



POST AND TELECOM
ADMINISTRATION
IN ICELAND

- Draft decision-

Review of Míla tariff for Metropolitan Data Highway (MDH) connections

1. July 2015

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1 Introduction

1.1 Facts of the case

Mila ehf. sent a letter dated 9 October 2013 to the Post and Telecom Administration (PTA) concerning an increase in the tariff for Metropolitan Data Highway (MDH) connections which included the submission of a cost analysis of the connections in question pursuant to a request made by the PTA on 30 November 2011.

In this letter Mila reiterated its previously stated view that MDH connections were not covered by the obligation for price control. This was a product available in the Capital City Area where there was significant competition and, in addition to this, it was a product that Mila had developed from scratch. Others had the same opportunity to develop an analogous product as other companies could lease fibre-optic from Mila or from other parties and could acquire and install equipment in the same way that Mila did. In the opinion of Mila the company did not have dominance over other companies in being able to offer this product.

PTA reiterates its previously stated position that the tariff was covered by the obligation for price control pursuant to PTA Decision no. 20/2007.

With a letter dated 2 December 2013 the PTA sent a query with respect to various investment and operational cost items in the Mila cost analysis.

Mila sent a reply to the PTA queries with a letter dated 28 January 2014.

The PTA informed Mila with a letter dated 11 April 2014 that the Administration had decided to deal jointly with this response and with the Mila communication dated 13 December 2013 concerning cost analysis for leased lines in the trunk line network.

With an email dated 23 October 2014, Mila sent a revised cost analysis which took into account the increase in the number of connections, additional investments and changes to opex, subsequent to the PTA query.

1.2 Market 14 (Trunk segments of leased lines)¹

This relates to transfer capacity which is sold to electronic communications companies for the purpose of interconnection of their networks and distribution locations.

The Mila wholesale tariff for trunk segments of leased lines is subject to PTA surveillance in accordance with the obligation for price control on the company which was imposed by the Administration with Decision no. 20/2007 concerning the designation of companies with significant market power and the imposition of obligations on the wholesale market for trunk segments of leased lines (Market 14).

¹ See the EFTA Surveillance Authority (ESA) Recommendation from 14 July 2004 on the relevant product and service market. The market was withdrawn as a predefined market in the ESA Recommendation from 5 November 2008.

1.3 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. Comments were received from Fjaraskipti ehf. (Vodafone) and were sent to Mila for review.

Vodafone points out that according to the consultation document, prices of 10 Gb/s are increasing from ISK 120,000.- to ISK 160,000.-. Vodafone urges PTA to consider whether Mila should use dual fibre instead of single fibre as indicated in Mila's cost analysis, where 10 Gb/s MDH are provided. Standard for 10 Gb/s does not presume the use of a single fibre.

Vodafone is of the opinion that PTA should consider whether the price increase covers the cost of a 10 Gb/s MDH.

In Mila's response the company expressed its opinion that the service provided should be technically neutral as the PTA had previously emphasized.

Mila points out that their cost analysis is based on the actual arrangement of the MDH as the cost model is based on actual costs. The company uses single fibre for the MDH and therefore should the calculation of the price be based on that.

Mila dismisses Vodafone's comment and is of the opinion that it is highly unprofessional to mention a standard without giving a reference.

In response to Vodafone's comments PTA points out that the MDH is a product in development and a part of the cost involved is a fixed cost, which causes the cost per MDH to decrease with the number of sold units. The price that Mila has suggested is in accordance with Mila updated numbers from October 2014 and the PTA does not see any reason to question that conclusion. PTA emphasizes that efficient solutions in network construction should be considered when estimating Mila's cost and does therefore not object to the use of single fibre instead dual fibre where that is possible.

2 Mila cost analysis

2.1 Summary

Mila states that the cost analysis submitted in October 2013 was based on investments and opex for MDH connections from 2010 until June 2013. This was mostly based on historical costs.

The cost of MDH connections is based to some extent on start-up costs in the form of central equipment and on opex for hosting and for fibre-optic which are to some extent not dependent on the number of MDH connections. This means that the lease price could decrease if the number of sold MDH connections were to increase on those routes where a MDH system has been developed.

It is not possible to make a precise division of costs between 10 Gb/s and 1 Gb/s MDH connections as a large part of the investment is shared. In such instances Mila relies on a specific assessment.

In the case of products in growth, Mila considers it normal to make a conservative projection of the increase in connections when calculating lease price. The calculations allow for [...]² and the lease price is calculated from these assumptions.

Mila assesses that a reasonable price for MDH connections would be as follows ex VAT:

10 Gb/s ISK 160,000 per month.

1 Gb/s ISK 95,000 per month.

Start-up charge ISK 107,000.

Mila last updated its cost analysis last 23 October where the company took into account the real increase in connections instead of estimated increase from mid-2013, additional related investment, WACC, review of other opex etc. The above changes are covered in more detail in the sections here below.

2.2 Weighted average capital costs (WACC)

The calculation method employs the same methodology as used in other Mila cost analyses. Risk-free interest takes into account the average for the last five years on indexed notes in the bond category HFF1504 2034. This calculation is in accordance with the calculation of WACC for hosting which was sent to the PTA earlier this year.

Weighted average cost of capital (WACC) is calculated as follows:

	2012
Risk-free rate ...	3.48%
Debt premium ...	3%
Cost of debt	6.48%
Market risk premium...	5.00%
Unlevered beta...	0.5
Levered beta...	0.72
Equity...	0.65
Liabilities/Equity...	0.54
Other risks (alpha)...	0.00
Corporate tax rate ...	0.20
Cost of Equity after tax	7.06%
Cost of Equity pre-tax	8.82%
WACC pre-tax	8.00%

Mila updated its cost analysis last 23 October and uses WACC 7.6% in its calculations of annual investment cost in accordance with the PTA conclusion for the year 2013.

² Confidential information.

2.3 Opex

Mila stated that as MDH is a relatively new product, there is limited experience of maintenance costs for the system. For this reason it is necessary to estimate maintenance costs in another manner than by using booked costs. Other opex includes hosting in technical spaces, electricity and fibre-optic.

According to Mila calculations, annual opex is as follows:[...]

It was stated by Mila that most MDH connections also use fibre-optic in the Access Network. As the MDH system is structured in this manner it is assumed that fibre optic in the Access Network for MDH connections is equivalent to the lease of 1 thread being added to the final calculations.

Mila updated its cost analysis last 23 October and calculates other costs (maintenance work and participation in shared costs) using the same methodology as in the cost analysis for Ethernet TP.

Opex on an annual basis will thus be as follows:

[...]

2.3.1 Fibre-optic lease

It was stated by Mila that the MDH used fibre-optic for both the trunk line network and the access network.

All fibre-optic in the trunk line network that is used for the MDH network is categorised under shared costs for 1 Gb/s and 10 Gb/s connections as they constitute the base layer for the product.

As this is leasing of fibre-optic within the same operational unit, Trunk Line Network, there is no separate transfer made for this in the bookkeeping but when calculating the price of the product one must include this leased line cost. In this instance the Mila tariff for fibre-optic lines is used with 15% discount.

The Mila conclusion is that the lease price per month for the underlying fibre-optic lines for the MDH network is [...].

[...]

Mila states that it is difficult to evaluate how one should divide costs for lease of fibre-optic between 1 Gb/s and 10 Gb/s connections. Fibre-optic lines are used equally for these connections and it makes no difference whether the connection is 1 Gb/s or 10 Gb/s. The Mila conclusion is therefore that this cost should be divided equally between 10 Gb/s and 1 Gb/s connections.

Mila asserts, as previously stated, that the MDH service is defined as a trunk line product, but MDH lines nevertheless often end in the access network. In the calculations it is assumed that each connection will have one fibre-optic thread in the access network and this is added to the calculation at the end.

2.3.2 Rent for premises

Here below one can see an overview of rent for premises for MDH: [...] Mila has calculated internal lease costs in all technical spaces [...]

It is difficult to evaluate how one should divide costs for lease of premises between 1 Gb/s and 10 Gb/s connections. Lease of space is equally used for these connections and in addition to this there is the fact that central equipment takes a large part of the space. The Mila conclusion is therefore that this cost should be divided equally between 10 Gb/s and 1 Gb/s connections.

2.3.3 Other costs

Mila estimated maintenance cost as [...] In addition to this one must take into account that neither senior management costs nor costs of the service desk are as yet entered as MDH network costs, only direct maintenance costs. The question of whether to also allocate costs for the service desk and for senior management to the MDH network is being examined.

Mila updated its cost analysis last 23 October and calculates other costs (maintenance work) using the same methodology as in the cost analysis for Ethernet TP, that is to say [...] annual investment costs for maintenance work and [...] for the Service Desk. Other costs are thus assessed at [...] on an annual basis instead of [...].

2.4 Investment

It was stated in the initial Mila analysis that the total investment in MDH equipment was [...] nominal price in the middle of 2013.

The investment was divided such that [...] was for work items while [...] was for purchase of materials.

Shortly after sales of MDH were commenced the company switched to equipment which was less expensive to procure. Investments are not indexed as has been the practice in cost analyses, as equipment has tended to drop in price rather than increase.

In these calculations the total investment is calculated until September 2012 when the MDH service was transferred to Siminn. The additional investment made since Siminn took over the product and to June 2013 is added to the above investment. In this way it is possible to categorise the investment up to September 2012 as initial investment, as at that time the system was being developed. Mila then categorises investments made during the period September 2012 until June 2013 as additional investment, as the MDH network was being installed on a system that was already installed in September 2012.

The investment in MDH was thus as per June 2013:[...]

Mila states that when the division of investment was made between 1 Gb/s MDH and 10 Gb/s MDH, the equipment had been categorised. Shelves, shells and other central equipment was categorised as shared equipment. Equipment that was specifically for 10 Gb/s connections was allocated directly to 10 Gb/s and equipment which was for 1 Gb/s connections was allocated directly to 1 Gb/s.

Shared equipment [...] comprised mainly filters [...] shelves and shells [...] and other materials costs [...].

Investment during the period September 2012 until June 2013 was [...]. During this period [...] 10 Gb/s connections and [...] 1 Gb/s connections were installed.

There was a total of [...] MDH installed up to September 2012, [...] 10 Gb/s and [...] 1 Gb/s and then from September to June 2013 [...] 10 Gb/s MDH and [...] 1 Gb/s MDH were installed.

A total of [...] MDH connections have been installed. In June 2013 there were [...] MDH in use. Some MDH have been cancelled and a few have been changed during this period.

Mila updated its cost analysis last 23 October and there it was stated that additional investment from June 2013 amounted to [...] and total investment was thus [...]. At the same time the connections in use increased from [...] to [...].

2.4.1 Division of investments between 1 Gb/s and 10 Gb/s MDH

Investments in equipment related specifically to 10 Gb/s connections amounted to [...] up to and including September 2012 and investments in equipment related specifically to 1 Gb/s amounted to [...].

Investments in 10 Gb/s equipment to September 2012: [...]

Investments in 1 Gb/s equipment to September 2012: [...]

2.4.2 Filters

Filters are used to make connections on Mila fibre-optic.

When assessing investment in filters in 10 Gb/s and 1 Gb/s, many filters in the underlying fibre-optic were examined, their data transfer speed and their location in the system. The total number of channels is [...] and many of them pass through one or more locations. [...] The total number of filters using this methodology is [...].

According to the above, Mila assesses that [...]. For this reason investments in filters are divided [...] 10 Gb/s and 1 Gb/s.

[...]

2.4.3 Shelves and shells

According to Mila, investment in shelves and shells totals [...].

The division of investments between 10 Gb/s and 1Gb/s is linked to the number of MDH that when leased out in June 2013. There were [...] MDH connections with 10 Gb/s data transfer speed and [...] with 1 Gb/s data transfer speed. The investment is divided in the same proportion.

2.4.4 Other material

Investment in other material amounted to just under [...] in September 2012. This material is divided in the same proportion as shelves and shells.

2.4.5 Installation costs

Mila divides the cost of installation of equipment into 2 categories, on the one hand there is the installation of MDH connections and on the other hand installation of central equipment.

These costs have not been specifically divided in the bookkeeping into installation of central equipment on the one hand and installation of individual MDH connections on the other. The total cost was [...] in September 2012. It is assumed that installation of 1 MDH will take an average of [...] hours. According to this, the cost of installation of 10 Gb/s connections is therefore [...] given [...] MDH (where one does not take into account the fact that more MDH have been installed that have been cancelled or altered) and the costs of installation of 1 Gb/s connections is [...] . The total is [...].

This leaves a remainder of just over [...] which is estimated as the installation cost for central equipment. These costs are divided in the same proportion as for filters, that is to say equally between 1 Gb/s and 10 Gb/s.

2.4.6 Investments September 2012 to June 2013

Mila states that Siminn investments in MDH for the period September 2012 to June 2013 amounted to [...]. During this period [...] 10 Gb/s MDH and [...] 1 Gb/s MDH were installed. The investment is divided between data transfer speeds in the same proportion as installed MDH for the period.

2.5 Number of lines

In June 2013 the number of 10 Gb/s MDH was [...] and the number of 1 Gb/s MDH was [...]. From June to September 2013 the number of 1 Gb/s MDH has increased by [...].

2.6. Mila Conclusions

The conclusions of the Mila calculations are as follows given the status of MDH in June 2013: [...]

It is stated that the total Mila investment was ISK [...] from which the setup charge for MDH is deducted. This leaves ISK [...] which is divided so that ISK [...] is for 10 Gb/s and ISK [...] for 1 Gb/s.

The annual investment cost is calculated on the basis of a five-year lifetime for equipment.

As can be seen in the table above the lease price for 10 Gb/s should be ISK [...] and ISK [...] for one Gb/s in the opinion of Mila given the number of MDH on lease in June 2013.

As has been previously stated, Mila considers that the MDH product has good prospects for growth. For example, from June to September there has been an increase of [...] 1 Gb/s MDH, which is a high proportion given that there are only [...]

It is clear that the initial investment in MDH is relatively high. Each additional MDH on the routes where installations have already been made is significantly less expensive than the calculated average costs.

If one uses the average costs for installed MDH for the period September 2012 until June 2013 then one can assume that the additional cost for each installed 10 Gb/s MDH is ISK [...] and ISK [...] for a 1 Gb/s MDH, as during this period [...] 10 Gb/s MDH and [...] 1 Gb/s MDH were installed for a total of ISK [...]. The cost is divided by the number of installed MDH for each individual speed.

If one allows for a [...] increase in MDH and that the additional cost is the same as in the period September 2012 until June 2013 then the conclusions of the calculations are as follows: [...]

The increase on the basis of these calculations is [...] for 10 Gb/s MDH and [...] for 1 Gb/s MDH.

Given a [...] increase in MDH then the conclusion on the other hand would be as follows:[...]

Mila considers that as this is a case of a product in growth one must take this into account in the price calculations. In addition to this Mila considers that it would have a negative impact on customers if they needed to accept a significant increase in the price of the product. It is also clear that the current price difference between 10 Gb/s and 1Gb/s connections is too small as the investment behind 8*1 Gb/s MDH is similar to that for 1*10 Gb/s. It is however clear that usage of 1 Gb/s connections is unlikely to be 100%.

In the light of the above Mila considers that the tariff for 10 Gb/s needs to increase significantly.

Mila proposes that the price for 10 Gb/s should be ISK 160,000 per month [...] and the price for 1 Gb/s should continue to be ISK 95,000 per month [...].

Mila considers that the plan to increase 10 Gb/s MDH by [...] and 1 Gb/s MDH by [...] to be a conservative estimate. 1 Gb/s MDH have already [...] which means that one could in reality assume [...].

2.7 Revised Mila conclusions (October 2014)

Mila updated its cost analysis last 23 October where it was stated that there were [...] 1 Gb/s connections and [...] 10 Gb/s connections giving a current total of [...] and the updated calculations were based on that number of connections instead of on [...] connections as before.

Investments that have been made since June 2013 are taken into account.

In addition to this Mila has reviewed other costs using the same methodology as in the cost analysis, for Ethernet TP, that is to say maintenance work is assessed at [...] of annual cost of investment and shared costs (service desk etc.) at [...]. Other costs are thus [...] on an annual basis instead of [...] as before.

The conclusions of the Mila calculations are as follows given the status of MDH in October 2014: [...]

Mila proposes that the price for 10 Gb/s should be ISK 160,000 per month and the price for 1 Gb/s should remain unchanged at ISK 95,000 per month.

3 The position of the PTA

The Mila criteria and calculations here under discussion with respect to the review of the wholesale prices for 1 and 10 Gb/s MDH connections are in the opinion of the PTA in accordance with the obligation on the company for price control, see the PTA Decision no. 20/2007.

As the products here under discussion are in development the PTA makes no objections to the Mila methodology of taking into account a larger number of connections in its cost calculations than were in use. This methodology reflects more effectively the development of costs for new and more efficient equipment and of better usage of Mila's existing systems, particularly when one takes into account the high cost proportion of central equipment.

Mila presents a reviewed calculation of the number of connections in October 2014 which shows [...] 1 Gb/s connections and [...] 10 Gb/s connections. [...]

In addition to this Mila has improved the allocation of other opex for maintenance and shared costs from the initial cost analysis.

The required rate of return has been revised with reference to the year 2013 to 7.6% which accords with the PTA evaluation of average cost of capital for an electronic communications company.

The PTA has examined the Mila criteria and calculations and in addition to this Mila has explained the criteria and calculations in more detail on which the company based its cost analysis in its replies to PTA queries. The conclusions of the calculations in the revised Mila analysis from last October do not provide reason to alter Mila's suggestion for a new tariff.

The PTA does not object to the capex nor to the five-year lifetime in Mila calculations in this instance but there is not yet adequate experience of the lifetime of the equipment as the system is still under development. The PTA considers that in the next review of the tariff, an economic evaluation of the life-cycle of equipment should be made in accordance with experience of its use.

On the basis of the above the PTA intends to endorse the tariff for MDH connections in accordance with the Mila submission. The start-up charge and lease charge for 1 Gb/s shall remain unchanged while the lease charge for 10 Gb/s shall be increased from ISK 120,000 to ISK 160,000 per month as it is clear that the price for 10 Gb/s connections has been too low with reference to available cost figures which are increasingly based on real costs. The monthly prices are fixed and independent of distance.

The tariff will thus be as follows:

- Price for 1 Gb/s connection ISK 95,000 per month.
- Price for 10 Gb/s connection ISK 160,000 per month.
- Setup charge ISK 107,000 per connection.

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.

DECISION

The Post and Telecom Administration endorses the Míla ehf. revised price calculations for MDH connections. Start-up charge and monthly lease charge shall be as follows:

- **Setup charge: ISK 107,000 per connection.**
- **1 Gb/s connection: ISK 95,000 per month.**
- **10 Gb/s connection: ISK 160,000 per month.**

The above prices are ex VAT.

The provisions of chapter 3 in Míla's reference offer applies to the coming into force of the new tariff. There it is stated that Míla 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. Míla 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 Míla 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 from the same date

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 2015

Hrafnkell V. Gíslason

Óskar Þórðarson