



PÓST- OG FJARSKIPTASTOFNUN

Decision no. 24/2017

**Review of Míla wholesale tariff for
fibre-optic to street cabinets (Market
4/2008) and fibre-optic in access
network (Market 6/2008)**

15 November 2017

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1 Introduction

The Míla ehf. tariff (Míla) for fibre-optic here under discussion is based on the obligations imposed on the company with the Decision of the Post and Telecom Administration (PTA) no. 8/2014 on the designation of a company with significant market power and on the imposition of obligations on the wholesale market for terminating segments of leased lines dated 6 May 2014 and on no. 21/2014 on the designation of a company with significant market power and on the imposition of obligations on the wholesale market for access networks at a fixed location and wholesale broadband access dated 13 August 2014.

The fibre-optic lines in question here and which are subject to price control are on the one hand fibre-optic in access network, one thread and one pair and on the other hand fibre-optic to street cabinets, 1 - 4 threads.

The PTA has already endorsed the Míla cost analysis for Markets 4/2008 and 6/2008 for Míla copper products, i.e. copper local loops and copper leased lines, which are also based on the PTA Decisions nos. 8/2014 and 21/2014. The PTA refers in this connection to PTA Decisions nos. 5/2017 and 7/2017 dated 30 May 2017. Míla requested that the analysis be divided in this manner between copper on the one hand and fibre-optic on the other.

The PTA opened a national consultation on the preliminary draft to the Decision here under discussion on 17 July and the consultation ran until 18 August 2017. PTA did not receive any comments from the operators during the consultation.

On 13 October 2017, the PTA submitted the draft decision to the ESA for consultation in accordance with Paragraph 1 of Article 7 of the Electronic Communications ACT and Article 7 of the Framework Directive. On 13 November 2017, the PTA received ESA's comments to the draft Decision, see appendix II. With respect to the comments made by ESA the PTA refers to their letter.

The following Sections cover the legal grounds, methodology and calculations that led to the PTA conclusion.

1.1 Basis of price obligation for fibre-optic

PTA Decision no. 8/2014.

With reference to Article 17 of Act No. 81/2003 on Electronic Communications, as amended, the PTA analysed the wholesale market for terminating segments of leased lines (Market 6/2008) and the PTA conclusion was published in the Administration's Decision no. 8/2014 on the designation of a company with significant market power and on the imposition of obligations on the wholesale market for terminating segments of leased lines on 6 May 2014.

Fibre-optic in the access network (black fibre without endpoint devices) belongs to this market as is stated in Section 2.6 in Appendix A to the PTA Decision no. 8/2014.

With a view to the market definition and analysis of competition on the wholesale market for terminating segments of leased lines and in accordance with Paragraph 2 of Article 17, see Article 18 of the Electronic Communications Act, the PTA decided designate Míla as having significant market power on the relevant market.

In accordance with Article 27 on the Electronic Communications Act, the PTA decided to maintain the obligations on Míla because of the designation of the company as having significant market power on this market. With the authority of Article 32 of the Electronic

Communications Act the PTA imposed the obligation on Míla that the wholesale tariff for terminating segments of the company's leased lines should be cost-oriented. When deciding prices for terminating segments of leased lines, Míla shall use the cost analysis methodology which is based on historical costs, allocated to the relevant service (HCA FAC).

When implementing its cost analysis Míla shall base its methodology on Chapter IV of Regulation no. 564/2011 on bookkeeping and cost analysis in the operations of electronic communications companies, such as on evaluation of operational assets, useful life and WACC. Furthermore, the PTA position shall be taken into account that was made known on criteria and calculations in the Administration's Decision no. 34/2011 with respect to cost analysis for terminating segments of leased lines. In its assessment of the conclusions of the Míla cost analysis the Administration will take into account the price for comparable products in the EEA when deciding price. The PTA will also have in mind that the tariff should relate logically to Míla's local loop leasing prices, with respect to potential over or under-pricing by the Skipti Group¹ of the above specified services. The PTA is authorised to reject costs that the Administration considers having resulted from uneconomical operations, see among other things Article 32 of the Electronic Communications Act No. 81/2003.

In the Decision, it was specified that if the Míla cost analysis for terminating segments of leased lines returned a conclusion that the PTA considered unacceptable with the above considerations in mind, the PTA would reject such a conclusion. The Administration would review the criteria applied in the Míla cost analysis in order to return a conclusion which was in accordance with the above considerations and with the objectives of the EU Commission to support competition and to improve the investment environment on the electronic communications market.

The Míla cost analysis for wholesale tariff for terminating segments of leased lines shall be based on the following main criteria:

- Allocation of costs shall be based on separation of accountancy for the access network, on Míla asset bookkeeping and on costs from Míla's bookkeeping system where opex for the access network is entered under bookkeeping accounts.
- A depreciation methodology shall be used that reflects the value in use of an asset.
- The annuity method shall be used to calculate annual investment costs.
- The number of lines shall be calculated taking into account line equivalents.
- The cost of the local loop network shall be captured, including share of joint costs, management, IT and senior management in accordance with separation of accountancy.
- Real return on investment shall be used as a reference, based on weighted average cost of capital² (WACC real) from capital bound in assets used for provision of service where the risk premium reflects the risk related to operations on the relevant market.
- Average unit cost for the whole country shall be calculated from allocated operational and investment costs divided by number of lines or line equivalents.

¹ Síminn and Skipti were merged and the merged company is called Síminn hf.. Síminn hf. is the parent company of Míla and these companies form the Síminn Group.

²In accordance with Article 16 of Regulation no. 564/2011 the PTA decides on an annual basis the weighted average cost of capital (WACC) which electronic communications companies should use as a reference in their calculations.

When deciding its tariff, Míla shall apply the above specified main criteria in its cost analysis.

PTA Decision no. 21/2014

With the PTA Decision no. 21/2014 of 13 August 2014, the PTA designated Míla as a company with significant market power on the wholesale (physical) network infrastructure access at a fixed location (Market 4/2008) and on the market for wholesale broadband access (Market 5/2008).

With the authority in Article 32 of the Electronic Communications Act the PTA imposed on Míla an obligation for price control for wholesale access to the company's copper access networks at a fixed location with related facilities, but did not impose an obligation for price control on Míla fibre-optic local loops.

In Paragraphs 762 and 764 of the Decision it is stated that Míla shall make *a tariff for fibre-optic from the exchange to street cabinet*. This would be a tariff for fibre-optic threads that are used for bitstream services with the VDSL technology. Pursuant to Paragraph 4 of Article 32 of the Electronic Communications Act the tariff for access to fibre-optic to street cabinets shall be cost-oriented.

In Paragraph 770 of the Decision it was furthermore stated that the Míla cost analysis should cover access to copper local loops, copper sub-loops and to *fibre-optic to street cabinets*, and access to associated facilities such as street cabinets. In the Decision, it was specified that the Míla cost analysis should be based on the following main criteria:

- The cost base shall be Míla historical costs (HCA) based on the preceding financial year in each instance.
- The methodology shall be based on allocating all costs to the service in question (FAC).
- Allocation of costs is based on separation of accountancy for local loop leasing, on Míla asset bookkeeping and on costs from Míla's bookkeeping system where opex is booked in bookkeeping accounts.
- Assessment of investment shall be based on the book value of operational equipment in Míla's asset bookkeeping where the historical cost of investments is adjusted to price levels of the year being analysed in each instance.
- A depreciation methodology shall be used that reflects the value in use of an asset.
- The annuity method shall be used to calculate annual investment costs.
- The number of lines shall be calculated with reference to line equivalents where the above specified changes in definition of access are taken into account when assessing their equivalents.
- The cost of the local loop network shall be captured, including share of joint costs, management, IT and senior management in accordance with separation of accountancy.
- The required rate of return used shall be based on weighted average cost of capital³ (WACC real) from capital tied in assets used for provision of service where the risk premium reflects the risk related to operations on the relevant market.

³In accordance with Article 16 of Regulation no. 564/2011 the PTA decides on an annual basis the weighted average cost of capital (WACC) which electronic communications companies should use as a reference in their calculations.

- Funds tied in current assets to the amount of average inventory for operations and development of the access network shall be taken into account.
- Average unit cost for the whole country is calculated from allocated operational and investment costs divided by number of lines or their line equivalents.

The Míla tariff shall be reviewed annually in accordance with annual updating of the cost analysis.

1.2 Míla tariff currently in force

Tariff for fibre-optic in access network

The existing Míla tariff for fibre-optic in access network is as follows:

Fibre-optic lines in access network	Monthly price	Initial cost
Fibre-optic, user segment, one pair	ISK 16,583.	ISK 96,680.
Fibre-optic, user segment, one thread	ISK 11,608.	ISK 96,680.

This tariff has remained unchanged for several years. The current monthly price for the fibre pair was decided in a letter to Landsími Íslands hf., dated 28 November 2003. The current monthly price for one thread was decided in the PTA preliminary conclusion dated 12 April 2010 (case no. 2009120050).

Míla tariff for fibre-optic to street cabinet

The existing Míla tariff for fibre-optic in access network is as follows:

Fibre-optic to street cabinet	Monthly price
1 fibre-optic thread	ISK 5,804.
2 fibre-optic threads	ISK 8,292.
3 fibre-optic threads	ISK 10,780.
4 fibre-optic threads	ISK 13,268.

In PTA Decision no. 21/2014, this product was included in Míla's price obligations for the first time and hence there have been no previous decisions by PTA on the prices for fibre to street cabinets. The above Míla's wholesale prices for fibre to street cabinets were however used in Siminn's cost analysis of bitstream access Option 1 and 3, PTA Decision no. 17/2014.

1.3 Written communications with Míla

With an email dated **13 November 2014**, Míla requested a postponement on delivery of its cost analysis of Market 6/2008. In its letter, Míla pointed out that since the cost of leased lines is based on the cost of copper local loops it would be better to analyse the cost of local loops before the analysis of the leased lines took place. Míla requested a postponement to January 2015 to deliver the cost analysis, to which the PTA raised no objection. Míla also mentioned that Míla's prior cost analysis of fibre-optic in access network had been rejected by the PTA. Míla pointed out that if historical cost would be applied in this cost analysis the lease price would be much too high which would result in no demand for the product.

In an e-mail from Míla dated **8 December 2014**, Míla proposed that the cost analysis on market 4/2008, 5/2008 and 6/2008 would be based on the 2014 financial year but this would delay the cost analysis. In an e-mail from Míla dated **15 December 2014** the company requested a time limit until March 2015 to submit the cost analysis for market 6/2008. The PTA accepted Míla's proposals.

In an e-mail to Míla, dated **21 January 2015**, the PTA requested that Míla would submit an analysis for fibre-optic in access network so the PTA could evaluate methods and assumptions of the cost model. The cost model should be based on historical cost and/or replacement cost of investments. In the PTA opinion, the situation on the market had changed from Míla's last cost analysis for this product when PTA rejected the analysis with a preliminary conclusion in April 2010 (case no. 2009120050).

On **3 February 2015**, Míla submitted a description of its cost accounting along with a report from an independent auditor in accordance with the PTA Decision on Markets 4, 5 and 6.

In a letter from Míla to the PTA dated **27 March 2015** the company submitted cost analysis for access to copper local loops. In the Míla letter it was stated that Míla considered that fibre-optic to street cabinets was part of the Míla fibre-optic local loop system. Fibre-optic local loops were, according to the PTA Decision, not subject to price control obligations and the same must apply to fibre-optic to street cabinets. For this reason, Míla did not submit calculations of the price for fibre-optic lines to street cabinets.

In the PTA letter dated **16 April 2015**, the PTA raised objections to the Míla interpretation of PTA Decision no. 21/2014, regarding fibre-optic to street cabinets. In its letter, the PTA referred to Paragraph no. 762 in Decision no. 21/2014:

"For access to street cabinets Míla shall also prepare a tariff for fibre-optic from the telephone exchange to the street cabinet on the one hand and between street cabinets on the other hand." "This is a tariff for fibre-optic threads that are used for bitstream services with the VDSL technology."

Then the PTA also referred to Paragraph no. 764:

"Pursuant to Paragraph 4 of Article 32 of the Electronic Communications Act, the tariffs for the relevant access to copper local loops, copper sub-loops and fibre-optic to street cabinets and access to related facilities shall be cost-oriented."

It was therefore perfectly clear that Míla was obliged to submit cost analysis of fibre-optic to street cabinets. The PTA pointed out that this product was the basis for providing VDSL service and that the price of this service had been used in price calculations in the cost analysis for VDSL service in Access Options 1 and 3.

It was also clear that fibre-optic to street cabinets was not the same as fibre-optic local loop and for this reason it could in no way be concluded that the obligation for price control did not apply to fibre-optic to street cabinets because there was no price control obligation on fibre-optic local loops.

The PTA required that Míla submit cost analysis for fibre-optic to street cabinets in accordance with the Administration Decision no. 21/2014.

In a letter from Míla to the PTA dated **21 April 2015**, it was stated that Míla considered that price calculations for fibre-optic to street cabinets were more applicable to fibre-optic to companies in Market 6/2008. For this reason, Míla proposed that cost analysis of fibre-optic to street cabinets be submitted with cost analysis of Market 6/2008.

On **26 June 2015** Míla submitted a communication to the PTA regarding categorisation of fibre-optic products on the market according to the market analysis. In that communication Míla repeated its view that the company was not obliged to submit cost analysis for fibre-optic to street cabinets.

It was also stated there that Míla considered that fibre-optic in the access network was not under obligations on the wholesale market for terminating segments of leased lines (Market 6/2008), see PTA Decision no. 8/2014. In the Míla letter the following is stated:

“The definition of the concept leased line in market analysis of Market 6, Terminating segments of leased lines, is as follows:

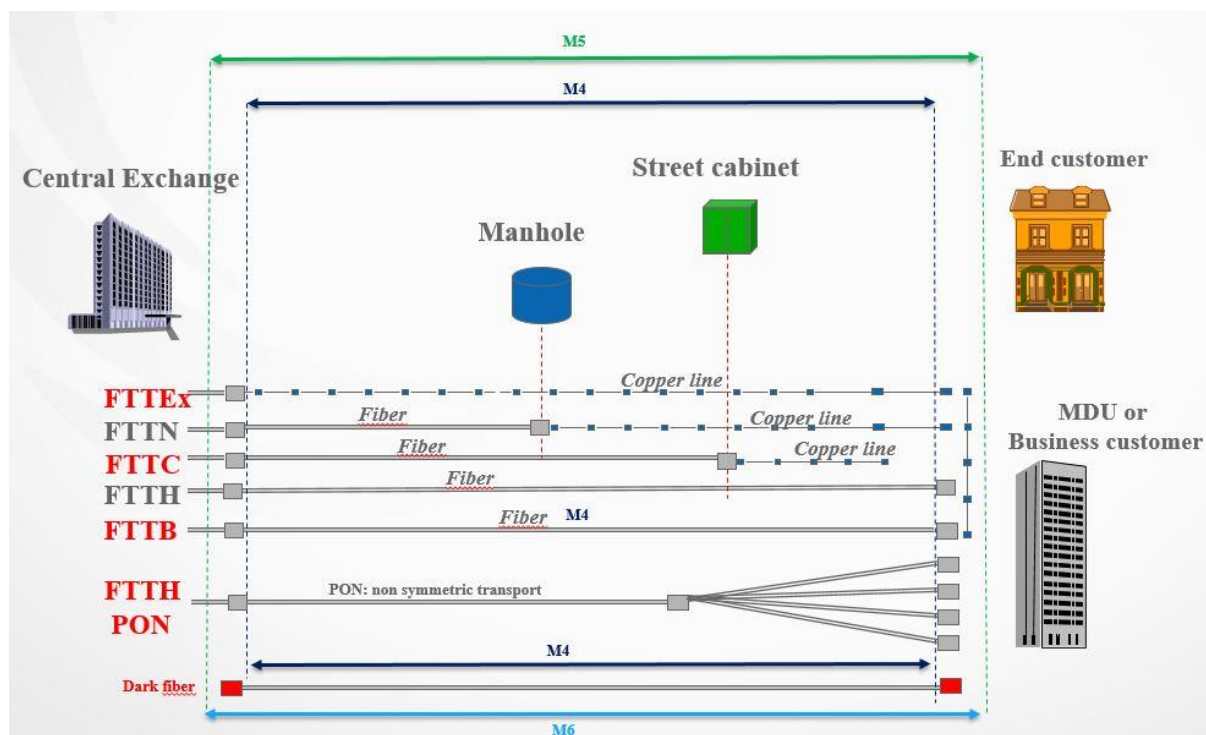
- *To be a permanent connection between two fixed locations*
- *To be for private use for the party leasing it and*
- *To provide symmetric transmission capacity.*

Fibre-optic to companies which Míla has leased for a number of years, fulfils the first two conditions but not the last one as the lines are leased without endpoint devices.

When one examines the definition of fibre-optic on Market 4 one sees that local loop is a term used for a line which connects an interconnection point at the user with the distribution frame of a telephone exchange or analogous equipment. It is furthermore stated that a local loop is naked, i.e. without endpoint devices, see Article 30 in market analysis of Market 6.

According to this the Míla fibre-optic lines are local loops on Market 4.

The following illustration shows the interaction between Markets 4, 5 and 6:



As one can see in the illustration here above, fibre-optic to companies is in Market 4. It is not until endpoint devices have been added to the line that it becomes Market 6, and this connection is in the remit of the party leasing the line and not of Míla. There is no technical difference

between fibre-optic and FTTO or FTTH in terms of configuration, i.e. in both instances they are fibre-optic without endpoint devices.

According to information from Cullen International, the obligation to provide access to dark fibre is in most instances is based on Market 4. Only Austria bases this on Market 6 in areas where active competition does not pertain. Denmark, France, Germany, Ireland, Italy, Luxembourg, Norway, Portugal, Spain and Sweden base this on Market 4. There is no obligation in Belgium, Finland, Greece, Holland and the United Kingdom to provide access to fibre-optic.”

In a letter from the PTA to Míla dated **19 August 2015**, the PTA reiterates that Míla is obliged to submit cost analysis of *fibre-optic to street cabinet* in accordance with the tariff obligation imposed on the company on Market 4/2008.

In the in a letter from Míla dated **10 September 2015** it is stated with respect to fibre-optic to street cabinet that Míla has examined definitions of products on Market 6/2008 in more detail and the connection with Markets 4/2008 and 5/2008. Míla considers that fibre-optic in access network belongs to Market 4/2008. Míla had sent a letter to the PTA on 26 June 2015 explaining Míla’s view on the market definition of fibre-optic in access network.

Fibre-optic to street cabinets is technically identical to other fibre-optic in access network in all respects other than that it does not reach all the way to users. It was therefore the opinion of Míla that if fibre-optic in access network is defined as part of Market 4/2008 then the same should apply to fibre-optic to street cabinets. Míla points out that in Europe, price control obligations have been generally lifted in what are called next generation networks. Fibre-optic to street cabinets were used as a sub-layer for VDSL and VDSL belongs to next generation networks pursuant to the EU definition.

In Paragraph 764 of the PTA Decision no. 21/2014 (Appendix A) on the designation of a company with significant market power and on the imposition of obligations on the wholesale market for local loops (M4/2008) and bitstream (M5/2008), the following is stated:

“Pursuant to Paragraph 4 of Article 32 of the Electronic Communications Act, the tariffs for the relevant access to copper local loops, copper sub-loops and fibre-optic to street cabinets and access to related facilities shall be cost-oriented. The PTA is authorised, when calculating costs, to take into account comparable service considered to be operated in an efficient manner. Furthermore, the PTA is authorised to make benchmarking based on cost analysis of tariffs in comparable competition markets such as in the EEA.”

Pursuant to the above specified Paragraph one should understand that fibre-optic lines to street cabinets were subject to price control without there being a need to provide specific arguments as to why they were subject to price control. Paragraph 772 dealt on the other hand with fibre-optic local loops:

“The PTA does not at this stage impose an obligation on Míla for price control for access to fibre local loops, among other things because currently the company’s development of fibre-optic local loops is not at an advanced stage. The number of Míla fibre-optic local loops in use was [...] at the end of 2013 which is about [...] of the total number of fibre-optic local loops in use which is [...] of the total number of local loops in use.”

As can be seen in Paragraph 772 in Decision no. 21/2014, the PTA has not imposed an obligation for price control for access to fibre-optic local loops but in Paragraph 764 parties having been an obligation was imposed that the price for fibre-optic to street cabinets shall be cost-oriented. In the opinion of Míla these paragraphs are contradictory as the fibre-optic system

in access network is in reality one comprehensive fibre-optic local loop system even though delivery of lines varies depending on whether it is fibre-optic to companies or in the Míla GPON system.

In the opinion of Míla it is extremely inappropriate to impose price control obligations on fibre-optic to street cabinets while other types of fibre-optic service are not subject to price control obligations. The rental price for fibre-optic to street cabinets today is 70% of the price for fibre-optic in access network. Given this method of calculating the rental price, one is effectively imposing price control on fibre-optic in access network if price control is imposed on fibre-optic to street cabinets and vice versa.

Míla furthermore pointed out that the spirit of the market analysis suggests that anything connected with copper should continue to be subject to price control obligation while the fibre-optic network should not be subject to price control obligation. As fibre-optic to street cabinets is a procurement for Míla VDSL service, the PTA seemed to be imposing an obligation for price control on that part. In the opinion of Míla this was contrary to the spirit of the European Directive on next generation networks (Digital Agenda) where price control obligations had been widely lifted to support migration to fibre-optic. VDSL was categorised as next generation network which means that fibre-optic to street cabinets was an essential part of migration to fibre-optic in Iceland.

Míla would therefore not submit a cost analysis for fibre-optic to street cabinets until this issue was resolved. Míla emphasised that the company's submission from 26 June 2015 be answered before further steps were taken.

In a letter from the PTA to Míla, dated **25 November 2015**, regarding categorisation of fibre-optic on the market pursuant to the market analyses, Míla's submission from 26 June 2015 was answered.

It was stated there that the PTA totally disagreed that dark fibre was not subject to obligations on the wholesale market for terminating segments of leased lines. It was stated clearly in the Decision in question that dark fibre was included in the relevant market as a transmission medium. This meant that the price control obligation applied equally to those service items as to others in the relevant market.

In response to the Míla assertions that what is called fibre-optic in access network (fibre-optic to companies, street cabinets and optic splitters) belonged to the wholesale market for local loops (Market 4/2008) and not to Market 6/2008, the PTA reiterated that dark fibre belonged to Market 6/2008 and not to Market 4/2008 as maintained by Míla and for this reason, this service must be cost-analysed like other leased line services.

With respect to fibre-optic to street cabinets, the PTA had referred to the fact that it had been specifically stated in the PTA Decision no. 21/2014, that fibre-optic to street cabinets was subject to an obligation for price control. Fibre-optic connections from street cabinets to end users were on the other hand exempt. In the opinion of the PTA this was clear in the Decision in question.

The PTA then referred to the Míla request that the Administration make a decision supported by arguments as to how one should understand which types of fibre-optic belonged to Market 4/2008 on the one hand and to Market 6/2008 on the other. The PTA pointed out in this connection that Míla had not appealed PTA Decisions, neither on Market 4/2008 nor on Market 6/2008. The PTA pointed out that there had been no uncertainty regarding interpretation of these issues that had been discussed in the Míla submission. In the next round of market

analyses of the markets in question, the company can present its views on this issue and can appeal the PTA Decision to the Appellate Committee for Electronic Communications and Postal Affairs or can refer it to the courts if the company is unhappy with the Decision.

The PTA reiterated that Míla was obliged to submit a cost analysis for fibre-optic to street cabinets without unnecessary delay and gave Míla notice until 9 December 2015 to provide the cost analysis.

Míla submitted a cost model for fibre-optic in access network on **23 December 2015**.

In the analysis, Míla repeated the views voiced in the company's letter from 26 June 2015 that fibre-optic in access network in Market 6/2008 and fibre-optic to street cabinets were not subject to PTA price control. To avoid further delays in price changes for fibre-optic in access network, Míla had decided to submit calculations of lease price for fibre-optic in access network. Míla deemed that it had not admitted the duty to submit this analysis by submitting it, as the company disagreed with the PTA on this issue.

Míla furthermore considered it to be worthy of criticism that the Administration had taken 5 months to reply to Míla's submission, particularly in the light of the fact that the PTA chose not to provide a reasoned reply to Míla's arguments thus totally avoiding a material answer to Míla's comments. In Míla's opinion, such an approach did not demonstrate good administrative practices.

Míla pointed out that the cost of fibre-optic in the Míla access network could not be subdivided into costs for fibre optic lines, backfeed fibre-optic lines or fibre-optic local loops (which were indisputably not subject to price control obligations). The Míla network was structured as an integrated whole, and a decision on its design e.g. the setting up or removal of optical distribution frames could totally alter whether specific parts of a route would be defined as fibre-optic local loops or fibre-optic lines.

On **21 January 2016**, the PTA requested a more detailed explanation of the following text in the Míla analysis: *"Míla takes on part of the cost of laying the final section into the building/home"*. The PTA requested an explanation as to why this was taken into account in capex when the service in question paid part of the cost of laying the final section.

In the Míla reply dated **21 January 2016**, it was stated that the contribution of the recipient of the service was variously entered as estimated jobs (on a specific profit centre) or was deducted from capex.

In an e-mail dated **2 May 2016** the PTA raised objections to the changed useful life period, where in the analysis Míla uses a 40-year useful life for investment in fibre-optic. In addition to this the PTA requested further arguments for the Míla estimated share in investment for installing conduits from the street cabinet to homes and for how fibre-optic local loops were separated from the analysis.

In the Míla reply dated **18 May 2006** it was stated that the useful life of fibre-optic was today estimated as much longer than that of the copper system and it was generally considered that fibre-optic would replace the copper system in the future. Míla deemed that the useful life of fibre-optic was 40 years where it took into account that there were no indications that the characteristics of the fibre-optic in which Míla had invested since 1988 had changed, maintenance costs for all the cables had not increased and there were no indications that they were becoming obsolete. BT wrote off its trenches over 40 years, and according to the GR annual financial statement the depreciation period for equipment was in the range of 7-41 years where one could assume that fibre-optic had the longest depreciation period.



In a letter from Míla dated **6 December 2016**, the company requested a changed arrangement for collecting setup charges for fibre-optic in the access network.

In a letter from the PTA dated **11 January 2017** the Administration informed that they did not endorse the use of a 40-year useful life period and proposed the use of 35-year useful life. The PTA also requested information on the development of sold units.

On **13 January 2017**, Míla submitted information on the development of the number of sold units and accepted the use 35-year useful life.

In a Míla letter dated **17 March 2017** the company submitted an updated cost analysis based on figures from 2016 operations and on investments up to the year 2016.

During the period **12 June 2017** until **15 June 2017** the PTA and Míla exchanged a number of letters with respect to opex, line equivalents and deductions for revenue. Míla subsequently submitted a corrected dated **15 June 2017**, which is the analysis on which the PTA bases its conclusions in the matter here under discussion.

2 Míla cost analysis and the position of the PTA

2.1 General

In Sections 2.2 - 2.9 here below one can find the criteria and conclusions of the PTA Decision on the cost analysis here under discussion. There is discussion on the main aspects that the PTA considers important as criteria for the Administration's position when calculating a tariff for lease of fibre-optic in access network and for fibre-optic to street cabinet. The factors in question are the following:

- Weighted average cost of capital (Section 2.3)
- Opex (Section 2.4)
- Capex (Section 2.5)
- Number of line equivalents (Section 2.6)
- Setup charges (Section 2.7)
- Calculation of lease price (Section 2.8)

Each sub-section is structured with a description of the Míla cost analysis coming first and then followed by the position of the PTA for each issue. In Section 2.9 the PTA Decision is then summarised before the wording of the Decision is given.

The position taken by the PTA is based on authority granted to the Administration in the Electronic Communications Act where reference is particularly made to Article 32 on price control and to Article 31 on separation of accountancy and to PTA Decisions nos. 8/2014 and 21/2014.

Míla has submitted a description of the company's cost accounting, along with a report from an independent auditor. Míla has also submitted an analysis of costs for the company's fibre-optic in access network and fibre-optic to street cabinets, along with further explanations at the request of the PTA. The PTA conclusion is based on Míla cost analysis from 23 December 2015, along with the updates submitted by the company, most recently on 15 June 2017.

2.2 Price control obligation on fibre-optic lines

2.2.1 Míla cost analysis

In the Míla cost analysis dated 23 December 2015, Míla discusses the dividing line between Markets 4/2008 and 6/2008 with respect to fibre-optic lines where it states:

“There is discussion on fibre-optic in access network in two PTA market analyses. On the one hand in Market 6, Terminating segments of leased lines and on the other hand in market analysis of Market 4, Access to local loops. The dividing line between these two markets with respect to fibre-optic is very unclear and there is no obligation for price control on fibre-optic local loops pursuant to Market 4 and nor, in Míla's opinion, is there a price control obligation on fibre-optic (without endpoint devices) in Market 6, only on leased lines.

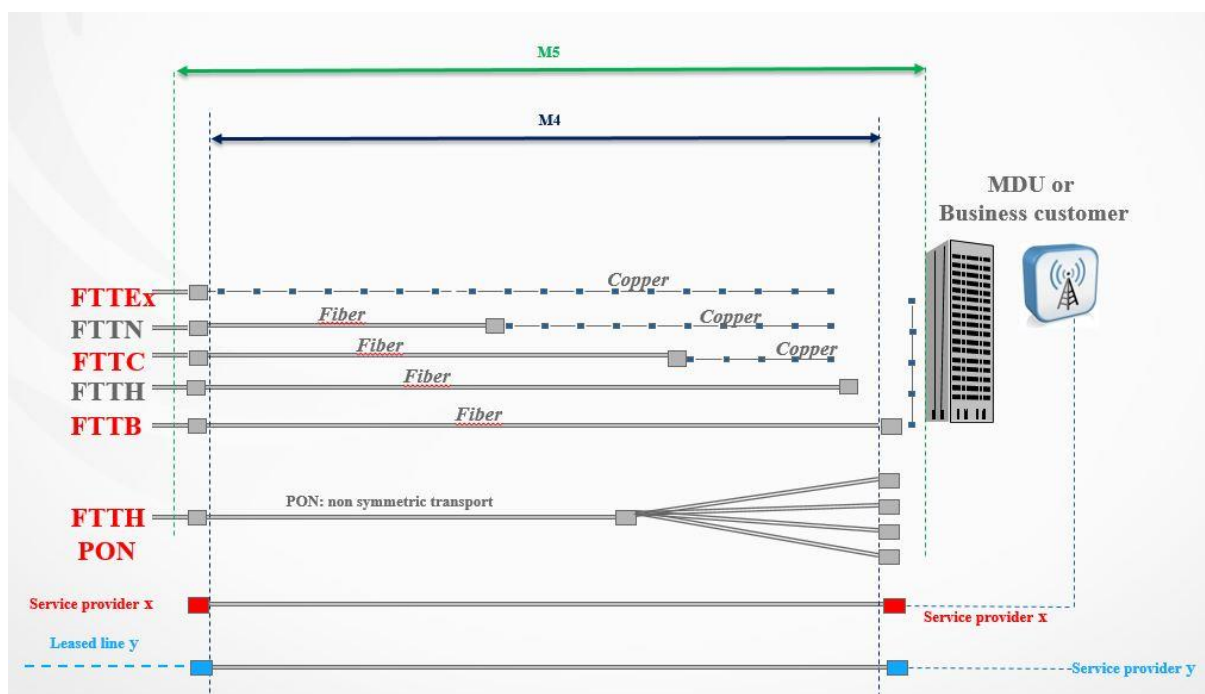
As stated in the introduction, the PTA was sent a submission concerning definition of fibre-optic lines. In this communication, Míla's position is voiced that fibre-optic lines in all instances

belonged to Market 4 as Market 6 concerns leased lines with defined capacity. Míla refers to its submission, dated 26.6.2015.

Míla therefore considers that leased lines in the access network belong to Market 4 and for this reason should not be subject to price control obligation. The PTA does not accept Míla's arguments, which means that stalemate now exists with respect to definition of fibre-optic lines and to obligations on such lines.

Míla offers PTP fibre-optic lines to companies and what is called backfeed fibre-optic e.g. for fibre-optic threads from Míla technical facility premises to a street cabinet for VDSL2. Míla has also constructed a PON access network in new build districts and at a number of other of selected locations. The PON access network, which is Míla's FTTH network, is not subject to price control obligation pursuant to the PTA Decision.

The following illustration shows the types of service provided through the cables in the access network and interaction with the PTA market analysis:



As one can see in the illustration here above, the Míla fibre-optic access network is in part subject to price control obligations (in the opinion of the PTA) and in part not subject to price control obligations. More detailed discussion follows here below on fibre-optic lines and fibre-optic loops and on the parts that Míla defines as being subject to price control obligations and those not covered by price control obligations.

Fibre-optic lines (subject to price obligations in the opinion of the PTA)

Fibre-optic lines are fibre-optic from end to end, i.e. they are a whole continuous fibre-optic thread from a user to the next technical facility premises. The user has full control of the line and decides himself the purpose for which he uses the line. This normally means laying the last part of the line to the end user by order and this can be an extremely expensive installation. "Míla takes on part of the cost of laying the final section into the building/home.". In most instances, these are fibre-optic lines to companies.

Back feed fibre-optic lines that are leased to departments within Míla (fibre-optic lines for Míla VDSL2 system) are not included here.

Calculations of tariff for fibre-optic lines based on these service categories, i.e. fibre-optic lines apart from fibre-optic used for the PON access network.

PON access network (fibre-optic local loops)

It is not disputed that fibre-optic threads from users to the optical distribution frame in a telephone exchange or analogous equipment are fibre-optic local loops and they are exempt from price control obligations.

The PON network is an integrated FTTH network which is partly based on sharing fibre-optic threads. Availability of fibre-optic lines and other technical issues decide where optical splitters and as appropriate, optical distribution frames are installed. The Míla access network controls network architecture. It is not possible to provide access to individual parts of the PON network as it is based on integrated and uninterrupted architecture. Generally in Europe, the practice has been to offer VULA service as an alternative when there is deemed to be a need for more access than bitstream access.

The Míla access network sells fibre-optic local loops directly to those electronic communications companies that provide the service in retail and Access Systems leases GPON service to companies. This means that there is no sale of fibre-optic local loops between Míla profit centres. This is in accordance with the arrangement for the sale of Míla copper local loops where Míla access network sells them directly to electronic communications companies.

The price for fibre-optic local loops thus covers the Míla PON network from the end user to the technical facilities premises where the interface between access network and trunk network is located. Fibre-optic local loop in the PON network is therefore shared to a large extent.”

2.2.2 The position of the PTA

The PTA reiterated that it is prescribed in Appendix A (Section 2.6) to the PTA Decision no. 8/2014 that fibre-optic in access network (dark fibre without endpoint devices) belonged to Market 6/2008 which meant that the price control obligation imposed on Míla in PTA Decision no. 8/2014 on fibre-optic in access network applied. As specified by Míla, this is fibre-optic end to end, i.e. a whole continuous fibre-optic thread from a user to the next technical facility premises. In most instances, this is fibre-optic to companies as in the case of other leased lines in the access network.

What Míla chooses to call backfeed fibre-optic lines have up to this point in time been called fibre-optic lines to the street cabinet and they are also subject to price control obligations as stated clearly in PTA Decision 21/2014. These lines are procurements in the Míla VDSL system and are therefore a large part of the pricing of Míla VDSL service which is unequivocally subject to price control obligation.

In the opinion of the PTA, the obligations imposed on Míla with PTA Decisions nos. 8/2014 and 21/2014, are not burdensome for the company. All companies need to be mindful of their costs, which means that it is normal for Míla to keep track of the costs of goods and services offered by the company. The PTA is not requiring Míla to calculate something that the company would not otherwise have had to examine.

The PTA does not raise objections to the definition of Míla product offer and the organisational boundary between them, described above.

With respect to the Míla definition of PON fibre-optic local loops, the definition of local loop assumes that it is not normally shared between users. The fact that a local loop terminates in a

telephone exchange and not in a splitter means on the other hand that it is partly shared. There is however no other current option for the GPON system, which means that this is an exception from this structure. The PTA therefore raises no objections for the time being to the Míla definition of fibre local loop in the Míla PON system.

2.3 Weighted average cost of capital

In its calculations, Míla allows for 7% weighted average cost of capital (WACC) for the year 2016. This is in accordance with PTA instructions and reference is made in this connection to Section 2.2 in PTA Decision no. 5/2017 on review of Míla wholesale tariff for copper local loops.

2.4 Opex

2.4.1 Míla cost analysis

In the Míla cost analysis it is stated that opex is based on booked opex. In the updated Míla cost model on which the PTA conclusions are based, opex for 2016 is used. It was stated by Míla that costs directly related to backfeed fibre-optic belonged to the calculation for fibre-optic lines while costs belonging to the segment from a splitter to a building in a PON area is not included in the calculations as it is not disputed that this belongs to Market 4/2008. Investments directly related to installing fibre-optic cables to companies are included in the calculations. Shared costs in the Míla analysis are divided between these two cost categories in the same proportion as allocated costs.

Míla also specifies that income and expenditure for the Míla fibre-optic system in the access network is recorded in a single profit centre which means that one must evaluate the part of opex that belongs directly to fibre-optic local loops. In the cost analysis, opex for the last segment of the copper local loop is therefore not included in the costs (the part which solely connects a single household). Opex for fibre-optic trunk lines (the part on the line route which is shared) is included, as the same line can be used for fibre-optic to a company and for the PON network. Part of the monthly charge for fibre-optic local loops is deducted from the total costs in the analysis to correct this. Míla allows for 20% of the lease price of fibre-optic local loops belonging to this segment.

Míla opex is booked to operational tasks. Míla operational tasks were categorised according to whether they belong to unshared local loops or to other fibre-optic lines.

Where the division between PON areas and fibre-optic to companies and fibre-optic trunk lines was not established, the division of costs was estimated. When making this estimation, Míla used an examination of individual invoices from collaborators.

In the Míla analysis, costs of support departments are divided in the same proportion as opex in each category.

Opex for the year 2016 is divided as follows:

Division 2016	Shared costs	Total
Fibre-optic local loops separate costs..	[...]	[...]
Fibre-optic lines.....	[...]	[...]
Shared costs.....	[...]	[...]
Total	[...]	[...]

2.4.2 The position of the PTA

Míla has submitted information on opex for the company's fibre-optic in access network (dark fibre) and fibre-optic to the street cabinet (backfeed fibre-optic line) for the years 2014 and 2016. The PTA uses information supplied by Míla in its assessment. The PTA also builds on data that shows information on separation in Míla's operations in accordance with the obligation for separation of accountancy.

Opex has increased between 2014 and 2016 and the line equivalents have increased during the same period in such a manner that the opex for each line equivalent has decreased.

The PTA considers that Míla has submitted adequate explanations of individual factors and division of opex. The PTA conclusion is that Míla opex for 2016 for fibre-optic in the access network (dark fibre) and for fibre-optic to street cabinets (backfeed fibre-optic lines), which is used as a basis for calculation of the company's monthly charges, amounts to a total of ISK [...] million.

2.5 Investment costs

2.5.1 Míla cost analysis

In the Míla cost analysis dated 23 September 2015 the following is stated with respect to capex:

“As previously stated, the installation of fibre-optic in the access network commenced around 1990. In 1995, the laying of coax and fibre-optic cables was commenced for broadband. Such an investment is used to a large extent for the whole Míla fibre-optic network in the access network. The Broadband System was decommissioned during 2009 and 2010. The decision was therefore made to write off part of the investment in Broadband.

The installation of fibre-optic cables connected with what is called PON technology was commenced in 2006 and Míla Access Network has complete control of the architecture of this network. Access Network sells electronic communications companies access to the system in the form of fibre-optic threads.

The division of capex is thus quite complex and there is discussion on investments during varying periods in the following sections.

Investments 1990-1994

Investments in fibre-optic in the Access Network were relatively low during the period 1990-1994. These largely concerned the laying of fibre-optic to companies. The investments for each year were as follows:

Year	Amount
1994	[...]
1993	[...]
1992	[...]
1991	[...]
1990	[...]

These investments are evaluated in full in the cost model.

Investments 1995-2005

As previously stated, Síminn embarked on major investments in Broadband in the year 1995. These were investments in a fibre-optic system from telephone exchanges/technical facilities to street cabinets and coax was laid from street cabinets to homes along with a conduit. These conduits can be used for future development of a fibre-optic local loop system.

In 2011, it was decided to write off part of the investment in coax and in broadband equipment as the Broadband system had been decommissioned. Investments for 1999 and for comparison 2000 and 2001, were analysed and the conclusion was that it was reasonable to write off [...] of investment. The remaining investment is an investment which can be used in the leasing of fibre-optic to companies, in backfeed fibre-optic and in roll-out of fibre-optic local loops. It is assumed that [...] of the investment can be used for fibre-optic local loops where fibre-optic still must be run through the conduits that are already in the ground, and connected. Míla estimates that [...] of the investment during the period 1995 to 2005 is investment in fibre-optic to companies and in backfeed fibre-optic (fibre-optic trunk lines from Míla technical facilities to street cabinets). As can be seen in the following table, investments in fibre-optic to companies are specified back to the year 2000. During the period 1995 to 1999 these investments are not broken down in detail but one can assume that the investments were in the range of ISK [...] million per annum during the period.

The table below shows a breakdown of investments during the period 1995-2005

Year	Amount	Depreciation	Local loop part	Fibre-optic trunk line	Company
2005	[...]	[...]	[...]	[...]	[...]
2004	[...]	[...]	[...]	[...]	[...]
2003	[...]	[...]	[...]	[...]	[...]
2002	[...]	[...]	[...]	[...]	[...]
2001	[...]	[...]	[...]	[...]	[...]
2000	[...]	[...]	[...]	[...]	[...]
1999	[...]	[...]	[...]	[...]	[...]
1998	[...]	[...]	[...]	[...]	[...]
1997	[...]	[...]	[...]	[...]	[...]
1996	[...]	[...]	[...]	[...]	[...]
1995	[...]	[...]	[...]	[...]	[...]

The last two columns belong to the cost calculation of fibre-optic lines.

Fibre-optic trunk line: Fibre-optic from Míla technical facilities to street cabinets.

This can be fibre-optic used variously for companies, VDSL2 or the

PON network.

Company: Separate costs for laying fibre-optic to companies

Local loop part: Estimated investment of the last segment of the local loop from the street cabinet to the building.”

Revised Míla cost analysis based on investments to the year 2016.

Investments 2006 to 2016

Míla stated that in 2006, they began laying fibre-optic local loops instead of copper in new-build districts. Further to this, conduits had been laid in instances where copper lines were renewed. There had thus been significant investment in the Míla fibre-optic system in the access network during these years, even though collapse of the financial system in Iceland had temporarily slowed down investments.

Investments during this period can be quite varied, i.e. some projects were for a mix of fibre-optic local loops and fibre-optic trunk lines or fibre-optic to companies and fibre-optic trunk lines. Míla has made efforts to break down these investments to the extent possible. The conclusion of the Míla calculations on investments up to the year 2016 is as follows:

Year	Total investments	Local loop part	Base	Company	Fibre-optic lines for VDSL
2016	[...]	[...]	[...]	[...]	[...]
2015	[...]	[...]	[...]	[...]	[...]
2014	[...]	[...]	[...]	[...]	[...]
2013	[...]	[...]	[...]	[...]	[...]
2012	[...]	[...]	[...]	[...]	[...]
2011	[...]	[...]	[...]	[...]	[...]
2010	[...]	[...]	[...]	[...]	[...]
2009	[...]	[...]	[...]	[...]	[...]
2008	[...]	[...]	[...]	[...]	[...]
2007	[...]	[...]	[...]	[...]	[...]
2006	[...]	[...]	[...]	[...]	[...]

In the cost analysis for local loops it was stated that part of the investment for roll-out of VDSL was the laying of fibre-optic to street cabinets. For this reason, Míla has added this investment to the investment in fibre-optic and it was deducted from investments in the cost analysis of copper local loops.

It was also stated by Míla that investment in fibre-optic local loops during the period 2006-2007 was estimated at [...] as the company did not have access to the Síminn bookkeeping system which meant that it did not have precise information on the division at that point in time.

Míla Conclusion

Míla adjusted investments on the basis of the building price index and the adjusted investment in fibre-optic lines is as follows:



Year	Total investments	Depreciation for BB	Depreciated broadband	Local loops	Base	Company	Fibre-optic lines for VDSL	Index	Indexed historical cost
2016	[...]			[...]	[...]	[...]	[...]	652.82	[...]
2015	[...]			[...]	[...]	[...]	[...]	628.05	[...]
2014	[...]			[...]	[...]	[...]	[...]	602.27	[...]
2013	[...]			[...]	[...]	[...]	[...]	593.17	[...]
2012	[...]			[...]	[...]	[...]	[...]	573.14	[...]
2011	[...]			[...]	[...]	[...]	[...]	539.40	[...]
2010	[...]			[...]	[...]	[...]	[...]	508.51	[...]
2009	[...]			[...]	[...]	[...]		488.93	[...]
2008	[...]			[...]	[...]	[...]		428.79	[...]
2007	[...]			[...]	[...]	[...]		371.56	[...]
2006	[...]			[...]	[...]	[...]		339.67	[...]
2005	[...]	[...]	[...]	[...]	[...]	[...]		313.90	[...]
2004	[...]	[...]	[...]	[...]	[...]	[...]		297.94	[...]
2003	[...]	[...]	[...]	[...]	[...]	[...]		285.90	[...]
2002	[...]	[...]	[...]	[...]	[...]	[...]		276.73	[...]
2001	[...]	[...]	[...]	[...]	[...]	[...]		257.54	[...]
2000	[...]	[...]	[...]	[...]	[...]	[...]		243.05	[...]
1999	[...]	[...]	[...]	[...]	[...]	[...]		235.79	[...]
1998	[...]	[...]	[...]	[...]	[...]	[...]		230.59	[...]
1997	[...]	[...]	[...]	[...]	[...]	[...]		222.69	[...]
1996	[...]	[...]	[...]	[...]	[...]	[...]		212.95	[...]
1995	[...]	[...]	[...]	[...]	[...]	[...]		203.38	[...]
1994	[...]					[...]		197.16	[...]
1993	[...]					[...]		192.29	[...]
1992	[...]					[...]		188.28	[...]
1991	[...]					[...]		183.54	[...]
1990	[...]					[...]		170.32	[...]

[...]

2.5.2 The position of the PTA

In the PTA Decision no. 21/2014, it is stated that when evaluating capex, the book price of operational assets in Míla's asset bookkeeping should be used, where capex is adjusted to the prices of the year being analysed in each instance.

In the following table, one can see a summary of Míla investments belonging to fibre-optic in access network and to fibre-optic lines to street cabinets.

Year	Base	Company	AGS trunk lines	Total investment	Index	Indexed historical cost
2016	[...]	[...]	[...]	[...]	652.82	[...]
2015	[...]	[...]	[...]	[...]	628.05	[...]
2014	[...]	[...]	[...]	[...]	602.27	[...]
2013	[...]	[...]	[...]	[...]	593.17	[...]
2012	[...]	[...]	[...]	[...]	573.14	[...]
2011	[...]	[...]	[...]	[...]	539.40	[...]
2010	[...]	[...]	[...]	[...]	508.51	[...]
2009	[...]	[...]		[...]	488.93	[...]
2008	[...]	[...]		[...]	428.79	[...]
2007	[...]	[...]		[...]	371.56	[...]
2006	[...]	[...]		[...]	339.67	[...]
2005	[...]	[...]		[...]	313.90	[...]
2004	[...]	[...]		[...]	297.94	[...]
2003	[...]	[...]		[...]	285.90	[...]
2002	[...]	[...]		[...]	276.73	[...]
2001	[...]	[...]		[...]	257.54	[...]
2000	[...]	[...]		[...]	243.05	[...]
1999	[...]	[...]		[...]	235.79	[...]
1998	[...]	[...]		[...]	230.59	[...]
1997	[...]	[...]		[...]	222.69	[...]
1996	[...]	[...]		[...]	212.95	[...]
1995	[...]	[...]		[...]	203.38	[...]
1994		[...]		[...]	197.16	[...]
1993		[...]		[...]	192.29	[...]
1992		[...]		[...]	188.28	[...]
1991		[...]		[...]	183.54	[...]
1990		[...]		[...]	170.32	[...]

[...]

As the table shows there was a significant decrease in investments subsequent to the crash of 2008 and they do not increase again until roll-out of VDSL which began in 2010 and reached a peak in 2014. As Míla has stated, its VDSL roll-out is mostly completed and investment in local loops has increased significantly as has investment in fibre-optic to companies in line with the increase in the number of single thread fibre-optic lines in recent years.

The PTA has examined the Míla statement of investments and the division of shared costs in the access network between those products that belong to this analysis and other products, i.e. fibre-optic local loops and copper local loops. The PTA raises no objections to the Míla conclusion that capex is estimated at ISK [...] billion.

2.6 Number of line equivalents:

2.6.1 Míla cost analysis

Míla states that calculation of fibre-optic line equivalents is based on the structure of the existing tariff. When calculating line equivalents, Míla basically uses the number of lines in each category in January 2017. Single thread fibre-optic lines have recently increased very significantly while fibre-optic pairs on the other hand have decreased. Because of this development, Míla has made allowance in its calculations for an increase in single thread fibre-optic lines and a reduction in fibre-optic pairs.

Here below one can see the development in the number of fibre-optic lines from January 2016 to January 2017:

Number 2016-17	January 2016	Jan 2017	Annual increase
Fibre-optic, in access network, one thread.....	[...]	[...]	[...]
Fibre-optic in access network, one pair.....	[...]	[...]	[...]
Fibre-optic line in access network, one pair internal sales MDH	[...]	[...]	
Fibre-optic to street cabinet, 1 thread.....	[...]	[...]	
Fibre-optic to street cabinet, 2 threads.....	[...]	[...]	
Fibre-optic to street cabinet, 3 threads.....	[...]	[...]	
Fibre-optic to street cabinet, 4 threads.....	[...]	[...]	

Míla points out that single thread fibre-optic lines have increased and that the company expects this trend to continue. Backfeed fibre-optic (fibre-optic lines to street cabinets for VDSL2 roll-out) will probably not increase as the VDSL roll-out is in its final stage.

When calculating line equivalents, Míla considers it normal to allow for continued increase in lines. Because of the time it takes to make a cost analysis, Míla proposes to allow for the same development throughout this year and the Míla calculations are based on a corresponding number of equivalents. Míla allows for a [...] increase in the number of single thread fibre-optic lines for the rest of this year but that single pairs will decrease by about [...]. Míla does not allow for an increase in fibre-optic to street cabinets as VDSL roll-out is in its final stage.

Calculated line equivalents are as follows according to the above:

	Number Jan. 2017	Increase	Estimated number	Equivalence coefficient	Number
Fibre-optic in access network, one thread	[...]	[...]	[...]	0.70	[...]
Fibre-optic in access network, one pair	[...]	[...]	[...]	1.00	[...]
Fibre-optic to street cabinet, 1 thread	[...]		[...]	0.35	[...]
Fibre-optic to street cabinet, 2 threads	[...]		[...]	0.50	[...]
Fibre-optic to street cabinet, 3 threads	[...]		[...]	0.65	[...]
Fibre-optic to street cabinet, 4 threads	[...]		[...]	0.80	[...]
					[...]

Míla stated that they did not allow for fibre-optic trunk lines (shared fibre-optic lines) for the PON network as this was an integrated system. As the price for fibre-optic local loops does not cover this cost item, the conclusion on estimated revenue from shared fibre-optic local loops route must be deducted. It is assumed that [...] of the cost will be for routes from splitters/street cabinets to a telephone exchange.

According to the above the number of line equivalents is [...].

2.6.2 The position of the PTA

Míla uses the same line equivalence coefficient as that on which the current tariff is based. Instead of using the existing number of sold connections, Míla allows for an increase corresponding to developments in recent years.

The PTA raises no objections to Míla taking into account the current development of the number of sold fibre-optic lines when estimating the number of line equivalents, having in mind the substantial fixed costs required for development of a fibre-optic network. The above methodology gives a more realistic picture of unit prices, as estimated use of existing investments is taken into account.

2.7 Setup charges

Míla cost analysis does not allow for changes to the setup charge for fibre-optic lines in the access network. The setup charge is ISK 96,680 where revenue from the setup charge is deducted from the cost base on which the calculation of monthly charges is based.

In a letter from Míla dated 6 December 2016, the company however requested a change in the arrangement for collection of setup charges because of complaints from customers in instances of connections comprised of a trunk line and access line. Míla specified that it was possible to share travel for installation of connections that comprise a trunk line and access line(s).

Míla stated that the following applied to connection locations:

1. A single fibre-optic line solely in access network: 2 journeys (to the user and to the telephone exchange)
2. Trunk line + 1 fibre-optic line in access network: 3 journeys (to the user and to 2 telephone exchanges).
3. Trunk line and to fibre-optic lines in access network: 4 journeys (2 to the user and 2 to telephone exchanges)

According to the Míla proposal, the company will collect a full setup charge for installation of a fibre-optic line in access network, ISK 96,680, but if the connection also comprises a trunk line then the company will collect half of a setup charge for fibre-optic in access network, ISK 48,340 (and additionally a setup charge for a trunk line, ISK 96,386) in accordance with the economy gained by sharing journeys for installation. In this instance, i.e. a trunk line and one fibre-optic line in access network, Míla would collect ISK 144,726 (96,386 + 48,340). In the case of one trunk line and two fibre-optic lines in access network the amount collected would be ISK 193,066. (96,386 + 2*48,340).

The PTA raises no objections to this altered arrangement for collecting setup charges.

2.8 Calculation of lease price

2.8.1 Míla cost analysis

The conclusion of the Míla calculations, pursuant to the above is as follows:

Investments.....	[...]
Annuity.....	[...]
Costs.....	[...]
Setup charges.....	[...]
	[...]
Revenue from fibre-optic local loops	[...]
	[...]
Quantity of line equivalents.....	[...]
Lease price, one pair.....	19,595

As stated here above, part of the Míla fibre-optic local loop system (the PON system), is on the same routes as fibre-optic lines. This is the route from the first optical splitter, which is generally at a similar distance as that from a street cabinet to Míla technical facilities building where the access network and trunk line network, meet. In this cost analysis Míla reckons that [...] of the lease price of fibre-optic local loops belongs to this route. Míla uses the current tariff for fibre-optic local loops and the estimated number at the end of this year given annual increase. Míla estimates that the total number of sold local loops at the end of 2017 will be just under ISK [...] and that revenue from them is estimated at ISK [...] million as shown in the table here above.

The lease price for a fibre-optic pair in access network will thus be ISK 19,595 per month, which is an increase of 18.2% from the current price.

The tariff price will be as follows:

	Price now	Previous price	Increase
Fibre-optic in access network, one thread	13,717	11,608	18.17%
Fibre-optic in access network, one pair	19,595	16,583	18.16%
Fibre-optic to street cabinet, 1 thread	6,858	5,804	18.17%
Fibre-optic to street cabinet, 2 threads	9,798	8,292	18.16%
Fibre-optic to street cabinet, 3 threads	12,737	10,780	18.15%
Fibre-optic to street cabinet, 4 threads	15,676	13,268	18.15%

2.8.2 The position of the PTA

The position taken by the PTA is based on the cost model submitted by Míla on 15 June 2017.

The main criteria of the updated Míla cost model are as follows:

- Opex is based on operations of 2016.
- Investments were indexed using the building price index to the average price of 2016.
- The number of units is based on an estimate of increase during this year, given the development over one year and the number of line equivalents in January 2017.
- The weighted average cost of capital (WACC) is 7.0%.

Míla calculated the initial annuities on the basis of 40-year useful life. The PTA rejected this amendment to useful life but accepted that Míla could use a 35-year useful life for investment in underground fibre-optic A 25-year useful life has been used up to this point of time which was based on a mixed investment of fibre-optic and trenches.

For reference, the PTA examined useful life in cost models from Norway, Sweden and Denmark. In Norway and Sweden, a 20-year useful life is used for fibre-optic cables and 40-year useful life for trenches/conduits. Frontier Economics also used this useful life in a cost model used in Luxembourg. The Danish on the other hand, used 35-year useful life for fibre-optic cable, trenches and conduits. If one calculates a mixed useful life, based on 20-year useful life for fibre-optic cable and 40-year useful life for trenches/conduits based on the investment being divided 25% for fibre-optic cables and 75% for trenches/conduits then this results in a 35-year mixed useful life for fibre-optic, the same as the Danes use. The PTA therefore accepted the use of this useful life. The PTA considers that this review of the criteria for useful life does not only apply to this cost analysis and that they should also be taken into account in the Míla cost analysis for the trunk segments of leased lines.

Because of the sharing of lines in the access network with fibre-optic local loops, part of the Míla revenue from fibre-optic local loops is deducted from the cost base. It is assumed that an average of [...] of the route lies through shared lines and for this reason [...] of Míla annual revenue from fibre-optic local loops is deducted from the base. In the same manner that allowance is made for an increase in fibre-optic lines in the calculations of line equivalents, allowance is made for an increase in the number of local loops in accordance with the increase over one year. The PTA raises no objections that the sharing of lines is taken into account in this manner.

In accordance with the above, the PTA endorses the Míla conclusion on opex, annuities on investments, setup charges and monthly charges for fibre-optic in the access network (one thread and one pair) and on fibre-optic to street cabinets (1 to 4 threads). The conclusion of the cost model is that the monthly price for 1 fibre-optic pair shall be ISK 19,595, which means that the monthly price for 1 fibre-optic thread is ISK 13,717.

The PTA has examined prices for analogous products ⁴ in Sweden, Finland and Denmark, see Appendix 1 This view does not indicate that the Míla prices pursuant to the new tariff are abnormally high or low.

2.9 The PTA conclusion

In PTA Decision no. 8/2014, the Administration imposed an obligation on Míla for price control for fibre-optic lines in the access network (one thread and one pair) and in PTA Decision no. 21/2014, the Administration imposed an obligation on Míla for price control for fibre-optic lines to street cabinets, (1 to 4 threads), with the authority of Article 32 of the Electronic Communications Act Pursuant to Paragraph 4 of Article 32 of the same Act it was prescribed that the Míla tariff for these services should be cost-oriented given fulfilment of specific conditions.

Pursuant to the PTA Decisions, Míla initially submitted a cost analysis for fibre-optic lines in access network and fibre-optic to street cabinets on 23 December 2015. The cost analysis was based on historical costs from 2014.

On 17 March 2017 Míla submitted an updated cost analysis based on operational figures from 2016 and on investments up to the year 2016. Míla subsequently submitted a corrected copy of

⁴ In the opinion of the PTA, FTTB (fibre to the building) is the closest to the Míla fibre-optic lines but no precise analysis was made of the characteristics of the products.

the cost analysis dated 15 June 2017, which is the analysis on which the PTA bases its conclusions.

The PTA endorsed the Míla cost model from 15 June 2017. In the following table one can see the new tariff pursuant to the conclusion from the cost model along with a comparison with the existing Míla tariff.

Service	Price now	Previous price	Increase
Fibre-optic in access network, one thread	13,717	11,608	18.2%
Fibre-optic in access network, one pair	19,595	16,583	18.2%
Fibre-optic to street cabinets, 1 thread	6,858	5,804	18.2%
Fibre-optic to street cabinet, 2 threads	9,798	8,292	18.2%
Fibre-optic to street cabinet, 3 threads	12,737	10,780	18.2%
Fibre-optic to street cabinet, 4 threads	15,676	13,268	18.1%

All prices are monthly prices ex VAT.

The setup charge for installation of fibre-optic line in the access network will be unchanged at ISK 96,680 ex VAT. If a connection comprises a fibre-optic line in the access network and a trunk line, Míla will collect half of the setup charge for fibre-optic in the access network, ISK 48,340 and a setup charge for the trunk line, ISK 96,386, totalling ISK 144,762. In the case of one trunk line and two fibre-optic lines in access network the charge is 193,066 ($96,386 + 2 * 48,340$).

In PTA decision no. 21/2014, it is stated that the tariffs should be reviewed annually in accordance with the annual update of the cost analysis according to the cost model that has now been approved. Accordingly, Míla shall submit an update to the cost model before April 1, 2018, at the same time as the update of the cost models for the copper local loop (PTA Decision no. 5/2017) and the bitstream (PTA Decision no. 6/2017) shall be submitted. If no major changes are made to the cost model, the PTA expects that the Authority will publish a new price decision by the end of 2018.

The Decision

The Post and Telecom Administration endorses the Míla ehf. cost analysis pursuant to the most recent update of the analysis which was received by the Administration on 15 June 2017.

The following tariff shall apply to Míla services:

Service	Price per month
Fibre-optic in access network, one thread	ISK 13,717
Fibre-optic in access network, one pair	ISK 19,595
Fibre-optic to street cabinet, 1 thread	ISK 6,858
Fibre-optic to street cabinet, 2 threads	ISK 9,798
Fibre-optic to street cabinet, 3 threads	ISK 12,737
Fibre-optic to street cabinet, 4 threads	ISK 15,676

Prices are ex VAT.

The setup charge for installation of fibre-optic line is ISK 96,680 ex VAT.

The tariff shall apply as from 1 January 2018, Míla ehf. has notified the coming into force of the new tariff with the required notice. Míla shall update its reference offer for wholesale access to the local loop and terminating segments of leased lines no later than 1 January 2018.

This Decision can be appealed to the Appellate Committee for Electronic Communications and Postal Affairs, see Article 13 of Act no. 69/2003 on the Post and Telecom Administration. The appeal shall have reached the Appellate Committee four weeks from the time that the party in question became aware of the Decision of the Post and Telecom Administration. Costs for an appeal are according to Paragraph 5 of Article 13 of the same Act, and in addition to this there is a special appeal charge to the amount of ISK 150,000, pursuant to Article 6 of Regulation no. 36/2009 on the Appellate Committee for Electronic Communications and Postal Affairs.

Reykjavík, 15 November 2017

Hrafnkell V. Gíslason

Óskar Þórðarson