POST AND TELECOM
ADMINISTRATION
IN ICELAND

Draft decision

Review of Mila tariff for trunk segments of leased lines.

(previously Market 14)

1. July 2015

POST AND TELECOM ADMINISTRATION IN ICELAND

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1. Introduction

The Mila ehf. (Mila) cost analysis for the wholesale market for trunk segments of leased lines here under discussion is based on obligations imposed on the company with the Decision of the Post and Telecom Administration (PTA) no. 20/2007 dated 14 September 2007.

The Mila products being dealt with in this cost analysis belong to the wholesale market for trunk segments of leased lines which is Market 14 pursuant to the EFTA Surveillance Authority (ESA) Recommendation from 2004. The PTA has made market analysis of this market and in the light of this analysis the Administration intends to maintain the obligation on Mila for price control for the company's trunk segments of leased lines.

1.1 The PTA Decision no. 20/2007

The PTA made Decision no. 20/2007 on 14 September 2007 on the designation of companies with significant market power and on the imposition of obligations on the wholesale market for terminating segments of leased lines (Market 13)[1] and on trunk segments of leased lines (Market 14)[2].

The PTA has come to the conclusion that the definition of Market 14 to be found in the ESA Recommendation[3] applies in this country. The PTA decided to designate Míla as having significant market power on the wholesale market for trunk segments of leased lines (Market 14).

With the authority in Article 32 of the Electronic Communications Act an obligation for price control for trunk segments of leased lines was imposed on Mila. Mila was to keep cost accounting and to make a cost model for the calculation of prices for leased lines in wholesale, according to historical costs. The construction of the cost model shall be completed within one year from the publication of the Decision on the relevant market. In order for Míla to be able to demonstrate that the tariff for a specific kind of service or product is cost-oriented, it was necessary to introduce cost accounting that captured, identified, assessed and allocated the relevant costs to services or products in accordance with recognised rules, that is to say a causal relationship. Míla was to submit a description of the cost accounting bookkeeping for trunk segments of leased lines to the PTA and to publish the main cost categories and the rules used to allocate costs. Mila was to deliver a report to the PTA from an independent auditor showing correspondence between the company's description to the PTA of how costs are split and the implementation in its cost bookkeeping system.

The PTA proposed that the Mila tariff for leased lines should be based on costs and on objective criteria in accordance with the following rules:

- The same price should apply across the whole country.

[1] *Wholesale terminating segments of leased lines.*
[2] *Wholesale trunk segments of leased lines.*
[3] See the EFTA Surveillance Authority Recommendation on the relevant markets from 14 July 2004.

- Tariffs for leased lines should normally be divided between installation charge and charge for use, that is to say a fixed lease price for a specific period of time.
- Where another manner of division is used it shall be transparent and based on objective criteria.
- Tariffs for leased lines apply to all service items provided between network interconnection points where the user has access to the line.

All changes to the Mila tariff for trunk segments of leased lines should be notified to the PTA and they will not come into force without prior endorsement by the PTA.

1.2 Draft PTA Decision on market analysis of the wholesale market for trunk segments of leased lines

The PTA has made a market analysis for the wholesale market for trunk segments of leased lines (previously Market 14) and the preliminary draft analysis is hereby submitted for consultation along with this cost analysis. The conclusion of the analysis is that circumstances in this country do not support the withdrawal of this market. Furthermore, circumstances on the market have not changed much from the circumstances that pertained in 2007. All wholesale of leased lines within the Skipti Group have been transferred to Mila. The number of companies on the market is more or less the same as in 2007. The PTA considers that significant and non-transitory entry barriers exist to the market and that active competition cannot be expected within the next 2 to 3 years. Mila still has an overwhelmingly dominant market share, whether measured by revenue from leased lines (75-80%) or by number of active connections (72%). In addition to this the PTA intends among other things to maintain obligations on Mila for price control and for cost accounting.

1.3 The PTA Decision no. 14/2011

The existing tariff is based on the PTA Decision no. 14/2011 with respect to the Mila cost analysis of tariff for leased lines dated 27 May 2011. The PTA endorsed the Mila cost analysis for trunk segments of leased lines which was based on the cost base for the year 2009 with amendments proposed by the PTA.

Cost analysis for trunk segments of leased lines (Market 14) was implemented in cooperation with the consultancy company Analysys Mason (hereafter AM). AM prepared a cost model on which the Mila wholesale tariff for trunk segments of leased lines was based and which used Mila historical costs which were allocated to the relevant services (HC, FAC). Mila reviewed the cost analysis twice, in August 2010 and January 2011, before it was endorsed.

In general the PTA endorsed the methodology used by Mila for allocating costs to specific services in trunk segments of leased lines. The PTA also endorsed the criteria for the capex and opex for trunk segments of leased lines as Mila based its calculations on the revised cost analysis submitted by the company in January 2011. The PTA endorsed the Mila criteria for the standard unit in calculations of the reference unit and it was decided that a 2Mb/s line would

be considered to be 1 equivalent unit which was used as a basis in price calculations. The PTA also accepted the Mila criteria for calculating the pricing of connections according to bandwidth as the price for each Mb/s became proportionately lower as the bandwidth of a connection increased.

The PTA made amendments to Mila calculation of annual capital costs. The PTA considered it proper to use equivalent annual costs without tilt and not with tilt for fibre-optic as proposed by Mila. The PTA conclusion was that the capex for trunk segments of leased lines should be assessed as ISK [...][4] at 2009 price level in accordance with indexing by the consumer price index. It was furthermore the conclusion of the PTA that annual capital costs would be approximately ISK [...] for the year 2009 having taken into account the above criteria and using 8.5% WACC.

The PTA assumed that booked operational costs for 2009 were approximately ISK [...] in accordance with information from Mila. Operational costs for trunk segments of leased lines were assessed as ISK [...] for the year 2009 which were allocated to cost objects and used as a basis for price calculation for leased lines. The reduction in the number of units in 2010 was taken into account, particularly the decommissioning of the NMT system.

The PTA accepted Mila's request for new distance measurements where the geodesic distance between endpoints (as the crow flies) of trunk lines on the cable path in question would be used. It was stated by Mila that given the Mila tariff then in force the number of kilometres for the kilometre charge would be reduced on average by 40% by using geodesic distance instead of the real measurements of lines then in use.

The PTA accepted Mila's proposal for a new discount arrangement. Discounts are based on the length of an agreement, that is to say where an agreement is for one year then the discount is 5%, 10% for a two-year agreement and 15% for a three-year agreement. Contracts can be terminated at any point in time with 2 to 4 months' notice.

Having taken into account the amendments made by the PTA to the Mila cost analysis, the conclusion was that Mila total revenue from leased lines would decrease by about [...] compared to 2009 given the current situation. The price for narrowband connections (less than 2Mb/s) increased while broadband connections decreased significantly, particularly for connections of 155 Mb/s and larger.

1.4 Míla tariff for trunk segments of leased lines

The existing tariff for trunk segments of leased lines pursuant to the PTA Decision no. 14/2011 is as follows:

[4] Information removed for purposes of confidentiality. The same applies to information provided in square brackets throughout the document.

Service product	*Price line*	*Price km.*
64 Kb/s	2,972	116
128 Kb/s	4,060	158
256 kb/s	5,546	216
512 kb/s	7,576	296
512 kb/s reserved connections	11,364	444
2 Mb/s	13,987	546
2 Mb/s reserved connections	20,980	819
45 Mb/s	56,780	2,217
155 Mb/s	64,116	2,503
155 Mb/s reserved connections	96,175	3,754
622 Mb/s	104,275	4,071
0.5 Gb/s	96,603	3,771
1.0 Gb/s	123,127	4,807
2.0 Gb/s	156,933	6,126
2.5 Gb/s	169,681	6,624
10 Gb/s	275,647	10,761
Ethernet 2 Mb/s	13,987	546
Ethernet 6 Mb/s	22,931	895
Ehternet 10 Mb/s	28,857	1,126
Ethernet 20 Mb/s	39,420	1,539
Ethernet 26 Mb/s	44,360	1,732
Ethernet 48 Mb/s	58,453	2,282
Ethernet 50 Mb/s	59,537	2,324
Ehternet 100 Mb/s	81,330	3,175
Dark fibre in urban areas, a pair		21,446
Dark fibre in rural areas, a pair		9,132
Dark fibre in urban areas, single fibre		18,266
Dark fibre in rural areas, single fibre		7,609

1.5 Facts of the case

With a letter dated **13 December 2013** the Administration received a submission from Mila concerning amendments to tariff and cost analysis of leased lines in the trunk line network.

Calculations of capex were based on real investments up to 2012 and on estimated investments from 2013 to 2015. The estimated investments allowed for a significant increase in investments in equipment and for similar investment in fibre-optic to the investment made in 2012 which was however significantly lower than in the preceding year.

Opex was based on costs for the Mila trunk line network for the first 9 months of 2012. Equipment in use in the Mila trunk line network was transferred to Siminn in 2012. In the bookkeeping the transfer date was 1 October 2012 which means that Mila only had total operational costs for the first 9 months of the year. The analysis is based on real costs for the first 9 months of 2012, indexed for a whole year.

When calculating prices, Mila used 2 Mb/s line = 1 equivalent in accordance with the previous cost analysis and on the other hand reduced the weighting of leased lines for data transfer speeds in excess of 100 Mb/s. This was done by decreasing the exponent in calculations of equivalents for this speed from [...].

The conclusion of the analysis was that the leased line price fell but to a varying degree depending on the capacity of the leased line.

On **9 January 2014** Mila sent a revised version of the cost analysis where the exponent for calculating equivalents for 20 Mb/s - 100 Mb/s leased lines was changed to [...]. In addition to this Mila added data transfer speeds from 100 Mb/s - 400 Mb/s which according to Mila is in accordance with customer needs.

In a letter to Mila dated **20 January 2014** the PTA objected to the methodology used by Mila when assessing historical costs for the trunk line network where a cost projection for a number of coming years was used while at the same time older years were removed from the cost base. The PTA pointed out that there was no precedent for this methodology. In the opinion of the PTA, Mila had not provided adequate arguments for the use of this methodology, nor explanations for the choice of number of years used in the forecast and nor had it shown how the projection values were determined. In the opinion of the PTA this methodology was not appropriate as it gave excessive leeway in the choice of variables which made it possible to adapt variables to the desired conclusion in each instance.

For the purpose of reference when estimating capex for fibre-optic the PTA also requested information on the total length of fibre-optic in the trunk line system and new information on Mila costs for each installed kilometre of fibre-optic cable.

In the Mila reply dated **29 January 2014**, Mila provided an audited cost analysis in the light of the PTA comments and provided further arguments for the calculations of capex.

In the reply Mila pointed out that the Mila trunk line network was currently at a technical watershed. The technology was developing and with the advent of 3G and now 4G, demands

for continuously greater bandwidth were increasing. Mila maintained that the existing tariff inhibited this development and that Mila [...].

In addition to this the Agreement between the Competition Authority and the Skipti Group and the new PTA market analysis of Markets 4 and 5, had an impact on the leased line market which resulted in increased demands for a major increase in bandwidth.

Mila pointed out that its projection had in fact only covered just less than 2 years ahead and not a number of years as maintained by the PTA. The projection for the year 2014 was based on the endorsed the Mila investment plan and on expectations of the projects that were to be implemented in this year and on the budget available to Mila.

Mila furthermore stated that the technical development that had taken place had led to a situation where equipment in which the company had invested in the years 2007 and 2008 was now obsolete. This among other things explained why it had been decided to base calculations on an investment plan for the years 2014 and 2015.

Mila also commented on the fact that the market analysis for Market 14 was made 7 years ago. During these 7 years the market had totally changed, both in this country and in Europe where this market has been withdrawn. In Mila's opinion there was thus doubt as to whether the trunk line network should be a defined market. In addition to this there was now competition on the market and there was some doubt as to whether Mila had a dominant market position in all parts of the country.

Despite the fact that it is stated in this 7-year-old market analysis that prices should be calculated on the basis of historical costs, it is well known that there have been deviations from this methodology in analyses.

In addition to this it is stated in the regulation on bookkeeping and cost analysis in the operations of electronic communications undertakings no. 564/2011 that costs analysis shall take account of long-run average incremental cost (LRIC). One could say that taking into account the immediate future with respect to investments, as is done in this analysis, is a step in this direction. In the regulation it is furthermore stated that the Administration is authorised to calculate prices on the basis of historical costs or by using another methodology, should that be considered more appropriate.

Mila had decided rather to look to the future in analysing the trunk line network among other things because tariffs take a long time to compile particularly when the PTA must send analyses for consultation which lengthens the process even more. The last tariff came into force on 1 August 2011. Two and a half years have now passed and it is not yet decided when the next tariff will come into force. In the PTA market analysis the Administration recommends that tariffs should be reviewed annually but the reality has been that because of pressure of work and because of the length of time it takes the PTA to process cost analyses, then this objective has not been achieved. Looking somewhat to the future with respect to investments would in the opinion of Mila result in the cost base being more accurate during the period of validity of a tariff. It is extremely important to authorise a degree of flexibility in calculations of products

where there are major technological changes such as in the trunk line network. In such instances it is in the opinion of Mila necessary to look to the future though this may only be a few quarters. Customers are waiting for lower prices so that they can increase bandwidth to their customers.

In Mila's opinion it is untenable to maintain that it is not possible to change methodologies on the grounds that there are no precedents for such change, as the result would be stagnation were it not possible to amend calculation methodologies because of a lack of precedent.

Mila furthermore points out that the calculations lead to a substantial reduction in price which is advantageous for customers. Article 13 of Regulation no. 564/2010 on cost analysis states that the PTA decides on maximum prices. Mila points out that the calculations in question lead to a reduction in tariff and not an increase.

Mila does agree with the PTA that it is not sensible to frequently alter calculation methods. In this instance however in the opinion of Mila there are special circumstances as the operation of the trunk line network is at a watershed. With this methodology Mila is supporting developments that have been forecast on the electronic communications market with respect to a huge increase in use of bandwidth, but if the price is too high this will lead to stagnation in the opinion of Mila.

On 1**8 March 2014** Mila submitted a correction on its updated analysis where the prices for 100-400 Mb/s were updated in accordance with the most recent amendments to the analysis.

On **21 March 2014** the PTA requested an analysis from Mila on the impact of changes on exponents proposed by Mila for the calculation of equivalents. More specifically the PTA requested calculations of monthly costs for each company on the basis of services purchased over a specific period of time where the charges paid by each company were recalculated on the basis of new prices with unchanged exponents on the one hand and on the other hand on the basis of new prices with amended exponents.

In an e-mail dated **24 March 2014,** Mila submitted a comparison between customers of the impact of the changes to the exponents.

In an email dated **25 September 2014** the PTA objected to the change where the exponent [...] was used for higher speed (100 Mb/s and higher) instead of [...] to the effect that this was too large a step in this instance. According to the Mila proposal, some cost items were [...] despite the fact that total costs for leased lines had dropped. The PTA proposed that the exponent [...] should be used for this speed. The PTA requested that Mila update the analysis in accordance with this change.

On **3 October 2014** Mila submitted a revised cost analysis for trunk lines in accordance with the PTA proposals for amended exponents. Opex was also updated in the analysis, capex was recalculated and the exponent for 2Mb/s reserve connections was reduced.

In an email dated **3 November 2014** the PTA requested that Mila revise the figures for the number of lines and kilometres and that the figures from May 2014 be used. In the PTA email it was stated that the cost analysis had been based on investments up to the end of 2014 and on

revised opex from June 2013 to May 2014 and that it was therefore normal to also revise the quantity figures.

In an email from the PTA dated **5 November 2014**, the PTA furthermore requested explanations of the [...].

With an email dated **7 November 2014**, Mila submitted a revised cost analysis where the calculations were based on quantity figures on leased lines from May 2014. Furthermore there were explanations in the Mila email on [...].

1.6 National consultation

The PTA opened a national consultation on the preliminary draft to the Decision here under discussion on 23 December 2014 and the consultation ran until last 10 February. The PTA received no comments.

2. The PTA conclusion

2.1 General

Mila correctly observes that a long time has passed since the last market analysis of the wholesale market for trunk segments of leased lines and in addition that the cost analysis process has taken a long time. In recent years the PTA has closely monitored developments on the market in question and it has been clear that Mila dominance of the market has on the whole been maintained. The development in this country has differed from that in most EEA states and the market environment has not changed much from the environment of 2007. As is stated in the draft market analysis which is submitted for consultation along with this cost analysis, Mila is still considered to have significant market power on the relevant market. Mila had 75-80% market share by revenue and 76 by number of lines in the year 2013 where the company's market share has only dropped by about 10% since 2005. In addition to this the PTA considers that significant and non-transitory entry barriers exist to the market and that active competition cannot be expected within the next 2 to 3 years.

The PTA furthermore points out that it would be far from the truth to maintain that the time taken to process individual cost analyses may be attributed to the time taken by the PTA, as Mila is fully aware and as has been discussed in detail in the prior analyses.

In a letter from Mila dated 29 January 2014 there seems to be a misunderstanding by Mila that the PTA has maintained that it is not possible to change methodologies where there is no precedent for such change. The PTA points out in this connection that if one is to adopt a new methodology for assessing capex then one must provide solid arguments that justify a change of methodology, particularly where there is no precedent to support such change. Furthermore one must describe the methodology being used so that a judgement can be made as to whether it fulfils existing obligations and, where appropriate, if the methodology can be used again in the next tariff review. In a letter from the PTA the Administration complained that Mila had not supplied adequate arguments to explain why this methodology had been used and that Mila had not explained how it had reached its conclusion.

The PTA agrees with Mila that there should be increased flexibility in calculations particularly as a result of technical changes and the PTA plans to emphasise cooperation with concerned parties in the coming months in order to achieve the objectives of annual review of tariffs. At the same time it is however necessary to ensure predictability in pricing.

In Sections 2.2 to 2.6 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 leased lines. The factors in question are the following:

1. Weighted Average Cost of Capital
2. Operational costs
3. Investment costs

4. Line equivalent
5. Setup charges
6. Total costs

Each subsection is structured with a description of the Mila cost analysis coming first and then followed by the position of the PTA for each issue.

2.2 Weighted Average Cost of Capital (WACC)

2.2.1 Mila cost analysis

The following was stated in a Mila communication dated last 29 January.

"Updated WACC is 7.6%. Interest cost is according to the average HFF0434 for the years 2009 to 2013. Other variables in the model remain unchanged."

	2013	2012
Risk free rate.....	3.13%	3.48%
Risk premium.....	3%	3%
Cost of debt	*6.13%*	*6.48%*
Market risk premium.....	5.00%	5.00%
Unlevered beta.....	0.5	0.5
Levered beta.....	0.72	0.72
Equity.....	0.65	0.65
Debts/equity.....	0.54	0.54
Other risk (alpha).....	0.00	0.00
Tax rate.....	0.20	0.20
Return on equity, post-tax	*6.71%*	*7.06%*
Return on equity, pre-tax	*8.38%*	*8.82%*
WACC (pre-tax)	**7.59%**	**8.00%**

2.2.2 The position of the PTA

In Article 16 of Regulation no. 564/2012 on accounting and cost analysis in the operations of electronic communications undertakings it is stated that the costs of capital bound in assets that are used in connection with the provision of service or service goods shall be calculated. The rate of return shall be based on weighted average capital costs (WACC) which is calculated from the rate of return requirement on equity and the rate of return requirement on debts in accordance with Regulation no. 564/2011. The CAPM model shall be used when calculating the rate of return on capital assets and the rate shall reflect the time value of money and the risk related to operations on the market in question. The cost of debt shall be calculated as the sum of risk-free interest and interest premium which reflects normal mark-up by companies on the market. The PTA shall decide the WACC at least once a year for specific financial markets

based on market mark-up, economic gearing and the position with respect to working capital and debts.

WACC using the PTA criteria is shown in the table here below.

Calculation of WACC for an electronic communication company and Iceland

WACC	***2013***
Risk-free rate	3.13%
Unlevered beta	0.50
Levered beta	0.72
Debts/equity	0.54
Market risk premium	5.00%
Return on equity	**6.71%**
Risk-free rate	3.13%
Debt premium	3.00%
Cost of debt	**6.13%**
Interest-bearing debt%	35%
Equity%	65%
Tax rate	20%
Cost of debts after tax	4.90%
Return on equity pre-tax	8.38%
WACC pre-tax	**7.6%**

Evaluation of average cost of capital (WACC real) for an electronic communications company in Iceland is 7.6% for the year 2013 in calculations of rate of return for capital bound in assets used in connection with the company's service offer. The position with respect to working capital and debts is not taken into account in the PTA calculations in this instance.

The Mila assessment corresponds to the PTA conclusion on the weighted average cost of capital for an electronic communications company.

2.3 Operating costs

2.3.1 Mila cost analysis

The Mila trunk line network was transferred to Siminn in 2012 and then transferred back to Mila in the middle of 2013. Mila submitted a revised analysis of operational costs last 3 October where costs from June 2013 to May 2014 were taken into account. The Mila costs are as follows: [...]

Mila stated that opex had [...] between the years 2013 and 2014. Subsequent to a query from the PTA, Mila provided the following explanation in an email dated last 7 November for the [...]

It is stated in the Mila analysis that costs for MDH[5] are allocated to the trunk line network. These costs are however not included in the cost analysis as they are dealt with separately in analyses.

The Mila analysis dated 13 December 2013 contained the following division of costs between fixed charges and distance related charges:

"The division of opex between fixed charges and distance related charges is calculated using the same methodology as in prior analysis. Costs for equipment are calculated using [...] of opex for hosting and [...] of labour costs while other costs are dependent on the number of lines. The remaining amount is considered to be distance related costs. Costs for fibre-optic are considered to be entirely distance related costs and all costs for the Control Network and for sound and TV equipment are considered to be dependent on the number of lines. This methodology harmonises with the last analysis."

2.3.2 The position of the PTA

Opex is based on real costs for the Mila trunk line network from June 2013 to May 2014 which is the first complete 12 month period during which the trunk line network was operated by Mila after transfer from Siminn.

In the following table one can see the division of opex for the 12 month period from June 2013 to May 2014 along with a comparison of opex for the years 2012 (on an annual basis) and 2011.[...]

If one examines average opex per month for the two periods used as a reference periods by Mila, that is to say June to December 2013 and January to May 2014, [...]

[...]

As stated here below in Section 2.7.1, the total cost of the trunk line network is corrected by taking into account the costs of MDH and Mila revenue from [...] The correction of total costs is just under [...] and in addition to this estimated revenue from setup charges of approximately ISK [...] is deducted from the costs before the monthly charges are calculated. If one takes into account the proportion of opex in this correction then the opex allocated to the cost account within the trunk line network for calculation of monthly charges is in fact ISK [...].

By comparison, the opex that was calculated in the prior cost analysis[6] for trunk lines was approximately ISK [...] on the basis of prices for 2009 which represents about ISK [...] when adjusted with the average price index of the 12 monthly period from June 2013 to May 2014.

[5] Mila submitted a request for amendments to the MDH tariff dated 9 October 2013. A draft PTA Decision on the tariff for MDH connections is submitted for consultation along with this draft.
[6] The PTA Decision no. 14/2011.

This means that opex has [...]. At the same time the number of sold leased lines has [...] while the number of sold kilometres has [...] and furthermore the [...] when calculated with an unchanged exponent. There is furthermore a manifest development towards a reduction in connections with lower data transfer speeds while connections with higher transfer speeds are increasing.

The PTA makes no objections to Mila opex. In the light of the fact that the trunk line network was transferred from Siminn to Mila in mid-2013, the PTA makes no objections to Mila real costs for the period June 2013 to May 2014 being used as a reference.

2.4 Investment costs

2.4.1 Mila cost analysis

In the initial Mila cost analysis dated 13 December 2013 it states that investments are calculated in the same way as in the prior cost analysis. On the other hand, Mila proposed a change where capex would be based on investments up to and including the year 2015, in other words partly based on estimates. Mila provided the following arguments for this change:

"The reason for making this change is that there has been a tendency for the tariff for the trunk line network to remain unchanged for an extended period of time which makes it necessary to look to the future to a certain degree, particularly when there is high demand for increased bandwidth. For example the tariff that currently applies came into force on 1 August 2011.

[...]"

In the Mila analysis from 13 December 2013 the following was stated with respect to division of investments into categories and to their lifecycles:

"Mila investments in the trunk line network are divided into the following categories:

- *Fibre-optic cables - lifetime 25 years*
- *Equipment - lifetime 6.67 years*
    - *SDH equipment,*
    - *Ethernet ports in SDH equipment,*
    - *Equipment which supports SDH and which is used for new technology, such as MPLS-TP technology. MPLS-TP will increasingly replace older SDH equipment in accordance with market demands and to fulfil obligations in the Agreement between Skipti, Siminn and Mila on the one hand and the Competition Authority on the other.*
    - *Wavelength equipment*
- *Control network - lifetime 6.67 years*
  Internal communications system installed to connect premises monitoring system and older connection equipment to the Mila control and monitoring system
- *Microwave radio equipment - life 10 years*
  From 2 Mb/s to 155 Mb/s"

In the light of PTA comments in the Administration's letter from 20 January 2014, Mila submitted a reviewed estimate of capex on 29 January 2014. There it states:

"In the Mila calculations that were submitted to the PTA 13.12.2013, the Mila investment for the year 2012 was estimated for a full year as Mila did not have information on investments in the system for the time when it was controlled by Siminn. In addition to this the investments for the year 2013 were estimated as the year was not completed. Due to an error all amounts were calculated, including amounts for fibre-optic and wavelength equipment.

Mila has now received information from Skipti on investments for the period October 2012 until May 2013.

Here below one can see real investments in the trunk line network for these years and for comparison the amounts used by Mila in the cost model:[...]

With this correction, investments are divided at nominal value in the following manner: [...]

Then the following was stated with respect to estimated investments:

"Mila withdraws its methodology of basing calculations on estimated investments for 2015. Mila however wishes to base its calculations on estimated investments for the year 2014. As explained here above there are significant changes in data transfer quantities and in ports and it is foreseeable that these changes will continue to be sizeable and possibly even greater in the near future. Further arguments for this request from Mila can be found above in this document.

[...]

In order to decide the capex, Mila adjusts investments for the years 1985 to 2012 to the average price of 2013 and adds investments made in 2013 and estimated investments for the year 2014 (according to the table here below).

In the following table one can see Mila's estimate of the capex for the trunk line network where older investments are adjusted to the average price of 2013 and where the lifecycle of each investment category is taken into account: [...]

Mila calculated annuities on the basis of the above specified criteria: [...]

2.4.2 The position of the PTA

In Paragraph 1 Article 14 of Regulation number 564/2011 on accounting and cost analysis in the operations of the electronic communications companies it states that an estimate should be made of the value of those investments required to provide the service in question. For the purpose of simulating as accurately as possible the circumstances on competition markets, gross replacement cost of operational assets shall be used in the methodology applied in this process. It is stated in Paragraph 3 of the same Article that in exceptional cases the PTA can agree, as a temporary measure, to historical costs being used. If assessment of assets is solely based on data from the electronic communications in question then this means that the burden of proof rests on that electronic communications company. In such instances the PTA shall apply as a

reference the estimated price that would result from an economically operated electronic communications company in the relevant field. Historical costs, as entered in the bookkeeping, incurred in the providing of facilities can provide indications of gross replacement cost, particularly for new assets. Such costs however do not define the cost of providing new facilities should they be no longer in place or if the owner has been deprived of such facilities.

In the original Mila proposal, the company requested that capex would be based on investments up to and including the year 2015. Investments for the years 2013, 2014 and 2015 were estimated and in addition to this older investments were removed from the investment base. Mila did not however provide information on how the company structured its estimates, but they did not harmonise with average investment costs of the preceding years. The PTA concluded that this methodology was unacceptable as presented. There was no reason given for the number of years for which estimates were made and nor were the criteria provided on which the estimated costs were based.

The PTA does not exclude the possibility of looking to the future when estimating capex, but such an estimate needs to be transparent and to be based on an assessment of demand, on a plan for essential investments, unit costs etc.

The methodology applied by Mila provided in reality the possibility of deciding the desired conclusion in advance and on this basis making a decision on the number of years that the estimate should cover and the estimated capex which would then provide the desired conclusion. In the opinion of the PTA, the Mila criteria were unclear and were this methodology to be used in the future then it would not be possible to predict the criteria used for such a methodology nor the outcome one could expect.

On last 29 January Mila submitted a reviewed assessment of capex. This assessment used real costs for the year 2013 and estimated costs for the year 2014 on the basis of an endorsed financial plan, with a breakdown for Fibre-optic, Equipment and Microwaves with costs itemised in each category. The PTA intends to endorse the Mila proposal that the estimated investments for the year 2014 be included in the capex.

Older investments are indexed with the consumer price index to the average price for the year 2013 which is in accordance with prior methodology for assessing investments in trunk lines used in the last cost analysis of this market, see the PTA Decision no. 14/2011. In the opinion of the PTA the consumer price index is the closest approximation for measuring price development of the relevant investments, which mainly constitute equipment and labour. The PTA thus plans to endorse Mila's use of the consumer price index for indexation of investments.

The following table shows the Lifetime of investment categories, capex and annuities: [...]

Total capex is estimated at ISK [...] of which investment in fibre-optic is approximately ISK [...]. Annual capital cost is ISK [...] given the Mila estimate on Lifetime and 7.6% WACC. The Lifetime is in accordance with prior Mila cost analysis of the market for trunk line segments of leased lines.

By comparison the capex for trunk line segments of leased lines is assessed as ISK [...] at 2009 price level in the previous cost analysis for trunk line segments of leased lines which is ISK [...] indexed to the average price level for 2013. The capex has thus [...] from 2009 [...].

The combined total length of the Mila fibre-optic system is [...] kilometres. Given this figure the capex for each kilometre in average is just less than ISK [...]. The PTA considers that the Mila conclusion is realistic and credible, among other things on the basis of information that the PTA has on laying fibre-optic cables in urban and rural areas.

The PTA plans to endorse the Mila assessment of capex for trunk lines submitted on 29 January 2014.

2.5 Line equivalent

In the PTA Decision no. 14/2011 on the Mila cost analysis of the tariff for leased lines, it was decided to define a specific lease unit (line equivalent) and the cost of such a unit and to calculate prices for leased lines with other data transfer speeds as multiples of the base unit. It was decided to use a 2Mb/s leased line as a base unit.

The equation here below was used to calculate the price for kilometre and fixed charge for trunk lines according to a given exponent and the price for the base speed (2 Mb/s) used as a reference (h = data transfer speed).

$$\mathbf{Price}_{\mathbf{h}\ Mb/s} = \mathbf{Price}_{\mathbf{2}\ Mb/s} \times \left(\frac{\mathbf{h\ Mb/s}}{\mathbf{2\ Mb/s}}\right)^{exponent}$$

The exponent 0.45 was used for the lower data transfer speed and 0.35 for data transfer speeds in excess of 100 Mb/s.

2.5.1 Mila cost analysis

In the Mila cost analysis dated 13 December 2013, the following was stated with respect to line equivalents:

"The calculation of line equivalents is based on the same methodology as in prior analyses. The exponent for data transfer speed in excess of 100 Mb/s will however be reduced from [...]. The reason for this is that Mila has at its disposal considerable excess bandwidth on its trunk line network. The additional cost of adding bandwidth is small when the basic equipment has been installed. The largest cost item is fibre-optic which represents [...] annual cost of investment. Management of leased lines under 2 Mb/s is in fact proportionately more than for lines that have high data transfer speeds and the maintenance and management costs are much higher for lines with low data transfer speed than for lines with low data transfer speed. The explanation here is that the equipment for high-speed data transfer is new and the technical management is easier. For example it is possible to manage and connect lines from a central location in the case of lines with high-speed data transfer while in many instances one has to

visit the location to alter connections or make installations in the case of lines with low data transfer speed.

[...]."

"The Mila proposal will mean that companies will be able to purchase more bandwidth at the same price as before which will encourage more efficient usage."

"The number of lines and the distance is based on lines that were charged for in October 2013 and they are converted to line equivalents in the same manner as has been done in prior analyses. The same discount terms are planned as are now in force for Mila customers."

[...]

Then Mila requested the addition of data transfer speeds from 100 Mb/s to 400 Mb/s as customers had requested this data transfer speed.

On 3 October 2014 Mila submitted a revised cost analysis for trunk lines in accordance with the PTA proposals for amended exponents.

[...]

"In addition to this Mila requests that it be authorised to reduce the coefficient for reserve connections for leased lines with data transfer speed of 2 Mb/s to 1.25. Mila considers it important to encourage companies to lease connections with reserve capacity in areas where this is possible. The current leased line tariff has discouraged customers from using this service as the price has been considered too high. In the case of a reserve connection under 2 Mb/s it is not possible to install the connections in the same manner as with 2 Mb/s as those are PDH connections. A reserve line on 64 - 512 Kb/s is in effect on 2 Mb/s in the SDH system.

Given the above the number of line equivalents is [...] and the number of kilometre equivalents is [...] including dark fibre and [...] excluding dark fibre."

In an email dated **3 November 2014** the PTA requested that Mila revise the figures for the number of lines and kilometres and that the figures from May 2014 be used. Given these figures the number of line equivalents is [...] and the number of kilometre equivalents is [...].

The following tables show the changes that were made to equivalents calculations (given quantity figures from May 2014) since the last cost analysis:[...]

2.5.2 The position of the PTA

In its initial cost analysis Mila proposed that the exponent for data transfer speed in excess of 100 Mb/s should be reduced from [...].

The PTA examined the impact that this change of exponent would have on the tariff and on Mila customers. Subsequently the PTA proposed that the exponent [...]

The PTA considers it normal that prices for larger connections should reflect that such connections are proportionately less expensive in comparison to smaller connections. The cost

consideration supports this division as additional cost incurred in increasing bandwidth is proportionately small and as the cost of managing leased lines under 2 Mb/s is greater. For this reason the PTA has not opposed a reduction in the exponent from its level in the previous analysis for higher speed. The PTA however considers it inappropriate to go too far in the reduction of costs of larger connections as this could support an increase in price of smaller connections.

The PTA planned conclusion is therefore to endorse the Mila proposal presented in the cost analysis submitted by Mila on 3 October 2014 and revised on last 7 November. This means that an exponent of 0.45 should be used for data transfer speeds lower than 20 Mb/s, 0.35 for data transfer speeds from 20 Mb/s2 100 Mb/s and 0.33 from and including 100 Mb/s.

The PTA also intends to endorse the Mila proposal that the proportion of dark fibre should be increased from 20,000 to 24,000 per pair in urban areas and from 3000 to 3700 per pair in rural areas. The PTA also intends to endorse the proposal for a reduction of the co-efficient to 1.25 for reserve connections for leased lines with data transfer speed of 2Mb/s.

In the table here below the PTA has compiled the changes which affect equivalence calculations:[...]

The conclusion is that the number of line equivalents is [...] and the number of kilometre equivalents is [...] including dark fibre and [...] excluding dark fibre.

2.6 Setup charges

Estimated annual revenue from setup charges are deducted from costs used in the calculation of the monthly charges.

2.6.1 Mila cost analysis

In the Mila revised cost analysis dated 3 October 2014 the following was stated:

"Setup charges have not increased for many years in the Trunk line network. Setup charges for traditional leased line connections up to 500 Mb/s are now ISK 10,000 and there is a clear need for a major increase. It is requested that setup charges increase to the same as for 1 Gb/s connections which is ISK 96,386.

The procedure for ordering and connecting leased lines in the Trunk line network are vastly more complex and time-consuming than for local loops in the Access Network. When a company requests a leased line, the procedure is normally such that the company in question submits a request for a connection between specific locations with a specific data transfer speed. The Mila Service department receives the request and sends it to staff at the Trunk network which verifies whether there is available capacity. Additional information is often required from the customer and this is gathered by the Service Department. If it is possible to lease a connection to a customer then the customer submits a formal order which is then sent to the Design Department at the Trunk line network which provides information on connection points and were required that department designs a path should one not be available.

In almost all instances, Mila staff or parties cooperating with Mila need to visit the location and install the connection, oft in consultation with the customer who needs to connect his equipment.

In the case of a connection in the countryside, Mila staff often need to travel long distances to install a connection but Mila does use agents where possible.

[...]

The amount currently collected for connections of 0.5 Gb/s and higher is ISK 96,386.

Mila considers it unacceptable to increase the setup charge to ISK [...]. Mila therefore requests to increase the setup charge to the same as for connections with the highest speed which is ISK 96,386.

Setup connections to the amount of ISK 10,000 were [...] during the period from June 2013 until May 2014. Given ISK 96,386 setup charge the revenue would be ISK [...]. Additional revenue to Mila, were the PTA to accept the increase, would be ISK [...]. This revenue is taken into account in the recalculated cost model and costs are reduced by ISK [...] in addition to the setup charges for the period covered by the analysis."

2.6.2 The position of the PTA

The PTA accepts the Mila proposal for changing the setup charge as this is a correction of the structure of the tariff for connections in accordance with a reviewed assessment of cost allocation. The above specified change does not constitute an increase in the cost base of the connections in question but rather it is a movement of costs which will subsequently be published in the company's tariff.

2.7 Total costs

Total costs per annum are made up of opex for a 12 month period and the annual cost of Mila investment. The numbers are based on the Mila cost analysis which was received by the Administration on 7 November 2014 where quantity figures of sold units were also updated.

The opex used is according to Mila bookkeeping for the period June 2013 until May 2014, see Section 2.3 here above.

The annual cost of capital is calculated on the basis of capex which is assessed from Mila investments (and to a certain extent Siminn investments) for the period 1985 to 2013 and from estimated investments for 2014, see Section 2.4 here above.

The quantities of sold units are based on the status in May 2014.

2.7.1 Mila cost analysis

According to the Mila analysis total costs are as follows: [...]

Items deducted are Mila revenue from [...], setup charges, agreement with [...], revenue from TV and audio transmissions, cross connections etc. Mila also calculates the share of MDH in fibre-optic which is based on the number of fibre-optics used for MDH. The deductions are divided as follows: [...]

Mila divides the deductions between cost units within the trunk line network in the following manner: [...]

Senior management costs are then divided between cost units in accordance with the proportion of total costs.

Total costs are divided between distance related costs on the one hand and by line on the other. The division of costs between fixed charges and distance related charges is calculated using the same methodology as in prior analysis.

Mila divides costs in accordance with a number of line equivalents and the number of kilometre equivalents. The unit price corresponds to the unit price for 2 Mb/s connections. The base price for dark fibre is based on the cost of fibre-optic and the distance related part of costs for Connections.

The table here below shows the base price for leased lines on the one hand and dark fibre on the other. [...]

According to the above the revised tariff is as follows:

	Current tarrif		New tarrif		Change	
	pr. line	pr. km	pr. línu	pr. km	pr. línu	pr. km
64 Kb/s	2,972	116	2,911	114	-2%	-1%
64 Kb/s, reserved connection	4,458	174	4,366	171	-2%	-1%
128 Kb/s	4,060	158	3,976	156	-2%	-1%
128 Kb/s, reserved connection	6,090	238	5,964	234	-2%	-1%
256 kb/s	5,546	216	5,432	213	-2%	-1%
256 kb/s reserved connection	8,319	325	8,147	320	-2%	-1%
512 kb/s	7,576	296	7,420	291	-2%	-1%
512 kb/s reserved connection	11,364	444	11,130	437	-2%	-1%
2 Mb/s	13,987	546	13,699	538	-2%	-1%
2 Mb/s reserved connection	20,981	819	17,124	672	-18%	-18%
2 Mb/s interconnection	6,994	546	6,849	538	-2%	-1%
45 Mb/s	56,781	2,217	40,733	1,599	-28%	-28%
45 Mb/s reserved connection	85,172	3,325	61,100	2,399	-28%	-28%
155 Mb/s	64,118	2,503	57,565	2,260	-10%	-10%
622 Mb/s	104,278	4,071	91,053	3,575	-13%	-12%
2.5 Gb/s	169,685	6,624	144,101	5,658	-15%	-15%
Ethernet 2 Mb/s	13,987	546	13,699	538	-2%	-1%
Ethernet 6 Mb/s	22,931	895	22,459	882	-2%	-1%
Ehternet 10 Mb/s	28,858	1,126	28,263	1,110	-2%	-1%
Ethernet 20 Mb/s	39,421	1,539	30,668	1,204	-22%	-22%
Ethernet 26 Mb/s	44,361	1,732	33,617	1,320	-24%	-24%
Ethernet 28 Mb/s	45,865	1,790	34,501	1,355	-25%	-24%
Ethernet 30 Mb/s	47,311	1,847	35,344	1,388	-25%	-25%
Ethernet 46 Mb/s	57,346	2,239	41,048	1,612	-28%	-28%
Ethernet 48 Mb/s	58,455	2,282	41,664	1,636	-29%	-28%
Ethernet 50 Mb/s	59,538	2,324	42,263	1,659	-29%	-29%
Ehternet 100 Mb/s	81,332	3,175	49,813	1,956	-39%	-38%
Ehternet 150 Mb/s	84,869	3,313	56,945	2,236		
Ehternet 200 Mb/s	87,472	3,415	62,616	2,458		
Ehternet 300 Mb/s	91,276	3,563	71,581	2,810		
Ehternet 400 Mb/s	94,076	3,672	78,709	3,090		
Ethernet 0.5 Gb/s	96,606	3,771	84,724	3,326	-12%	-12%
Ethernet 1 Gb/s	123,130	4,807	106,499	4,181	-14%	-13%
Ethernet 2 Gb/s	156,937	6,126	133,871	5,256	-15%	-14%
Ethernet 4 Gb/s	200,025	7,808	168,277	6,607	-16%	-15%
Ethernet 5 Gb/s	216,274	8,443	181,136	7,112	-16%	-16%
Ethernet 6 Gb/s	230,524	8,999	192,369	7,553	-17%	-16%
Ethernet 7 Gb/s			202,408	7,947		
Ethernet 10 Gb/s	275,654	10,760	227,691	8,940	-17%	-17%
Dark fibre in rural areas		9,135	0	8,850		-3%
Dark fibre in urban areas		21,453	0	20,528		-4%
Dark fibre in rural areas, single fibre		7,612	0	7,538		-1%
Dark fibre in urban areas, single fibre		18,271	0	17,484		-4%

2.7.2 The position of the PTA

The Mila conclusion on the new tariff for trunk lines is broadly based on the criteria prescribed by the PTA. In addition to this, amendments and observations from the Administration have been taken into account as is stated above.

The conclusion of the cost analysis is that total costs for the trunk line network are ISK [...]. It is estimated that these costs will be recouped with setup charges to the amount of ISK [...] and monthly charges to the amount of ISK [...].

Setup charges will be ISK 96,386 for all trunk lines. With this arrangement Mila estimates that annual cost to the amount of ISK [...].

Costs collected with monthly charges are divided according to the following table: [...]

The division of total costs between individual cost units is similar to that in the previous cost analysis for trunk lines.

In the Mila tariff the monthly price is divided into unit prices for line and kilometre price. In order to decide this price the total cost is divided into costs for connections and costs for distance. The same methodology is used with this division as was used in the previous cost analysis and the PTA makes no objections to that methodology. Total costs are divided as follows: [...]

The unit price for the base unit, that is to say 2 Mb/s leased lines, is calculated from the above specified costs and the number of equivalents. This means that the price for 2Mb/s leased lines per month is ISK 13,699 and the kilometre charge is ISK 538.

The conclusion of the analysis is that the leased line price for connections less than 20 Mb/s will be slightly reduced while larger connections have a larger reduction with the reduction being in the range of 10%-39%.

The PTA considers that the new tariff reflects well the cost development on the market for larger connections which results both from technical development and from increased demand.

With all of the above in mind the PTA intends to endorse the new Mila tariff for trunk line connections for leased lines as presented in the revised Mila analysis dated 7 November 2014, see Appendix I.

Other price conditions, such as discounts, according to the current tariffs remain unchanged.

The provisions of chapter 3 in Mila's reference offer applies to the coming into force of the new tariff. There it is stated that Mila shall inform the service purchaser of amendments to the tariff with at least 60 days' notice. In this instance PTA considers it appropriate that the tariff change shall apply on the turn of a month and that the new tariff will come into force on the next turn of the month after the 60 days' notice has passed.

Currently, all PTA's decisions regarding tariff changes are subject to national consultation and consultation with ESA. As a result of this change in procedure the process time of PTA's price decisions prolonged considerably. This applies to the consultation time as well as the work

involved in preparation for consultation, processing of the result of the consultation, translations, etc.

In order to take into account the interests of the parties to the market in question the PTA has allowed Mila to notify the service purchasers about the amendments to the tariff when PTA has sent the draft decision formally to the ESA for consultation. The notification will apply as long as PTA's final decision will not alter the tariff from the draft decision. If the tariff in the final decision differs from the draft decision Mila shall notify the service purchaser of the new amendments to the tariff with the same notice as stated here above.

The Decision

The Post and Telecom Administration endorses the Mila ehf. cost analysis for trunk line segments of leased lines as last updated on 7 November 2014.

Setup charges and price per month for leasing shall be in accordance with Appendix I to this Decision.

The provisions of chapter 3 in Mila's reference offer applies to the coming into force of the new tariff. There it is stated that Mila shall inform the service purchaser of amendments to the tariff with at least 60 days' notice. In this instance PTA considers it appropriate that the tariff change shall apply on the turn of a month and that the new tariff will come into force on the next turn of the month after the 60 days' notice has passed. Mila may notify the service purchasers about the amendments to the tariff when PTA has sent the draft decision formally to the EFTA Surveillance Authority (ESA) for consultation. The notification will apply as long as PTA's final decision will not alter the tariff from the draft decision. If the tariff in the final decision differs from the draft decision Mila shall notify the service purchaser of the new amendments to the tariff with the same notice as stated here above.

The new Míla ehf. tariff shall be part of the company's reference offer for leased lines.

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, XX, XX 201X

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Hrafnkell V. Gíslason

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Óskar Þórðarson

Appendix I- Tariff for wholesale market for trunk line segments of leased lines
Appendix II– Opinion of ESA