 months later), which according to NOS created a capacity bottleneck in the Azores islands.

⁴⁵ According to NOS, this compensation should increase according to the period of delay, and at the same time it should be ensured that no installation amounts are due where the delay exceeds 15 days.

According to LLRO and RELLO, “a request for supply, upgrade of speed or external change is deemed to be “unreasonable” where it is not possible to recover costs associated to its supply (which vary from Line/Access to Line/Access, namely according to the location of the respective NTP) only on the basis of the revenue resulting from the application of prices in the Offer”, however it is not clear whether in these cases of “unreasonable” requests, MEO is required to present always to the beneficiary a substantiated budget within an appropriate period.

In this context:

D 5. MEO is required to clarify that, further to the reception of “unreasonable” requests, a budget will always be submitted to beneficiaries.

It is deemed, in principle, that any budget proposed to beneficiaries must always be substantiated by MEO, and in the specific case of a request for lines which MEO does not consider to be reasonable, grounds for that budget require greater detail, reason for which ONI’s and NOS’ proposals are accepted.

In this context, MEO must present a qualitative justification and break down the budget into two components, ‘labour’ and ‘material’.

MEO is also required to submit the referred budget in due time, in the specific case of backhaul lines, a maximum deadline of 10 working days from the date the request is sent by the beneficiary having already been defined (*vide* Annex 4 of RELLO, section 1.2).

As such, the maximum deadline for submission of the budget by MEO, of 10 days from the date the request is sent by the beneficiary, must also apply to any type of line the request for which is considered by MEO to be “unreasonable”. Notwithstanding, it is deemed that, for now, compensation for non-compliance by MEO with the deadline to submit the budget for 100% of the cases should not be imposed. However, in case beneficiaries identify repeated situations of significant and unjustified delay on the part of MEO to submit budgets, ANACOM may impose the respective compensation for non-compliance.

Accordingly:

D 6. MEO is always required to substantiate any budget proposed to beneficiaries, which must be submitted within at the most 10 working days from the date the request is sent by the beneficiary.

As regards the cancellation of a request for installation (without budget or after a budget has been accepted), RELLO⁴⁶ sets out that “the OSP is entitled to cancel the request for installation of a line, being required to pay MEO the amount that corresponds to the respective installation,

⁴⁶ As well as LLRO.

plus costs incurred by MEO in the technical supply process, unless the cancellation is due to a delay over 15 days in the installation of the line for which MEO is responsible, in which case the OSP is not required to pay any amount. Upon reception of a request for cancellation of an installation, MEO shall inform the OSP of costs incurred up to the cancellation, as well as the date on the which the technical process of line supply started”.

However, in the specific case of a request for line installation with budget (deemed to be “unreasonable” by MEO), offers do not explicitly provide the beneficiary with the possibility not to accept the budget presented by MEO or with the option to cancel that request.

In fact, further to a request for installation of a line the reasonability of which must be analysed by MEO and for which a budget must be presented, the beneficiary may only assess the economic feasibility of its request according to the amount presented by MEO for the referred installation. It does not seem reasonable to force the beneficiary, in all situations, even where the budget is not considered to be feasible, to maintain the order for the line or to pay the full amount of the installation when it has not yet taken place. As such, the beneficiary must be granted a time period to respond to MEO, accepting or rejecting the budget and, in the latter case, to cancel the request. A maximum deadline of 20 working days seems to be reasonable, although it is considered that it is in the best interest of beneficiaries to respond as soon as possible, the request remaining ‘customer pending’.

Notwithstanding, MEO incurs in costs in undertaking such analysis and budgeting, reason for which VODAFONE’s and NOS’ claim for the cancellation of the request at no cost cannot be accepted. It is stressed that, contrary to VODAFONE’s suggestion, the payment of a “penalty” is not here at stake.

Likewise, after the budget is accepted, in case the beneficiary later decides to cancel the request, it shall be *“required to pay MEO the amount that corresponds to the respective installation, plus costs incurred by MEO in the technical supply process”.*

As such:

D 7. MEO is required to allow the beneficiary to cancel the request for installation which was subject to a feasibility analysis and budgeting by MEO, where the beneficiary concludes that the installation is unfeasible, being only required to pay the cost effectively incurred by MEO with such feasibility analysis and budgeting. As such, after the budget is presented, MEO must wait to know whether the budget is accepted by the beneficiary, a response which must be sent within 20 working days at the most, remaining ‘customer pending’. Where the beneficiary does not confirm its interest within this deadline, the request is automatically cancelled.

Amendment to installation procedures

VODAFONE claims that it has faced several situations of: (i) misidentification of lines at the place of supply, (ii) failure (on MEO's part) to schedule the supply with people in charge at each NTP, (iii) failure by MEO to submit the weekly status report, as well as (iv) some problems related to acceptance of addresses (even where addresses are listed in CTT's database). Taking into account the identified constraints, VODAFONE proposes an improvement of LLRO's and RELLO's operating terms, in particular:

- (a) Provision for a penalty for situations where MEO fails to properly identify lines at the place of supply (e.g. 50% of the installation price).
- (b) Provision for the possibility of beneficiaries requesting from MEO the project for implementing a given line.
- (c) Obligation on MEO to always contact the person in charge of the NTP indicated by the beneficiary in the request for the line, in order to schedule the supply of the service.
- (d) Possibility of the beneficiary sending the geographic coordinates of NTPs in the request.
- (e) Definition of a penalty for situations of failure to send the weekly status report of ongoing installations (e.g. 10% of the installation price for each ongoing installation).
- (f) Explicit provision that MEO may not reject an address that is listed in CTT's database.

VODAFONE's proposal referred in point a) makes sense, given that, in case MEO misidentifies a line at the place of installation, the beneficiary of the wholesale offer (which for all purposes is the final customer) will incur costs. In fact, any misidentification of a line by MEO, at the place of supply, may ultimately prevent the end-customer from activating the service (as the port concerned is not active), or even result in an operating line becoming non-operational, in case it is considered to be the line most recently installed by MEO. As such, ANACOM believes that MEO should not be imposed a penalty (as suggested by VODAFONE), but the obligation to grant a discount on the price of the line installation, being deemed in this context that a 35% discount is reasonable.

As regards the proposal in point b), VODAFONE failed to detail what it considers to be a "*line implementing project*", nor has it substantiated the grounds for claiming access to such project. In any case, in principle, this claim cannot be accepted, on grounds related to confidentiality and business secrecy (e.g. information on the structure and routing in MEO's transmission network). The nature itself of the leased line service provided by MEO requires the connection of two points with certain characteristics, as provided for in Annexes 1 to LLRO and RELLO.

The claim identified in point c) is reasonable, given that, even in the context of offers, the contact and telephone of the person in charge of the NTP (on the beneficiary's side) is already available in the order form, thus MEO is required to always use this information. The systematic failure to meet this obligation may result in the application of compensation for non-compliance.

ANACOM takes the view that compensation for non-compliance should apply to main deadlines and objectives and not to any action provided for in the offer. For example, weekly status reports on ongoing installations were not imposed by ANACOM, they are but a feature introduced by MEO in the offer. The introduction of compensation for non-compliance for failures to submit this information could lead to situations where MEO supplied all lines within the deadline but, having failed to send status reports, it would incur the payment of compensation, which would hardly be reasonable. As such, VODAFONE' proposal identified in point e) is not accepted.

The proposal identified in point d) is also reasonable, the beneficiary being entitled, if it so wishes, to include the geographic coordinates of NTPs in the form, in a format to be agreed with MEO, which is required to use this information specifically where doubts as to the address arise. Consequently, it is deemed that MEO must not reject a request for supply (on the grounds of incorrect address) where the beneficiary indicates the geographic coordinates of NTPs (as provided for in D9) or where the beneficiary indicates an address which is clearly listed in public information available at CTT's website.

In conclusion:

- D 8. MEO is required to always contact the person in charge of the NTP indicated by the beneficiary in the line request, in order to schedule the supply of the service. In case MEO misidentifies the line at the place of installation, a discount by 35% must be applied on the line installation price.**
- D 9. MEO is required to amend the line request form, in LLRO and RELLO, so as to provide for the possibility of the beneficiary introducing the geographic coordinates of NTP(s).**
- D 10. MEO may not reject a request for supply on grounds of "incorrect address" - consequently placing the line request in a 'customer pending' situation - where the NTP indicated by the beneficiary is listed in CTT's website or where the beneficiary indicates, in the line request, the geographic coordinates of that address (which shall prevail, in case both information mismatch).**

Revision of the migration/exterior change procedure

VODAFONE complains that the migration/exterior change procedure presents operational constraints to the service provided to its end customers, given that MEO is not able to ensure the non-interruption of the service. As such, VODAFONE refers that it is regularly faced with the need to opt between installing a new line in the new location (paying double the price compared to the exterior change) or requesting the referred exterior change at overtime hours (subject to an additional value, budgeted by MEO).

As such, VODAFONE proposes a robustness increase in LLRO and RELLO, so that the migration/exterior change takes place without any service interruption, as well as an

effectively deterrent penalty to prevent these situations, at an amount four times higher than the price of the exterior change, plus 25% for each hour of service interruption.

It is not technically possible to carry out any migration/change of a leased line without a service interruption being involved, unless backup/securitisation solutions are in place to ensure a continuous provision of the service. In this context, the performance of the change at overtime hours or potential temporary backup solutions, although with limitations at the level of quality or capacity, are options available to the beneficiary that minimize the impact of the interruption, where it considers that it should maintain the service provided to end-customers, naturally incurring in increased costs.

As such, as in a normal situation the service interruption, however minimum, will always occur, it would not be proportional to impose a penalty on MEO, as requested by VODAFONE, that would have a deterrent effect on an incident which cannot be avoided. Consequently, VODAFONE's claim cannot be accepted.

In fact, in view of the range of circumstances which may take place in the scope of a migration (e.g. deviation of routes) the time limit of which is difficult to predict, it is not possible to define a maximum interruption deadline applicable to all of these situations.

Nevertheless, ANACOM acknowledges that the period of interruption associated to a migration/exterior change should be kept to a minimum, so as to cause the least possible disturbance to the beneficiary's customer, reason for which MEO is urged to make the best efforts to reduce that period, informing where possible the beneficiary of the maximum duration the interruption associated to the migration/exterior change is expected to last.

Customer pending situations in line supply contexts

Rejection of requests by MEO further to the generation of the GECA number

In ONI's perspective, after a request is accepted by MEO and the GECA number is generated, LLRO's and RELLO's supply API should not be able to reject such request. As such, further to the generation of the GECA number, ONI believes that MEO should only be able to suspend the supply in customer pending situations, explaining always via API the reason why the situation is pending.

ONI's proposal, which seems to be out of context, is not fully understood, as ANACOM is not aware of the existence of a line supply API made available by MEO in the scope of LLRO or RELLO, neither of situations where, after a request has been accepted and a GECA number has been generated, MEO later rejects the request.

In fact, in the scope of these wholesale offers, line requests are made by the beneficiary operator through the submission of forms via email to MEO. In any case, in the light of the weak demand for lines registered especially in the scope of LLRO, it is questionable whether it would be

beneficial for MEO to establish a new API in view of the costs involved, which would naturally be passed on to LLRO beneficiaries.

'Customer pending' supply request

According to ONI, the suspension by MEO of the time counting, for the purpose of the determination of supply times, has been provided for the periods where the supply is customer pending (e.g. where it is impossible to access facilities of the beneficiary's end customer). However, according to ONI, there are cases where MEO unduly places a line supply in a 'customer pending' status, acknowledging later that the suspension is undue. In these cases, ONI refers that, in the determination of the total supply time, MEO fails to add the undue customer pending period to the supply time for which it is responsible. As such, ONI proposes that MEO includes, in the total supply time, the duration of periods unduly classified to be 'customer pending'. In addition, so as to contribute to an effective reduction of supply times, ONI suggests that:

(a) MEO is only able to place a request for supply in the 'customer pending' status in situations where this is justified, after all infrastructure required from MEO for the service supply has been provided.

(b) A penalty is defined on MEO for periods improperly classified to be 'customer pending'.

NOS identified inefficiencies in the characterization of customer pending situations, in notifications submitted by MEO and in the absence of direct contacts to settle these constraints. The solution, according to NOS, is to establish quicker mechanisms for communication of customer pending situations and a larger detail in their characterization, under terms to be agreed between MEO and beneficiaries and to determine, as mandatory procedure, the exchange of information by telephone with the contacts of the operator.

LLRO and RELLO already provide that the determination of the line supply time does not account for delay times for which MEO is not responsible, such as, for example, 'customer pending' times and delay times resulting from deterring facts⁴⁷, as well as incidents resulting from events classified as force majeure.

The characterization of 'customer pending' situations is already clearly set out in offers, a request remaining 'customer pending' when the procedure for the supply, change and/or repair of a line is suspended on grounds attributable exclusively to the beneficiary, preventing MEO from pursuing the work under its responsibility, the beneficiary being always notified of such situations. LLRO and RELLO even provide examples of such situations⁴⁸. In this context,

⁴⁷ Imposed by Municipal Councils or other bodies.

⁴⁸ The absence of a coaxial splitter in the beneficiary co-located module, the placing of an incorrect address, the impossibility of access by MEO due to absence of contact of the beneficiary, the time associated to the scheduling of trips between the beneficiary and its end-customer, the ignorance as to the request or the precise location where the line must be installed (on the part of the person in charge of the facilities where the line is to be installed), the fact that buildings are still under a construction stage or works in the facilities.

ANACOM does not identify the inefficiencies in the characterization of 'customer pending' situations, referred by NOS.

On the other hand, it has been also laid down that delays for which MEO is not responsible, except for 'customer pending' situations, are always analysed and handled on a case-by-case basis, «*OSP being submitted a detailed justification for the delay*» as well as all documentation required to prove that the responsibility is not attributable to MEO.

As such, ONI's request concerns an additional situation to the one provided for in offers, that is, where it is determined that a 'customer pending' period is, in fact, improperly classified (that is, attributable to MEO) it should be accounted for (by MEO) in the calculation of the total time to supply the line, which seems to be reasonable.

ANACOM considers that a (reasonable) time limit should be defined for the beneficiary to lodge a claim against a 'customer pending' situation deemed to be improperly classified, a time limit which is set to 2 working days.

As such, it is established that:

D 11. The beneficiary has two working days after the 'customer pending' situation is notified by MEO to lodge a claim, where it deems the situation to be improperly classified. Where it is confirmed that the 'customer pending' situation was in fact improperly classified, MEO must always account for such period in the total supply time.

The real situation is thus reinstated, being deemed that compensation for non-compliance, for having initially and unduly alleged 'customer pending' periods, should not be imposed on MEO right away.

However, in case there is evidence of repeated situations where MEO unduly alleges 'customer pending' periods or the company fails to add the improperly classified 'customer pending' period to the line supply time, ANACOM may revise its position on the matter so as to impose compensation for non-compliance.

Lastly, as MEO has demanding responsibilities in terms of service supply, it is also in the utmost interest of the beneficiary and its end-customer to make every effort to unblock any situations that may prevent the service supply. As such, and bearing also in mind the different specific possibilities associated to customer pending situations, ANACOM does not accept - in the absence of more information that proves that MEO uses this argument in an abusive manner - NOS's proposal that MEO only places a request for supply in the 'customer pending' status after all infrastructure required for the supply of the service is provided.

Revision of deadlines for the start of MEO's billing of 'customer pending' lines

ONI refers that MEO starts billing lines from the date of the request when a line is in a 'customer pending' situation for a period exceeding 30 consecutive or alternate days, which is not deemed

to be fair, as in these cases, there is also work to be done by MEO for which deadlines are established.

As such, in cases of 'customer pending' situations for more than 30 consecutive or alternate days, ONI proposes that MEO bills the line from the date of request, plus the supply time (for 95% of cases) for the type of line concerned, thus MEO would start billing on the following dates:

- (a) Lines Type 1: request date + 20 days.
- (b) Lines Type 2: request date + 30 days⁴⁹.

Given the period of time that runs from the request date up to the supply date, for which MEO is not responsible, it is not reasonable to penalise it so that it is only able to bill as from the "technical completion date", as it will already have incurred costs without the billing having started for reasons which have nothing to do with the company. Even so, LLRO and RELLO currently do not penalise 'customer pending' situations up to 30 consecutive or alternate days. The 30 days for the resolution of a 'customer pending' situation should be compared to the 20 days required from MEO to supply a line (Type 1). In fact, MEO cannot be imposed short deadlines for line supply and at the same time be penalised for being able to meet such deadlines, when on the end-customer side there are no conditions for being supplied the service.

In any case, it is the beneficiary's responsibility to take the necessary steps to overcome 'customer pending' situations as quickly as possible, just as it is MEO's responsibility to supply lines within the deadlines defined (otherwise incurring in compensation for non-compliance).

Finally, it is stressed that this issue has been already analysed by ANACOM (in former amendments to LLRO and RELLO) and does not involve new subject-matter that may result in the revision of the former position.

Minimum 12-month lock-in period in RELLO lines

ONI believes that the application to RELLO lines of a minimum 12-month lock-in period⁵⁰ is unjustifiable and should be removed.

In this scope of certain wholesale services, MEO is only able to fully recover costs incurred with the respective supply with monthly fees, not the installation price. As such, as this is the case of MEO's supply of Ethernet lines in the scope of RELLO, the minimum 12-month lock-in period is deemed to be justified.

⁴⁹ This is deemed to be a mistake, given that the supply time of Type 2 lines, for 95% of cases, is 40 days (and ONI proposes the definition of a 30-day deadline).

⁵⁰ Referred to in section 1.4 of Annex 2 to RELLO.

In fact, according to MEO's CAS for 2015 for the RELLO product, the installation is significantly loss-making, thus the removal of the minimum lock-in period would lead to a substantial increase of the installation price, by around 12 times.

Moreover, this minimum lock-in period exists since the first RELLO version, published in December 2010, and has already been analysed and accepted by ANACOM, namely in the context of grounds for RELLO prices.

2.2.3 Fault repair

Process automation/API

According to ONI, in the context of regulated offers, only LLRO is provided with a restore API (fault repair), through which the beneficiary notifies MEO of faults and checks the respective repair status, which ensures the coherence of the fault opening and closure time information between MEO's and beneficiaries' systems, automating processes associated to fault repair (e.g. scheduling and joint intervention).

As such, in order to ensure a full transparency of processes and an increased fault repair automation, ONI considers that similar API should be developed for all reference offers, and that MEO should provide basic information on line operation status, enabling the beneficiary to check whether problems that have been detected by MEO exist or whether lines are operating normally.

In addition, according to ONI, MEO should proactively detect and repair faults, informing the beneficiary of any detected fault and promptly remedying the situation, without waiting for the reporting of the fault detected by the beneficiary.

Furthermore, VODAFONE considers that all actions and communications should take place via API and all associated procedures should be governed by the "*principle of urgency*".

The development of a restore API has costs for MEO and also for beneficiaries. In addition, API may not have the foreseen use, as was the case, for example, of the API developed in the scope of LLRO, which was not used by the operator with the largest number of accesses contracted under that offer, who had also suggested its implementation.

In this context, and in the light of the low pool in offers (slightly above two thousand lines in LLRO and one thousand lines in RELLO), which is decreasing (*vide* figures below), ANACOM believes that there are no grounds to impose on MEO the burden of developing a restore API for those offers, given that the development costs would have to be (fully) passed on to relatively few bodies, some of which with an extremely low level of lines (less than ten), who have not expressed such need.

Chart 1. Evolution in the pool of lines (end-to-end and part circuits) contracted under LLRO

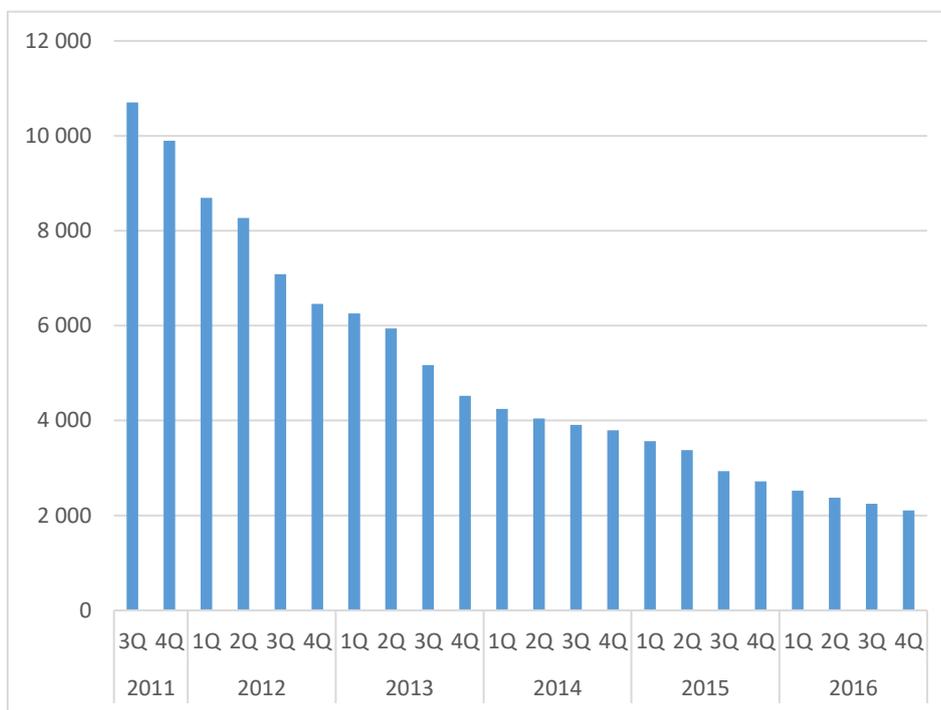
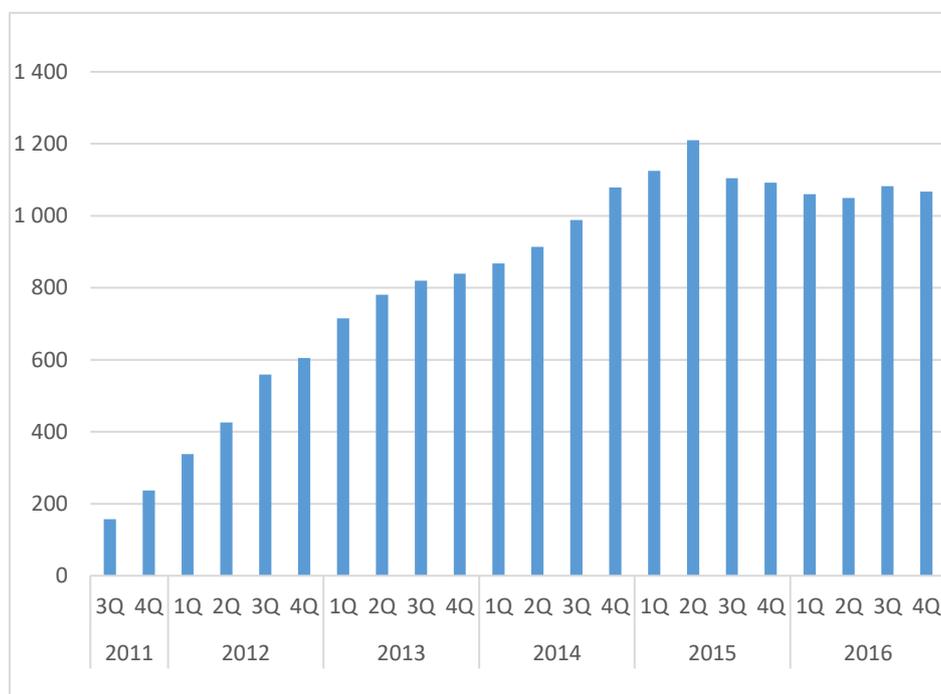


Chart 2. Evolution in the pool of lines (end-to-end and part circuits) contracted under RELLO



As regards ONI's claim for a fault repair process that is "*proactively*" started by MEO, it should be referred that a failure in a line may not necessarily be a fault, but a result of a deliberate act (for example, tests carried out by an end-customer), and in this case, there is no reason why MEO should launch a fault repair process. On the other hand, there are faults for which MEO is

not responsible, thus it is desirable that the beneficiary should properly screen such faults in advance.

As such, to improve the safety and certainty of the process, and without prejudice to any procedures that MEO may launch, the start of the repair must also be preceded by a report from the beneficiary to MEO for the purpose of the start of the repair process. A different process would be hard to understand, as the body whose service is not operating or is degraded should take the initiative to request the intervention. The time or procedures involved in this reporting are also not deemed to be disproportional so as to require the development of different processes. Moreover, in case MEO was forced to develop fault repairs on its own initiative, it is not clear how compliance with such obligation would operate.

As such, it is not appropriate to amend the current fault repair process so as to explicitly impose on MEO the burden to start that process, without a formal report from the beneficiary (a clear point as from which the repair times starts to run).

Without prejudice, ANACOM considers that MEO, as network operator and wholesale supplier of leased lines, is required to maintain its network in a permanently operational status and to quickly repair any fault falling under its responsibility that is detected by its systems.

Improper faults – initial screening and potential trip of MEO’s technical employee

According to ONI, as there is no deadline for the initial screening, MEO performs in many situations a remote screening to check whether the fault falls under its responsibility, but notifies the beneficiary of the result of that screening action several hours later, sometimes with the indication that, after all, the situation was “Correct When Tested - *Correto Quando Ensaiado* (CQE)” and that no fault existed, which involves unnecessary delays in the process of fault resolution and closure process on the part of the beneficiary.

Consequently, bearing in mind the cases of improper faults involving the trip of MEO’s technical employee to the facility or verified remotely not to exist, ONI proposes that:

- (a) A fault classified by MEO to be improper which involves a trip of a technical employee should be classified as “*CQE with trip*” and should not be charged (MEO should have checked whether the fault existed before sending the employee).
- (b) Faults verified remotely by MEO not to exist should be classified as “*CQE without trip*”, charged a lower price for improper fault reporting and notified to the beneficiary 30 minutes after the fault is opened.

As such, according to ONI, the definition of a 30-minute period after the reporting of a fault by the beneficiary should allow MEO sufficient time to perform a (remote) initial screening to check whether it is responsible for the fault or whether additional tests are required, possibly in conjunction with the beneficiary, MEO being also required at the end of these 30 minutes to report the result of the initial screening to the beneficiary.

Moreover, in case of resolution of improper faults and whenever the resolution time is shorter than 30 minutes, ONI believes that MEO should charge the beneficiary a lower value than that currently established for improper faults.

Having regard to all possible situations of faults, it is deemed that the definition of a deadline for the initial screening of each and every fault will not solve the problem *per se*, nor will this always contribute for a quicker resolution of the fault in question. In fact, it is probable that there are fault situations, the origin of and responsibility for which may not be diagnosed in only 30 minutes. In fact, there are even situations where no agreement can be reached on the responsibility for the fault.

In any case, MEO is required, whenever possible, to promptly carry out remote tests to screen any fault and identify responsibility.

In general, it is deemed excessive to take several hours to report the closure of the fault after remote tests are performed, especially in the case of faults closed by MEO under the AVOL02 code (“*Correct when tested*”).

As such, after a fault is reported to MEO by a beneficiary, it is deemed that, in case MEO performs a remote screening and finds out that the fault does not fall under its responsibility, an improper fault being at stake, the closure must be reported to the LLRO/RELLO beneficiary without any unjustified delay, though means deemed to be the most efficient - namely a telephone call - which must now include the information on the time (h:m:s) when the remote screening was concluded.

In case MEO considers it to be more efficient and/or to have less impact and costs on its systems, it may formally conclude the fault repair procedure in a subsequent step, submitting to the beneficiary the formal closure of the fault, including the reason for the closure and the time when the remote screening was concluded.

D 12. In case MEO performs a remote screening and finds out that the fault does not fall under its responsibility, an ‘improper fault’ being at stake, that result must be reported to the beneficiary (for example, via telephone call) without any unjustified delay. The formal closure of the fault (which must always take place) may be subsequently reported by MEO, including the information on the time (h:m:s) when the remote screening was concluded.

ANACOM takes the view that, for now, it should not specify a deadline for the reporting, nor any compensation for non-compliance. However, in case of significant and unjustified discrepancies between the information on the time (h:m:s) when the remote screening was concluded and the respective reporting to the operator or of excessive duration of remote testing, ANACOM may impose such deadlines and respective compensation for non-compliance.

Furthermore, ANACOM acknowledges that it is reasonable to separate situations where the trip of a MEO technical employee is involved or not (such trip should only take place where the

remote screening is not conclusive), for the purpose of the amount to be paid to MEO in the case of improper faults. In fact, it is acknowledged that in LLRO and RELLO it is not absolutely clear if situations of faults, not only those classified as “Correct when tested” but also where there are other reasons for closure, exclusively involve the performance of remote screening by MEO or could also potentially involve trips of MEO’s technical employees to the facility.

However, ONI’s proposal to break down the AVOL02 reason for closure according to whether a trip is involved or not, seems in principle not to be justified, as the presence of MEO’s technical employees could be required at the facility in other situations of fault, which would bring about substantial changes in the classification of reasons for closure (e.g. sections 4.10 and 3.10 of Annex 5, respectively of LLRO and RELLO).

In fact, according to data from MEO, in the vast majority of cases, the resolution of reports, for reasons associated to the responsibility of the operator, involves the trip of MEO’s technical employees to the location. In general, this trip is only not required when the reasons for closure are ‘Improper reporting’ and ‘Scheduling required to access customer facilities’.

Notwithstanding, being acknowledged that it is reasonable to separate situations where the trip of MEO’s technical employee is involved or not, for the purpose of the billing of the ‘improper fault’ (which must be lower in this latter case), ANACOM admits that, in case this is easier to implement, and in place of the referred principle, MEO may maintain the charging of trips in case of faults for which the beneficiary is responsible, except for those based on the following reasons: ‘AVOL07 - Improper reporting’ and ‘AVOL12 - Scheduling required to access customer facilities’.

D 13. MEO is required to include in the fault closure report information on whether the trip of its technical employee to the facility is involved, the price for the improper fault reporting covering situations where a trip is involved or not. Instead of this standard, MEO may maintain the charging of trips in case of faults for which the beneficiary is responsible, except for those based on the following reasons: ‘AVOL07 - Improper reporting’ and ‘AVOL12 - Scheduling required to access customer facilities’.

In case of a non-existing fault or a fault falling under the responsibility of the beneficiary itself, the change in the amount to be paid to MEO for the “improper fault reporting” is not a result of matter of whether the time elapsed up to the reporting by MEO to the beneficiary is lower than 30 minutes or not, but of whether MEO’s technical employee has travelled to the facility or not.

Improper faults - procedures and compensation for non-compliance

Oni proposes that, for faults improperly closed by MEO, MEO pays compensation according to the tariff for improper fault opening.

ONI also believes that MEO should always be responsible for faults whose: (i) resolution begins after the end of the SLA; (ii) resolution occurs after expiry of the deadline for repair defined for 100% of incidents; or (iii) reporting to the beneficiary takes place after the expiry of the deadline for repair.

In the first place, it is deemed that further to the reporting of a fault by a beneficiary, in case MEO initially finds this fault report to be improper (thereby closing and/or rejecting it) and it is later established that the fault exists and falls in fact under its responsibility, the company is required:

- (a) to repair the fault concerned; and
- (b) to account for as fault repair time the full period of time from the (initial) fault report by the beneficiary up to the reporting by MEO of the conclusion of the fault repair (including, of course, the period during which the fault was improperly closed), compensating the beneficiary where this period exceeds maximum deadlines provided for in the offer for fault repair.

In the second place, ONI's proposal that the beneficiary should be paid the "improper fault price" amount in case of improper fault closure (as the beneficiary incurs costs to check whether the fault does not effectively fall under its responsibility), is deemed to be appropriate. Where this situation applies, MEO must refund any amount charged on grounds of intervention for improper fault reporting.

In any case, the prior screening undertaken by the beneficiary is always desirable, as this will contribute to a reduction in the number of situations of improper faults.

As such:

D 14. MEO is required to pay the beneficiary the "improper fault price" and refund any amount charged on grounds of intervention for improper fault reporting, where the company informs that the fault is improper and it is later established that the fault exists and falls in fact under its responsibility.

Situations described by ONI, where faults do not fall under MEO's responsibility, may not be attributed to this company. However, without prejudice to the fact that MEO is not responsible for the repair, it is deemed that this company is required, as referred in the previous section, to undertake a quick initial screening, preferably a remote one, and to promptly inform the beneficiary of results thereof and reasons for closure. As such, where MEO starts the initial screening, or reports the respective results, after expiry of the deadline for repair defined for 100% of incidents, it is deemed that the screening did not take place in a satisfactory way and according to the principle of urgency, reason for which it should not be taken into account for collection purposes, whereby:

D 15. MEO must not charge the amount due for ‘improper fault’ where the initial screening begins, or the result thereof is reported to the beneficiary, after expiry of the deadline for repair defined for 100% of incidents.

Advance notice of planned interventions given by MEO to beneficiaries

ONI refers that MEO has not been imposed any obligations as regards minimum notice for planned interventions on its networks that affect services provided to beneficiaries and that, as such interventions are planned, there is no reason why such advance notice should not be given, proposing a minimum one-week notice.

Interventions planned by MEO (such as route deviation) are not a matter of urgency, being planned some time in advance, thus it is acknowledged that MEO is required to inform beneficiaries of such interventions where this is operationally possible, so as to allow beneficiaries to adjust their means (such as, for example, the installation of new fibre optic to enable the redundancy of connections) to these interventions.

In this context:

D 16. MEO is required to notify beneficiaries of planned/programmed interventions which may affect services provided as early as operationally possible, namely as soon as the company schedules (that is, plans) such interventions, an advance notice of 5 working days ahead of the date of intervention being deemed to be reasonable for this purpose.

Definition of fault repair time frames

VODAFONE supports that sometimes faults are not repaired (the scheduling of a new intervention thus being required) where MEO’s and the beneficiary’s technical employees fail to meet each other and where access to the facilities of the end-customer is impossible. A consensus on a time frame reached between MEO and the beneficiary would contribute, according to VODAFONE, to increased efficiency in the management and processing of fault repair requests, as well as to the decrease of situations where technical employees miss each other, likely to affect the success of the repair.

As such, VODAFONE proposes that LLRO and RELLO set out various fault repair scheduling and performance time frames, via a procedure that promotes an understanding between the beneficiary and MEO, which must agree in advance on the time frame for the repair.

VODAFONE's claim is not absolutely clear.

In general, the repair that involves the trip of MEO' technical employee is required where it is necessary to access equipment at the facilities of the beneficiary's end-customer (it is useful that the trip of MEO's and the beneficiary's technical employees is coordinated and does not occur at different times, however this is not a situation for MEO to ensure).

LLRO and RELLO already provide that, in case the beneficiary intends to schedule MEO's intervention, it must request such intervention by email, which must include information on the time frame desired⁵¹. The request for the scheduling of a fault (repair) must be made by the beneficiary at least two hours ahead of the start of the scheduled time frame, thus the scheduling of the fault repair and the fault repair itself already take place in two different periods of time, with an interval of at least two working hours.

As such, it is always incumbent on the beneficiary to decide whether it is necessary to schedule a time frame for MEO's intervention.

Revision of joint intervention (JI) standards

VODAFONE and ONI, while acknowledging the positive contribution of the process concerning JI, believe that there are several aspects which could be improved.

Fault closure in MEO's systems

ONI has found that, after a fault closure is reported to the beneficiary by MEO's technical employee on the ground, there are situations of delay in the formal and effective closure of the fault by MEO in its systems, which prevents the beneficiary for immediately requesting the scheduling of a new JI, where necessary. As such, ONI takes the view that MEO should be required to close faults in its systems simultaneously with the report of closure by its technical employee on the ground.

For VODAFONE, the maximum 15-minute deadline to request a reanalysis, in case of a disagreement as to the fault repair (section 4.2 of Annex 6 to LLRO), is clearly too short, either to assess the adequacy of the repair, to deal with the possible attribution of responsibilities and even to substantiate a potential request for reanalysis. Likewise, the 4-working-hour deadline to apply for a redistribution of the fault after it has been closed by email seems to VODAFONE to be insufficient to make an appropriate and substantiated analysis that may lead to a potential request for redistribution of the fault under the established terms, in view of the necessary preliminary measures which the beneficiary is required to take, namely the contact with the customer to verify the availability and quality of the service, the request for a potential JI or, in the alternative, the performance of new tests.

⁵¹ According to the following time frames: morning period (9 am to 1 pm) and afternoon period (2 pm to 6 pm) on working days.

As such, and bearing in mind that the procedure for resolution of disagreement in the process of fault repair must abide by the principle of urgency, VODAFONE proposes that the deadline granted to the beneficiary to apply for the reanalysis of the fault repair should not be less than 4 hours and the deadline to request the redistribution of faults under the terms established in LLRO and RELLO should be 16 hours.

ANACOM acknowledges the validity of arguments put forward by MEO in its response to the DD as regards why the assisted restore procedure should not be used (due to the absence of requests for reanalysis of faults). Where it is confirmed that the assisted restore procedure is not used, ANACOM will not oppose to its removal from LLRO and RELLO, in case this results from ANACOM's position in its final decision on amendments to RUO, in the context of which the removal of an identical procedure (applicable to RUO) was placed under public consultation and prior hearing procedures.

As referred by MEO, the procedure for reanalysis of faults within 15 minutes from the reporting of the resolution is maintained.

Finally, VODAFONE claims that the 4-working hour deadline is insufficient for the beneficiary to apply for a redistribution of the fault after it has been closed, and proposes its change to 16 hours, which ANACOM fails to fully understand in the light of its proposal to revise the objective of the fault repair deadline to 4 hours for 100% of incidents.

Standards and maximum deadline for (re)scheduling JI

ONI supports that, in the absence of an effective time limit for scheduling a JI time frame, MEO should schedule it within at the most 24 hours from the request from the beneficiary, proposing a penalty in case of non-compliance (e.g. for each day of delay in relation to that 24-hour period), without prejudice to holding MEO responsible for waiting times that result from these postponements compared to the time frame initially proposed by the beneficiary.

The procedure for the scheduling of a JI provides that the beneficiary indicates to MEO the date/time desired for the intervention, abiding by certain time frames⁵², the JI request being made at least two hours ahead of the beginning of the desired time frame, and in case the request is valid and the desired time frame is available, MEO notifies the operator via email of the JI reference, the date/time of reception and the date/time when the time frame starts, within at the most twenty minutes.

⁵² Namely: 9:30 am; 10:00 am; 10:30 am; 11:00 am; 11:30 am; 12:00 pm; 2:30 pm; 3:00 pm; 3:30 pm; 4:00 pm; 4:30 pm and 5:00 pm, on working days.

Where the desired time frame is not available, MEO must schedule the JI for the following best available time frame (emphasis added), and where this time frame does not suit the operator, it may request a new JI scheduling date/time in a subsequent time frame, within 20 minutes from MEO's notification.

On this issue, it is stressed that, in the consultation and prior hearing report on the draft decision on procedures to be followed in evaluating quality of service of regulated wholesale offers⁵³, it was established that: *“As regards the proposal for definition of time frames for the scheduling of intervention, the view taken earlier is maintained: the time that elapses from the communication for scheduling of intervention and the first time frame proposed must be accounted for as fault repair time, as this results in proper incentives for minimizing that period of time, for the resolution of a fault that is a priority given that, in principle, it concerns a re-occurrence or an improperly closed fault (for which PTC or the beneficiary may be held responsible), that is, a fault the resolution of which has been going on for some time”*.

As such, although no quantitative deadline exists between the request of the beneficiary and the start of the time frame scheduled in situations where MEO has no availability of the time frame indicated by the beneficiary, the offers provide for the duty on MEO to schedule the JI for the following best available time frame, and also that the time that runs from the date/time requested by the operator for the JI and the date/time scheduled by MEO is always accounted for as fault repair time (where the fault is MEO's responsibility), thus MEO has every incentive to schedule the best available time frame, in order to minimize the total fault repair time, compensation for non-compliance with the deadline for fault repair already being provided for (where this is MEO's responsibility).

As such, the imposition on MEO of a maximum deadline to schedule the JI after the time frame initially requested by the beneficiary does not seem to be required.

Failure of technical employees to meet in the scope of JI

According to ONI, an aspect that affects in a very negative way the efficiency of JI is the fact that MEO's and the beneficiary' technical employees fail to meet each other or do not show up at the scheduled time and location, without prejudice to the procedure for confirmation that is established, the application of penalties being a means to discourage these situations.

ONI thus proposes that MEO is imposed a penalty, for each day of non-compliance, in case the technical employee does not show up to perform a JI, corresponding to the cost of the trip made by the technical employee, and that the rescheduling of the JI due to MEO's technical employee's no-show takes place within 24 linear hours from the initial scheduled time, a different penalty being set in case of non-compliance.

⁵³ Vide <http://www.anacom.pt/render.jsp?categoryId=345207>.

ANACOM's decision of 28.03.2012 on procedures to be followed to assess the quality of service of wholesale reference offers (RUO, Rede ADSP PT, LLRO and RELLO)⁵⁴, established that, to avoid situations where MEO's and the beneficiary's teams miss each other, it is necessary to guarantee the availability of contacts of those involved in the joint intervention, to guarantee an advance notice in case of no-show and ensure that the depart from the location of intervention has the agreement of the other party.

In case technical teams miss each other, either for reasons attributable to MEO, or to the beneficiary, the party that fails to show up must compensate the other for costs incurred on the basis of the principle of reciprocity, and the beneficiary must reschedule the JI using a similar process to that used for the scheduling of JI: the beneficiary notifies the desired time frame and in case the request is valid and there is availability for the desired time frame, MEO is required to notify the operator via email of the JI reference, the date/time of reception and the date/time when the scheduled time frame starts, within at the most twenty minutes.

Where the desired time frame is not available, MEO must schedule the JI for the following best available time frame, and where this time frame does not suit the operator, it may request a new date/time for the scheduling of the JI for a subsequent time frame, within 20 minutes from MEO's notification.

D 17. In case technical teams miss each other, for reasons attributable to MEO or to the beneficiary, the party that fails to show up must compensate the other for costs incurred on the basis of the principle of reciprocity, the JI rescheduling procedure then being followed.

2.2.4 Parameters of Quality of Service (PQS)

Reduction of line installation deadlines (PQS1)

According to ONI, line installation deadlines, resulting from the (above-mentioned) decision of ANACOM of 2012, represent a substantial improvement compared to the previously existing situation. However, for ONI, the market evolution requires a new improvement of installation deadlines, in view of end-customer demands, whereby the company proposes the following reduction of installation deadlines for lines supplied in the scope of LLRO and RELLO:

Deadline for line installation	Current objective		ONI Proposal	
Type 1	20 days	95%	20 days	95%
	40 days	100%	30 days	100%
Type 2	40 days	95%	30 days	95%
	80 days	100%	45 days	100%

⁵⁴ Vide <https://www.anacom.pt/render.jsp?contentId=1124132>.

On its turn, NOS questions the absence of specific levels of service for the installation of inter-island and backhaul lines, taking the view that they should be associated to reasonable deadlines, duly substantiated by MEO, as well as to proportional compensation for non-compliance.

In the first place, bearing in mind quarterly reports submitted by MEO on PQS for 2015 and 2016, it was found that values achieved for performance indicators concerning installation deadlines of LLRO and RELLO lines generally meet⁵⁵ objectives defined, except for Type 1 lines in LLRO and RELLO - in the case of the installation deadline for 95% of incidents, non-compliance was registered in 16 months in the scope of RELLO and in 7 months in the scope of LLRO (*vide Annex* and the following charts).

⁵⁵ Notwithstanding the fact that non-compliance was registered in some of the months analysed (e.g. in RELLO the deadline for installation of Type 2 Ethernet lines was not complied with in 4 [out of 24] months).

Chart 3. Installation deadlines in LLRO

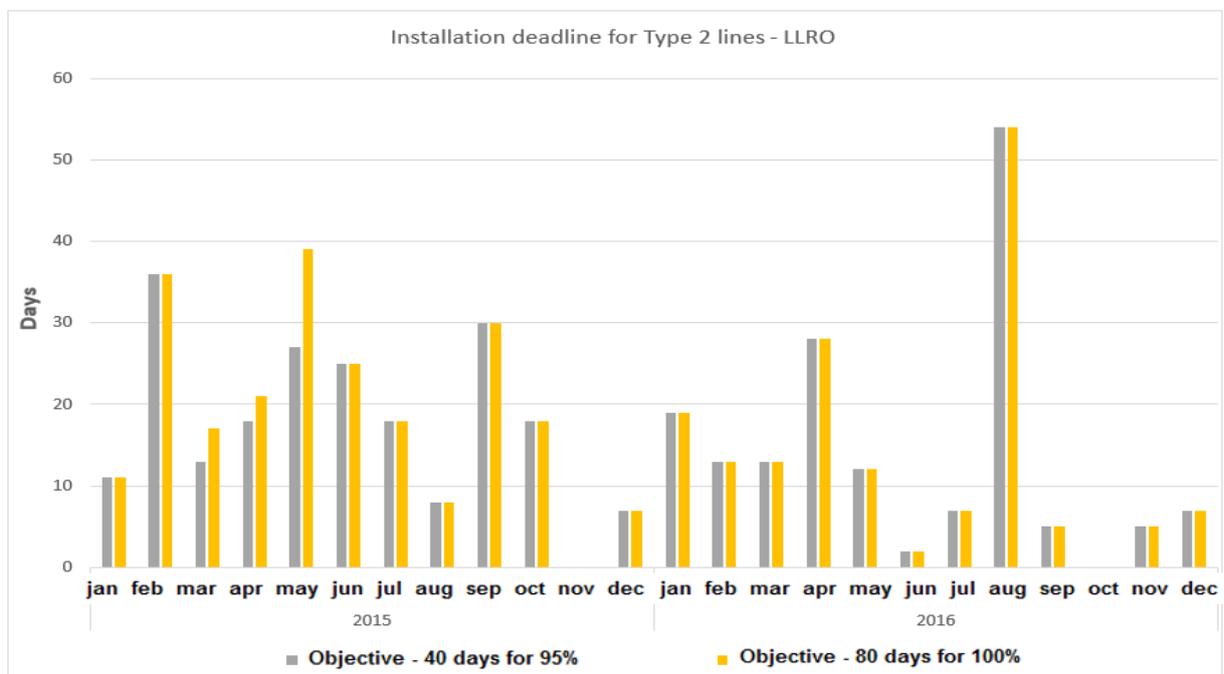
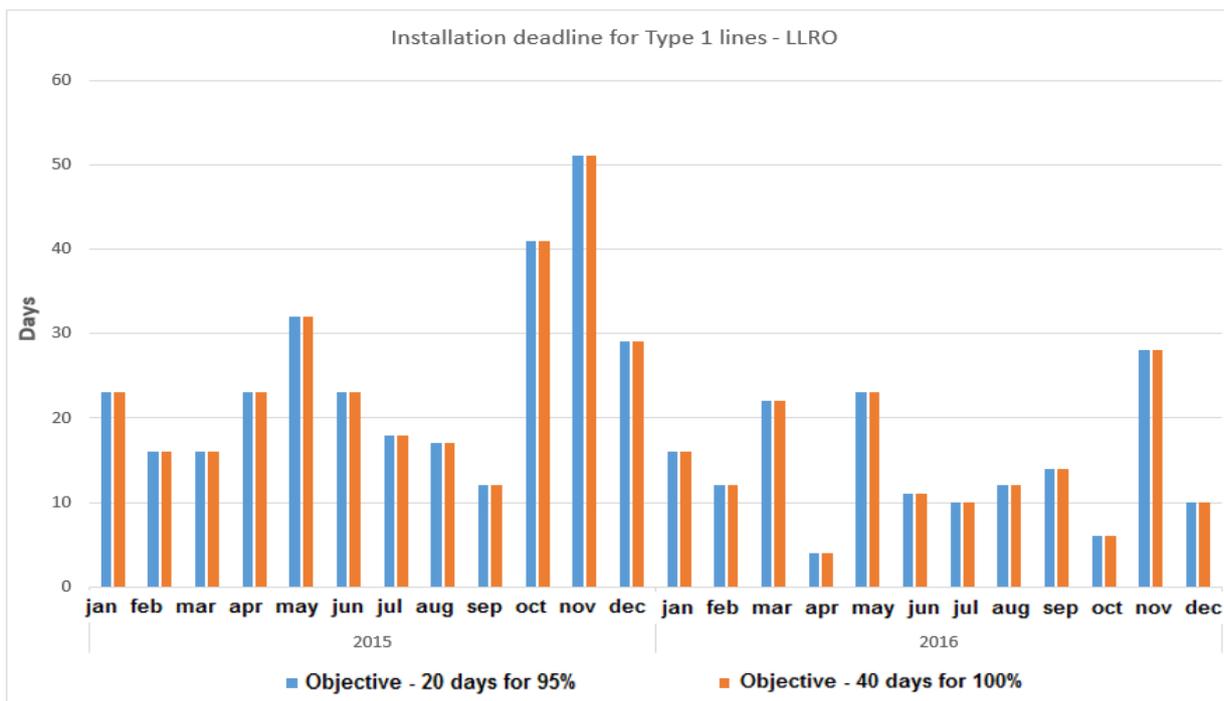
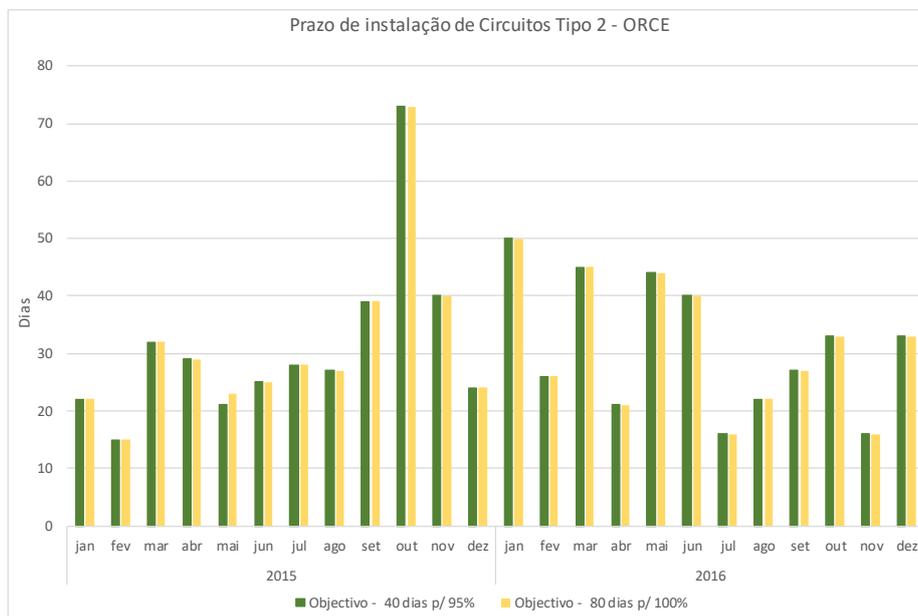
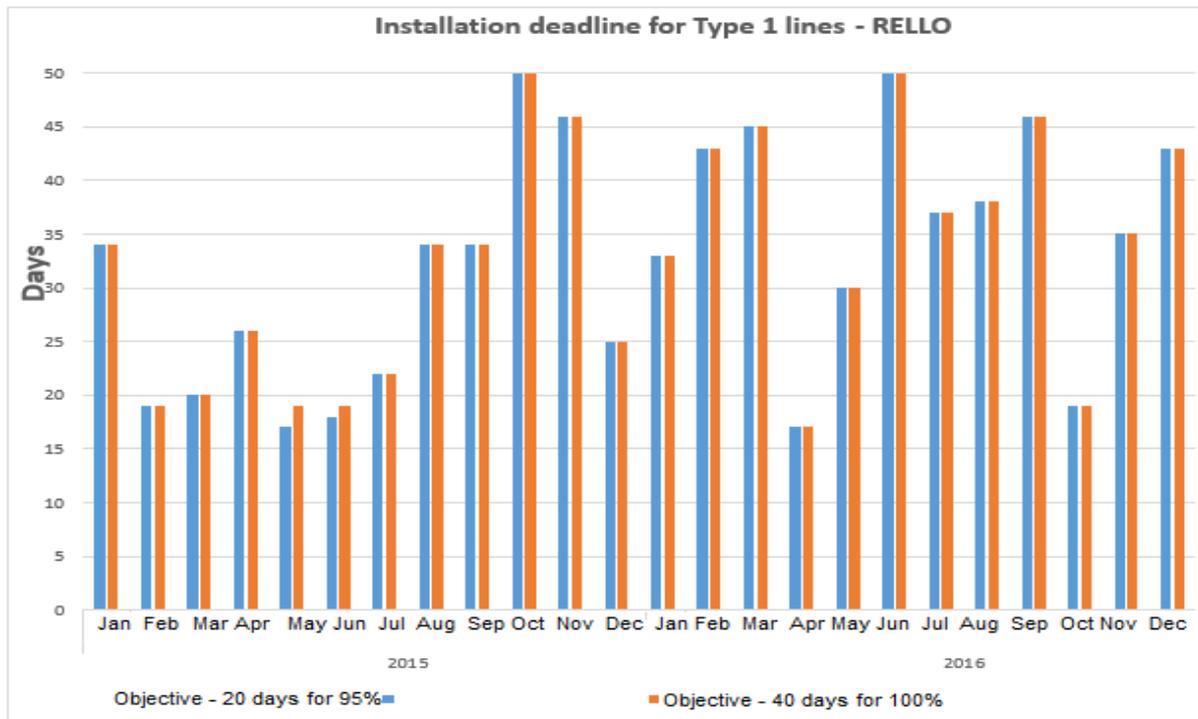
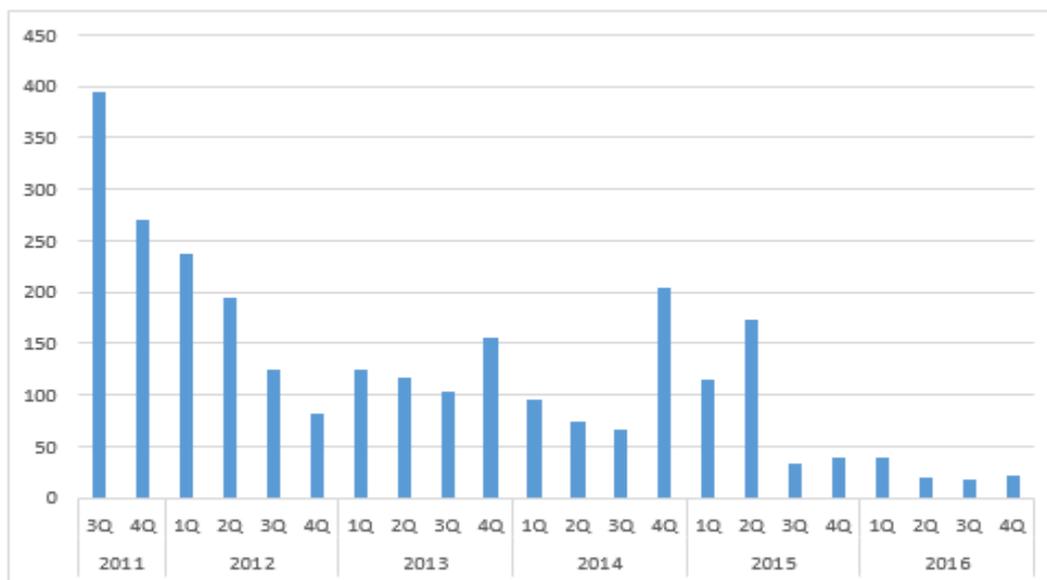


Chart 4. Installation deadlines in RELLO



In the second place, the volume of line installations, in LLRO, has been low, this trend having worsened over time. For example, in the last quarter of 2016 only 21 installations were registered (*vide* chart below). ANACOM is not provided with information on the volume of installations in RELLO, but the evolution of the pool of lines during the last quarters also points towards a decrease in the volume of installations in this offer.

Chart 5. Volume of installations in LLRO



The extremely low volume of installations, less than 10 for most beneficiaries of LLRO (and apparently also RELLO) results, in these situations and in practise, in the equivalence between the deadline for 95% of cases and for 100% of cases. This means, in practise, that in order not to incur any non-compliance, MEO is required to supply all lines within the deadline defined for 95% of cases (20 days for Type 1 lines and 40 days for Type 2 lines)⁵⁶.

These 20- and 40-day deadlines, which are in place for both offers, respectively for Type 1 and Type 2 lines, are already ambitious compared to those practised in other countries (e.g. 31 working days in Austria, between 4 to 8 weeks in Denmark, 56 calendar days in locations where fibre optic is available in France, between 8 weeks to 6 months in Germany, 45 working days in Ireland, between 48 and 90 calendar days for 95% of cases or 100 calendar days for 100% of cases in Italy, 60 working days in Spain, 30 working days in the UK and between 50 to 65 working days in the Netherlands for fibre optic lines/accesses⁵⁷).

In such circumstances, it is deemed that a reduction of all PQS objectives for line installation would be disproportionate, an additional penalty being imposed on MEO, which is discouraged. In fact, as ONI acknowledges, general deadlines for installation of lines set in the scope of LLRO and RELLO, through ANACOM's determination of 12.06.2012, were ambitious, and there are no substantiated reasons for an overall amendment thereof.

⁵⁶ For example, for a volume of installations below 10, MEO must ensure, in practise, that all installations are performed within the deadline defined for 95% of cases (e.g. in the case of 5 installations, 95% is 4.75, which means that MEO is required to supply those installations within the deadline defined for 95% of cases; however, in the case of 20 installations, 95% corresponds to 19, MEO being required to ensure the supply of 19 requests in 20 days in the case of Type 1 lines - deadline for 95% of cases - and 1 request in 40 days - deadline for 100% of cases.

⁵⁷ Source: WIK Report on "Ethernet leased lines, a European benchmark", November 2014.

However, no situations of non-compliance with the deadline for installation of Type 2 lines for 100% of incidents have been registered either in the scope of LLRO or of RELLO, thus a (wide) margin for reduction exists. In this context, it is deemed appropriate to decrease the deadline from 80 to 60 days, according to available data, although, as referred earlier, it is acknowledged that the most relevant deadline in practice is the one for 95% of cases. According to data from the last 24 months, this 60-day deadline was exceeded only in October 2015. The reduction of this deadline to a period of time more in tune with reality provides operators with greater guarantees in their response to requests from end-customers, for example, in the scope of tenders, where the installation deadline may be a critical factor.

ONI's claim for the revision of this PQS is thus partially accepted.

D 18. MEO is required to define to 60 days the installation deadline objective for Type 2 lines for 100% of incidents.

Without prejudice, ANACOM will continue to monitor the evolution of indicators of quality of service concerning line installation.

Lastly, as regards NOS's claim for the definition of specific levels of service for the installation of inter-island and backhaul lines, it is deemed, given their more complex and case-by-case nature (which may require a budget from MEO), that if such PQS were defined, they would be necessarily less demanding than those that currently apply to other lines.

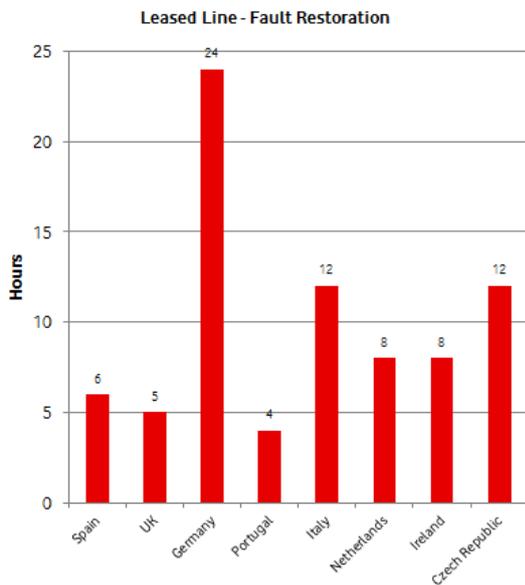
Revision of fault repair deadlines (PQS2) and of levels of occurrence

VODAFONE takes the view that there should be no difference in LLRO and RELLO as regards the rate of occurrence to be considered for the purpose of fault repair deadlines⁵⁸, considering also that the current standard for 100% of incidents (72h) is excessive and out of step with reality, bearing also in mind that "*the study carried out by Grupo VODAFONE with regard to some of the European markets where it operates shows [that] the longest repair times never exceed 72 hours*".

⁵⁸ 80% of incidents in the case of LLRO and 90% of incidents in the case of RELLO.

Leased Line – Fault Restoration

Committed time to resolve reported faults (hours)



Opco	Leased Lines – Comments on fault restoration
Spain	Committed repair time of 6 hours is for full outages reported on circuits in a regional capital; degradation faults on these lines have a committed fault resolution time of 8 hours . For circuits outside of a regional capital, the equivalent repair times are 8 hours (full outage) and 10 hours (degradation).
Germany	Committed repair time is the standard SLA; an enhanced SLA of 8 hours is available.
Portugal	Committed repair time is for 80% of cases only; repair time for 100% of incidents is 72 hours .
Italy	For faults reported on the morning of working days, a repair time of 4.5 hours applies; Faults reported at any other time have a repair time of 12 hours .
Netherlands	Committed repair time of 8 hours is for 90% of orders only; there is an additional commitment to resolve 100% of faults within 12 hours .
Ireland	Committed repair time of 8 hours includes an obligation to provide a response within 3 hours of the fault being initiated.
Czech Republic	Committed repair time is for the standard SLA for OneNet circuits. Enhanced repair times of 8 hours are available for a single circuit; with redundant circuits, repair times of 4 hours or 0.5 hours are available.

VODAFONE thus proposes that the fault repair deadline both in LLRO and in RELLO is set to 4 hours for the whole (100%) of incidents.

On its turn, ONI proposes the following revision of fault repair deadlines provided for in LLRO (taking only into account the pool for the wide line network) and in RELLO:

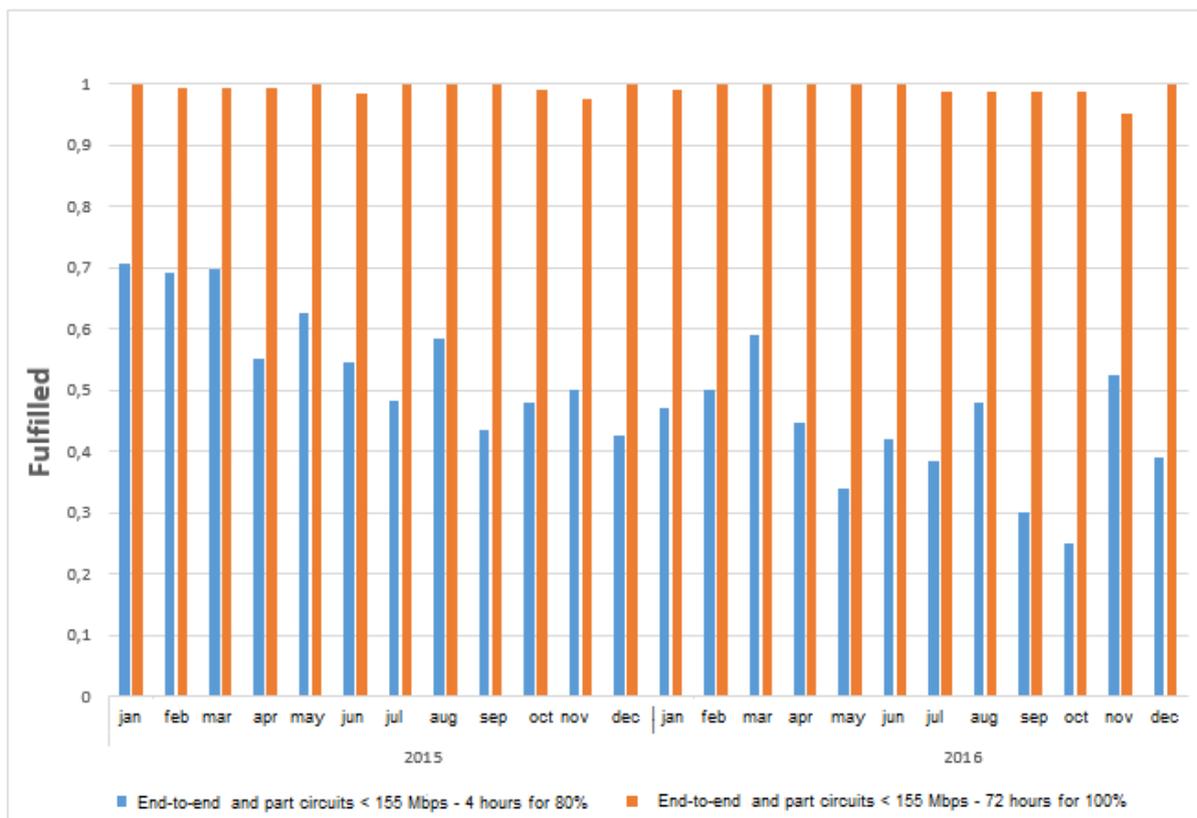
Fault repair deadline (LLRO)	Current LLRO		ONI Proposal	
	Objective	Incidents	Objective	Incidents
Type of lines				
Leased lines (end-to-end and part circuits)	4 h	80%	2.5 h	80%
	-	-	4 h	95%
	-	-	8h	98%
	72 h	100%	24 h	100%
Lines for traffic interconnection (interconnection lines and internal extensions for traffic interconnection)	-	-	2.5 h	80%
	4 h	90%	4 h	90%
	-	-	8 h	98%
	72 h	100%	24 h	100%

Fault repair deadline (RELLO)	Current RELLO		ONI Proposal	
	Objective	Incidents	Objective	Incidents
Type of lines				
Any line	4 h	90%	2.5 h	80%
	-	-	4 h	90%
	-	-	8 h	98%
	72 h	100%	24 h	100%

ONI does not substantiate its proposal for reduction of (and for new) objectives of fault repair deadlines and levels of occurrence submitted in the scope of LLRO and RELLO. ONI specifically proposes a breakdown of deadline-objectives currently defined together with the establishment of additional levels of occurrence, which would add complexity (with regard to the assessment/reporting and analysis).

As regards LLRO, in the light of the decrease which has been registered in the respective pool of lines, the breakdown of deadline-objectives for lines with very close levels of occurrence seems not to be necessary, as this would basically lead to the same results⁵⁹, not least because MEO has not been able to meet the 4-hour deadline (for 80% or 90% of incidents, respectively for LLRO and for RELLO) defined in 2012 (*vide Annex* and chart below).

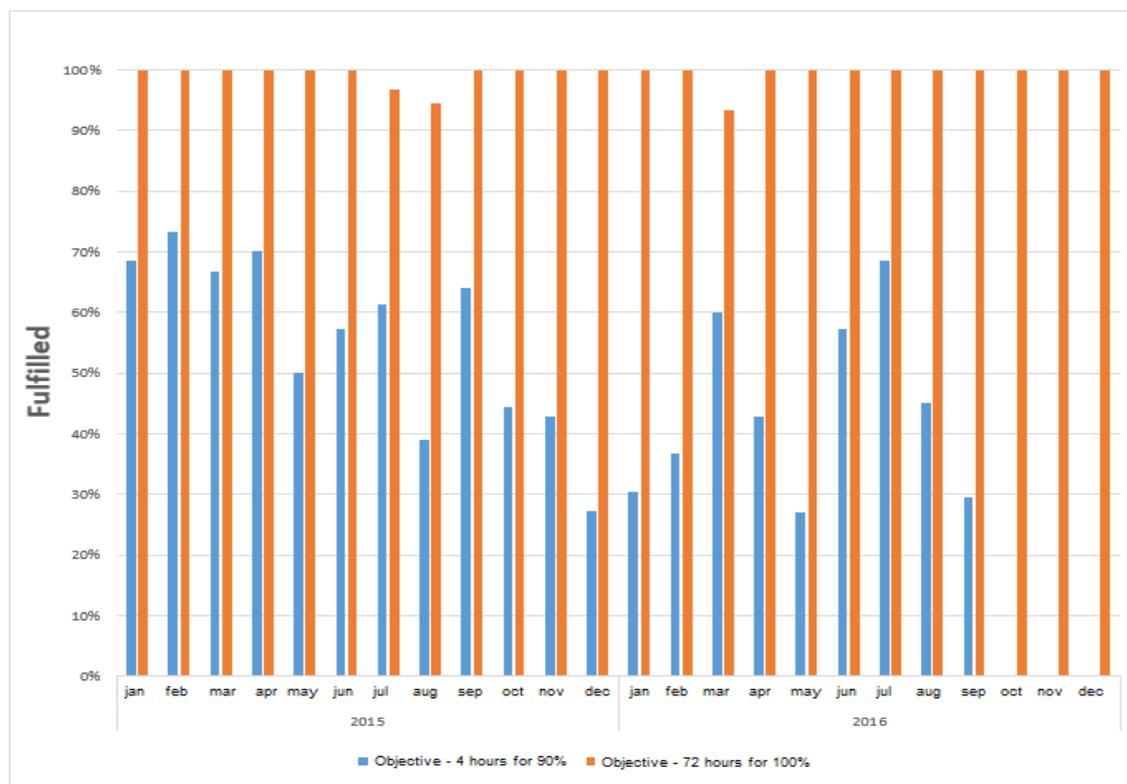
Chart 6. Fault repair deadlines in LLRO



This repeated non-compliance with the more demanding deadlines (4 hours) on the part of MEO, together with the respective payment of compensation to beneficiaries, also takes place in the scope of RELLO (*vide Annex* and chart below).

⁵⁹ In the case of RELLO, the pool of lines is still very small (although it has increased [a very slight increase]), reason for which the same reasoning will apply as regards the breakdown of deadline-objectives for fault repair of Ethernet lines with additional levels of occurrence.

Chart 7. Fault repair deadlines in RELLO



As such, it is deemed that it is not appropriate nor proportionate to impose, as proposed by ONI, a reduction of fault repair deadlines for incidents below 100% (from 4 hours to 2.5 hours) either in LLRO or in RELLO, as this would impose a heavy burden on MEO, without any guarantee of a better service provision on the part of the latter, in view of the fact that current values of compensation for non-compliance are very high. For example, a RELLO line that takes a total of 8 hours to be repaired leads (in case it is not accounted for in the 10% of incidents) to the payment on the part of MEO of a value that corresponds to 150% of the monthly fee for that line.

Moreover, as some operators already hold their own network in main urban centres, applying to MEO for the supply of lines in more remote areas, such as lines to base stations, it is normal that the repair of such lines takes longer, namely where this requires a trip and/or equipment that may not exist in all of MEO’s network exchanges. As such, it is not proportional to decrease fault repair deadlines for incidents below 100% of cases, which are already demanding, defined in LLRO and RELLO.

In the chart included by VODAFONE in its proposal, it may be observed that in Portugal the fault repair deadline objective is more demanding than in other countries presented (Spain, UK, Germany, Italy, the Netherlands, Czech Republic and Ireland), although VODAFONE fails to present the corresponding levels of incidents or to clarify whether working hours or consecutive hours are concerned, which makes the comparison difficult.

However, it was found that in several countries repair times are accounted for in working hours (for example, in France, Spain and Ireland⁶⁰) while in Portugal such periods are calculated according to consecutive hours - in this respect 4 consecutive hours could correspond to 19 working hours⁶¹ - and in other countries they relate to a number of incidents below 100% (such as Spain and the Netherlands). On the basis of data presented in VODAFONE's study, it cannot be concluded, rather the opposite, that the fault repair deadline in LLRO and RELLO should be set to 4 hours for the whole (100%) of incidents.

In fact:

- (a) In Spain, the fault repair time is 6 working hours for 80% of incidents⁶², which involves less demanding levels than those in force in Portugal (the normal repair deadline for 90% of faults is 4 consecutive hours).
- (b) In Ireland, the repair deadline for leased lines is 8 working hours, which is also less demanding than the deadline set for MEO (4 consecutive hours), although in Ireland the deadline is set for 100% of incidents and in the case of MEO, it is set for 80% or 90% of incidents⁶³.
- (c) The maximum 12-hour deadline in Italy is not directly comparable to fault repair deadlines provided for in offers in Portugal, as it refers only to the repair of 2 Mbps lines⁶⁴ in requests submitted in non-working hours.
- (d) In the Netherlands, the repair time for fibre optic lines is 4 consecutive hours for 90% of cases⁶⁵, which represents a level of service similar to that provided for in the scope of RELLO.

As regards the repair deadline for 100% of incidents, in the light of data reported by MEO and also of data practised in other countries, there seems to be some scope for its reduction, without a disproportionate effort being imposed on MEO, that is, an objective that is achievable by MEO with current volumes of lines and faults, while not involving a serious disruption of services or further additional costs. In this context, it is deemed that a reduction of the fault repair deadline from 72 hours to 48 hours in LLRO and RELLO is reasonable, for 100% of incidents, bearing in mind that this concerns a deadline in consecutive and not working hours.

It is obvious that a reduction to 4 hours, as proposed by VODAFONE, is not remotely reasonable, taking into account that the deadline applies to all faults. ONI fails also to

⁶⁰ Source: WIK Report on "Ethernet leased lines, a European benchmark", November 2014.

⁶¹ For example, a repair that starts at 4 pm, where normal working hours run from 9 am to 6 pm.

⁶² <https://telecos.cnmc.es/documents/10138/4282698/ANEXO+Resoluci%C3%B3n+MTZ2014-1114+revisi%C3%B3n+ORLA+VP.PDF/edf9f7e0-e9dc-468e-8cb6-40ebf6cfa66>.

⁶³ www.openeir.ie/WorkArea/DownloadAsset.aspx?id=860.

⁶⁴ https://www.wholesale.telecomitalia.com/it/c/document_library/get_file?uuid=efcbc277-8d0c-4919-a8b0-09e31ddd1dfa&groupId=10165.

⁶⁵ <https://www.kpn->

[wholesale.com/media/792940/20160617_weas_service_description_version_6.3_valid_from_1-9-2016.pdf](https://www.kpn-wholesale.com/media/792940/20160617_weas_service_description_version_6.3_valid_from_1-9-2016.pdf).

substantiate its proposal of reduction to 24 hours. Without prejudice, as the pool of lines in LLRO and RELLO decreases, the fault repair deadline for 80% or 90% of cases becomes more relevant, given that, in practise, this is the deadline which MEO is required to guarantee in the resolution of the whole of faults.

ONI's (and VODAFONE's) claim for the revision of this PQS is thus partially accepted:

D 19. MEO is required to define to 48 hours the fault repair deadline objective for 100% of incidents.

Availability

ONI proposes objectives for the degree of availability of lines in the scope of LLRO and RELLO:

Availability (LLRO) Wide line network	Current LLRO	ONI Proposal
Type of lines	Objective	Objective
End-to-end and part circuits	99.85%	99.95%
Interconnection	99.90%	99.95%

Availability (RELLO)	Current RELLO	ONI Proposal
Ethernet lines (Speed)	Objective	Objective
1 Gb and 10 Gb	99.95% ⁶⁶	99.99%

ONI calls for 99.995% availability for secured lines.

VODAFONE believes that, as availability is calculated for a given pool and according to typology, there could be lines with recurring faults which (on the basis of the size of the pool and a mere average consideration) do not originate penalties on or compensation due by MEO. As such, given that LLRO and RELLO must reflect concerns related to the individual performance of lines, VODAFONE proposes the definition of individual line availability levels.

The line availability degree⁶⁷ measures the rate of available hours (under operating conditions) based on the potential amount of hours of service of the average pool of lines of a given type, in the reference period, per operator.

The line availability in the scope of LLRO and RELLO (*vide Annex* and chart below) has been complied with by MEO, at levels that are very close to the availability degree for which ONI requests an upwards revision of the respective objectives.

⁶⁶ Availability degree objective introduced in RELLO since August 2013.

⁶⁷ A line is deemed to be unavailable during the period of time from the reception by MEO of the report by the beneficiary of a fault attributable to MEO up to its resolution, 'customer pending' periods of time being deducted.

Chart 8. Quarterly availability in LLRO

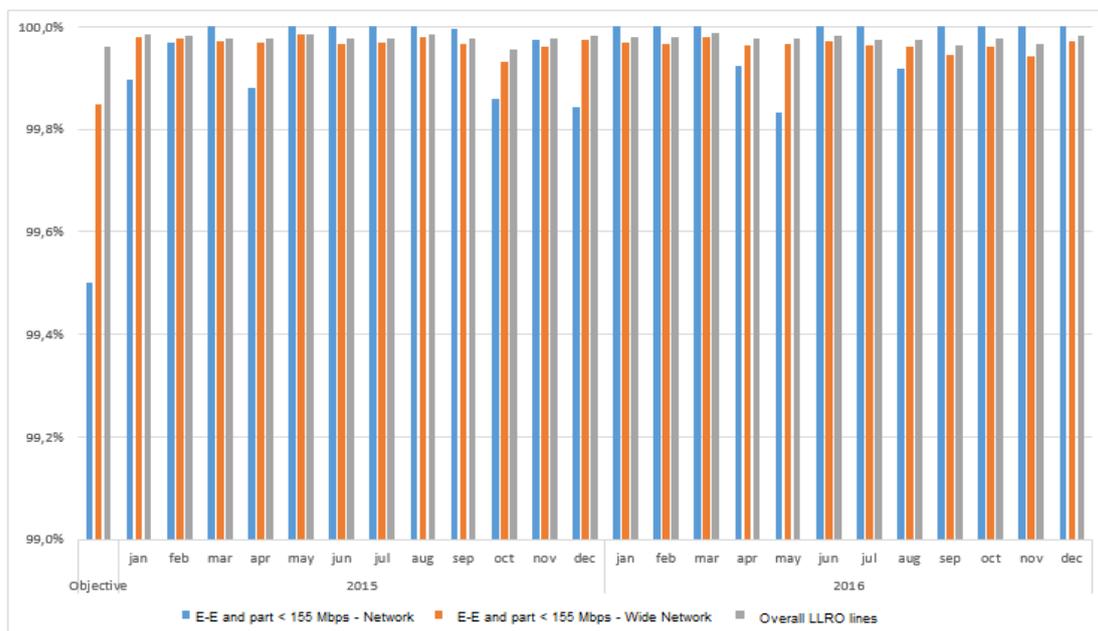
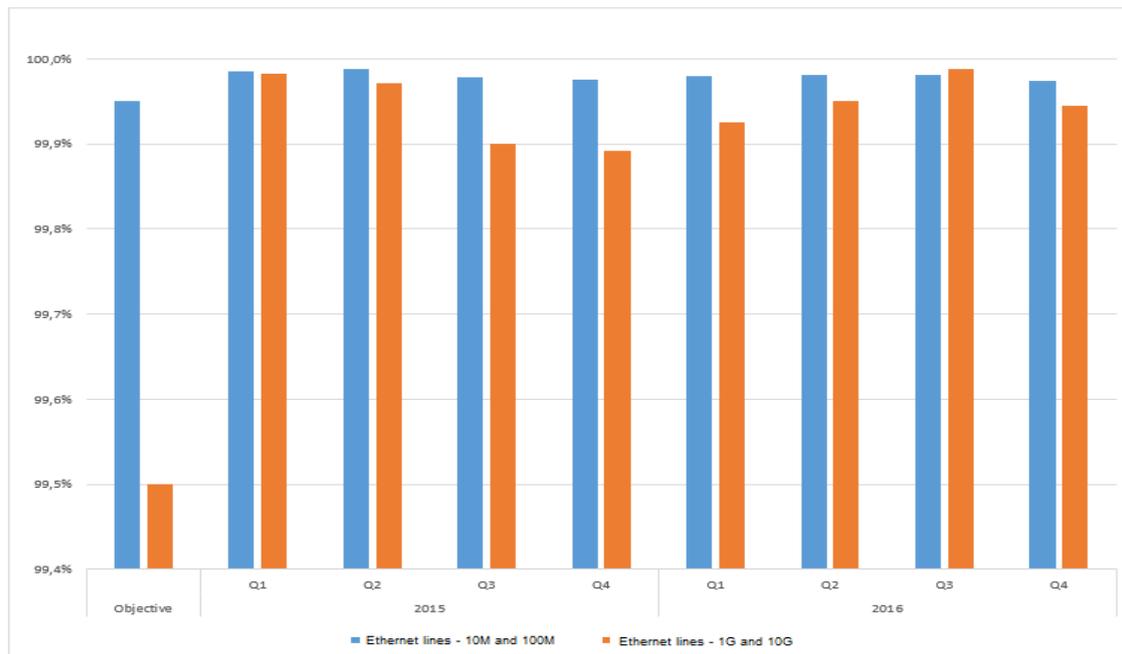


Chart 9. Quarterly availability in RELLO



Notwithstanding, an analysis of the trend of line availability levels presented in charts above shows that there is scope to tighten them up.

However, LLRO shows an excessive breakdown of accounting levels of the line availability degree, according to the speed, but also according to the type (of “network”), which renders the monitoring more difficult and seems not to offer added value, in addition to the fact that lines over 2 Mbps were deregulated in LLRO.

In RELLO, line availability levels apply also to sets of lines of each operator broken down according to capacity ranges (on the one hand, the pool of 10 and 100 Mbps), and on the other the pool of 1 and 10 Gbps). Bearing in mind the small pool of lines of 1 and 10 Gbps, and inclusively that there are operators with only one line with these capacities, in practise for this set of lines MEO is ensuring an individual availability, not an availability for a given pool of lines. In these cases, the request for 99.95% availability, for example, for that line segment, would mean for operators provided with only 1 line in this segment, that the quarterly unavailable period of time would have to be approximately one hour, which is an unreasonable demand, namely due to the fault repair time objective. In fact, one single fault in a given quarter would be enough, even if MEO complied with the maximum repair deadline (of 4 hours), to easily exceed the unavailable period of time. As such, given that in RELLO, the pool of lines of 1 Gbps and 10 Gbps contracted by operators is relatively low, a greater demand in the redefinition of the line availability degree objective must be accompanied by an aggregation of the pool of each operator for the purpose of the application of this indicator.

In this context, it is deemed appropriate to consider a 99.95% availability objective applicable to the total pool of lines of each beneficiary (in each offer - LLRO and RELLO), being stressed that, on the basis of available PQS3 data for 2015 and 2016, values achieved for the overall LLRO availability always exceeded 99.95% (although for the whole of lines of all operators) and in the scope of RELLO, values were below that rate only in three quarters (and only for 1 Gbps and 10 Gbps lines, for which a small pool exists).

In the light of the above, and taking also into account the increase of the availability level, the definition of individual levels of service (in this case, of availability) per line is also not considered to be proportionate, beneficiaries being entitled to opt for (individual) securitization in case they desire to guarantee greater quality of service and individual levels of service.

In this sense, it is deemed that the adoption of a 99.95% performance level for the whole pool of each operator, in LLRO and RELLO, is a value that is compatible with what has been achieved (in both offers).

D 20. MEO is required to define the availability degree objective to 99.95% for the pool of each operator.

Definition of an indicator that allows the monitoring of repetitive faults

Given the significant impact of repetitive faults on the service provided to the final customer, ONI takes the view that an indicator should be introduced to allow the monitoring of repetitive faults on the same line, so that the maximum quarterly amount of faults per individual line is 3.

According to ONI, the introduction of the new indicator on the maximum quarterly amount of faults per individual line requires the definition of a new penalty on MEO in the case of non-compliance with this objective. As such, ONI proposes that in case of non-compliance with the indicator on the maximum quarterly amount of faults per individual line, MEO pays the beneficiary the amount that corresponds to a monthly fee due for the line concerned.

This proposal somehow corresponds to VODAFONE proposal to establish individual levels of availability.

Under the terms of LLRO and RELLO, MEO does not provide information on volumes of faults in leased lines nor on the volume of repetitive faults on the same line. In fact, information on (the repair of) faults in lines in the scope of LLRO and RELLO concerns the percentage of lines whose repair time complies with the defined (percentage) objective, not the volume of fault (repairs).

In this context, ANACOM does not have, nor has ONI indicated, any information on values of volumes of faults registered in operator lines, especially lines held by ONI (on a quarterly basis or otherwise), reason for which ANACOM is not aware of whether there are grounds to define a limit for the amount of faults per quarter for a given line.

As such, for the moment there seems not to exist any justification to define compensation to be applied by MEO for any non-compliance with the maximum quarterly volume of faults per line.

Force majeure

NOS highlighted the issue of notification deadlines and submission of proof of force majeure by MEO, and recalled that it (rather than OPTIMUS) had proposed a procedure for the classification of faults on force majeure grounds, according to which MEO should submit to beneficiaries a brief description of each force majeure fault by the date of its closure and a detailed description and respective proof within at the most 3 days from the date of closure of the fault, and in the absence of evidence, faults would automatically integrate the range of levels of service, having been identified several advantages in the adoption of this procedure⁶⁸.

Still in this scope, NOS supports that force majeure related to “acts of third parties” should exclude bodies engaged by MEO or acting on its behalf, MEO’s partners in the operation of the infrastructure or in associated services or consortium in which MEO participates. According to NOS, the failure to make these exceptions clear could lead to the abusive claiming of force majeure in situations where MEO is directly or indirectly responsible.

⁶⁸ According to NOS: (i) this allows operators to check the effective existence of force majeure and to more easily accept a justification, (ii) simplifies the analysis of results presented by MEO, (iii) minimizes any disagreements in the process of the monitoring of the evolution of different ranges of PQS1, (iv) prevents the collection of data by the end of reference periods (the end of each quarter), which affects the presentation of real evidence and fosters the use of more generic and less reliable data (e.g. civil protection alerts reported by the media) and (v) significantly influences the extension in time of dispute situations over the validity of evidence presented.

Additionally, NOS believes that faults in underwater components should not be regarded as force majeure, in particular those that result from deficiencies or lack of cable maintenance, the responsibility for which must be attributed to the respective consortium of which MEO is part⁶⁹.

Both LLRO and RELLO provide that, in case of a force majeure incident that prevents a one-off provision of services agreed, on the established dates and deadlines, the deadline to restore the service is postponed to a period that corresponds to the verified delay, without prejudice to the development by MEO and the beneficiary of all efforts to minimize the consequences of the event. A force majeure incident is deemed to be any unforeseen and unavoidable event, the effects of which are produced regardless of MEO's or the beneficiary's will or circumstances, that prevents them, fully or partially, permanently or temporarily, from complying with their obligations, a list of events which may be covered by the scope of those situations being set out in offers.

NOS failed to present specific elements that may substantiate the proposed amendments to LLRO and RELLO as far as force majeure cases are concerned. In fact, NOS's proposals seems to assume a claim perhaps abusive (and repeated) by MEO on grounds of force majeure to interrupt the provision of services, of which ANACOM is unaware.

There were situations in the past (for example, related to thefts of copper cables) which are acknowledged to be force majeure incidents. Obtaining the respective evidence could take a long time and is not deemed to be a priority, unlike the resolution of the interruption. In this sense, NOS's proposal to prioritize and impose more demanding deadlines regarding the presentation of proof, the provision of which was imposed by ANACOM in a determination of 2012⁷⁰, seems not to be reasonable.

ANACOM is also not aware of specific situations claimed to be force majeure incidents involving "third parties" mentioned by NOS that are somehow related to MEO, who could be at the source of situations deemed to be of force majeure (for example, inadvertently cutting a fibre optic cable at an excavation).

Finally, it is deemed that the exception to the accounting in PQS2, provided for in RELLO, concerning the "*cutting of cables in the underwater component of MEO and inter-island lines*", seems not to be associated to situations referred by NOS of deficiencies or lack of cable maintenance, but rather to be a reason of force majeure, as referred to in RELLO.

In this context, there seems to be no reason to amend offers as far as reasons of force majeure are concerned.

⁶⁹ The list of exceptions to be considered in the accounting of PQS2 (time to restore the service) includes the report of faults on MAM and inter-island lines due to fault caused by a cutting of cables in the underwater component of these lines (*vide* section 1.1.2 of annex 3 of RELLO).

⁷⁰ "*PTC shall send proof to the beneficiaries that a particular fault warrants classification as force majeure, except in duly justified exceptional situations where this is not possible.*"

Applicability of compensation for non-compliance

VODAFONE believes that the standard set out in LLRO and RELLO, according to which compensation related to installation deadlines apply to lines covered by the forecast plan for the period concerned, is unjustified and disproportionate, as it makes the request of penalties dependant on this plan, thereby undermining the deterrent effect of MEO's non-compliant behaviour. As such, VODAFONE takes the view that penalties provided for should be objectively associated to behaviours aimed to be sanctioned, without making the respective application dependant on any other conditions, namely the prior supply of forecasts.

VODAFONE thus proposes the following amendment:

- (a) Application of penalties specified in LLRO and RELLO where non-compliance on the part of MEO is verified, regardless of a prior supply of forecasts.
- (b) Notwithstanding, a standard similar to that which exists in LLRO may be defined, thereby being established that in case the beneficiary has not submitted to MEO a forecast plan, it shall only be entitled to 75% of the penalty provided for. Otherwise, where procedures provided for have been observed, the beneficiary shall be entitled to the full amount (100%) of the applicable penalty.

VODAFONE stresses that penalties on availability (LLRO and RELLO) are limited (and of a small amount), which significantly affects their deterrent effect, taking the view that no limits to amounts of penalties applied should exist.

According to NOS, this matter was previously reported to ANACOM and was not subject to amendment, and difficulties associated to compliance with forecasts⁷¹ remained or worsened, as most of new lines are aimed for end-customers who present strict requirements concerning installation deadlines. Still according to NOS, the current level of detail of forecast plans is completely unfit due to its granularity and to the uncertainty of the associated market, depriving the compensation procedure of any effective deterrent effect, reason for which it considers it appropriate to extend to LLRO and RELLO the standard on compliance with forecasts provided for in RUO, RDAO and RPAO, that is:

- (a) No longer making the payment of compensation dependant on the supply of forecasts, these offers being aligned with others where, in any case, 75% of the value of compensation is due to beneficiaries, as well as ensuring a maximum limit of installations with compensation plans independent of forecast supply, and
- (b) Reintegrating in LLRO and RELLO the possibility to revise forecasts supplied on a quarterly basis.

Moreover, NOS supports the removal of limits to payment for non-compliance with PQS 1 of 5 monthly fees per incident likely to be compensated. According to NOS, these limits were introduced in 2012, against any other of ANACOM's decisions and have not been justified.

⁷¹ Including a level of detail up to pairs of exchanges at ends of main sections.

ANACOM considers that the role of forecast plans within the planning and efficiency of MEO's wholesale offers to be increasingly less significant, due to learning economies and accumulated experiences over the years of implementation thereof, as well as the stability of regulated offers.

Although it is acknowledged that the submission of forecast plans on the part of beneficiaries was more relevant at the stage of introduction and development of offers in general (e.g. RUO and RDAO), it is deemed, however, that submitting such plans still entails some benefits in the scope of the scaling of required resources, which justifies extending to LLRO and RELLO the incentive (by 25%) associated to the payment of compensation for non-compliance of installation objectives.

In this context, VODAFONE's and NOS' proposal is accepted:

D 21. Conditions for payment of compensation for non-compliance with defined objectives shall abide by the following standards: (a) where beneficiaries submit to MEO a forecast plan, under the terms and with the reliability specified in the offer, they shall be entitled to the full amount of compensation; (b) otherwise, they shall be entitled to 75% of the value of compensation defined in the offer. This standard only applies to compensation for non-compliance with line installation objectives, other compensation for non-compliance not being subject to any demand forecasts.

As regards the possibility of quarterly revision of forecast plans, it is deemed that the annual submission currently provided for, with a six-month breakdown, is sufficient for MEO to appropriately plan the evolution of its network infrastructure, as operators seem not to be subject to any special difficulties in determining in due time their requirements at the level of leased lines in the short and medium term.

As far as NOS's claim is concerned, it is deemed in principle that the possibility of a limit to the payment of compensation cannot be excluded, as there are no data that allow the amendment of the value set out in the offer, which corresponds to 5 monthly fees for the line concerned (for which the non-compliance occurred). It is stressed that in the scope of another regulated offer (RDAO) ANACOM also imposed⁷² limits to amounts of compensation due for non-compliance with certain PQS.

2.2.5 Procedures for settlement of billing disputes

VODAFONE proposes that LLRO and RELLO explicitly set out that, in case of a disagreement on a given bill, both parties (MEO and the beneficiary) are given the opportunity to complain within at the most 90 calendar days. According to VODAFONE, LLRO and RELLO, for this

⁷² Vide point 62 of decision of 26.05.2006 on amendments to RDAO.

purpose, must include a procedure for the clarification and resolution of any billing issues as follows:

- (a) MEO submits to the beneficiary the respective relevant data for billing purposes.
- (b) The beneficiary is granted 90 days to complain against any issues related to the issued bill, submitting relevant documentation for the purpose.
- (c) MEO is required to meet the complaint presented by the beneficiary within at the most 30 calendar days, being entitled to reject the beneficiary's claim, insofar as that rejection is duly substantiated and documented.
- (d) The beneficiary is also granted 30 days to refute MEO's most recent position, insofar as this is duly substantiated and documented.
- (e) Where the dispute persists after the preceding steps are taken, any of the parties (MEO and the beneficiary) may request ANACOM's intervention.

NOS believes that ANACOM's urgent intervention is required as regards the imposition⁷³ on operators of a 90-day deadline to complain against bills (subject to expiry of such right) and the absence of a penalty on MEO for non-compliance with deadlines associated to the payment of compensation, unlike the beneficiary, whose right to compensation expires in case the deadline for reply is not observed⁷⁴. As such, NOS requested the following amendments to offers and their retroactive application, so as to counter negative impact on operators:

- (a) Removal of the 90-day deadline to complain against bills;
- (b) Imposition of the obligation on MEO to pay the full amount of compensation to operators, where the deadline for analysis is not met.

In the first place, as regards VODAFONE' reference that "*both parties (MEO and the beneficiary) are given the opportunity to complain*" about a given bill, it should be clarified that, in principle, the complainant over a given bill will always be a beneficiary who presents that complaint to MEO (that obviously does not complain against a bill it issued itself, as any correction thereto should not be regarded as a complaint on the part of MEO).

Annexes 6 to LLRO⁷⁵ and RELLO on "*Billing and Payment Procedures*" should cover, as the title indicates, billing and payment procedures to be used by MEO as regards the various elements and services provided for each of those offers. However, those annexes only set out that MEO submits a bill to the beneficiary and that the latter may present to MEO a complaint thereon within at the most 90 days from the date of issue of the bill, if it so wishes.

⁷³ Unilaterally by MEO, contrary to any regulatory decision.

⁷⁴ According to NOS, a recent example of non-compliance took place in the scope of the RELLO offer: following a challenge lodged by NOS on 21.03.2016, against the compensation report lodged by MEO concerning the 2nd half of 2015, MEO replied with a challenge on 23.05.2016, after expiry of the 30-day deadline provided for in the offer.

⁷⁵ By mistake, the title of the annex in LLRO is Annex 7, instead of Annex 6.

This means, in practise, that in addition to the deadline for complaining against the bill, no other subsequent procedures/steps to be taken into account by MEO or beneficiaries are specified (in those Annexes to LLRO and RELLO) for the purpose of the checking and reconciliation of bills, thus the detailing of these procedures is required, VODAFONE's proposals in this respect being deemed in general to be valid.

As such:

D 22. MEO is required to detail, in Annexes 6 to LLRO and RELLO, the following procedure:

- D22.1 MEO presents to the beneficiary relevant (detailed) data for billing purposes, the payment of bills being required within the deadline indicated therein.**
- D22.2 The beneficiary has 120 days to complain against the issued bill, submitting relevant documentation for the purpose. The submission of a complaint on billing-related issues by the beneficiary does not suspend the deadline to pay bills.**
- D22.3 MEO meets the claim presented by the beneficiary within at the most 30 calendar days, being entitled to reject the beneficiary's claim, insofar as that rejection is duly substantiated and documented.**
- D22.4 The beneficiary has 30 additional days to refute in a documented and substantiated manner MEO's (most recent) position.**
- D22.5 In case the complaint is accepted, MEO must settle the amount billed within 30 days.**

Lastly, where the disagreement persists after all above-mentioned steps, any of the parties (MEO or the beneficiary) may always request, as hitherto, ANACOM's intervention.

As regards the deadline for complaining against bills provided for in LLRO and RELLO, ANACOM believes that this is a matter of the scope of the contractual freedom of parties, and as this is a private matter, it is not within the Regulatory Authority's competence. Without prejudice, ANACOM does not identify any disadvantage in beneficiaries being granted a deadline to complain against any billing issues, thus it is deemed appropriate to amend the deadline provided for in offers from 90 to 120 days from the date of issue of the bill, for beneficiaries to complain on billing issues (the removal of such deadline not being justified, as supported by NOS).

Nevertheless, it is stressed that the setting of this deadline is without prejudice to the appeal of beneficiaries to Courts, within time barring limits that result from general Law.

Specifically as regards NOS's repeated request for the removal from LLRO and RELLO of the 90-day deadline to complain against bills, it is clarified that under the Civil Code (article 330, paragraph 1), MEO is entitled, on its own initiative, to amend published reference offers so as to set an expiry deadline up to which beneficiaries may submit complaints on issued bills

deemed to be appropriate, and also to reflect this deadline on contracts for the provision of services concluded with beneficiaries in the framework of those offers.

With respect to the process for resolution of disagreements on the amount of compensation to be paid by MEO (a matter that, contrary to what NOS's claim seems to suggest, is not the same as the issue of complaints against bills), it is deemed that there are grounds to maintain the 1-month deadline set out in offers⁷⁶ for MEO to meet a request for reanalysis of compensation submitted by a beneficiary. This reanalysis request must obviously be duly substantiated and detailed (e.g. any correction in the accounting of customer pending periods) by the LLRO or RELLO beneficiary, and present the specific value which in the view of the beneficiary should be the amount of compensation MEO is required to pay. In case MEO fails to meet the 1-month deadline to address the request for reanalysis of compensation, MEO incurs the payment of the amount of compensation presented by the beneficiary in the reanalysis request (a symmetrical situation to the one defined by MEO in offers).

Finally, it is stressed that ANACOM deems the retroactive request of above-measures not to be justified, both as regards the billing complaint procedure and the procedure for resolution of disagreements on the amount of compensation.

In conclusion:

D 23. Requests for reanalysis of compensation submitted by LLRO or RELLO beneficiaries must be duly substantiated and detailed and present the specific value which in the view of the beneficiary should be the amount of compensation MEO is required to pay.

D 24. Where MEO fails to meet the 1-month deadline to address the request for reanalysis of compensation, it incurs the payment of the amount of compensation presented by the beneficiary in the reanalysis request.

2.2.6 Prices

NOS (then OPTIMUS) informed ANACOM in the past of situations where MEO presented to end-customers line offers at prices that were significantly below those of RELLO, thus illustrating MEO's disrespect for the retail-minus rule and the need for a review of prices of that offer, which remained unchanged, even further to the last market analysis (Market 4), in which ANACOM imposed that prices should be cost-oriented (removing the retail-minus rule).

The price component, according to NOS, is quite urgent in the scope of the revision of offers, and the one that contributed to most to the decrease of its use in specific market segments, given that the price gap is so wide that operators, in individual cases, decide to develop their own infrastructure merely in order to meet customer requirements, incurring disproportionate

⁷⁶ Vide last paragraph of Annex 3 to LLRO and second last paragraph of section 1 of Annex 3 to RELLO.

costs which would be avoidable in a context where non-discrimination and price control obligations were complied with.

NOS reiterates the need for a revision of LLRO and RELLO prices, in the light of obligations imposed on MEO.

Data of MEO's Cost Accounting System (CAS) for 2015 do not raise the issue of the reduction of prices in LLRO and RELLO.

As a whole, products covered by LLRO and RELLO present negative margins, a situation which will likely be aggravated as from 2016, as only lines in NC Areas (which tend to have higher costs) will be regulated.

It is stressed in the scope of the analysis of Market 4 a substantial reduction of the price of MAM and inter-island lines was imposed, on the basis of the request of the principle of cost-orientation of prices (which was extended to all Ethernet lines).

MEO subsequently decreased in RELLO the price of certain main sections, on its own initiative.

2.2.7 Other matters

NOS referred also that the following issues require a revision of offers:

Limitation of liability for direct damage to 25% of the amount billed for services provided under offers

According to NOS, in the scope of services provided under offers, there is a maximum limit to be paid by MEO as well as by operators, on the basis of contractual and/or extra-contractual liability for direct damage, corresponding to 25% of the amount billed. NOS considers that this amount is clearly low and in conflict with the respective legal framework, reason for which it proposes that it is removed from the offer.

The provision on "limitation of liability", as provided for in sections 10.7 of LLRO and RELLO, represents a clause on contractual and/or extra-contractual limitation of liability, and as such it must abide by general and specific standards of civil law.

As far as extra-contractual liability is concerned, the limitation by agreement of this type of liability is prohibited by law, as its source is not contractual. As regards contractual liability, parties are entitled, by agreement and on the basis of their private autonomy, to set maximum limits to compensation due to address the loss suffered for non-compliance with contractual obligations to which the other party was bound.

However, in this case, the provision is set out in a document prepared unilaterally by MEO, and as such it cannot be considered to be a "prior agreement" between parties, thus it is required to

meet the specific regime of general contractual clauses (Decree-Law No. 446/85, of 25 October, as it stands), which, in point c) of article 18 provides that “*the following general clauses are strictly prohibited: (...) c) exclude or limit, directly or indirectly, liability for definitive non-compliance, delay or defective performance, in case of intentional fault and serious misconduct; (...)*”.

ANACOM is entitled to order MEO to amend the provision on “limitation of liability” so as to render it compliant with general rules of law, thus making effective obligations imposed according to article 66 of ECL. It is noted that in the scope of other regulated offers provided by MEO (such as RDAO and RPAO) no such limitation of liability exists.

In this context, it is deemed that MEO is required to remove or amend the provision set out in LLRO and RELLO on the “limitation of liability”, according to the applicable legal framework, specifically restricting the limitation of contractual liability to situations of “minor fault”.

D 25. MEO is required to amend the provision on “limitation of liability” in conformity with the applicable legal framework, restricting the limitation of contractual liability to situations of “minor fault” and removing the reference to limitation on the basis of extra-contractual liability.

Procedures related to securitisation solutions

According to NOS, the need remains for the provision of securitisation solutions completely disjoined from lines already installed, which offers have not rendered formal.

NOS’ claim for “completely disjoined” securitisation solutions seems to concern the supply/existence of redundancy in respect of installed lines. In this context, it is stressed that the securitisation option is always open to the beneficiary, who is entitled to request the individual securitisation of each line.

3. DETERMINATION

Bearing in mind the analysis carried out and whereas:

- (a) MEO is subject, in the scope of the leased line offer, and further to the analysis of the wholesale market for high-quality electronic communications at a fixed location (access and trunk segments), among others, to the obligations of:
 - Access to and use of specific network resources;
 - Transparency in the publication of information, including reference offers;
 - Non-discrimination in the offer of access and interconnection;
 - Cost-orientation of prices;
- (b) In the above-mentioned market analysis, ANACOM acknowledged that there were aspects in LLRO and RELLO that should be revised or updated, so as to better adjust them to market interests, with particular focus on installation and line repair procedures and deadlines,
- (c) A prior hearing of stakeholders and the general consultation procedure were carried out on a draft decision concerning amendments to LLRO and RELLO, which ran up to 04.05.2017, comments received, the respective analysis and grounds for the decision being set out in the “Report of the public consultation and prior hearing on amendments to the Leased Lines Reference Offer (LLRO) and Reference Ethernet Leased Lines Offer (RELLO)”, which is deemed to be an integral part hereof,

ANACOM’s Management Board, in the scope of powers provided for in points a), b) and h) of paragraph 1 of article 8 of ANACOM’s Statutes, approved by Decree-Law No. 39/2015, of 16 March, in the exercise of competencies provided for in point a) of paragraph 1 of article 9 of those Statutes and in the pursue of regulatory objectives and principles, in particular point a) of paragraph 1 and paragraph 6, both of article 5 of ECL, under paragraph 3 of article 68 of ECL, and in order to implement measures determined further to the analysis of market 4, hereby determines as follows:

MEO is required to amend LLRO and RELLO within 30 days from notification of ANACOM’s final decision, account being taken of the following provisions:

- D 1.** MEO is required to include in its cost accounting system a separate profit and loss account for backhaul lines, in the scope of RELLO.
- D 2.** MEO is required to provide beneficiaries with geographic information (in SIG format) on the coverage of its exchange areas, both in the scope of RELLO and of LLRO, as well as a triangular matrix with distances in a straight line to serve as reference to the billing of trunk segments (in the scope of LLRO).

- D 3.** MEO is required to justify, on a case-by-case basis, any situations of connections to an exchange area other than the one that covers the NTP concerned and, in this case, it must give the beneficiary the opportunity to terminate the contract on the line concerned at no additional cost (except for any administrative costs the company may have incurred in, duly justified).

- D 4.** MEO is required to amend procedures currently defined in LLRO and RELLO, informing the beneficiary reasonably ahead (e.g. at least 1 day) of the time when MEO's technical employee is scheduled to arrive at the facility of the end-customer to conclude the supply of lines. In situations where the presence of the end-customer of the beneficiary is required at the facility (to provide MEO with access thereto), it is deemed that the beneficiary should be able to justifiably request the re-scheduling of the installation on the part of MEO on the basis of the availability of that customer, the deadline then remaining 'customer pending'.

- D 5.** MEO is required to clarify that, further to the reception of "unreasonable" requests, a budget will always be submitted to beneficiaries.

- D 6.** MEO is always required to substantiate any budget proposed to beneficiaries, which must be submitted within at the most 10 working days from the date the request is sent by the beneficiary.

- D 7.** MEO is required to allow the beneficiary to cancel the request for installation which was subject to a feasibility analysis and budgeting by MEO, where the beneficiary concludes that the installation is unfeasible, being only required to pay the cost effectively incurred by MEO with such feasibility analysis and budgeting. As such, after the budget is presented, MEO must wait to know whether the budget is accepted by the beneficiary, a response which must be sent within 20 working days at the most, remaining 'customer pending'. Where the beneficiary does not confirm its interest within this deadline, the request is automatically cancelled.

- D 8.** MEO is required to always contact the person in charge of the NTP indicated by the beneficiary in the line request, in order to schedule the supply of the service. In case MEO misidentifies the line at the place of installation, a discount by 35% must be applied on the line installation price.

- D 9.** MEO is required to amend the line request form, in LLRO and RELLO, so as to provide for the possibility of the beneficiary introducing the geographic coordinates of NTP(s).
- D 10.** MEO may not reject a request for supply on grounds of “incorrect address” - consequently placing the line request in a ‘customer pending’ situation - where the NTP indicated by the beneficiary is listed in CTT’s website or where the beneficiary indicates, in the line request, the geographic coordinates of that address (which shall prevail, in case both information mismatch).
- D 11.** The beneficiary has two working days after the ‘customer pending’ situation is notified by MEO to lodge a claim, where it deems the situation to be improperly classified. Where it is confirmed that the ‘customer pending’ situation was in fact improperly classified, MEO must always account for such period in the total supply time.
- D 12.** In case MEO performs a remote screening and finds out that the fault does not fall under its responsibility, an ‘improper fault’ being at stake, that result must be reported to the beneficiary (for example, via telephone call) without any unjustified delay. The formal closure of the fault (which must always take place) may be subsequently reported by MEO, including the information on the time (h:m:s) when the remote screening was concluded.
- D 13.** MEO is required to include in the fault closure report information on whether the trip of its technical employee to the facility is involved, the price for the improper fault reporting covering situations where a trip is involved or not. Instead of this standard, MEO may maintain the charging of trips in case of faults for which the beneficiary is responsible, except for those based on the following reasons: ‘AVOL07 - Improper reporting’ and ‘AVOL12 - Scheduling required to access customer facilities’.
- D 14.** MEO is required to pay the beneficiary the “improper fault price” and refund any amount charged on grounds of intervention for improper fault reporting, where the company informs that the fault is improper and it is later established that the fault exists and falls in fact under its responsibility.

Situations described by ONI, where faults do not fall under MEO's responsibility, may not be attributed to this company. However, without prejudice to the fact that MEO is not responsible for the repair, it is deemed that this company is required, as referred in the previous section, to undertake a quick initial screening, preferably a remote one, and to promptly inform the beneficiary of results thereof and reasons for closure. As such, where MEO starts the initial screening, or reports the respective results, after expiry of the deadline for repair defined for 100% of incidents, it is deemed that the screening did not take place in a satisfactory way and according to the principle of urgency, reason for which it should not be taken into account for collection purposes, whereby:

- D 15.** MEO must not charge the amount due for 'improper fault' where the initial screening begins, or the result thereof is reported to the beneficiary, after expiry of the deadline for repair defined for 100% of incidents
- D 16.** MEO is required to notify beneficiaries of planned/programmed interventions which may affect services provided as early as operationally possible, namely as soon as the company schedules (that is, plans) such interventions, an advance notice of 5 working days ahead of the date of intervention being deemed to be reasonable for this purpose.
- D 17.** In case technical teams miss each other, for reasons attributable to MEO or to the beneficiary, the party that fails to show up must compensate the other for costs incurred on the basis of the principle of reciprocity, the JI rescheduling procedure then being followed.
- D 18.** MEO is required to define to 60 days the installation deadline objective for Type 2 lines for 100% of incidents.
- D 19.** MEO is required to define to 48 hours the fault repair deadline objective for 100% of incidents.
- D 20.** MEO is required to define the availability degree objective to 99.95% for the pool of each operator.
- D 21.** Conditions for payment of compensation for non-compliance with defined objectives shall abide by the following standards: (a) where beneficiaries submit to MEO a forecast plan, under the terms and with the reliability specified in the offer, they shall

be entitled to the full amount of compensation; (b) otherwise, they shall be entitled to 75% of the value of compensation defined in the offer. This standard only applies to compensation for non-compliance with line installation objectives, other compensation for non-compliance not being subject to any demand forecasts.

- D 22.** MEO is required to detail, in Annexes 6 to LLRO and RELLO, the following procedure:
- D22. 1** MEO presents to the beneficiary relevant (detailed) data for billing purposes, the payment of bills being required within the deadline indicated therein.
 - D22. 2** The beneficiary has 120 days to complain against the issued bill, submitting relevant documentation for the purpose. The submission of a complaint on billing-related issues by the beneficiary does not suspend the deadline to pay bills.
 - D22. 3** MEO meets the claim presented by the beneficiary within at the most 30 calendar days, being entitled to reject the beneficiary's claim, insofar as that rejection is duly substantiated and documented.
 - D22. 4** The beneficiary has 30 additional days to refute in a documented and substantiated manner MEO's (most recent) position.
 - D22. 5** In case the complaint is accepted, MEO must settle the amount billed within 30 days.
- D 23.** Requests for reanalysis of compensation submitted by LLRO or RELLO beneficiaries must be duly substantiated and detailed and present the specific value which in the view of the beneficiary should be the amount of compensation MEO is required to pay.
- D 24.** Where MEO fails to meet the 1-month deadline to address the request for reanalysis of compensation, it incurs the payment of the amount of compensation presented by the beneficiary in the reanalysis request.
- D 25.** MEO is required to amend the provision on "limitation of liability" in conformity with the applicable legal framework, restricting the limitation of contractual liability to

situations of “minor fault” and removing the reference to limitation on the basis of extra-contractual liability.

ANNEX – LLRO AND RELLO PQS (JANUARY 2015 TO DECEMBER 2016)

LLRO

INSTALLATION DEADLINE Achieved	Objective	Incidents	2015												2016											
			jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
Type 1 LLRO lines	20 days	95%	23	11	11	17	19	23	18	17	12	41	51	29	16	12	22	4	23	11	10	12	14	6	28,0	10
	40 days	100%	23	16	16	23	32	23	18	17	12	41	51	29	16	12	22	4	23	11	10	12	14	6	28,0	10
Type 2 LLRO lines	40 days	95%	11	36	13	18	27	25	18	8	30	18	NA	7	19	13	13	28	12	2	7	54	5	NA	5,0	7,0
	80 days	100%	11	36	17	21	39	25	18	8	30	18	NA	7	19	13	13	28	12	2	7	54	5	NA	5,0	7,0

FAULT REPAIR DEADLINE Achieved	Objective	Incidents	2015												2016											
			jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
Leased lines (end-to-end and part circuits) < 155 Mbps	4 hours	80%	70,59%	69,23%	69,77%	55,17%	62,50%	54,47%	48,39%	58,43%	43,40%	48,08%	50,00%	42,50%	47,06%	50,00%	58,97%	44,79%	34,07%	42,03%	38,36%	47,89%	30,00%	25,00%	52,46%	39,13%
	72 hours	100%	100,00%	99,15%	99,22%	99,31%	100,00%	98,37%	100,00%	100,00%	100,00%	99,04%	97,56%	100,00%	99,02%	100,00%	100,00%	100,00%	100,00%	100,00%	98,63%	98,59%	98,75%	98,68%	95,08%	100,00%
Leased lines (end-to-end and part circuits) - 155 Mbps	4 hours	90%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	72 hours	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lines for traffic interconnection	4 hours	90%	75,00%	25,00%	60,00%	100,00%	56,25%	50,00%	50,00%	81,82%	58,33%	57,14%	66,67%	25,00%	NA	NA	66,67%	50,00%	57,14%	85,71%	25,00%	36,84%	50,00%	NA	63,64%	50,00%
	72 hours	100%	100,00%	100,00%	93,33%	100,00%	93,75%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%

QUARTERLY AVAILABILITY Achieved	Objective	2015												2016												
		jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	
Line Network Contracts																										
Leased lines (end-to-end and part circuits) < 155	99,50%	99,90%	99,97%	100,00%	99,88%	100,00%	100,00%	100,00%	100,00%	100,00%	99,86%	99,97%	99,84%	100,00%	100,00%	100,00%	99,92%	99,83%	100,00%	100,00%	99,92%	100,00%	100,00%	100,00%	100,00%	
Leased lines (end-to-end and part circuits) - 155	99,99%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	
Lines for traffic interconnection	99,90%	100,00%	100,00%	99,97%	100,00%	100,00%	100,00%	100,00%	100,00%	99,99%	100,00%	99,98%	100,00%	99,99%	100,00%	100,00%	99,99%	100,00%	100,00%	100,00%	99,97%	100,00%	100,00%	100,00%	99,98%	
Line for access to submarine cables	99,50%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	
Wide Line Network Contracts																										
Leased lines (end-to-end and part circuits) < 155	99,85%	99,98%	99,98%	99,97%	99,97%	99,99%	99,97%	99,97%	99,98%	99,97%	99,93%	99,96%	99,97%	99,97%	99,97%	99,97%	99,98%	99,97%	99,97%	99,97%	99,96%	99,96%	99,95%	99,96%	99,94%	99,97%
Leased lines (end-to-end and part circuits) - 155	99,99%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	
Lines for traffic interconnection	99,90%	100,00%	99,99%	99,99%	100,00%	99,98%	100,00%	99,99%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	99,99%	99,99%	99,99%	100,00%	99,99%	99,99%	100,00%	100,00%	100,00%	
Line for access to submarine cables	99,85%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	
Overall LLRO lines	99,96%	99,99%	99,98%	99,98%	99,98%	99,99%	99,98%	99,98%	99,99%	99,98%	99,96%	99,98%	99,98%	99,98%	99,98%	99,98%	99,99%	99,98%	99,98%	99,98%	99,97%	99,97%	99,96%	99,98%	99,97%	99,98%

RELLO

INSTALLATION DEADLINE Achieved	Objective	Incidents	2015												2016											
			jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
Type 1 Ethernet lines	20 days	95%	34	19	20	28	17	18	22	34	34	50	46	25	33	43	45	17	30	50	37	38	46	19	35	43
	40 days	100%	34	19	20	26	19	19	22	34	34	50	46	25	33	43	45	17	30	50	37	38	46	19	35	43
Type 2 Ethernet lines	40 days	95%	22	15	32	29	21	25	28	27	39	73	40	24	50	26	45	21	44	40	16	22	27	33	16	33
	80 days	100%	22	15	32	29	23	25	28	27	39	73	40	24	50	26	45	21	44	40	16	22	27	33	16	33

FAULT REPAIR DEADLINE Achieved	Objective	Incidents	2015												2016											
			jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
Ethernet lines	4 hours	90%	68,57%	73,33%	66,67%	70,00%	50,00%	57,14%	61,29%	38,89%	64,00%	44,44%	42,86%	27,27%	30,43%	36,67%	60,00%	42,86%	26,92%	57,14%	68,42%	45,00%	29,41%	42,86%	20,00%	50,00%
	72 hours	100%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	96,77%	94,44%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	93,33%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%

QUARTERLY AVAILABILITY Achieved	Speed	Objective	2015				2016																		
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4															
Ethernet lines	10M and 100M	99,95%	99,98%		99,99%		99,98%		99,98%		99,98%		99,98%		99,98%		99,98%		99,98%		99,98%		99,97%		99,97%
	1G and 10G	99,50%	99,98%		99,97%		99,90%		99,89%		99,93%		99,95%		99,99%		99,99%		99,99%		99,99%		99,95%		99,95%