Finnish gas transmission system tariffs effective from January 1, 2020

Consultation document on preliminary tariffs

15.02.2019

CONTENTS

Introduction

The Finnish gas transmission system operator (=TSO) with system responsibility will hold a public consultation between February 15 and March 31, 2019 on the new gas transmission tariffs. These tariffs will apply in the gas transmission system in Finland as of January 1, 2020. The Energy Authority (=NRA), which regulates the transmission business, has obliged the transmission system operator to hold a tariff consultation before the final confirmation and publication of the price list. Publication will be at the latest on June 30, 2019.

This document presents the preliminary transmission charges proposed at the TSO's entry and exit points, excluding international connections, in the natural gas system. In addition to the transmission charge, this document describes charges other than transmission charges and the criteria for them. In addition, the transmission system operator with system responsibility presents calculations for the network usage for domestic purposes compared to the estimated transit flow.

Following proposals to amend the Natural Gas Market Act, the rights and obligations of the transmission system operator with system responsibility to set transmission charges are restricted to internal entry and exit points in the system. Regarding international connections in the natural gas transmission system, the regulatory authority, the Energy Authority, sets transmission charges and holds consultations on these charges prior to the confirmation and publication of the final transmission charges.

A general description of the Finnish gas transmission system, the essential technical characteristics of the system and the TSO's assumptions regarding gas flows and directions during demand peaks are provided as background information in this document.

Consultation process February 15 – March 31, 2019

The transmission system operator with system responsibility will be pleased to receive written statements about the tariffs and charges proposed in chapters 1, 2 and 3 of this document. The TSO has the right to prepare a public summary of the statements given. This summary will be published on the website of the transmission system operator with system responsibility after the consultation has ended. Parties providing comments must separately notify whether their comment or part of it is confidential information that may not be published in the summary. The TSO also has the right to submit statements given to the regulatory authority, i.e. to the Energy Authority.

The transmission system operator with system responsibility will also hold a separate consultation event on the new tariff draft for stakeholders in Helsinki on March 15, 2019. At the event, the TSO will present the draft tariff structure together with the material changes compared to earlier transmission pricing and how the pricing structure will change once the Finnish gas market opens up to competition on January 1, 2020.

Written comments submitted during the consultation process and verbal comments made at the consultation event will be taken into account in decision-making when any necessary changes are made to the tariff now being proposed before publication of the final tariff at the latest on June 30, 2019.

Comments will be accepted throughout the consultation process from February 15 to March 31, 2019. Comments must be submitted either by email (the preferred means of delivery) to:

janne.gronlund@gasum.com

or by regular mail to:

Gasum Oy
Janne Grönlund
Kiehuvantie 189, 45100 Kouvola

Any enquires and questions relating to the consultation process may also be made by telephone to 0400 368 825 (comments concerning the tariff will not be accepted by telephone).

1. Description of the Reference Price methodology in transmission services

Starting on January 1, 2020, the Postage Stamp methodology will be applied as the Reference Price methodology in the Finnish gas transmission network. In the Postage Stamp methodology, the distance between the entry and exit points and the technical transmission capacity do not affect the unit price of transmission capacity. The Postage Stamp methodology will be applied to capacity charges. A capacity charge will be applied both to entry and exit capacity.

Figure 1 shows the entry and exit points in Finland's gas transmission system that will be applied in the transmission tariff as of January 1, 2020.

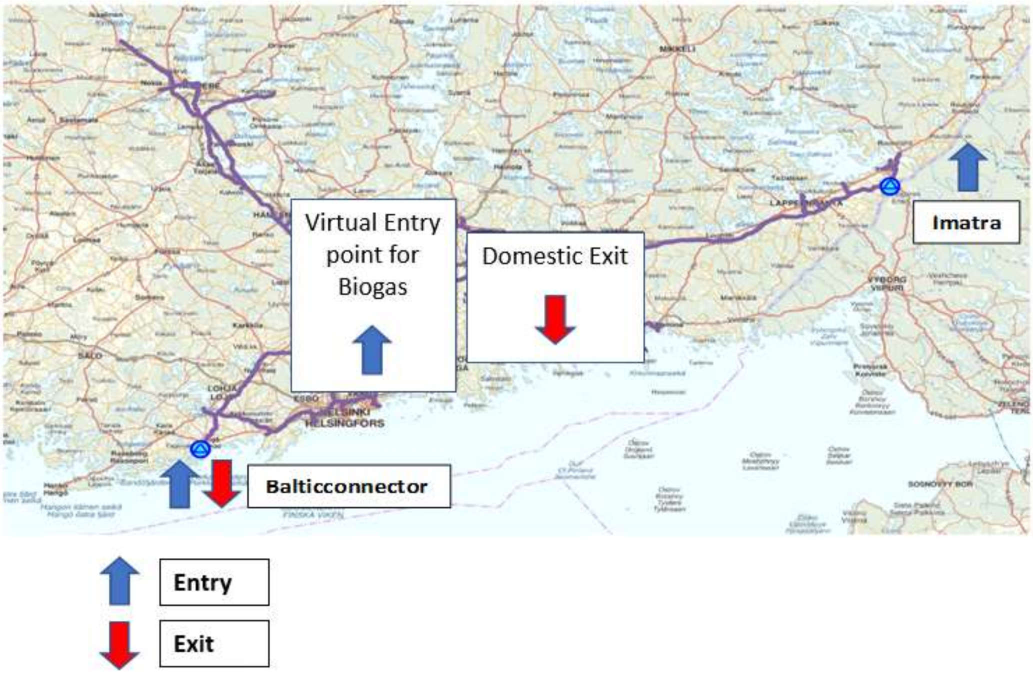

Figure 1 Entry and exit points in the Finnish gas transmission system.

2. Preliminary reference prices for transmission charges

Chapter 2 presents the actual gas transmission charges. These are entry and exit charges for firm and interruptible capacity. In addition to capacity charges, the commodity charge is also a transmission charge.

Appendix 1 shows example calculations illustrating the use of the pricelist. Appendices II and III are more accurate calculations of the entry/exit split, the efficiency ratio between internal use and the country's flow-through in the system as well as the criteria used to determine the commodity charge.

Besides a capacity and commodity charge, the TSO charges for the use of the network and for services it provides other than actual transmission services. Chapter 3 presents the pricing model for services other than transmission services and the preliminary prices.

Table I shows the preliminary transmission tariffs, which will be valid for the tariff period January 1 – December 31, 2020.

Table I Peliminary transmission pricelist for the tariff period January 1-December 31, 2020.

Transmission tariffs		
Firm capacity charge for annual product		
Entry		
Biogas virtual entry point		0.14277 €/kWh/day/year
LNG entry point		0,14277 €/kWh/day/year
Exit		
Finland's domestic exit zone		1.04859 €/kWh/day/year
Firm capacity charge / short product multipliers En/Ex		
Capacity type	Multiplier	
Quarter	1.10	
Month	1.25	
Day	1.50	
Intraday	1.70	
Interruptible capacity		
Interruptible capacity discount (%) on the corresponding price for the firm product.		
Entry		Discount
Biogas virtual entry point		0 %
LNG entry point		0 %
Commodity charge (energy charge)		
Based on the quantity of gas transferred		0.00006 €/kWh
Commodity charge payable in Finland's exit zone.		

Based on the prices presented before and, on the discussions, TSO has had with the NRA regarding tariffs at the international connections, TSO has calculated following ratios and indexes. More detailed calculations are presented in appendixes II-III.

Entry / Exit – split	**12 % / 88 %**
Capacity / commodity split	**98 % / 2 %**
Network usage between domestic / transit	**92 % / 8 %**

Following indexes describes interlinkage between network usage (domestic/transit) and revenues collected from domestic/transit flows.

Capacity cost allocation	**189 %**
Commodity cost allocation	**200 %**

3. Preliminary services other than transmission services and their pricing

Pricing for connections

TSO has obligation to connect new infrastructure to its grid as long as connecting infrastructure fulfills technical requirements set by the TSO. Connecting infrastructure may consist of natural gas usage or storage facilities as well as LNG or biogas infrastructure. TSO is justified to collect all reasonable costs which have been generated because of the new connection.

Pricing	Price of the connection is evaluated case by case

Nomination imbalance charge

A nomination imbalance charge may be applied in Finland’s exit zone.

Pricing:	€0 /kWh

Capacity overrun charge

A Capacity overrun charge is paid in Finland’s exit zone and at the biogas virtual entry point.

Finland’s exit zone: Should, based on the results of the final balance settlement, offtake from the shipper’s system in Finland’s exit zone exceed the shipper’s total capacity for each gas day in the exit zone, the shipper must pay capacity overrun charge.

Biogas virtual entry point: Should, based on the results of the final balance settlement, injection into the shipper's system at the biogas virtual entry point exceed the shipper's total capacity for each gas day at the biogas virtual entry point, the shipper must pay capacity overrun charge.

Capacity overrun charge pricing:

Three (3) times the unit price based on intraday firm capacity will be charged for the quantity exceeding the reserved capacity.

Daily balance charge

Buy and sell prices of balance gas

The transmission system operator with system responsibility's definition for neutral gas price

Neutral gas price is the weighted average price of intraday products on the Gas Exchange in €/kWh during the gas day.

Balance gas buy price of the transmission system operator with system responsibility

Step 1: Neutral gas price less 0.5% of the neutral gas price

Step 2: Neutral gas price less 3.0% of the neutral gas price

Marginal price of purchase: Lowest price of the following:

1) the lowest trading price of the transmission system operator with system responsibility for intraday products on the gas day concerned if the imbalance forecast in the system has been in the yellow zone (TSO has participated in trading at gas exchange) during the gas day or

2) the applicable adapted price (step 1 or 2). Nevertheless, the price may not be lower than 65% of the neutral gas price.

The balance gas sell price of the transmission system operator with system responsibility

Step 1: Neutral gas price plus 0.5% of the neutral gas price

Step 2: Neutral gas price plus 3.0% of the neutral gas price

Marginal price of sale: Highest price of the following:

1) highest trading price of the transmission system operator with system responsibility for intraday products on the gas day concerned if the imbalance forecast in the system has been in the yellow zone (TSO has participated in trading at gas exchange) during the gas day or

2) the applicable adapted price (step 1 or 2). Nevertheless, the price may not be higher than 135% of the neutral gas price.

Once the competent authority has announced that a crisis level in the supply is in force, the transmission system operator with system responsibility may, authorized by the competent authority, determine the pricing of balance gas in some other way.

Compensation for non-conformity with gas quality and supply requirements

Compensation terms and conditions have been mentioned in the shipper's framework agreement.

Charges in a prevailing emergency situation

Compensation is agreed separately case by case between the transmission system operator with system responsibility and the shipper.

Capacity right transfer charge

Pricing: 0 €/transfer notification

Centralized data exchange charge (=gas datahub)

The charge is applied to cover the investment and development costs of the centralized data exchange and the transmission system operator with system responsibility does not profit from the charges. The distribution system operator is charged with regard to the consumption sites in distribution networks owned or operated by the distribution system operator for which information is maintained in the register of centralized data exchange system (= all daily or non-daily read metering sites in the distribution network except for individual non-daily read gas cooker sites).

Pricing: 1.25 €/metering site/month

4. Technical information about the transmission system, the forecast utilization rates and peak demand gas flows

The following presents the structure of Finland's transmission system and the most important technical information about the system's characteristics. Chapter 4.2 presents the technical transmission capacities of the system and Chapter 4.3 presents the forecasts of the transmission system operator with responsibility concerning the annual total transmission quantities at the entry and exit points. Chapter 4.4 also presents estimates of the transmission quantities at the entry and exit points during peak demand in transmission.

4.1 Description of and technical information about the transmission system

The transmission system structure and presentation have been divided into the onshore system and the offshore system. The oldest parts of the onshore system date from 1974, when the transmission pipeline to Finland was completed. The onshore system was extended until the early 2010s. The offshore transmission system and related onshore system interconnections, i.e. Balticconnector pipeline, are estimated to complete in the late of 2019.

4.1.1 Onshore network

Finland's gas transmission system consists of a high-pressure transmission pipeline network and related infrastructure, which has been connected to the pressure network. The principal elements are the following:

- A high-pressure transmission pipeline network totaling 1,151 km in length, including 22 km still under construction in 2019 as part of the Balticconnector project
  - 80 bar/ 111 km, carbon steel
  - 54 bar/ 1037 km, carbon steel
  - <54bar/ 3 km, carbon steel
  - Pipe diameter varies between DN100 and DN1000, average pipe size is DN500
- Low pressure transmission pipeline network 63 km
  - 8 bar/ 55 km, PEH
  - <8bar/ 8 km, PEH
- 4 compressor stations, including one still under construction in 2019 as part of the Balticconnector project
  - 9 compressors, with a total shaft output of 60 MW
  - the compressor stations are in Imatra, Valkeala, Mäntsälä and Inkoo
  - 8 compressors are gas operated and 1 (the new compressor in Inkoo in the Balticconnector section of pipeline) is electricity operated
- 135 pressure reduction and metering stations
- 166 valve stations
- Four (4) biogas facility injection points have been connected to the gas transmission system. In addition, one biogas facility has been connected to the distribution network. The biogas facilities connected to the transmission network are located in Kouvola, Espoo, Lahti and Riihimäki. The biogas facility connected to the distribution network is located in Hamina.

- The average age of the network is 27 years
- Most of the carbon steel pipeline has been coated with polyethylene. Corrosion protection has been further supplemented by a cathode protection system. All main pipelines can be inspected internally.

The pipeline transmission network operates at a maximum pressure of 54 bar(g) (the exception being the Mäntsälä-Siuntio-Inkoo pipeline, which has a maximum operating pressure 80 bar(g)). Maximum total gas transmission capacity is around 26 Mm3n/24 h (293 GWh/24 h), if gas enters the country simultaneously from both Imatra (around 19 Mm3n/24 h or 214 GWh/24 h) and from the Balticconnector (around 7 Mm3n/24 h or 79 GWh/24 h).

The gas network is monitored and operated from the TSO’s central control room in Kouvola.

Figure 2 Onshore gas transmission pipeline system in Finland

4.1.2 Offshore system

The offshore gas pipeline Balticconnector has landfall in Finland near Fjusö Peninsula in Inkoo on the coast of the Gulf of Finland. The southern end of the pipeline is in Paldiski on the coast of Estonia. The Balticconnector pipeline has a transmission capacity of 7.2 Mm3n/24 h (79 GWh/24 h or 3300 MWh/h). The pipeline is bi-directional, which means that gas can flow from Finland to Estonia and from Estonia to Finland. Ownership of the offshore system is split between Eleringin AS and Baltic Connector Oy.

The pipeline diameter is DN500, the design pressure is 80 bar and the total length is 77 km. The pipes are of carbon steel, with an epoxy-painted interior and an exterior coated with polyethylene. The pipeline is protected with an approximately 50-mm thick concrete coating and by a protective anticorrosive cathodic layer.

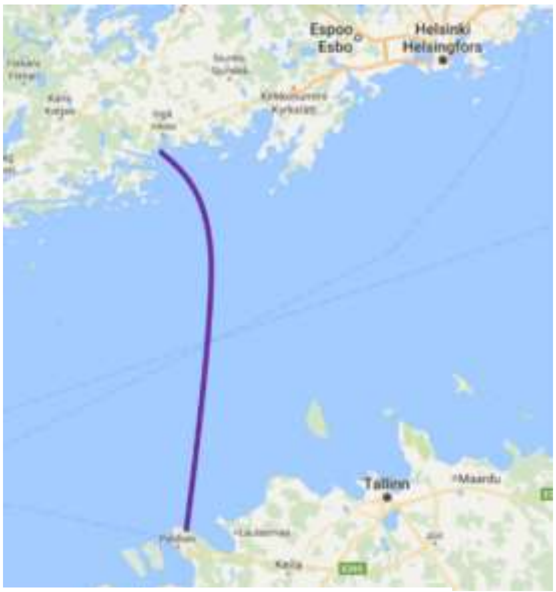

Figure 3 Offshore gas transmission system, which is due to complete in late 2019.

4.2 Technical capacity at entry and exit points and related assumptions

Table 2 shows the technical entry and exit capacities in Finland's transmission system.

Table 2 Technical entry and exit capacities in Finland's transmission system

Technical capacity at entry and exit points			
Entry	**MWh/h**	**GWh/24 h**	**TWh/year**
Imatra	> 9000	> 216	> 78.8
Biogas virtual entry point	15	0.4	0.2
Balticconnector	3300	79.2	28.9
Exit			
Finland's exit zone	> 9000	> 216	> 78.8
Balticconnector	3300	79.2	28.9

The entry capacity at the virtual entry point for biogas and Balticconnector's entry and exit capacities are actual maximum capacities. The entry capacity at Imatra and the total capacity in Finland's exit zone are indicative estimates. There have been no transmission deliveries constraining transmission capacity or supply disruptions arising from insufficient transmission capacity in Finland's transmission system in recent years.

4.3 Forecast capacity at exit and entry points and related assumptions

Table 3 shows the forecast total entry and exit quantities in Finland's transmission system.

Table 3 Forecast total entry and exit quantities in Finland's transmission system

Forecast total transmission quantities at entry and exit points		
Entry	**GWh/24 h**	**TWh/year**
Imatra	40 – 215	22.8
Biogas virtual entry point	0.2 – 0.4	0.2
Balticconnector	0 – 79	2.0
Exit		
Finland's exit zone	40 – 200	23.0
Balticconnector	0 – 79	2.0

It is assumed that the quantity of gas consumed in Finland's exit zone will remain stable in the near future. Once the Balticconector pipeline has been completed, the TSO estimates that gas transmission quantities between Finland and Estonia will initially be modest, 1 - 2 TWh/year in both directions. Most of the gas delivered to Finland's exit zone in 2020 is predicted to come from the Imatra entry point.

4.4 Forecast gas flows during demand peaks and related assumptions

Tables 4 and 5 show the forecast gas transmission quantities at entry and exit points in Finland's transmission system during demand peak.

Table 4 Forecast gas transmission quantities at entry and exit points in Finland's transmission system during demand peak. Assumption: Flow direction in Balticconnector from Finland to Estonia.

Gas flow quantity and direction at entry and exit points during demand peak (day level)		
Entry	**MWh/h**	**GWh/24 h**
Imatra	9000	216.0
Biogas virtual entry point	15	0.4
Balticconnector	0	0.0

Exit		
Finland’s exit zone	8000	192.0
Balticconnector	< 1000	< 24

Table 4 is gas demand in Finland’s exit area based on gas transmission peaks in recent years. During a demand peak, a much smaller quantity of gas can be transferred from Finland to Estonia than the technical transmission capacity of Balticconnector allows. The estimated transmission capacity to be able to cover domestic gas demand is probably below 1000 MWh/h.

Table 5 *Forecast gas transmission quantities at entry and exit points in Finland’s transmission system during demand peak. Assumption: Flow direction in Balticconnector from Estonia to Finland.*

Gas flow quantity and direction at entry and exit points during demand peak (day level)		
Entry	**MWh/h**	**GWh/24 h**
Imatra	4640	111.4
Biogas virtual entry point	15	0.4
Balticconnector	3300	79.2
Exit		
Finland’s exit zone	8000	192.0
Balticconnector	0	0

Table 5 is gas demand in Finland’s exit area based on gas transmission peaks in recent years. Demand peak transmission capacity has been calculated on the assumption that the Balticconnector’s transmission capacity is used in the direction from Estonia to Finland. In this case, the TSO does not expect deliveries constraining transmission capacity to occur in Finland’s transmission system.

Appendices

Appendix I Example calculations for use of the pricelist

For illustrative purposes only, non-binding example calculations for use of the firm transmission capacity pricelist.

Example 1: Annual capacity

The shipper estimates that it requires transmission capacity at an average capacity of 100 MW (=total transmission requirement during a gas day is $100\ MW\ \cdot 24 \frac{h}{gas\ day} = 2\ 400 \frac{MWh}{gas\ day}$) throughout the year. For this, the shipper books the required entry capacity from Imatra and the exit capacity for Finland's exit zone.

Use the unit price of the entry capacity at Imatra to obtain the transmission capacity from Imatra $1 \frac{kWh}{gas\ day}$ for a year. If the annual order lasts 365 days, the unit price 0.14277 € equates to a transmission quantity of 365 kWh (0.365 MWh). The total transmission quantity required by the shipper is $2\ 400 \frac{MWh}{day} \cdot 365\ days = 876\ 000\ MWh$. In which case the shipper requires $\frac{876\ 000\ MWh}{0.365 \frac{MWh}{unit}} = 2\ 400\ 000$ units of entry capacity. The unit price is $0.14277 \frac{€}{unit}$, in other words the total cost is $0.14277 \frac{€}{unit} \cdot 2\ 400\ 000\ units = 342\ 648\ €$. The average cost of entry capacity is $\frac{342\ 648\ €}{876\ 000\ MWh} = 0.3912 \frac{€}{MWh}$.

Use the unit price of the exit capacity in Finland's exit zone to get the transmission capacity to the exit point $1 \frac{kWh}{gas\ day}$ for a year. If the annual order lasts 365 days, the unit price 1,04859 € equates to a transmission quantity of 365 kWh (0.365 MWh). The total transmission quantity required by the shipper is $2\ 400 \frac{MWh}{day} \cdot 365\ days = 876\ 000\ MWh$. In which case the shipper requires $\frac{876\ 000\ MWh}{0.365 \frac{MWh}{unit}} = 2\ 400\ 000\ units\ \ of\ exit\ capacity$. The unit price is 1.04859 €, in other words the total cost is $1.04859 \frac{€}{unit} \cdot 2\ 400\ 000\ units = 2\ 516\ 616\ €$. The average cost of exit capacity is $\frac{2\ 516\ 616\ €}{876\ 000\ MWh} = 2{,}8728 \frac{€}{MWh}$.

The average cost of the capacity booking is therefore $0.3912 \frac{€}{MWh} + 2{,}8728 \frac{€}{MWh} = 3{,}264 \frac{€}{MWh}$.

Example 2: Monthly capacity

The shipper estimates that it requires transmission capacity at an average capacity of 100 MW (=total transmission requirement during a gas day is $100\ MW\ \cdot 24 \frac{h}{gas\ day} = \ 2\ 400 \frac{MWh}{gas\ day}$) for one month. For this the shipper books the required entry capacity from Imatra and the exit capacity for Finland's exit zone. The shipper now uses monthly capacities to book the capacity.

The unit price of the monthly product can be determined when the price of the annual product is proportional in time to the monthly product and multiplied by the relevant short-term capacity coefficient. Whereas there are 365 gas days in the annual product (or 366 in a leap year), there are 28-31 gas days in a monthly product depending on the month concerned. In addition, the coefficient for the monthly product is 1.25. These data can be used to calculate the unit prices for the Imatra entry and domestic exit capacities.

The unit price of the entry capacity at Imatra is $0.14277\ € \ \cdot \frac{30}{365} \cdot 1.25 = 0.014668\ €$. The unit price of the monthly product can be used to obtain the transmission capacity from Imatra by $1 \frac{kWh}{gas\ day}$ for a period of 30 gas days, for example. If the monthly order lasts 30 days, i.e. the unit price of 0.014668 € equates to a transmission quantity of 30 kWh (0.030 MWh). The total transmission quantity required by the shipper is $2\ 400 \frac{MWh}{day} \ \cdot 30\ days = 72\ 000\ MWh$. In which case, the shipper requires $\frac{72\ 000\ MWh}{0.030 \frac{MWh}{unit}} = 2\ 400\ 000$ units of transmission capacity. The total cost is therefore $0.014668 \frac{€}{unit} \cdot 2\ 400\ 000\ units = 35\ 203\ €$. The average cost of entry capacity is $\frac{35\ 203\ €}{72\ 000\ MWh} = 0{,}4889 \frac{€}{MWh}$.

Similarly, the unit price of the exit capacity in Finland's exit zone will be $1.04859\ € \ \cdot \frac{30}{365} \cdot 1.25 = 0{,}107732\ €$. The total transmission quantity required by the shipper in the exit zone is 72 000 MWh, i.e the shipper requires $\frac{72\ 000\ MWh}{0.030 \frac{MWh}{unit}} = 2\ 400\ 000\ units$ of exit capacity. The total cost is $0.107732 \frac{€}{unit} \cdot 2\ 400\ 000\ units = 258\ 557€$. The average cost of exit capacity is $\frac{258\ 557\ €}{72\ 000\ MWh} = 3{,}5911 \frac{€}{MWh}$.

The average cost of the capacity booking is therefore $0.4889 \frac{€}{MWh} + 3.5911 \frac{€}{MWh} = 4.08 \frac{€}{MWh}$.

$$NB!\ 4{,}08 \frac{€}{MWh} = 1.25\ \cdot\ 3.264 \frac{€}{MWh}$$

Example 3: Intraday capacity

The shipper requires gas transmission capacity for a gas day that has already begun. The shipper assesses whether to transfer gas totaling 2400 MWh in Finland's gas transmission network on the gas day. When a gas day is already underway, the shipper can order only intraday capacity. The shipper books the entry capacity required from Imatra and the oexit capacity to Finland's exit zone.

The unit price of the entry capacity at Imatra is $0.14277\ € \cdot \frac{1}{365} \cdot 1.7 = 0.000665\ €$. The unit price of the intraday product can be used to obtain the transmission capacity from Imatra $1\frac{kWh}{gas\ day} = 0.001\frac{MWh}{gas\ day}$. The total transmission quantity required by the shipper is $2\ 400\frac{MWh}{day} \cdot 1\ day = 2\ 400\ MWh$. In which case, the shipper requires $\frac{2\ 400\ MWh}{0.001\frac{MWh}{yksikkö}} = 2\ 400\ 000$ units of entry capacity. The total cost is therefore $0.000665\frac{€}{unit} \cdot 2\ 400\ 000\ units = 1\ 596\ €$. The average cost of injection capacity is $\frac{1\ 596\ €}{2\ 400\ MWh} = 0.665\frac{€}{MWh}$.

Similarly, the unit price of the exit capacity in Finland's exit zone will be $1{,}04859 \cdot \frac{1}{365} \cdot 1.7 = 0{,}004884\ €$. The total transmission quantity required by the shipper in the exit zone is also 2 400 MWh, i.e. the shipper requires $\frac{2\ 400\ MWh}{0.001\frac{MWh}{unit}} = 2\ 400\ 000\ units$ of exit capacity. The total cost is $0.004884\frac{€}{unit} \cdot 2\ 400\ 000\ units = 11\ 721\ €$. The average cost of exit capacity is $\frac{11\ 721\ €}{2\ 400\ MWh} = 4{,}884\frac{€}{MWh}$.

The average cost of the capacity booking is therefore $0.665\frac{€}{MWh} + 4{,}884\frac{€}{MWh} = 5.549\frac{€}{MWh}$.

$$NB!\ 5.549\frac{€}{MWh} = 1.70\ \cdot\ 3.2640\frac{€}{MWh}$$

Appendix II Results of estimates concerning the distribution of costs according to TAR NC Article 5

Entry / Exit – split **12 % / 88 %**

Entry / Exit split describes relation between set entry and exit capacity prices.

Entry (yearly / firm) = 1,04859 €/kWh/day/year

Exit (yearly / firm) = 0,14277 €/kWh/day/year

$$\frac{0{,}14277}{(0{,}14277 + 1{,}04859)} = 0.12$$

$$\frac{1{,}04859}{(0{,}14277 + 1{,}04859)} = 0.88$$

Capacity / commodity split **98 % / 2 %**

Capacity / Commodity split describes estimated relation between revenues collected from capacity products and commodity charge.

TSO estimates that it will collect approximately 81 M€ / year from capacity products.

TSO estimates that it will collect approximately 1,3 M€ / year from commodity charges

$$\frac{81}{(81 + 1{,}3)} = 0.98$$

$$\frac{1{,}3}{(81 + 1{,}3)} = 0.02$$

Network usage between domestic / transit **92 % / 8 %**

Describes estimated relation between gas transported for domestic needs and for transit purposes.

TSO estimates that domestic gas consumption is 22,7 TWh/year

TSO estimates that gas volumes transported for transit purposes is 2,0 TWh/year

$$\frac{22,7}{(2,0 + 22,7)} = 0.92$$

$$\frac{2,0}{(2,0 + 22,7)} = 0.08$$

Following indexes describes interlinkage between network usage (domestic/transit) and revenues collected from domestic/transit flows. More detailed information can be found from TAR NC (article 5).

Capacity cost allocation	**189 %**
Commodity cost allocation	**200 %**

Appendix III Information about calculations concerning the setting of a commodity charge according to TAR NC Article 4.3

TSO set commodity charge to collect direct costs which are generated because of the gas transportation such as transmission system compressors fuel and electricity costs.

TSO estimates that direct transmission costs are approximately 1,3 M€/year.

$$\frac{1\,300\,000\,€}{22\,700\,000\,MWh} = 0.06\frac{€}{MWh} = 0{,}00006\frac{€}{kWh}$$