PÓST- OG FJARSKIPTASTOFNUN

Draft Decision

Review of the Míla wholesale tariff for bitstream access (Market 5/2008)

Case no: 2018040002

11 March 2019

TABLE OF CONTENTS

page

1 Introduction

1) The Míla ehf. (Míla) tariff for bitstream access here under discussion is based on the obligations imposed on the company with the decision of the Post and Telecom Administration (PTA) 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 to local loops (M4) and to bitstream (M5), dated 13 August 2014.

2) The products covered by the Mila tariff belong to the wholesale market for bitstream access which is Market 5 pursuant to the EFTA Surveillance Authority (ESA) Recommendation from 2008[1] (Market 5/2008).

3) In accordance with the PTA Decision no. 21/2014 and 6/2017,[2] the Mila wholesale tariff for bitstream access has now been reviewed in accordance with the update of the Mila cost model with data from Mila bookkeeping from the year 2017.

4) The planned PTA Decision on the wholesale tariff for bitstream was submitted for national consultation which lasted from 21 December 2018 until 23 January 2019. The PTA did not receive any comments from stakeholders..

5) The following Sections cover the legal grounds, methodology and calculations that led to the PTA conclusion. The text of the Draft Decision describes the intended PTA position which can be subject to amendment until the final Decision is made, among other things as a result of comments from stakeholders. The wording of the Draft should be read with this in mind.

2 PTA Decision no. 21/2014

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

7) With the authority in Article 32 of the Electronic Communications Act the PTA intends to impose an obligation on Míla for price control for bitstream access with DSL technology. Míla was to submit its wholesale tariff for access to bitstream at various locations on the network in accordance with specified access options to the Administration for endorsement, where variations in bandwidth and quality are also taken into consideration.

8) In the Decision it was stated that the Míla cost analysis for bitstream access should be based on the following main criteria:

- Cost analysis shall cover access with DSL technology (i.e. ADSL and VDSL standards), given Access Options 1-3. The cost for virtual network access to sub-loops (VULA) with the VDSL technology shall also be calculated.

[1] ESA has now issued a new Recommendation on wholesale market definition for electronic communications services: EFTA Surveillance Authority Recommendation of 11 May 2016 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with the Act referred to at point 5cl of Annex XI to the EEA Agreement (*Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communication networks and services).*

[2] Review of Míla wholesale tariff for bitstream access (Market 5/2008) - dated 30 May 2017.

- The basic price for bitstream services for general Internet service (best effort) without endpoint equipment shall be shown and the price for quality controlled (QoS) bitstream access, i.e. the transmission of TV material with multicast, video rental material (unicast) and IP telephone service (VoIP).
- In addition to the above the Míla tariff shall contain as a minimum the price for all bitstream services and for connections provided today to its own service departments or to other related parties or parties cooperating with Míla and to other electronic communications companies.
- The cost base shall be Míla historic 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 wholesale bitstream service, on Míla asset bookkeeping and on costs from the company's bookkeeping system where opex is entered by bookkeeping account.
- The Operating expenses (OPEX) of the bitstream system shall be captured, including the share in indirect costs, i.e. management and IT in accordance with separation of accountancy.
- When assessing investments (CAPEX) the replacement cost of the operational assets shall be used, taking into account the next generation of access networks (NGA).
- When evaluating the cost of the Access network, account shall be taken of the share in installation, capex and opex of wholesale switches.
- Evaluation of operational assets shall reflect the value in use of assets.
- The annuity method shall be used to calculate annual costs for operational assets. It is authorised to use the tilted annuity depreciation method based on estimated gross replacement cost (GRC) of the bitstream system. The cost of the total number of connections and bandwidth is calculated.
- The required rate of return used shall be based on weighted average cost of capital[3] (WACC real) from capital tied in assets used in connection with provision of service where the risk premium reflects the risk related to operations on the relevant market.
- It is authorised to assume a working capital cycle of 30 days to assure normal operations.
- The average unit cost for individual bitstream access service is calculated as an average cost for the whole country on the basis of allocated opex and capex having taken into consideration varying Access Options, number of connections, bandwidth and their quality management.

9) When deciding the tariff Míla should base its decisions on the above specified main criteria in its cost analysis and shall submit this to the PTA no later than 6 months after the publication PFS Decision no. 21/2014. The tariff should then be reviewed annually in accordance with annual updating of the cost analysis. A new wholesale tariff for bitstream access would not come into force prior to endorsement by the PTA, subsequent to national consultation and consultation with ESA in each instance.

[3] In 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.

3 PTA Decision no. 6/2017 on review of Mila wholesale tariff for bitstream access

10) In accordance with PTA Decision no. 21/2014, Mila submitted a cost analysis for bitstream access in August 2015. During the processing of the cost analysis at the PTA, the Mila cost model was revised on a number of occasions subsequent to observations from the Administration. At the request of the PTA, Mila then revised its cost model in March 2017 with cost figures for the operational year 2016. This model provided the Mila final conclusions which the PTA endorsed and which became the basis for the conclusion on the Mila tariff for bitstream access. The calculated price for bitstream access is based on opex for the year 2016 and for the investment base which is based on the replacement cost of operational assets as of the year 2016.

11) In accordance with the PTA Decision no. 6/2017, the following prices apply to Mila bitstream service and they will be in force until a new tariff for this service comes into force:

Access Option 1

Type of connection	Monthly price
ADSL and VDSL	ISK 691
ADSL+ 2 Mb/s	ISK 1,573
ADSL+ 4Mb/s	ISK 1,888
ADSL+ 6 Mb/s	ISK 2,045
ADSL+ 8 Mb/s	ISK 2,124
ADSL+ 14 Mb/s	ISK 2,203
VDSL + 50 Mb/s	ISK 2,517
VDSL + 100 Mb/s	ISK 3,147
G.SHDSL 2 Mb/s	ISK 3,368
G.SHDSL 4 Mb/s	ISK 6,158
G.SHDSL 5 Mb/s	ISK 4,144
G.SHDSL 10 Mb/s	ISK 6,918
G.SHDSL 15 Mb/s	ISK 10,605
G.SHDSL 20 Mb/s	ISK 14,749

Other charges	Price
Taking over xDSL service	ISK 1,329
Change from ADSL to VDSL*	ISK 3,166
Setup charge	ISK 3,166

*In the case of a connection on VDSL compatible equipment, a setup charge is not collected for migration from ADSL to VDSL or vice versa.

Access to ports on wholesale switches and analogous equipment:

Ports	Monthly price
1 Gb/s	ISK 7,000
10 Gb/s	ISK 35,000

12) The setup charge for these ports is according to billed hours.

Transit of multicast and unicast

Service	Monthly price
Transit per Mb/s	ISK 22.33

13) Total price for dedicated bandwidth is by number of set-top boxes for each DSLAM. It is assumed that data volume will increase as set-top boxes increase. The following table shows estimated data transfer needs with reference to the number of set-top boxes:

Quantity	Data volume Mb/s
-9	50
10-29	130
30-49	160
50-99	240
100-199	360
200-399	560
400-	600

IP voice telephony service, VoIP

Service	Monthly price
VoIP per unit	ISK 55.85

VULA

Service	Price
Setup charge	ISK 4,200,000
VULA access charge per month	ISK 70,000
VULA monthly charge per connection	ISK 79

Access Option 2

14) Pricing of Access Option 2 is be according to the tariff for Ethernet service and Mila trunk line network sells this service directly to customers. In addition to this, customers will pay for connection to end users according to the tariff for Access Option 1.

15) If more than one party requests Access Option 2 at the relevant location, then Mila shall endeavour to share connections to Mila counterparties in order that he can enjoy lower unit prices.

Access Option 3

Type of connection	Monthly price
ADSL and VDSL	ISK 1,205
ADSL+ 2 Mb/s	ISK 2,392
ADSL+ 4Mb/s	ISK 2,996
ADSL+ 6 Mb/s	ISK 3,383
ADSL+ 8 Mb/s	ISK 3,655
ADSL+ 14 Mb/s	ISK 4,094
VDSL + 50 Mb/s	ISK 6,606
VDSL + 100 Mb/s	ISK 8,936
G.SHDSL 2 Mb/s	ISK 4,314
G.SHDSL 4 Mb/s	ISK 7,495
G.SHDSL 5 Mb/s	ISK 5,975
G.SHDSL 10 Mb/s	ISK 9,032
G.SHDSL 15 Mb/s	ISK 13,194
G.SHDSL 20 Mb/s	ISK 17,739

Other charges	Price
Taking over xDSL service	ISK 1,329
Change from ADSL to VDSL*	ISK 3,166
Setup charge	ISK 3,166

*In the case of a connection on VDSL compatible equipment, a setup charge is not collected for migration from ADSL to VDSL or vice versa.

Interconnection of Internet service providers to xDSL and GPON systems for Access Option 3

Setup charge	Price
Setting up of the first domain	ISK 114,173
Setting up of additional domain	ISK 28,543

Ports	Monthly price
Port up to 1 GB/s	ISK 9,986
Port 10 Gb/s	ISK 59,921

4 Written communications with Míla

16) With reference to the Competition Authority Decision no. 6/2017, Mila submitted a cost analysis on 10 April 2018 for bitstream access based on the operational year 2017. Mila stated that the only changes that had been made to the cost model were that the calculations for multicast had been slightly altered. The tariff for multicast was structured to take into account the quantity, regardless of whether connection was xDSL or GPON. This meant that when

calculating the number of Mb/s, the proportion of GPON of the total number of connections was calculated and the amount of Mb/s was reduced by the same proportion.

17) In an email from the PTA to Mila dated 17 August 2018, the PTA requested further explanations on the Mila cost analysis with respect to I/O cards, share of GPON in ISAM, number of cards, cable to distribution frames, investments in wholesale switches, labour component in investments, lease of local loops for G.SHDSL, VULA and multicast.

18) In a letter from Mila dated 17 August 2018, Mila replied to the PTA query and submitted a revised cost model along with a document containing further information on investments. In the revised cost model, costs for I/O cards were corrected, as were costs for cable to distribution frames.

19) Mila stated that the calculation of the share of GPON in ISAM was slightly altered, and in the resulting method this share was calculated for each location, as this was normal, given that the significance of GPON varied by location. With respect to multicast, the calculations of data volume for the division between GPON and xDSL were corrected. Mila also provided more detailed explanations of the criteria used for revising the labour component in investments. Mila also confirmed that no one had requested VULA connections from the company.

20) On 29 August 2018, Mila submitted a revised cost model on the basis of recalculation of local loop prices and it is on this cost analysis that the PTA conclusion is based.

5 The PTA conclusion

5.1 General

21) In Sections 5.2 - 5.6 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 bitstream service. The factors in question are the following:

- Weighted average cost of capital
- Opex
- Capex
- Costs for tied capital.
- Number of lines
- Calculation of lease price

22) In Section 5.6 the PTA Decision is summarised before the wording of the Decision is given.

23) The PTA position 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. 21/2014 and 6/2017.

24) Mila has submitted information on separation of the company's accountancy for the year 2017 and a report from independent auditors. Míla has also submitted an analysis of costs for the company's bitstream service, along with further explanations at the request of the PTA. The PTA conclusion is based on the Mila cost analysis from 29 August 2018.

5.2 Weighted average cost of capital

5.2.1 Míla cost analysis

25) The Mila cost analysis dated 10 April 2008 was based on weighted average cost of capital. According to the following table:

	2017
Risk-free rate	2.49%
Debt premium.....	3.00%
Cost of debt	*5.49%*
Market premium.....	5.00%
Unlevered beta.....	54.00%
Unlevered beta.....	77.26%
Equity.....	65.00%
Liabilities/Equity.....	53.85%
Other risk (alpha).....	0.00%
Tax rate.....	20.00%
Required rate of return after tax	*6.35%*
Required rate of return pre-tax	*7.94%*
WACC pre-tax	7.1%

5.2.2 The position of the PTA

26) In Article 16 of Regulation no. 564/2011 on accounting and cost analysis in the operations of electronic communications companies, it is stated that the costs of initial capital tied 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 cost of capital (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 rate of return 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 decides at least once a year the WACC for the telecommunication markets based on market premium, economic indebtedness and the position with respect to working capital and debts.

27) The WACC depends on how much of a company's assets are funded by debt, on the one hand, and equity, on the other, and the cost of the funds used.

28) The PTA considers the use of the WACC real model to be most appropriate for calculating the rate of return when deciding annuity on investments in each instance. The PTA considers it to be real costs when the investment base is calculated using indexed historical costs, and that one should therefore use real interest rate in calculations of the WACC. Otherwise, the result would be distorted as inflation is included in nominal interests.

29) Investments that have been booked at purchased price are indexed with the building index or other indices. Such calculations are part of the assessment of real value of investments in each instance where the aim is to approximate the replacement cost of investments at the time being examined. If investments have been assessed at replacement cost, then they are assessed at prices of the operational year being examined in each instance. Opex is furthermore real costs of the operational year in question, which are used as a reference for costs on an annual basis.

WACC formula

30) In order to decide the WACC, the following formula is used:

WACC = Ke * (E/(D+E)) + Kd * (D/(D+E))

where:

Ke = cost of equity in percentage

E = equity

Kd = cost of debt in percentage

D = interest-bearing debt

31) When calculated post-tax:

WACC = Ke * (E/(D+E)) + Kd * (1-t) * (D/(D+E))

where:

t = corporate income tax rate

32) When WACC is calculated pre-tax:

WACC (pre-tax) = WACC / (1-t)

Cost of equity

33) The PTA considers that when deciding the WACC, the Capital Asset Pricing Model (CAPM) should be used. The main argument for using CAPM is that this model is easy-to-use and transparent. It is also the most commonly used method for calculating the rate of return on capital as it facilitates comparison.

34) The CAPM model is used for calculating the cost of equity:

$Ke = Rf + \beta * (Rm-Rf)$

where:

Rf = risk-free rate

Rm = expected average return on stock market

(Rm-Rf) = market risk premium

β = beta parameter which indicates the risk of the sector in question in comparison with the market as a whole

35) Here below are the main parameters in the CAPM model and the PTA conclusion on how the Administration decides them.

Risk-free rate

36) The PTA considers it appropriate to set the risk-free interest at the rate of return on HFF 1506 2044 30 Housing Financing Fund bonds as these bonds today best reflect the payment flow being converted to current value when one considers the lifetime of the investments in question.

37) There has however been uncertainty in recent years about the future of the Housing Financing Fund and in the opinion of analysts a risk premium has developed on top of the indexed Housing Financing Fund bonds. This indicates that the rate of return on HHS bond

issues no longer reflects risk-free interest on the market. In order to evaluate risk-free interest, the PTA takes into account an adjustment to the amount of estimated "Housing Financing Fund premium " in each instance.

38) Given the above specified criteria the average risk-free interest for the last 5 years is 2.49%.

Beta risk parameter β

39) In order to estimate the Beta parameter reference was made to comparable companies in European states that are considered best suited for comparison with the Icelandic market environment, both economically and legally (as categorised by Capital IQ). The following table shows the result of this comparison:

Beta and leverage - Telecommunication Services							
		Total debt 5 Year		**D/E**	**Tax rate**	**Unlevered beta**	
Company	**Country**	**Debt**	**Equity**			**2 years**	**5 years**
BT Group plc	United Kingdom	48.1%	51.9%	92.6%	22.8%	0.33	0.57
Deutsche Telekom AG	Germany	55.6%	44.4%	125.1%	29.5%	0.45	0.45
Elisa Oyj	Finland	23.6%	76.4%	30.9%	23.0%	0.57	0.54
Koninklijke KPN N.V.	Netherlands	56.1%	43.9%	127.7%	25.0%	0.51	0.38
Proximus PLC	Belgium	28.1%	71.9%	39.2%	34.0%	0.56	0.52
Swisscom AG	Switzerland	30.7%	69.3%	44.2%	19.2%	0.60	0.50
TDC A/S	Denmark	11.5%	88.5%	13.0%	24.6%	0.54	0.70
Telecom Italia S.p.A.	Italy	74.3%	25.7%	289.5%	31.4%	0.29	0.34
Telekom Austria Aktiengesellschaft	Austria	55.7%	44.3%	125.7%	25.0%	0.41	0.43
Telenor ASA	Norway	4.2%	95.8%	4.4%	27.6%	1.00	0.79
Telia Company AB	Sweden	6.4%	93.6%	6.8%	23.7%	0.83	0.66
Average		**36%**	**64%**	**82%**	**26%**	**0.55**	**0.53**
Median		**31%**	**69%**	**44%**	**25%**	**0.54**	**0.52**

Source: Capital IQ

40) On the basis of the above specified method, the conclusion is derived that unlevered beta for electronic communications companies is in the range of 0.52-0.55. The PTA has decided to use the value 0.54.

41) Unlevered beta shall be levered using the appropriate indebtedness and tax rate. Further discussion on indebtedness and tax rate is in the sections with those names. Unlevered beta is levered using the Modigliani-Miller formula which takes into account risk from indebtedness and tax rate, see the formula below:

$$\beta assets = \beta equity / (1+(1-t) * (D/E))$$

where:

Beta assets (βassets) is equivalent to unlevered beta and where beta equity (βequity) is equivalent to levered beta.

Market risk premium

42) The PTA considers it proper, given development over recent years, that the market risk premium be in the range of 4.5-5.5% without the country specific risk. The PTA uses historical premium of risk-free interest. As the premium is considered for the long run, substantial changes over a long period of time would be needed to have an impact on market risk premium. The PTA also takes into account the BEREC benchmark from the preceding years and compares it with what generally applies in this country.

43) The PTA considers it appropriate to use 5% market risk premium for the year 2017, which is according to the above specified criteria. The Administration reviews the market risk premium annually but has not deemed it necessary to change it in recent years.

Specific debt premium

44) The PTA has proposed the use of real interest as stated previously. Real interest on debts subsequently bear a specific debt premium which reflects market circumstances in each instance and not the specific debt premium of individual companies. This premium is decided by the PTA.

45) For comparison, the premium abroad is commonly in the range of 1-2% while in this country it is more common for the premium to be in the range of 2-3%.

46) The PTA prescribes that the debt premium for the year 2017 should be at the upper limit of the above specified range, i.e. 3.0%. The premium is consistent with the terms companies in this country have enjoyed recently and takes into account circumstances on the market, but it is also taken into account that this is in context of taking of long-term loans. The Administration reviews the specific debt premium annually but has not deemed it necessary to change it in recent years.

Gearing

47) The PTA considers it normal to use gearing on the telecommunications market by assessing indebtedness of a reference group of electronic communications companies which are deemed to be run efficiently, and target gearing from PTA sister administrations in Europe. Assessed efficient level of gearing is therefore independent of the indebtedness of the company in question in each instance.

48) The PTA conclusion is to use an unchanged gearing from the previous year for Mila , i.e. 35%.

Tax rate

49) The PTA considers that the use of corporate tax rate is in each instance the best measure for tax rate when calculating WACC. Its use is more transparent and simpler than using the effective tax rate. The PTA intends to use the corporate tax rate in force for the period of time in question in each instance in these calculations, which was 20% in 2017.

PTA conclusion on WACC

50) The WACC for the operational year 2017 using the above PTA criteria is shown in the table here below. For comparison the WACC calculation for 2016 is also shown.

WACC	*2016*	*2017*
Risk-free rate	2,57%	2,49%
Unlevered beta	0,51	0,54
Levered beta	0,73	0,77
Debts/equity ratio	0,54	0,54
Market risk premium	5,00%	5,00%
Cost of equity	**6,22%**	**6,35%**
Risk-free rate	2,57%	2,49%
Debt premium	3,00%	3,00%
Cost of debt	**5,57%**	**5,49%**
Interest bearing debt %	35%	35%
Equity %	65%	65%
Corporate tax rate	20%	20%
Cost of dept, post-tax	4,46%	4,39%
Cost of equity, pre-tax	7,77%	7,94%
WACC (pre-tax)	**7,0%**	**7,1%**

51) In accordance with the above it is the opinion of the PTA that weighted average cost of capital (WACC real) for an electronic communications company in Iceland is 7.1% for the year 2017 in calculations of rate of return for capital tied in assets used in connection with the company's provision of services. Comparing with the WACC for the year 2016 which was 7.0% there is an increase of 10 points. The increase stems from the increase in the value of beta.

52) Mila raised no objections to this PTA assessment, so the Mila cost analysis takes into account.

5.3 Access Option 1

5.3.1 Míla cost analysis

53) There are no changes to the Mila cost model with respect to opex, thus only a revision of costs using data from 2017.

5.3.1.1 Opex

54) Opex in the revised Mila analysis is based mainly on two factors:

- operation of DSL equipment and

- other costs related to operation of Mila DSL service, such as purchase of fibre-optic to street cabinets, access to distribution frames and costs for electricity in street cabinets.

55) Mila calculates costs for local loops which are used in G.SHDSL connections where [...][4] local loops were being used for this Mila service at the end of 2017. Given a local loop price of ISK 1,558/month according to the new Draft Decision on review of the Mila tariff for access to local loops, the annual costs for local loops are estimated at ISK [...].

Opex for DSL equipment

56) The revised Mila cost analysis dated 29 August 2018 contains the following table which shows an overview of opex for DSL equipment and for comparison with the amounts from the last cost analysis on Access Option 1.

	2016	2017
DSLAM		
Service agreements	[...]	[...]
Transferred labour and per diem	[...]	[...]
Purchased telecom services	[...]	[...]
Materials	[...]	[...]
Office services within Skipti	[...]	[...]
Licence, levelling and opex	[...]	[...]
Senior management - and support dept. costs	[...]	[...]
Rent for premises	[...]	[...]
Electricity costs 48 V	[...]	[...]
Other costs.	[...]	[...]
	[...]	[...]

Other costs

57) The Mila revised cost analysis dated 29 August 2018 shows the following table for opex for access to distribution frames, fibre-optic and electricity in street cabinets:

For calculation	2016	2017
Access to distribution frame.....	[...]	[...]
Fibre-optic in street cabinet.....	[...]	[...]
Electricity in street cabinets.....	[...]	[...]
	[...]	[...]

5.3.1.2 Investment costs

58) In the revised Mila cost analysis dated 29 August 2018, there is the following conclusion on investment GRC:

[4] Information removed for purposes of confidentiality. The same applies to information provided in square brackets here below.

	Number	Unit price, equipment	ISK	Labour	Unit price	Total	Annuity	Lifetime
ISAM	[...]	[...]	[...]	[...]	[...]	[...]	[...]	7
Share of GPON in ISAM	[...]	[...]	[...]	[...]	[...]	[...]	[...]	7
REM in street cabinets	[...]	[...]	[...]	[...]	[...]	[...]	[...]	7
Line cards in ISAM	[...]	[...]	[...]	[...]	[...]	[...]	[...]	7
I/O cards	[...]	[...]	[...]	[...]	[...]	[...]	[...]	7
I/O cards, more expensive	[...]	[...]	[...]	[...]	[...]	[...]	[...]	7
SFPs for line cards in REM	[...]	[...]	[...]	[...]	[...]	[...]	[...]	7
SFP backfeed	[...]	[...]	[...]	[...]	[...]	[...]	[...]	7
Internal fibre-optic cables	[...]	[...]	[...]	[...]	[...]	[...]	[...]	20
Cable to copper distribution frame	[...]	[...]	[...]	[...]	[...]	[...]	[...]	20
Wholesale switches	[...]	[...]	[...]	[...]	[...]	[...]	[...]	7
SHDSL cards	[...]	[...]	[...]	[...]	[...]	[...]	[...]	7
Software licences	[...]	[...]	[...]	[...]	[...]	[...]	[...]	8
						[...]	[...]	

59) Míla calculates annuity using the tilted annuity depreciation method. The same price development (tilt) is used as in the prior analysis, -5%.

5.3.1.3 Costs for tied capital

60) Mila calculates the cost of tied capital in accordance with the PTA Decision no. 6/2017. In the Mila cost analysis it is stated that the cost of capital tied for 30 days for the year 2017 is ISK [...] given 7.1% WACC.

5.3.1.4 Revenue from other services

61) In the Mila cost analysis, revenue from access to distribution frames, transit of multicast and unicast, IP phone service, the taking over of xDSL service and interconnections for domains and ports are deducted from the cost base for Access Option 1 in the same manner as in the last cost analysis.

Ports to wholesale switches

62) Mila does not requests changes to the price for access to ports. The following table shows Mila prices for access to ports for non-residential connections in wholesale switches and comparable equipment:

	Monthly fee
1 Gb/s.....	7,000
10 Gb/s.....	35,000

63) According to the Mila cost analysis, the estimated revenue from ports to wholesale switches in non-residential connections is ISK [...] per annum and this is deducted from the cost base for Access Option 1.

Taking over xDSL service

64) Mila revenue for taking over xDSL service was ISK [...] for the year 2017, which is deducted from the cost base for Access Option 1. No increase in this charge is envisaged and Mila collects ISK 1,329 for the service.

Multicast

65) In the Mila cost analysis one can find the following calculations of TV costs:

	2016	2017
DSLAM opex	[...]	[...]
Annuity of equipment	[...]	[...]
Capital tied in inventory	[...]	[...]
	[...]	[...]
Share of multicasting	[...]	[...]
Total costs	[...]	[...]
Number Mb/s	[...]	[...]
Price per month. Mb/s	**22.33**	**21.06**

66) Mila allows for unchanged proportion of multicast in costs for DSLAM.

67) The Mila conclusion on the price for transmission of multicast and unicast will therefore be:

Price per month. Mb/s.....	21.06

68) Mila estimates annual revenue from multicast and unicast at ISK [...].

VoIP

69) The Mila tariff for VoIP is unchanged and in will therefore be as follows:

Price per month per unit (EUDP).	55.85

70) In the Mila analysis, revenue from VoIP service is estimated at ISK [...] per annum and this amount is deducted from the cost base for Access Option 1.

Domains and ports for interconnection

71) Mila Tariff for domains and ports for interconnection with Mila systems remain unchanged:

Setup charge	
Setup of first domain	114,173
Setup of additional domain	28,543
Price per month:	
Port up to 1 GB/s	9,986
Port 10 Gb/s	59,921

72) Revenue from this Mila service to be deducted is ISK [...].

Total deductions

73) Deductible revenue from the above services is estimated at a total of ISK [...].

5.3.1.5 Total costs

74) The Mila conclusion according to the last revision of the cost analysis dated 29 August 2018, is that total costs for the Access system are ISK [...]. When calculating the monthly charge for Access Option 1, Mila deducts from revenue the amount of ISK [...] for other services, see Section 5.3.1.4 here above. The Mila conclusion is that total costs for calculation of the monthly charge for Access Option 1 are ISK [...]. Division of costs and deductions for 2017 and comparison with the year 2016 are specified in the following table:

	2016	2017
Local loop rental	[...]	[...]
DSLAM opex	[...]	[...]
Other opex	[...]	[...]
Annuity on equipment	[...]	[...]
Tied working capital and inventory	[...]	[...]
Income from ports in wholesale switches	[...]	[...]
Income for setup charges	[...]	[...]
Income from multicasting	[...]	[...]
income from VoIP	[...]	[...]
Income from domains and ports for interconnection	[...]	[...]
Total costs	[...]	[...]

5.3.1.6 Number of line equivalents:

75) The following table can be found in the Mila cost analysis which shows the number of ADSL, VDSL, ADSL+, VDSL+ and G.SHDSL in December 2017 and for comparison, in December 2016:

	Dec. 16	Dec. 17
ADSL, A1.....	[...]	[...]
ADSL, A3.....	[...]	[...]
VDSL, A1.....	[...]	[...]
VDSL, A3.....	[...]	[...]
ADSL+ 2 Mb/s.....	[...]	[...]
ADSL+ 2 Mb/s A1.....	[...]	[...]
ADSL+ 4Mb/s A3.....	[...]	[...]
ADSL+ 4 Mb/s A 1.....	[...]	[...]
ADSL+ 6 Mb/s A3.....	[...]	[...]
ADSL+ 8 Mb/s A3.....	[...]	[...]
ADSL+ 8 Mb/s A 1.....	[...]	[...]
ADSL+ 14 Mb/s A3.....	[...]	[...]
ADSL+ 14 Mb/s A 1.....	[...]	[...]
VDSL +50 Mb/s A3.....	[...]	[...]
VDSL +50 Mb/s A1.....	[...]	[...]
VDSL +100 Mb/s A3.....	[...]	[...]
VDSL +100 Mb/s A1.....	[...]	[...]
SHDSL+ 2 Mb/s A3.....	[...]	[...]
SHDSL+ 2 Mb/s A 1.....	[...]	[...]
SHDSL+ 4 Mb/s A3.....	[...]	[...]
SHDSL+ 4 Mb/s A 1.....	[...]	[...]
SHDSL+ 5 Mb/s A3.....	[...]	[...]
SHDSL+ 5 Mb/s A 1.....	[...]	[...]
SHDSL+ 10 Mb/s A3.....	[...]	[...]
SHDSL+ 10 Mb/s A 1.....	[...]	[...]
SHDSL+ 15 Mb/s A3.....	[...]	[...]
SHDSL+ 15 Mb/s A 1.....	[...]	[...]
SHDSL+ 20 Mb/s A3.....	[...]	[...]
SHDSL+ 20 Mb/s A 1.....	[...]	[...]

76) Mila uses the same method for calculating line equivalents as was used in the last cost analysis. The Mila conclusion on calculations for line equivalents is summarised in the following table:

	Dec. 17	Speed coefficient	Coefficient per connection Other costs	Coefficient per connection Annuity	Equivalent for other cost	Equivalent for annuity
ADSL, A1……	[...]	1.0	1.0	1.0	[...]	[...]
ADSL, A3……	[...]	1.0	1.0	1.0	[...]	[...]
VDSL, A1……	[...]	1.0	1.0	1.0	[...]	[...]
VDSL, A3……	[...]	1.0	1.0	1.0	[...]	[...]
ADSL+ 2 Mb/s.....	[...]	1.0	3.0	1.0	[...]	[...]
ADSL+ 2 Mb/s.....	[...]	1.0	3.0	1.0	[...]	[...]
ADSL+ 4Mb/s A3.....	[...]	1,2	3,0	1,0	[...]	[...]
ADSL+ 4 Mb/s A 1.....	[...]	1,2	3,0	1,0	[...]	[...]
ADSL+ 6 Mb/s A3.....	[...]	1,3	3,0	1,0	[...]	[...]
ADSL+ 8 Mb/s A3.....	[...]	1,4	3,0	1,0	[...]	[...]
ADSL+ 8 Mb/s A 1.....	[...]	1,4	3,0	1,0	[...]	[...]
ADSL+ 14 Mb/s A3.....	[...]	1,4	3,0	1,0	[...]	[...]
ADSL+ 14 Mb/s A 1.....	[...]	1,4	3,0	1,0	[...]	[...]
VDSL +50 Mb/s A3.....	[...]	1,6	3,0	1,0	[...]	[...]
VDSL +50 Mb/s A1.....	[...]	1,6	3,0	1,0	[...]	[...]
VDSL +100 Mb/s A3.....	[...]	2,0	3,0	1,0	[...]	[...]
VDSL +100 Mb/s A1.....	[...]	2,0	3,0	1,0	[...]	[...]
SHDSL+ 2 Mb/s A3.....	[...]	1,0	3,0	2,0	[...]	[...]
SHDSL+ 2 Mb/s A 1.....	[...]	1,0	3,0	2,0	[...]	[...]
SHDSL+ 4 Mb/s A3.....	[...]	1,1	4,0	4,0	[...]	[...]
SHDSL+ 4 Mb/s A 1.....	[...]	1,1	4,0	4,0	[...]	[...]
SHDSL+ 5 Mb/s A3.....	[...]	1,2	3,0	3,0	[...]	[...]
SHDSL+ 5 Mb/s A 1.....	[...]	1,2	3,0	3,0	[...]	[...]
SHDSL+ 10 Mb/s A3.....	[...]	1,4	4,0	4,0	[...]	[...]
SHDSL+ 10 Mb/s A 1.....	[...]	1,4	4,0	4,0	[...]	[...]
SHDSL+ 15 Mb/s A3.....	[...]	1,4	6,0	6,0	[...]	[...]
SHDSL+ 15 Mb/s A 1.....	[...]	1,4	6,0	6,0	[...]	[...]
SHDSL+ 20 Mb/s A3.....	[...]	1,5	8,0	8,0	[...]	[...]
SHDSL+ 20 Mb/s A 1.....	[...]	1,5	8,0	8,0	[...]	[...]
	[...]				[...]	[...]

5.3.1.7 Calculation of lease price of Access Option 1

Unit price for local loop lease

77) As stated here above, underlying local loops are allowed for in the price of G.SHDSL+.

78) Mila estimates [...] local loops for its G.SHDSL+ service, so the cost for this is ISK [...] per annum given the price for access to the local loop of ISK 1,558/month according to the PTA draft decision on review of the Mila wholesale tariff for copper local loops.

79) Míla calculates the number of local loops for G.SHDSL+ in the following manner:

	Dec. 17	Number local loops	Equivalent
SHDSL+ 2 Mb/s.....	[...]	1	[...]
SHDSL+ 4 Mb/s.....	[...]	2	[...]
SHDSL+ 5 Mb/s.....	[...]	1	[...]
SHDSL+ 10 Mb/s.....	[...]	2	[...]
SHDSL+ 15 Mb/s.....	[...]	3	[...]
SHDSL+ 20 Mb/s.....	[...]	4	[...]
			[...]

80) The unit price for local loop lease is ISK 1,558 per month, see the conclusion of cost analysis for that market.

81) The price for local loop lease categorised under the SHDSL+ will therefore be as follows:

SHDSL+ 2 Mb/s.....	1,558
SHDSL+ 4 Mb/s.....	3,116
SHDSL+ 5 Mb/s.....	1,558
SHDSL+ 10 Mb/s.....	3,116
SHDSL+ 15 Mb/s.....	4,674
SHDSL+ 20 Mb/s.....	6,232

Unit price for opex

82) Mila calculates the unit price for opex in the following manner:

DSLAM.....	[...]
Other opex.....	[...]
Tied working capital.....	[...]
Deducted revenue.....	[...]
	[...]
Total equivalents	[...]
Unit price	[...]

Unit price for annuity

83) Mila calculates the unit price for annuity in the following manner:

	xDSL	Line cards ADSL/VDSL	SHDSL line cards
ISAM.....	[...]		
Share of GPON in ISAM.....	[...]		
REM in street cabinets.....	[...]		
Line cards in ISAM.....		[...]	
I/O cards.....	[...]		
I/O cards, more expensive.....	[...]		
SFPs for line cards in REM.....	[...]		
SFP backfeed.....	[...]		
Internal fibre-optic cables.....	[...]		
Cable to copper distribution frame	[...]		
Wholesale switches.....	[...]		
SHDSL cards.....			[...]
Software licences.....	[...]		
	[...]	[...]	[...]
Total equivalents	[...]	[...]	[...]
Price per month per equivalent	[...]	[...]	[...]

Unit price - conclusion

84) According to the above, the conclusion of the Mila calculations is as follows:

Unit price	Joint	ADSL/VDSL	SHDSL+
Local loops.....	[...]	[...]	1,558
Other opex.....	[...]	[...]	[...]
Annuity on investments.....	[...]	[...]	[...]
Unit price total	[...]	[...]	[...]

85) The price on the basis of varying service and data transfer speed will thus be as follows:

	Local loop	Annuity	Annuity-line cards	Other costs	Total
ADSL and VDSL.....	0	[...]	[...]	[...]	725
ADSL+ 2 Mb/s.....	0	[...]	[...]	[...]	1,651
ADSL+ 4Mb/s.....	0	[...]	[...]	[...]	1,982
ADSL+ 6 Mb/s.....	0	[...]	[...]	[...]	2,147
ADSL+ 8 Mb/s.....	0	[...]	[...]	[...]	2,229
ADSL+ 14 Mb/s.....	0	[...]	[...]	[...]	2,312
VDSL + 50 Mb/s.....	0	[...]	[...]	[...]	2,642
VDSL + 100 Mb/s.....	0	[...]	[...]	[...]	3,303
SHDSL+ 2 Mb/s.....	1,558	[...]	[...]	[...]	3,697
SHDSL+ 4 Mb/s.....	3,116	[...]	[...]	[...]	6,802
SHDSL+ 5 Mb/s.....	1,558	[...]	[...]	[...]	4,574
SHDSL+ 10 Mb/s.....	3,116	[...]	[...]	[...]	7,639
SHDSL+ 15 Mb/s.....	4,674	[...]	[...]	[...]	11,711
SHDSL+ 20 Mb/s.....	6,232	[...]	[...]	[...]	16,284

86) Mila allows for unchanged setup charge and charge for takeover of xDSL service:

Setup charge	ISK 3,166
Taking over xDSL service	ISK 1,329

5.3.1.8 Effect of price changes

87) Mila has summarised the effects of changes in the following table:

	New price	Previous price	Change
ADSL and VDSL.....	725	691	5%
ADSL+ 2 Mb/s.....	1,651	1,573	5%
ADSL+ 4 Mb/s.	1,982	1,888	5%
ADSL+ 6 Mb/s.....	2,147	2,045	5%
ADSL+ 8 Mb/s.....	2,229	2,124	5%
ADSL+ 14 Mb/s.....	2,312	2,203	5%
VDSL + 50 Mb/s.....	2,642	2,517	5%
VDSL + 100 Mb/s.....	3,303	3,147	5%
SHDSL+ 2 Mb/s.....	3,697	3,368	10%
SHDSL+ 4 Mb/s.....	6,802	6,158	10%
SHDSL+ 5 Mb/s.....	4,574	4,144	10%
SHDSL+ 10 Mb/s.....	7,639	6,918	10%
SHDSL+ 15 Mb/s.....	11,711	10,605	10%
SHDSL+ 20 Mb/s.....	16,284	14,749	10%

5.3.2 The position of the PTA

5.3.2.1 Opex

88) Mila has submitted information on opex for the company's bitstream service for the year 2017 and furthermore, the opex for 2014 - 2016 is submitted for comparison. The PTA uses information supplied by Míla in its assessment. The PTA also builds on data that shows financial separation in Míla's operations in accordance with the obligation for separation of accountancy.

89) This is only a revision of, and endorsed cost model for specifying opex and the entire methodology is the same as before.

90) Opex is less by just under 3% from the last analysis. Most items decrease between years with the exception of access to distribution frames and to fibre-optic to street cabinets, where there is costs increase between years which can be attributed to increases in the tariff for these services.

91) The PTA conclusion is thus that the Míla opex for the year 2017 used as a basis for calculation of bitstream service provided through Access Option 1 amounts to a total of ISK [...] million.

5.3.2.2 Investment costs

92) In the last cost analysis, the investment base for bitstream service was reassessed and was based on replacement cost of operational assets in accordance with the PTA Decision no. 21/2014. Mila has now revised these calculations on the basis of units of equipment, exchange rate and increase in labour component for the year 2017.

93) The PTA compared calculations of the investment base with the previous analysis and submitted comments by email to Mila dated 17 August 2018 on the specification of I/O cards, share of GPON in ISAM, number of GPON cards and cable to distribution frames. In the Mila reply, these issues were corrected or explained as applicable. The PTA makes no further comments on the Mila revision of the investment base.

94) The PTA agrees with the conclusion from the cost model, which is to say that the annuity on investments which is used as a basis for calculation of tariff for bitstream service provided through Access Option 1 is ISK [...] million.

95) This represents a reduction of just over [...]% on the annuity.

5.3.2.3 Costs for tied capital

96) The costs for tied capital are calculated in the same way as in the last cost analysis. The conclusion is that tied capital and inventory are calculated at about ISK [...] million, which represents a [...]% reduction.

5.3.2.4 Revenue from other services

97) As stated here above, revenue from access to distribution frames, transit of multicast and unicast, VoIP, the taking over of xDSL service and interconnections for domains and ports are deducted from the cost base in the same manner as in the last cost analysis.

98) There are no plans for changes to the Mila tariff for the service items with the exception of the tariff for transit of multicast. In the PTA Decision no. 6/2017, the share of multicast in cost of DSLAM was decided at [...]% on the basis of traffic statistics. Mila recalculates the share of multicast in accordance with the revised cost figures. The share of GPON in costs is

also revised. The conclusion is that the monthly price per Mb/s in multicast decreases from ISK 22.33 to ISK 21.06.

99) When calculating the monthly price, estimated revenue from the above specified services is deducted from costs for bitstream access through Access Option 1. The total deduction is ISK [...] million.

5.3.2.5 Total costs

100) The following table shows a summary of total Mila costs for bitstream service through Access Option 1:

Breakdown of costs	
Local loop rental	[...]
DSLAM opex	[...]
Other opex	[...]
Total opex	**[...]**
Calculated replacement cost of investments	[...]
Annuity	**[...]**
Tied working capital	**[...]**
Income from ports in wholesale switches	[...]
Income from setup charges	[...]
Income from multicasting	[...]
Income from VoIP	[...]
Income from domains and ports for interconnection	[...]
Total deductions	**[...]**
Total costs	**[...]**

101) The total cost is ISK [...] million which is a decrease of just under [...]% between the years.

5.3.2.6 Number of line equivalents:

102) The costs for Mila xDSL service in Access Option 1 are taken as a whole and then divided between varying services with the use of equivalents. The varying costs of service items and the speed of connections are taken into account when deciding line equivalents.

103) Line equivalents are decided in the same manner as in the previous cost analysis.

104) The conclusion is that the number of equivalents for opex is calculated at [...] but for capex the equivalents are [...]. [...]

105) The PTA makes no objections to Mila calculations of line equivalents or to the Mila conclusion on line equivalents for each service.

5.3.2.7 Calculation of lease price

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

- Opex is in the main based on operations of 2017. The cost for fibre-optic to street cabinet and for access to distribution frames is based on costs in December 2017, projected for a 12 month period. The cost for access to fibre-optic to street cabinet is also revised on the basis of an increase in tariff for that service.
- The investment base is decided in the same manner as in the last cost analysis and is revised on the basis of the status in 2017 with respect to number of units of equipment, to exchange rate and increase in the labour component.
- The number of units is based on the number of connections at the end of 2017.
- The weighted average cost of capital (WACC) is 7.1% for the year 2017.

107) Mila calculates total cost of operation of its xDSL service and this cost belongs to Access Option 1 less costs of transit through the Mila trunk line network and the Siminn MPLS-IP network. Estimated income from setup charges, access to ports, multicasting and VoIP along with domains and ports for interconnection are deducted from opex in order to decide the monthly charge for xDSL connections. Deducted income is estimated on the basis of sold units.

108) The unit price comprises a share in annuity of line cards of other annuity and of opex. Added to this are costs for local loops and unit costs for G.SHDSL connections.

109) Opex per equivalent is ISK [...]/month. This cost is calculated based on total opex and tied working capital after deducting income. As specified here above [...] equivalents are assumed for opex.

110) Annuity for line cards varies depending on whether the cards are for ADSL/VDSL or for G.SHDSL. Annuity for ADSL/VDSL line cards for each line equivalent is ISK [...]/month while the cost for G.SHDSL line cards is ISK [...]/month. There are [...] ADSL/VDSL line equivalents while G.SHDSL line equivalents are [...]. Other annuity per equivalent is ISK [...]/month and those calculations are based on [...] equivalents for annuity on equipment.

111) Equivalents are used to calculate the monthly price of varying xDSL connections where account is taken of characteristics and speed. The equivalence coefficient of each connection can be seen in the following table:

Service	Local loop	Annuity	Annuity-line cards	Opex
ADSL and VDSL	0	1.00	1.00	1.00
ADSL+ 2 Mb/s	0	1.00	1.00	3.00
ADSL+ 4Mb/s	0	1.20	1.20	3.60
ADSL+ 6 Mb/s	0	1.30	1.30	3.90
ADSL+ 8 Mb/s	0	1.35	1.35	4.05
ADSL+ 14 Mb/s	0	1.40	1.40	4.20
VDSL + 50 Mb/s	0	1.60	1.60	4.80
VDSL + 100 Mb/s	0	2.00	2.00	6.00
G.SHDSL 2 Mb/s	1	2.00	2.00	3.00
G.SHDSL 4 Mb/s	2	4.40	4.40	4.40
G.SHDSL 5 Mb/s	1	3.60	3.60	3.60
G.SHDSL 10 Mb/s	2	5.40	5.40	5.40
G.SHDSL 15 Mb/s	3	8.40	8.40	8.40
G.SHDSL 20 Mb/s	4	12.00	12.00	12.00

112) The cost for each equivalent is multiplied by the equivalents of each connection to find the unit price for varying connections. The conclusion can be seen in the following table:

Service	Local loop	Annuity	Annuity-line cards	Opex	Total
ADSL and VDSL	0	[...]	[...]	[...]	725
ADSL+ 2 Mb/s	0	[...]	[...]	[...]	1,651
ADSL+ 4Mb/s	0	[...]	[...]	[...]	1,982
ADSL+ 6 Mb/s	0	[...]	[...]	[...]	2,147
ADSL+ 8 Mb/s	0	[...]	[...]	[...]	2,229
ADSL+ 14 Mb/s	0	[...]	[...]	[...]	2,312
VDSL + 50 Mb/s	0	[...]	[...]	[...]	2,642
VDSL + 100 Mb/s	0	[...]	[...]	[...]	3,303
G.SHDSL 2 Mb/s	1,558	[...]	[...]	[...]	3,697
G.SHDSL 4 Mb/s	3,116	[...]	[...]	[...]	6,802
G.SHDSL 5 Mb/s	1,558	[...]	[...]	[...]	4,574
G.SHDSL 10 Mb/s	3,116	[...]	[...]	[...]	7,639
G.SHDSL 15 Mb/s	4,674	[...]	[...]	[...]	11,711
G.SHDSL 20 Mb/s	6,232	[...]	[...]	[...]	16,284

113) On the basis of the number of sold units in December 2017, this change returns an average increase of about 5.1% in the Mila tariff for the above specified connections. [...].

114) In accordance with that stated above, the PTA endorses the Mila calculations of share of individual service items in opex and annuity.

5.4 Access Option 3

5.4.1 Míla cost analysis

115) Mila leases access to the Siminn MPLS network for traffic on Access Option 3 and the Siminn unit prices for this service have not increased between the years. At those locations where Siminn does not provide this service, Mila Access systems leases connections from the Mila Trunk line network. The lease price for the locations were Mila leases directly between departments was ISK [...] in December 2017, according to the Mila cost analysis.

116) Mila divides this cost between service items in the same proportion as costs for Siminn services are divided. The price for transit will therefore be as follows:

Analysis for 2017	Siminn unit price	Quantity	Lease price to Siminn	Internal lease	Total cost	Unit price
ADSL - Access Option 3.....	[...]	[...]	[...]	[...]	[...]	515
VDSL - Access Option 3.....	[...]	[...]	[...]	[...]	[...]	515
VDSL + 50 Mb in Access Option 3	[...]	[...]	[...]	[...]	[...]	4,090
VDSL+ 100 Mb.....	[...]	[...]	[...]	[...]	[...]	5,790
ADSL+ 2 Mb/s.....	[...]	[...]	[...]	[...]	[...]	819
ADSL+ 4 Mb/s.....	[...]	[...]	[...]	[...]	[...]	1,108
ADSL+ 6 Mb/s.....	[...]	[...]	[...]	[...]	[...]	1,338
ADSL+ 8 Mb/s.....	[...]	[...]	[...]	[...]	[...]	1,532
ADSL+ 14 Mb/s.....	[...]	[...]	[...]	[...]	[...]	1,892
SHDSL+ 2 Mb/s.....	[...]	[...]	[...]	[...]	[...]	946
SHDSL+ 4 Mb/s.....	[...]	[...]	[...]	[...]	[...]	1,338
SHDSL+ 5 Mb/s.....	[...]	[...]	[...]	[...]	[...]	1,832
SHDSL+ 10 Mb/s.....	[...]	[...]	[...]	[...]	[...]	2,114
SHDSL+ 15 Mb/s.....	[...]	[...]	[...]	[...]	[...]	2,589
SHDSL+ 20 Mb/s.....	[...]	[...]	[...]	[...]	[...]	2,991
			[...]	[...]	[...]	

117) In the revised Mila cost analysis the conclusion on price for Access Option 3 is as follows:

	Transit	A1 price	A3 Total
ADSL and VDSL.....	515	725	1,239
ADSL+ 2 Mb/s.....	819	1,651	2,470
ADSL+ 4Mb/s.....	1,108	1,982	3,090
ADSL+ 6 Mb/s.....	1,338	2,147	3,484
ADSL+ 8 Mb/s.....	1,532	2,229	3,761
ADSL+ 14 Mb/s.....	1,892	2,312	4,204
VDSL + 50 Mb/s.....	4,090	2,642	6,732
VDSL + 100 Mb/s.....	5,790	3,303	9,093
SHDSL+ 2 Mb/s.....	946	3,697	4,643
SHDSL+ 4 Mb/s.....	1,338	6,802	8,140
SHDSL+ 5 Mb/s.....	1,832	4,574	6,406
SHDSL+ 10 Mb/s.....	2,114	7,639	9,754
SHDSL+ 15 Mb/s.....	2,589	11,711	14,300
SHDSL+ 20 Mb/s.....	2,991	16,284	19,275

118) Setup charge and takeover of xDSL service are to remain unchanged:

Setup charge ISK 3,166.

Taking over xDSL service ISK 1,329

5.4.2 The position of the PTA

119) The price for Access Option 3 is based fundamentally on criteria and calculations for Access Option 1 with the addition of costs for data transit. Mila purchases transit in most instances from Siminn, where traffic goes through the Siminn MPLS-IP network. This is in accordance with the Competition Authority Settlement with Siminn from 2013 (which was reviewed in 2015) as Mila has considered that option more economical than to develop its own transit system for this service by leasing its own trunk line connections. As stated by Mila here above, Siminn no longer offers connections to all locations through its MPLS-IP network and Mila therefore needs to purchase its own connections for this transit in some instances. Mila divides this cost between types of connections in the same proportion as other transit costs are divided.

120) The above specified prices for Access Option 3 are in accordance with the Mila criteria and calculations that the PTA endorsed with its Decision no. 6/2017. The price comprises the price for transit and the price for Access Option 1. The price for transit remains almost unchanged, which means that the increase in price for Access Option 3 can be almost entirely attributed to an increase in price for Access Option 1.

5.5 Access Option 2 and VULA

121) In this revision, there are no changes in tariff envisaged for Access Option 2 and VULA. According to information from Mila, there has been no demand for these products which means that it is not possible to revise the calculations with actual figures.

122) With respect ot VULA it appears that Access option 1 and Access option 3 fulfill the requirements of most operators and, for the time beint, there is little added value in VULA, compared to these products. Because of high setup costs there is a minimum economy of scale in the number of connections.

123) The following Mila's tariff for VULA will therefore remain unchanged:

VULA

Service	Price
Setup charge	ISK 4,200,000
VULA access charge per month	ISK 70,000
VULA monthly charge per connection	ISK 79

124) The Mila pricing of of Access Option 2 will be according to the tariff for Ethernet service and Mila trunk line network will sell this service directly to customers. In addition to this, customers will pay for connection to end users according to the tariff for Access Option 1.

125) If more than one party requests Access Option 2 at the relevant location, then Mila shall endeavour to share connections to Mila counterparties in order that he can enjoy lower unit prices. Reduction of unit prices shall be in accordance with the benefit gained by sharing.

5.6 The PTA conclusion

126) In PTA Decision no. 21/2014, the Administration imposed an obligation on Mila for price control for the company's bitstream service with the authority of Article 32 of the Electronic Communications Act. With reference to Paragraph 4 of Article 32 of the same Act, it was prescribed that the tariff for wholesale Mila bitstream service be cost oriented on the fulfilment of certain conditions, see Section 1.1 here above.

127) In accordance with the PTA Decision no. 21/2014, the Mila tariff for bitstream access was decided in the PTA Decision no. 6/2017 after close scrutiny of Mila costs for this service and of the cost model used by Mila for its calculations.

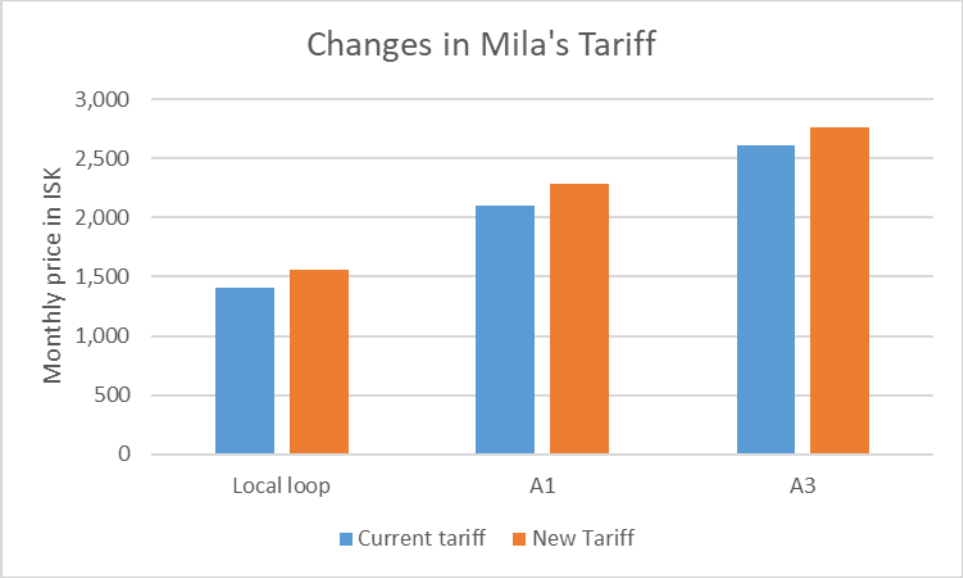
128) The PTA Decision no. 21/2014 prescribes an annual update of the cost model for bitstream service. In accordance with the above and pursuant to PTA Decision no. 6/2017, Mila submitted a cost analysis of bitstream service on 10 April 2018, where the cost model that had been endorsed in the PTA Decision no. 6/2017 was updated with data from the 2017 operational year as described in the sections here above. Mila then submitted a revised cost model on 17 August 2018, and on 29 August 2018 the model was revised using the new local loop price. This conclusion is based on a cost model received by the PTA on 29 August 2018.

129) In Appendix 1 one can find the conclusion on the Mila tariff for bitstream service in accordance with the results from the Mila cost model with updated data from the operational year 2017 as discussed here above.

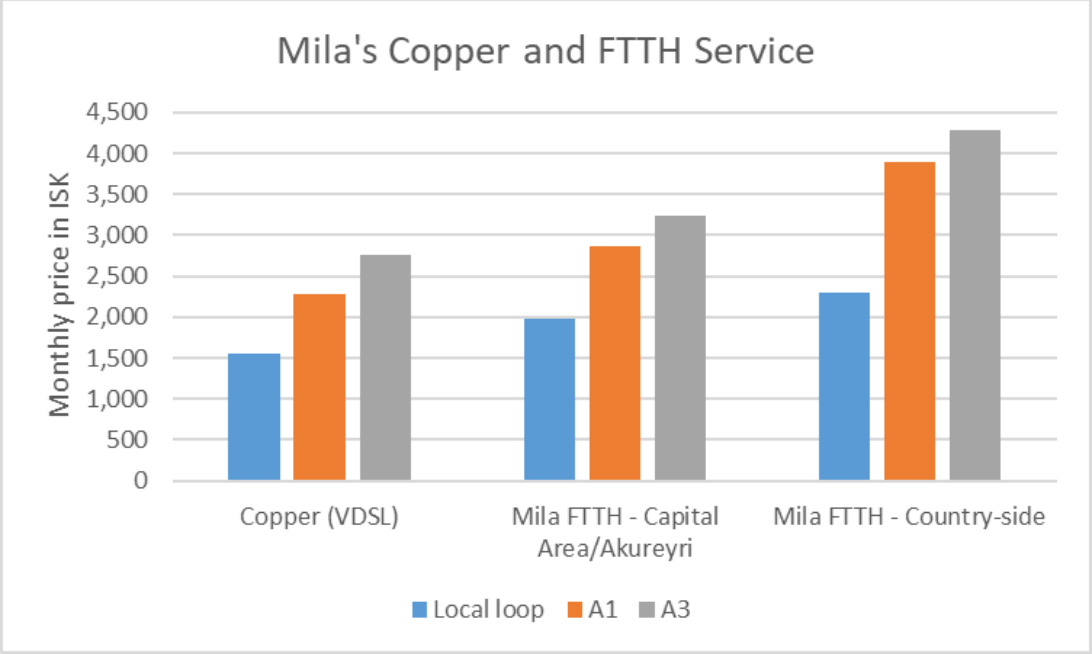
130) The conclusion from the revision of the Mila cost analysis described here above is that the increase in monthly prices for ADSL, VDSL, ADSL+ and VDSL+ connections on Access Option 1 is about 5%. SHDSL+ connections increase more in price, i.e. about 10%, which is attributed to a price increase in access to copper local loops[5] and to an increase in xDSL service. This increase in Access Option 1, also results in an increase in the monthly charge for Access Option 3, where the price for Access Option 3 is based on the price for Access Option 1 with the addition of transit. The price for transit in Access Option 3 remains unchanged. At the same time the building price index has increased by about 1.6% and the wages indexed by about 6.8%. Mila costs have decresed between years, but xDSL connections have at the same time decreased which means that the unit price has increased. According to the PTA statistical report, fibre-optic connections have increased hand-in-hand with a very significant increase in offer of fibre-optic local loops with xDSL connections decreasing correspondingly.

131) The following shows amendments to the tariff resulting from this conclusion:

[5] Access to copper local loops increases from ISK 1,406 to ISK 1,558/month.



132) Mila is also offering bitstream service for fibre-optic local loops but there is no obligation for price control on the service supplied by Mila. The figure here below shows the interaction between prices for access to local loop, Access Option 1 and Access Option 3 with Mila.



133) For those electronic communications companies that are new entrants to this market, Access Option 3 is a simple way to begin, while there are few end users. For electronic communications companies with more than 750 end users, Access Option 1 is possible, by opening new opportunities for electronic communications companies, for service offer to their end users, e.g. by offering multicast. Electronic communications companies can also use their own backbone network or they can lease access to the backbone network of another electronic communications company. To be able to utilise such an access. There has to be more investment and for this it could be necessary to achieve minimum economy of scale.

134) In accordance with the criteria discussed here above, the PTA endorses the prices specified in Appendix I to this Decision.

135) While analysing Market 5/2008, the PTA was also dealing with a cost analysis for the Mila tariff for copper local loops (Market 4/2008) and for access to terminating segments of leased lines (Market 6/2008). Because of the close relationship between these tariffs, it is necessary that they come into force together, and for this reason they are being processed together by the PTA.

136) The PTA has now commenced market analysis of Markets 3a and 3b pursuant to new Recommendations from ESA from 2016 on the definition of wholesale markets for telecommunications, and these markets cover similar service as Markets 4/2008 and 5/2008. After the Administration has analysed these markets, a decision will be made on whether to maintain those obligations now imposed on Mila pursuant to the PTA Decision no. 21/2014. The PTA plans to commence a national consultation of the market analysis for Market 3a and 3b in June this year.

137) Until the time that a new decision is made, the PTA Decision no. 21/2014 on the implementation of obligations for price control will apply. The decision states that the tariff shall be reviewed annually in accordance with the annual update of the cost analysis according to the cost model that PTA has endorsed. On the grounds of proportionality, PTA also have to take into consideration work in relation to other cost analysis to be provided by Mila. Mila shall submit an update of the cost model for the operational year 2017, by 1 October 2019.

The Decision

1) 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 29 August 2018.

2) A new Mila tariff for bitstream access is specified in Appendix I to this Decision.

3) Míla ehf. shall notify the coming into force of the new tariff with at least 60 days' notice. The new Míla ehf. tariff shall be part of the company's reference offer on the coming into force of the above specified price changes.

4) 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 to be paid pursuant to Article 6 of Regulation number 36/2009 on the Appellate Committee for Electronic Communications and Postal Affairs. Pursuant to Paragraph 4 of Article 13 of the same Act, a party can also refer a decision of the Post and Telecom Authority directly to the courts without the case having been first referred to the Appellate Committee. Such a case shall be brought within 3 months from the time that the party in question received knowledge of the Administration's decision. Referral of the case does not postpone the legal impact of the decision of the Administration. Referral of the case direct to the courts, prevents the Appellate Committee from being authorised to process an appeal.

Reykjavík, XX XX 2019

_____
Hrafnkell V. Gíslason

_____
Óskar Þórðarson

Appendix I: Tariff