



Development of a Price Squeeze Model

Price Squeeze Model – Consultation Document

December 2020

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1. Introduction

This public consultation is conducted by the Hellenic Telecommunications and Post Commission (the 'EETT') within the framework of its competences from the Law 4070/2012¹, as it stands amended, and particularly Article 17, as well as Law 4727/2020².

As per the latest decisions on markets 3a and 3b, the SMP operator has an "obligation not to margin squeeze when providing services included in the Wholesale Local Access Market at a fixed location" (Decision 792/07³ - paragraph 4.8) and an "obligation not to margin squeeze in the provision of services included in the Wholesale Central Access Market at a fixed location for mass products" (Decision 792/09⁴ - paragraph 4.7).

On 10 October 2019, the EETT launched a consultation round with the industry. The consultation aimed at providing the stakeholders an opportunity to comment and advice on the Price Squeeze Model methodology developed by the EETT with the support of Axon Partners Group Consulting (hereinafter, 'Axon'). After the consultation, the EETT approved the final methodology to be applied on August 2020⁵.

The EETT is now ready to launch a consultation on the Price Squeeze Model (hereinafter 'PSM' or 'the model'), which has been developed based on the final methodology in place. The objective of this consultation is to allow stakeholders to review, comment and

1 "Law No 4070/2012 Regulations of Electronic Communications, Transportation, Public Constructions, and other provisions", Government Gazette of the Hellenic Republic, April 2012. Source: http://www.et.gr/idoocs-nph/search/pdfViewerForm.html?args=5C7OrtC22wEbA_BZxkczbHdtvSoClrL85CIBV551Iq7tII9LGdkF53UIxsx942CdYqXSQYNuqAGCF0IfB9HI6qSYtMQEkEHLwnFqmqJSA5WIsluV-nRwO1oKqSe4BIOTSpEWYhszF8P8UqWb_zFijLdLEuiYx6QwDnl7MK0fSCBFUv1_Z2IMKFvm4ZFaV1ZC

2 "Law No 4727/2020 Digital Governance (Integration in Greek Law of Directive (EU) 2016/2102 and Directive (EU) 2019/1024) - Electronic Communications (Integration in Greek Law of Directive (EU) 2018/1972) and other provisions.", September 2020, Source: http://www.et.gr/idoocs-nph/search/pdfViewerForm.html?args=5C7OrtC22wHUdWr4xouZundtvSoClrL8yb711HobT0h5MXD0LzQTLWPU9yLzB8V68knBzLCmTXKaO6fpVZ6Lx3UnKI3nP8NxdnJ5r9cmWyJWelDvWS_18kAEhATUkJb0x1LIQ163nV9K--td6SIuamaZppf1YGuFqs-72Wsf7c7-sBp-O-Xlfrl56OkYmC

3 "Decision 792/07 Definition of a National wholesale local access market at a fixed location, definition of undertakings with significant market power in this market and their obligations (4th Cycle Analysis)", EETT, December 2016. Source: https://www.eett.gr/opencms/export/sites/default/admin/downloads/telec/apofaseis_eett/kanonistikes_apofaseis_eett/AP792-007.pdf

4 "Decision No 792/09 Definition of a National Central Wholesale Access Market for a Fixed Position for Mass Products, definition of undertakings with significant market power in this market and their obligations (4th Cycle of Analysis)", EETT, December 2016. Source: https://www.eett.gr/opencms/export/sites/default/admin/downloads/telec/apofaseis_eett/kanonistikes_apofaseis_eett/AP792-009.pdf

5 "Price Squeeze Test – Methodological Framework", EETT, August 2020, Source: <https://www.eett.gr/opencms/export/sites/default/admin/downloads/Consultations/telecoms/PCMethodFramework.pdf>

advice on the model. Within this consultation round, the EETT is specially interested in gathering feedback on the reasonability and representativeness of the model's inputs and calculations.

Stakeholders are invited to submit their comments in reply to the relevant questions by making use of the template to comment included in section 4 of this document.

The starting date for the public consultation is [28th of December 2020], ending [5th of February 2021]. Responses should be submitted eponymously in print and electronic form by the ending date of the public consultation.

The answers will be published in full and eponymously on the EETT's website. In case the responses contain confidential information, the confidential sentences should be started with a **[START CONFIDENTIAL]** and ended with a **[END CONFIDENTIAL]**.

Responses should be submitted to:

- a) EETT
60, Kifissias Avenue,
15125 Marousi
Attica

As well as to

- b) The following email address: newPSM@eett.gr

During the Public Consultation, EETT may provide clarifications to questions issued by interested parties, which must be submitted eponymously and by e-mail to newPSM@eett.gr.

EETT is open to receive and consider the reasoned views and documented comments on all these matters by respondents to this consultation. The EETT expects respondents to support their comments with any relevant justifications. The EETT may not consider comments that are not properly justified.

Comments related to previous consultations (such as aspects defined in the approved "Price Squeeze Test – Methodological Framework") and/or to other regulatory processes (e.g. market analysis) will not be considered during this process.

The EETT will assume that if a stakeholder does not answer a specific question, the stakeholder is accepting the approach presented to such question under the present paper.

2. Description of the files submitted to consultation

The following files are shared with stakeholders as part of this second consultation round:

- ▶ **Consultation Document** (this document): After a description of the consultation process, it presents the questions that stakeholders are expected to answer.
 - The file provided is named «Διεξαγωγή Εθνικής Δημόσιας Διαβούλευσης για την ανάπτυξη μοντέλου ελέγχου συμπίεσης περιθωρίου των οικονομικών προγραμμάτων της επιχείρησης με ΣΙΑ».
- ▶ **PSM Excel Model:** It presents the Price Squeeze Model under Microsoft Excel, which is consistent with the methodological framework set by the EETT. In this document, all required details regarding inputs, calculation flow, structure and outputs can be found. All stakeholders will be provided with the anonymised versions of the PSM:
 - Price squeeze model anonymised: File named «PSM Model μη εμπιστευτική έκδοση».
- ▶ **PSM user manual:** This document provides the instructions to open, operate and update the model.
 - The file provided is named «Price Squeeze Model User Manual».
- ▶ **PSM descriptive manual:** This document describes the modelling approach, structure and calculation process followed in the development of the model.
 - The file provided is named «Price Squeeze Model Descriptive Manual».

Please note that, given the confidential nature of some of the PSM's inputs, these had to be anonymised in the version of the model submitted to consultation. For the sake of transparency, the following colour codes have been used in the PSM:

- ▶ **Non-confidential inputs that need to be regularly updated.** These refer, for example, to the list of retail tariffs under assessment. These inputs, when coloured with a cream background (RGB code: R255-G250-B227) as illustrated below, are not confidential and, therefore, are not anonymised:



Exhibit 2.1: Example of the cell background of the non-confidential inputs that need to be regularly updated [Source: Axon Consulting]

- ▶ **Non-confidential inputs that do not need to be regularly updated.** These refer, for example, to tariffs of wholesale services. These inputs, when coloured with a blue background (RGB code: R64-G206-B236) as illustrated below, are not confidential and, therefore, are not anonymised:



Exhibit 2.2: Example of the cell background of the non-confidential inputs that do not need to be regularly updated [Source: Axon Consulting]

- ▶ **Confidential inputs.** These inputs contain confidential information from one or more of the operators and, therefore, had to be anonymised in the model to preserve their confidentiality by multiplying them by a random factor between $\pm 30\%$ in these versions. They may refer to inputs that need and do not need to be regularly updated. They are coloured with a light red background (RGB code: R220-G178-B186) as illustrated below:



Exhibit 2.3: Example of the cell background for confidential inputs [Source: Axon Consulting]

3. Main topics under consultation

This section describes the most relevant topics about which we would like to gather feedback from the industry, namely:

- ▶ Retail tariffs
- ▶ Revenues calculation
- ▶ Wholesale tariffs
- ▶ Downstream costs
- ▶ Geographical definition

Calculation of costs

3.1. Retail tariffs

The retail tariffs of the SMP to be assessed in the PSM are defined in the worksheet '1A INP RET TARIFFS'. For the sake of illustration, the PSM submitted to public consultation has been populated with sample tariffs.

Additional details on how these inputs are considered are included in the User Manual, specifically in section '4.1 Retail tariffs'.

Question 1: Do you agree with the way the retail tariffs are being inputted into the model?

Additionally, in section '4.1 Retail tariffs' the EETT defines the way that the customer lifetime⁶ is calculated for a specific retail tariff.

Question 2: Do you agree with the way a retail tariff's customer lifetime is considered?

⁶ It should be noted that this customer lifetime refers to the period a customer stays contracted to a particular tariff and is used for the calculation of the tariff's monthly revenues. On that regard, the total discount received during the commitment period is distributed throughout this customer lifetime. On the other hand, the customer lifetime considered for the annualization of one-off elements (e.g. activation fees or connection costs) refers to the period a customer is contracted to the same operator and is calculated based on the operators' churn rates.

3.2. Revenues calculation

The calculation of the monthly revenues per tariff is performed in the worksheet '2C CALC RET REVENUES' based, mainly, on the inputs included in the worksheet '1A INP RET TARIFFS', described in the section above.

In order to perform these calculations, the PSM takes into consideration two main types of revenues:

- ▶ **Activation fee**, which refer to revenues that are only collected at one specific point in time (e.g. related to the activation of the retail service(s)), without taxes. As these revenues refer to a broad period (the customer lifetime), in order to convert them into recurring revenues, they are annualised based on the average customer lifetime.
- ▶ **Monthly fee**, which refer to the average monthly payments made by the subscribers, without taxes. This is calculated as the summation of monthly fixed price paid for the tariff and average monthly payments made by the consumer for the outside the tariff consumptions. Outside the tariff consumption revenue is calculated by multiplying the average volume of service consumed outside the tariff by the average revenue per service unit.

Based on the two fields above, the monthly revenues per tariff, net of taxes, are obtained.

Question 3: Do you agree with the calculation approach of the revenues per tariff?

3.3. Wholesale tariffs

As at the time of developing the draft version of the PSM, there are three references of the SMP's fixed wholesale services and associated fees, namely:

- ▶ EETT's decision 919/51⁷ - EKOS decision
- ▶ EETT's decision 937/03⁸ - NGA Bottom-Up model decision, which partially updates the tariffs of EETT's decision 919/51

⁷ Source:

https://www.eett.gr/opencms/export/sites/default/admin/downloads/telec/apofaseis_eett/kanonistikes_apofas_eis_eett/AP919-051.pdf

- ▶ EETT's decision 938/01⁹ – Decision on the approval of temporary tariffs of wholesale leased lines (markets 4 and 14), which updates the Ethernet tariffs of EETT's decision 919/51

Question 4: Do you agree with the sources for the wholesale tariffs' inputs?

In order to properly reflect the wholesale services available to a reference operator, and the fees it would have to pay to get them from the SMP, the relevant services from the previous references have been included in the worksheet '1C INP WH TARIFFS' of the PSM. For each of these services, both their one-off and recurring fees have been specified. Additionally, some of these wholesale inputs are sustained by supplementary data for its correct consideration within the model.

Question 5: Do you agree with the values considered for the wholesale tariffs' inputs?

3.4. Downstream costs

In line with the methodological document, the relevant downstream costs to considered in the PSM are:

- ▶ **Own network costs**, which have been extracted from the current bottom-up models used by the EETT to regulate, as well as questionnaires to the SMP and information from the EKOS, adjusting its costs to the scale of the reference operator. The relevant data is included in worksheets '1D INP NW' and '1H INP COST RES AND SERV'. Additional details can be found in sections '4.4 Network inputs' and '4.7 Unitary costs per service' of the User Manual.

⁸ Source:

https://www.eett.gr/opencms/export/sites/default/admin/downloads/telec/apofaseis_eett/kanonistikes_apofaseis_eett/AP937-003.pdf

⁹ Source:

https://www.eett.gr/opencms/export/sites/default/admin/downloads/telec/apofaseis_eett/kanonistikes_apofaseis_eett/AP938-001.pdf

- ▶ **Termination of traffic to/from other networks**, which have been extracted from the corresponding EETT's decisions. Their values can be found in worksheets '1C INP WH TARIFFS' and '1D INP NW'.
- ▶ **Retail costs**, which have been extracted from the EKOS and aligned with the cost categories defined therein. These costs are further adjusted to the scale of the reference operator. The non-adjusted values can be found in worksheet '1F INP RET COSTS', with further explanations in section '4.5 Retail and G&A costs' of the User Manual. The scale mark-ups can be found in worksheet '1B INP MARKET' of the PSM.
- ▶ **G&A costs**, which have been extracted from the EKOS as a mark-up over retail revenues. These costs are further adjusted to the scale of the reference operator. The non-adjusted mark-up can be found in worksheet '1F INP RET COSTS'. The scale mark-ups can be found in worksheet '1B INP MARKET' of the PSM.

Question 6: Do you agree with the sources for the downstream costs?

Question 7: Do you agree that the downstream costs considered in the model reasonably represent the costs of an efficient operator with a market share of 20%?

3.5. Geographical definition

The model determines the underlying costs related to the retail tariffs considering the different network configurations and scenarios (see section 3.6 for further details). The necessary geographical information to support the calculation process, including the geotypes for the access and transmission network, has been extracted from the SMP as well as internal data from the EETT. Such information is included in worksheet '1G INP GEO'. Additional details are included in section '4.6 Geographical inputs' of the User Manual.

Question 8: Do you agree that the geographical inputs duly characterize the network of an efficient operator with a scale of 20% providing services in the areas where the SMP operator provides services corresponding to markets 3a and 3b (i.e. whole national territory with the exception of the areas where services are provided subject to state-aid funding initiatives)?

3.6. Calculation of costs

The cost calculations involve two main cost categories, namely:

- ▶ Calculation of wholesale and network costs

- ▶ Calculation of retail and G&A costs

3.6.1 Calculation of wholesale and network costs

Whilst the core of the calculation of wholesale and network costs is performed in the block '4' of worksheets, the basis for such costing and dimensioning considers different network configurations. The parameterisation of such configurations is included in worksheet 'OD PAR NW SCENARIOS' of the model, presenting comprehensive explanations in section '3.1.4 Scenario parameterisation' of the Descriptive Manual.

Question 9: Do you agree with the defined network configurations and scenarios for representing the reference operator wholesale and own network costs?

The above-mentioned block '4' of worksheets in the model performs the dimensioning and costing of the network. This costing differentiates the different network segments, acknowledging the handover points of the various wholesale solutions both on its access and backhaul sections, which are dependent on the scenarios and geotypes previously defined. Additionally, it costs the core network which is geotype independent. The Descriptive Manual provides details to support the calculation flow of the PSM in section 'Block 4 – Network and wholesale dimensioning and costing'.

Question 10: Do you agree with the access, backhaul and core networks dimensioning algorithms implemented in the Excel model?

Finally, the model, aligned with the Methodology, does consider the most cost-efficient wholesale solution in any case. This concept is approached on a double basis:

- ▶ On an individual scenario level, ensuring that the most economical solution is approached for any segment of the network (e.g. considering either a wholesale Ethernet service, an OKSYA wholesale product or an own network solution). This concept can be observed both at backhaul level in worksheet '4C CALC BACKHAUL' or at backbone level in '4H CALC CORE LINKS'.
- ▶ From a full scenario perspective, identifying the optimum solution which considers the availability for each wholesale configuration per geotype (e.g. one geotype that does not have either physical or distant collocation on its local exchanges will not consider an LLU solution handed over to the operator at local exchange level). This optimum scenario selection per geotype is calculated in the model in worksheet '4F CALC SCEN SELECTION'.

Question 11: Do you agree with the algorithms implemented to determine the most cost-efficient combinations for the reference operator?

3.6.2 Calculation of retail and G&A costs

The retail costs are calculated in worksheet '6A CALC ES RET COSTS', providing indications on section '3.7.1 Retail costs calculations' of the Descriptive Manual, while the G&A costs are obtained in worksheet '6B CALC TARIFF GA & SPECIF COST' together with any other additional costs as well as the gift and/or discounts, whose calculations are described in section '3.7.2 Calculation of G&A and tariff specific retail costs' of the Descriptive Manual.

Question 12: Do you agree with the calculation approach of the retail and G&A costs?

Finally, the model annualizes all the one-off costs per retail tariff based on the customer lifetime calculated in '8A CALC COST ANNUALISATION'. This, in addition to the annualization of individual cost items investments that is performed in worksheets '1E INP MAP COST CONSOL', '4C CALC BACKHAUL' and '4H CALC CORE LINKS'.

These annualizations are performed by means of the PMT (Payment) formula which returns the periodic payments for the one-off costs within the useful lives of the equipment or customer lifetime.

Question 13: Do you agree with the annualization approach of the one-off costs and investments?

4. Summary of questions

This section provides a summary of the questions the EETT expects stakeholders to answer.

In the case that the stakeholder does not agree with the inputs or calculations related to the questions presented, it shall justify its position providing supporting information and references.

Question	Position (Agree / Partially Agree / Disagree)	Justification
Question 1: Do you agree with the way the retail tariffs are being inputted into the model?		
Error! Reference source not found.		
Question 3: Do you agree with the calculation approach of the revenues per tariff?		
Question 4: Do you agree with the sources for the wholesale tariffs' inputs?		
Question 5: Do you agree with the values considered for the wholesale tariffs' inputs?		
Question 6: Do you agree with the sources for the downstream costs?		
Question 7: Do you agree that the downstream costs considered in the model reasonably represent the costs of an efficient operator with a market share of 20%?		

Question	Position (Agree / Partially Agree / Disagree)	Justification
<p>Question 8: Do you agree that the geographical inputs duly characterize the network of an efficient operator with a scale of 20% providing services in the areas where the SMP operator provides services corresponding to markets 3a and 3b (i.e. whole national territory with the exception of the areas where services are provided subject to state-aid funding initiatives)?</p>		
<p>Question 9: Do you agree with the defined network configurations and scenarios for representing the reference operator wholesale and own network costs?</p>		
<p>Question 10: Do you agree with the access, backhaul and core networks dimensioning algorithms implemented in the Excel model?</p>		
<p>Question 11: Do you agree with the algorithms implemented to determine the most cost-efficient combinations for the reference operator?</p>		
<p>Question 12: Do you agree with the calculation approach of the retail and G&A costs?</p>		
<p>Question 13: Do you agree with the annualization approach of the one-off costs and investments?</p>		

Exhibit 4.1: Template to respond to the consultation questions about the margin squeeze model
[Source: Axon Consulting]

