

**NATURAL GAS TRANSMISSION TARIFFS SUMMARY**  
**PORTUGAL 2018-2019**

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Este documento está preparado para impressão em frente e verso

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## 1 FOREWORD

The Commission Regulation (EU) 2017/460 of 16 March 2017, establishes a network code defining the rules on harmonized structures for gas transmission tariffs, including rules on the application of a reference price methodology, publication and consultation requirements and the calculation of reserve prices for standard capacity products. This Regulation is binding in its entirety and directly applicable in all Member States from April 2017 subject to different deadlines for entry into force depending of the issues.

The Commission Regulation (EU) 2017/460 requires regular public consultations on the reference price methodology, which is defined as the methodology applied to that part of the revenue from transmission services to be recovered from capacity-based transmission tariffs with the aim of deriving reference prices.

One of the key objectives to be achieved by this Network Code is to increase the transparency of the transmission tariff structures and the procedures for its creation. In this context, the publication of information related to the determination of the allowed revenues of the transmission system operator and the calculation of the different tariffs for the use of the transmission system is mandatory.

These requirements should enable network users to better understand the tariffs established for transmission services and other regulated non-transmission services provided by the transmission system operator, as well as the manner in which these tariffs are defined, their historical variation and future changes. In addition, network users should be able to identify and know the costs underlying transmission tariffs and predict the future tariffs.

This document provides information, as set out in Articles 29 and 30 of Commission Regulation (EU) 2017/460 on the transmission system tariffs applicable during the tariff period (from 1 July 2018 to 30 June 2019) and the gas year (from 1 October 2018 to 30 September 2019), concerning the following matters:

- Technical characteristics of the transmission network;
- Information about firm standard capacity product in the VIP;
- Information on interruptible standard capacity product in the VIP;
- Approved transmission tariffs for the tariff period;
- The difference in the level of transmission tariffs for the same type of transmission.

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## 2 ASSUMPTIONS FOR THE CALCULATION OF NATURAL GAS TRANSMISSION TARIFFS

### 2.1 TECHNICAL CHARACTERISTICS OF THE TRANSMISSION NETWORK

#### 2.1.1 TECHNICAL CAPACITY AT ENTRY AND EXIT POINTS AND ASSOCIATED ASSUMPTIONS

The technical capacity at entry and exit points of the transmission network is not a relevant variable for the purpose of the methodology of calculation of the transmission tariffs.

Information on the technical capacity at entry and exit points of the transmission system is published on the transmission system operator's website at <https://www.ign.ren.pt/web/guest/capacidades-pcs-pontos-relevantes>.

#### 2.1.2 FORECASTED CONTRACTED CAPACITY AT ENTRY AND EXIT POINTS AND ASSOCIATED ASSUMPTIONS

In the assumptions of the forecasted contracted capacity, at the different entry and exit points of the transmission network (interconnections of Campo Maior and Valença do Minho, Liquefied Natural Gas (LNG) Terminal in Sines and Underground Storage), two scenarios for contracted capacity were considered, namely: i) minimization of capacity contracting and ii) minimization of capacity contracting invoice<sup>1</sup>.

The forecasted contracted capacity result from the adoption of the scenario ii) that minimizes the capacity contracting invoice, which considers the following assumptions:

- Differentiated prices for standard capacity products;
- The contracted capacity of the yearly product was defined as equal to the average capacity from the tariff period 2014-2015 up to the tariff period 2017-2018 (REN Gasodutos forecast), so the optimization process focused on the contracting of monthly, quarterly and daily capacity products;
- The daily products do the match of the quantities in relation to total daily capacity required;
- The forecasted contracted capacity for within-day standard capacity products is zero;
- The forecasted contracted capacity for interruptible standard capacity products is zero;

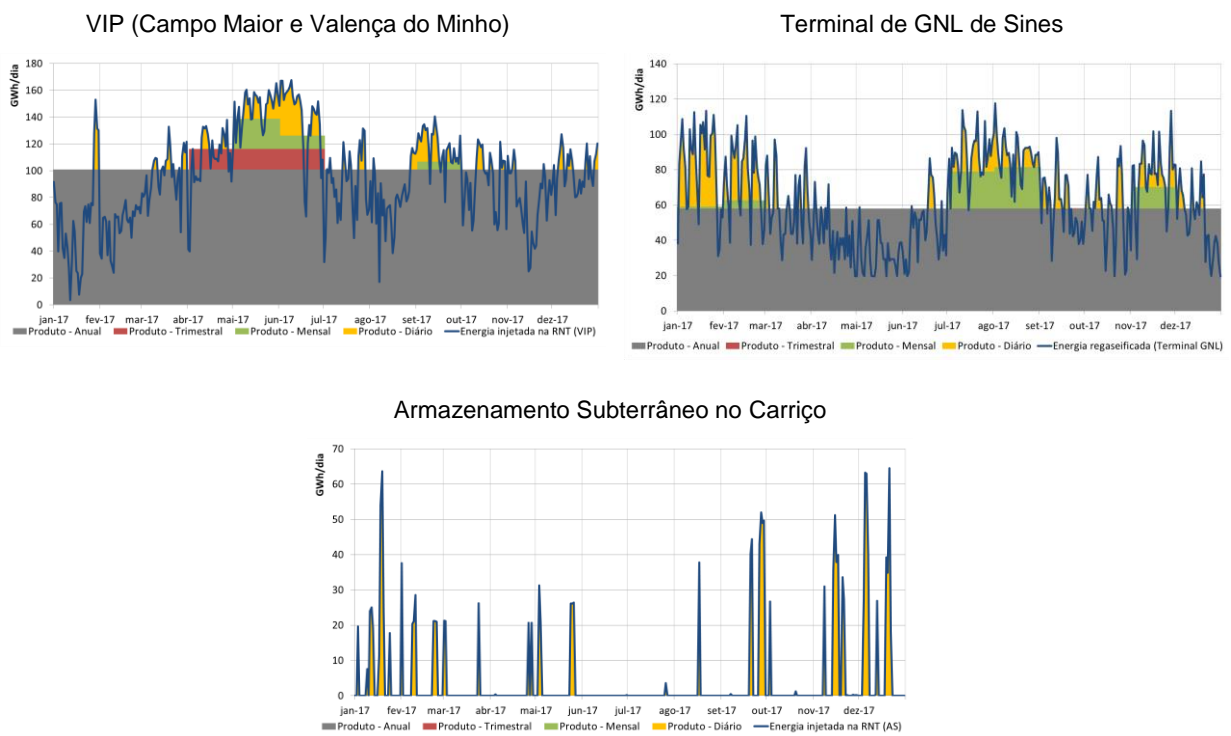
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<sup>1</sup> Further information on the study of the scenarios considered, see [http://www.erse.pt/pt/gasnatural/tarifaseprecos/2018\\_2019/Documents/PagPrincipal/Caracteriza%C3%A7%C3%A3o%20Procura%20GN%202018-2019%20\(Jun18\).pdf](http://www.erse.pt/pt/gasnatural/tarifaseprecos/2018_2019/Documents/PagPrincipal/Caracteriza%C3%A7%C3%A3o%20Procura%20GN%202018-2019%20(Jun18).pdf)

- The forecasted contracted capacity for the yearly firm standard capacity product for the time horizon of more than 1 year is zero.

This scenario uses a combination of capacity products that minimizes the annual invoice of contracted capacity in transmission network, focusing in products with higher maturity and less expensive. This scenario tends to be adopted by agents with greater predictability in their annual supplies. Figure 1 illustrates what would be the result if the network users adopted such a strategy.

**Figure 1 - Products of contracted capacity at Transmission Network entry  
– scenario ii**



In this scenario, the forecasted contracted capacity for firm standard capacity products are as follows in the next tables:

**Table 1 – Forecasted contracted capacity for firm standard capacity products, at entry points**

Transmission Tariffs (Entry point)		
	(kWh/day)	(kWh/hour)
<b>VIP (Campo Maior / Valença do Minho)</b>	<b>114 282 807</b>	<b>0</b>
Yearly product	101 055 478	
Quarterly product	3 781 413	
Monthly product	3 196 185	
Daily product	6 249 731	
Within-day product		0
<b>LNG Terminal</b>	<b>71 838 475</b>	<b>0</b>
Yearly product	57 913 064	
Quarterly product	30 471	
Monthly product	5 257 080	
Daily product	8 637 861	
Within-day product		0
<b>Underground Storage</b>	<b>4 552 785</b>	<b>0</b>
Daily product	4 552 785	
Within-day product		0

**Table 2 - Forecasted contracted for firm standard capacity capacity products, at exit points**

Transmission Tariffs (exit point)			
	(kWh/day)	(kWh/hour)	(kWh)
<b>VIP (Campo Maior / Valença do Minho)</b>	<b>0</b>	<b>0</b>	<b>0</b>
Yearly product	0		
Quarterly product	0		
Monthly product	0		
Daily product	0		
Within-day product		0	
<b>Commodity</b>			0
<b>LNG Terminal</b>	<b>0</b>	<b>0</b>	<b>0</b>
Yearly product	0		
Quarterly product	0		
Monthly product	0		
Daily product	0		
Within-day product		0	
<b>Commodity</b>			0

Table 3 shows the forecasted quantities (used capacity and commodity) for the remaining exit points from the transmission system, namely for high pressure clients (HPC) and distribution system operators (DSO).

**Table 3 – Forecasted quantities for transmission tariff for HPC and DSO**

Transmission Tariffs (exit point)				
	Used Capacity/Annual Base Capacity	Additional Monthly Capacity (Apr-Sep)	Additional Monthly Capacity (Oct-Mar)	Commodity
	(kWh/day)/month	(kWh/day)/month	(kWh/day)/month	(MWh)
<b>High Pressure Clients (Long usage)</b>	57 370 117			16 151 397
<b>High Pressure Clients (Flexible - Annual)</b>	64 946 273	0		13 829 736
<b>High Pressure Clients (Flexible - month)</b>		38 083 491	39 122 187	4 152 637
<b>High Pressure Clients (Short usage)</b>	0			0
<b>Distribution Network</b>	106 921 250			25 083 911

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### 2.1.3 THE STRUCTURAL REPRESENTATION OF THE TRANSMISSION NETWORK, THE QUANTITIES AND THE DIRECTION OF THE GAS FLOW FOR ENTRY AND EXIT POINTS AND ASSOCIATED ASSUMPTIONS, SUCH AS DEMAND AND SUPPLY SCENARIOS FOR THE GAS FLOW

The transmission tariffs in Portugal are calculated using the matrix method based on the capacity unit costs of every possible path<sup>2</sup>.

The first step in applying the entry-exit methodology is to design a simplified representation of the transmission network, illustrated at Figure 2, where entry and exit points of the network and pipeline segments' lengths are shown, as of January 2010<sup>3</sup>.

There are four entry points: Valença do Minho (O), Underground Storage (L), Campo Maior (G) and Sines LNG Terminal (A), being the segments [OP], [LM], [GH] and [AB] the primary system entries.

For the simplified model of the network the exit points are clustered into eight exit zones:

- Exit zone C: Sines Refinery, GALP Cogeneration, Portucel (Setúbal), Repsol, Advansa.
- Exit zone E: TER, Carregado, Lisboagás, Setgás, Barreiro Cogeneration.
- Exit zone I: Beiragás (Guarda).
- Exit zone K: Pego, Tagusgás.
- Exit zone N: Lares Central, Lusitaniagás, Soporgen e Renoeste (Cogeneration), Leirosa.
- Exit zone Q: Portucel.
- Exit zone S: Turbogás, Portgás, Petrogal Refinery, Air Liquide.
- Exit zone U: Beiragás (Mangualde).

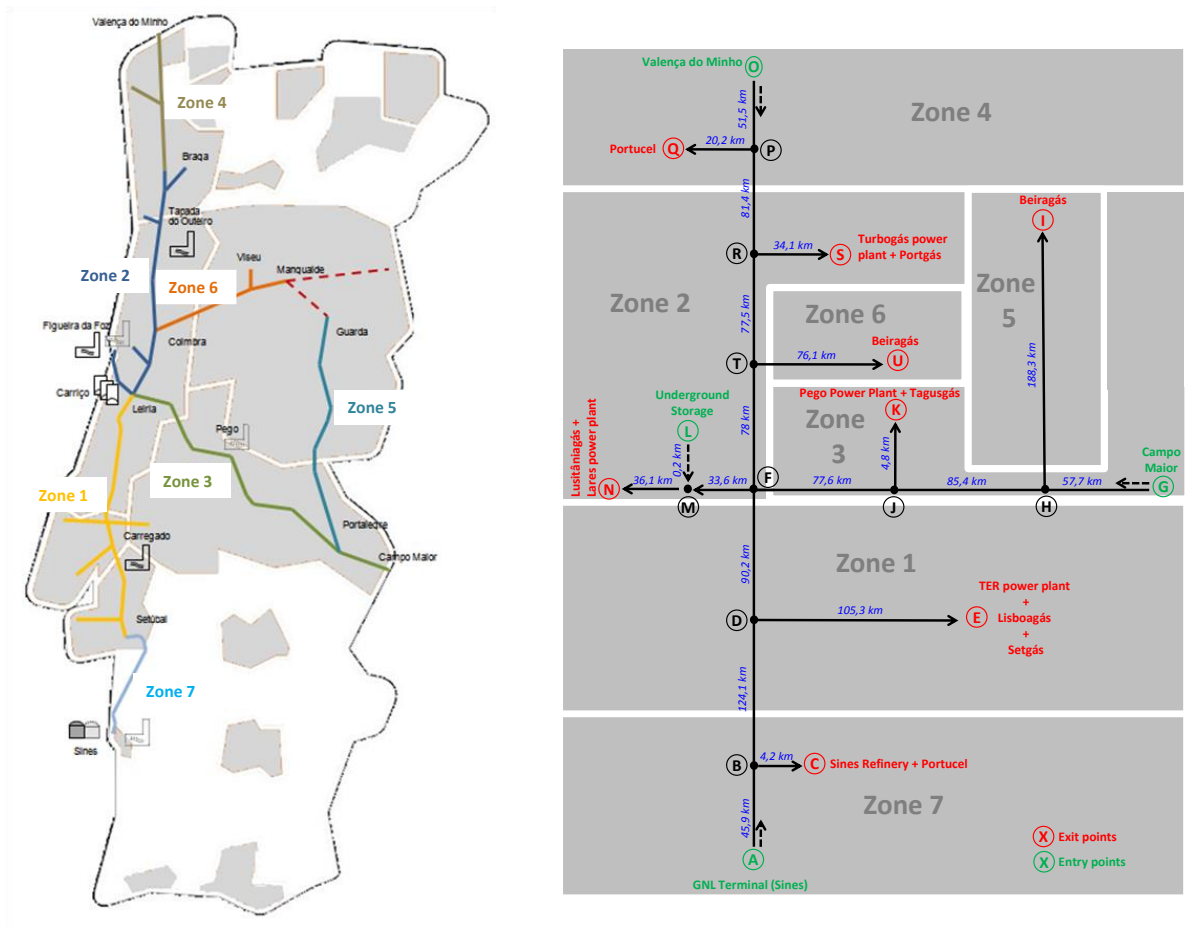
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<sup>2</sup> For more on this see the paper "*Introduction of a decoupled entry-exit tariff system in the Portuguese natural gas sector*" ( <https://ieeexplore.ieee.org/document/6254653/> )

<sup>3</sup> The matrix methodology was applied in 2010 and ERSE is going to discuss it again in 2018 in the public consultation on the reference price methodology foreseen in Regulation (EU) 460/2017.



Figure 2 – Simplified structural representation of the transmission network



The second step is the characterization of the maximum capacities in the long term in each entry point and exit zone of the simplified model. Table 4 shows the capacities, per entry and exit point, considered in the calculations.

**Table 4 – Long term capacity**

Entry		Capacity MWh/d
<b>A</b>	Sines	192 780
<b>G</b>	Campo Maior	122 000
<b>L</b>	Carricho	6 762
<b>O</b>	Valença do Minho	23 000
TOTAL		344 542

Exit		Capacity MWh/d
<b>C</b>	Refinaria+Cogeração GALP em Sines+Portugal (Setubal)+Repsol+Advers a	26 785
<b>E</b>	TER+Carregado+Lisboagas+Setgas+Cog Barreiro	99 424
<b>I</b>	Beiragas (Guarda)	2 178
<b>K</b>	Pego+Tagusgas	41 522
<b>N</b>	Lares+Lusitaniagas+Soporgen+Carricho(ind)+Leiros a	89 891
<b>Q</b>	Portugal	2 390
<b>S</b>	Turbogas+Portgas+Refinaria Petrogal+Air Liquide	80 174
<b>U</b>	Beiragas (Mangualde)	2 178
TOTAL		344 542

Table 5 shows the matrix of distances between the several entry and the exit points listed in the transmission network above.

**Table 5 - Matrix of distances between entry and exit points, in km**

km		Entry				
		TGNL-Sines	Campo Maior	US - Carricho	Valença do Minho	
Exit		<b>A</b>	<b>G</b>	<b>L</b>	<b>O</b>	
	C - Lote 7	Sines	50	439	252	507
	E - Lote 1	Lis-Set	275	416	229	484
	I - Lote 5	BEI-Guarda	562	246	385	640
	K - Lote 3	TAG	343	148	116	371
	N - Lote 2	LUS	330	290	36	358
	Q - Lote 4	V. Castelo	517	478	291	72
	S - Lote 2	PORT	450	410	223	167
U - Lote 6	BEI-Mangualde	414	375	188	287	

The capacities listed in Table 4 are split by the several network sections, resulting in the matrix shown in Table 6. The capacity used in each network section as well as the contribution associated with each entry point are depicted in this table.

**Table 6 – Maximum capacity, by section of the network**

Lots	Sections	Capacities (MWh/day)				Flows by section (MWh/d)
		Gas Flow from A	Gas Flow from G	Gas Flow from L	Gas Flow from O	
7	AB	192 780	-	-	-	192 780
7	BC	26 785	-	-	-	26 785
7+1	BD	165 995	-	-	-	165 995
1	DE	99 424	-	-	-	99 424
1	DF	66 571	-	-	-	66 571
3	GH	-	122 000	-	-	122 000
5	HI	-	2 178	-	-	2 178
3	HJ	-	119 822	-	-	119 822
3	JK	-	41 522	-	-	41 522
3	JF	-	78 300	-	-	78 300
2	FM	38 199	44 930	-	-	83 129
2	LM	-	-	6 762	-	6 762
2	MN	38 199	44 930	6 762	-	89 891
2	FT	28 372	33 370	-	-	61 742
6	TU	1 001	1 177	-	-	2 178
2	TR	27 371	32 193	-	-	59 564
4	OP	-	-	-	23 000	23 000
4	PQ	-	-	-	2 390	2 390
2+4	PR	-	-	-	20 610	20 610
2	RS	27 371	32 193	-	20 610	80 174

There are no other physical elements of the network that are relevant for the calculation of transmission network tariffs.

Further technical information on the transmission network, related to the diameter and length of the pipelines and the power of the compression stations, can be found on the transmission operator website<sup>4</sup>.

## 2.2 STANDARD FIRM CAPACITY PRODUCTS OFFERED IN INTERCONNECTION (VIP)

According to the Natural Gas Sector Tariff Regulation<sup>5</sup>, the natural gas tariff period runs from 1 July to 30 June of the following year and annually ERSE shall approve regulated tariffs, for the tariff period.

In 2018 (and for this year alone), the tariff for the interconnection points, are applicable from 1 July 2018 to 30 September 2019. From October 2019 ahead, the validity period of the regulated tariffs, for the interconnection points, will match with the period foreseen in the Regulation (UE) 2017/459 (from October to September of the next year).

<sup>4</sup> Available at "[Rede Nacional de Transporte de Gás Natural, Infra-estruturas de Armazenamento e Terminais de GNL - Diagrama Dez2016](https://www.ign-ren.pt/gestao-tecnica)", in the webpage <https://www.ign-ren.pt/gestao-tecnica>.

<sup>5</sup> Pursuant to article 160 of the Natural Gas Sector Tariff Regulation, approved by [Regulamento n.º 225/2018, de 16 de abril](#).

In the high pressure infrastructures of the Portuguese Natural Gas System<sup>6</sup>, the capacity allocation model requires a binding reservation, through market mechanisms, subject to payment regardless their use.

Table 7 show the entry and exit reserve prices for the transmission standard capacity products for firm capacity in the virtual interconnection point (VIP).

**Table 7 – Reserve prices of transmission tariff, at VIP**

Transmission Tariffs (Entry point)	Contracted Capacity		Contracted Capacity	
	EUR/(kWh/day)/month	EUR/(kWh/day)/day	EUR/(kWh/hour)/day	EUR/(kWh/hour)/hour
<b>VIP (Campo Maior / Valença Minho)</b>				
Yearly product	0,010150	0,00033369	0,00800856	
Quarterly product	0,013195	0,00043379	0,01041096	
Monthly product	0,015224	0,00050053	0,01201272	
Daily product		0,00066738	0,01601712	
Within-day product		0,00073411		0,00073411

Transmission Tariffs (Exit Point)	Contracted Capacity		Contracted Capacity		Commodity EUR/kWh
	EUR/(kWh/day)/month	EUR/(kWh/day)/day	EUR/(kWh/hour)/day	EUR/(kWh/hour)/hour	
<b>VIP (Campo Maior / Valença do Minho)</b>					
Yearly product	0,000000		0,00000000		
Quarterly product	0,000000		0,00000000		
Monthly product	0,000000		0,00000000		
Daily product	0,000000		0,00000000		
Within-day product		0,00000000		0,00000000	
Commodity					0,00000000

For the capacity acquired for a time horizon of five years it is applicable the price of the yearly capacity product in force at the time of the capacity usage.

At VIP exit point the capacity and energy prices are set to zero. The main reason that justified this option is the fact that, at this point the counter-flow nominations are prevailing, which contributes to release flow capacity.

The prices for non-yearly standard capacity products result from the application of the multipliers shown in Table 8 to the price of the yearly standard capacity product.

**Table 8 – Level of multipliers for standard capacity products**

Contracted Capacity - Entry point	Multipliers
<b>VIP (Campo Maior / Valença Minho)</b>	
Quarterly product	1,3
Monthly product	1,5
Daily product	2,0
Within-day product	2,2

<sup>6</sup> Which are: LNG terminal, underground storage, entry and exit points of the transmission network for these infrastructures and interconnections.

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The price of non-yearly standard capacity products as well as the choice of multiplier value should ensure that, on the one hand, long-term reserves are not discouraged in order to justify investment in infrastructures and a fair recovery of revenues by infrastructure operators and, on the other hand, no short-term contracting barriers are created, hampering tariff flexibility and the entry of new players into the market.

The defined multipliers shape the behavior of the users, since each market player will adopt a usage in order to minimize its invoice. The multipliers should increase as the product maturity decreases, encouraging a schedule that gives greater predictability to the management of the system.

Seasonal factors are not applied to reserve prices of non-yearly standard capacity products.

### **2.3 STANDARD CAPACITY PRODUCTS FOR INTERRUPTIBLE CAPACITY IN INTERCONNECTION (VIP)**

Regulation (EU) 2017/459, establishing a network code for capacity allocation mechanisms in gas transmission networks, provides that transmission system operators should offer interruptible capacity at least for daily and within-day horizons. The Network Code on harmonized transmission tariff structures for gas, establishes that the price of interruptible capacity is calculated on the basis of a discount in relation to the firm capacity price.

This discount can be determined *ex-ante* (before the occurrence of the interruption), based on the probability of interruption, or *ex-post* (after the occurrence of the interruption), resulting at a compensation paid to the network users for the interruption.

The Portuguese Tariff Regulation<sup>7</sup> provides that the reserve prices for standard capacity products for interruptible capacity must reflect the probability of interruption<sup>8</sup>. This information has to be annually sent by the transmission system operator to ERSE, with an assessment of the probability of interruption aiming to calculate the prices of interruptible products<sup>9</sup>. It also provides that in the absence of a capacity interruption, in the previous gas year due to physical congestion, *ex-post* discounts may be applied.

The transmission system operator has submitted to ERSE<sup>10</sup> its assessment of the probability of interruption and has concluded that at the transmission network points there has been no interruption to date due to physical congestion. For this reason, given the absence of historical data usable for the calculation of

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<sup>7</sup> Approved by Regulamento n.º 225/2018, of 16th March.

<sup>8</sup> In accordance with Article 54 (12).

<sup>9</sup> In accordance with Article 54 (13).

<sup>10</sup> Available at [http://www.erse.pt/pt/gasnatural/regulamentos/tarifario/Documents/GNGS%20-%20Avalia%C3%A7%C3%A3o%20probabilidade%20interrup%C3%A7%C3%A3o%202018\\_19.pdf](http://www.erse.pt/pt/gasnatural/regulamentos/tarifario/Documents/GNGS%20-%20Avalia%C3%A7%C3%A3o%20probabilidade%20interrup%C3%A7%C3%A3o%202018_19.pdf)

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probability values with adherence to practical scenarios, it is considered that the probability of interruption assumes an infinitesimal value, whatever the standard interruptible capacity product to offer.

Considering the information sent by the transmission system operator<sup>11</sup> and expected demand scenarios, ERSE considers that in the period between 1<sup>st</sup> July 2018 and 30<sup>th</sup> September 2019 an *ex-post* discount should be applied. Thus, interruptible capacity products will be offered with capacity prices equal to the prices of equivalent products for firm capacity and, in the event of an interruption, the discount will be equal to three times the reserve price for daily standard capacity products applied over the effective duration of the interruption.

This discount is calculated for each gas day according to the following expression:

$$\text{Discount [€]} = 3 \times \text{reserve price (daily firme product) [€/kWh/h]} \times \text{Energy not delivered [kWh]} / 24$$

$$\text{Energy not delivered [kWh]} = \text{Energy not delivered Capacity interrupted [kWh/h]} \times \text{Interruption hours}$$

This discount will be held in the monthly settlement of the use of the transmission network for each market player. The discount will be applied, in respect of daily and within-day horizons, focuses and confined to the aggregate amount of monthly interruptible capacity contracted in these horizons by the respective market agent.

## **2.4 CAPACITY PRODUCTS OFFERED AT LNG TERMINAL AND STORAGE**

As for interconnection points, at entry points from LNG terminal and underground storage to the transmission network and at exit point from the transmission network to underground storage the capacity allocation model requires a binding reservation, through market mechanisms, subject to payment regardless their use. Table 9 shows the entry reserve prices for the transmission capacity products at these points.

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<sup>11</sup> Available in portuguese language at [http://www.erse.pt/pt/gasnatural/regulamentos/tarifario/Documents/GNGS%20-%20Avalia%C3%A7%C3%A3o%20probabilidade%20interrup%C3%A7%C3%A3o%202018\\_19.pdf](http://www.erse.pt/pt/gasnatural/regulamentos/tarifario/Documents/GNGS%20-%20Avalia%C3%A7%C3%A3o%20probabilidade%20interrup%C3%A7%C3%A3o%202018_19.pdf)

**Table 9 – Prices of transmission tariff, at entry point from LNG terminal and underground storage**

Transmission Tariffs (Entry point)	Contracted Capacity		Contracted Capacity	
	EUR/(kWh/day)/month	EUR/(kWh/day)/day	EUR/(kWh/hour)/day	EUR/(kWh/hour)/hour
<b>LNG Terminal</b>				
Yearly product	0,010150	0,00033369	0,00800856	
Quarterly product	0,013195	0,00043379	0,01041096	
Monthly product	0,015224	0,00050053	0,01201272	
Daily product		0,00066738	0,01601712	
Within-day product		0,00073411		0,00073411
<b>Underground Storage</b>				
Daily product		0,0000936	0,00022464	
Within-day product		0,00001030		0,00001030

The underground storage facility is considered an entry point to the system and not an exit point because physically the exit flows from the grid is always small, and investments depend on the exit from the underground facility to the grid.

Table 10 shows the reserve prices for the transmission capacity products at the exit point to LNG terminal.

**Table 10 – Prices of transmission tariff, at exit point to LNG terminal**

Transmission Tariffs (Exit Point)	Contracted Capacity		Contracted Capacity		Commodity EUR/kWh
	EUR/(kWh/day)/month	EUR/(kWh/day)/day	EUR/(kWh/hour)/day	EUR/(kWh/hour)/hour	
<b>LNG Terminal</b>					
Yearly product	0,000000		0,00000000		
Quarterly product	0,000000		0,00000000		
Monthly product	0,000000		0,00000000		
Daily product	0,000000		0,00000000		
Within-day product		0,00000000		0,00000000	
Commodity					0,00000000

The prices for non-yearly capacity products result from the application of the multipliers shown in Table 11 to the price of the yearly capacity product.

**Table 11 – Level of multipliers for capacity products**

Contracted Capacity - Entry point	Multipliers
<b>LNG Terminal</b>	
Quarterly product	1,3
Monthly product	1,5
Daily product	2,0
Within-day product	2,2
<b>Underground Storage</b>	
Daily product	1,0
Within-day product	1,1

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## 2.5 TRANSMISSION TARIFFS APPLIED TO THE DOMESTIC EXITS

The domestic exit points are high pressure clients (HPC), LNG terminal and distribution networks. There are also some private LNG autonomous units (LNG AU), which are not physically connected to the transmission network, but also pay the transmission tariff<sup>12</sup>.

At exit points to HPC (including power plants) and at exit points to distribution system operators (DSO), capacity prices are applicable to the capacity used, i.e, the maximum daily capacity in the last twelve months. At these exit points, energy prices are also applied.

For the LNG autonomous units (LNG AU) the capacity prices are converted into energy prices and only energy prices are applicable.

Aiming to achieve more tariff flexibility and to enable the access to the gas system of market players with time concentrated uses, the transmission tariffs to domestic exit points include five tariff options. These can be characterized as follows:

- Long Usage Tariff - The capacity used corresponds to the maximum daily capacity of the last 12 months.
- Short Usage Tariff:
  - The capacity used corresponds to the maximum daily capacity of the last 12 months;
  - The price of capacity used in this option is lower than the price in the long usage option, by conversion to the energy price which has higher values.
  - This tariff option is advantageous for consumers with annual modulations less than 90 days.
- Annual Flexible Tariff:
  - Combined annual and monthly capacity contracting;
  - The annual base contracted capacity must be greater than or equal to the maximum daily consumption recorded in the winter months (October to March) of the previous 12 months, including the month in which the invoice respects;
  - The additional monthly capacity of the summer months corresponds to the difference between the maximum monthly capacity determined in the month of billing and the annual base contracted capacity;
  - The aggregation, at the same exit point, of annual capacity with monthly capacity it is only allowed in the summer months (April to September);

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<sup>12</sup> The gas of the LNG autonomous units is transported by tank truck.



- Monthly Flexible Tariff:
  - Monthly contracting only.
  - Monthly capacity corresponds to the maximum daily consumption recorded in that month invoice.
  - The price of the capacity can be different each month.
- Daily Flexible Tariff:
  - Daily contract only;
  - Daily capacity match to daily consumption;
  - The price of the capacity can be different on a daily basis.

The monthly and daily contracting, within the scope of the flexible tariff, and the short usage contracting are dependent on the availability of capacity of the transmission network.

The following tables present the transmission tariffs applicable to the different exit points in the tariff period 2018-2019.

Table 12 presents the prices of the long usage tariff applicable to DSO, high pressure clients and LNG autonomous units.

**Table 12 – Prices of transmission tariffs  
(DSO, HPC and LNG AU)**

<b>Transmission Tariffs (Exit point)</b>		
<b>Distribution Network and High Pressure Clients</b>		
Used Capacity (EUR/(kWh/day)/month)	< 10 000 000 m <sup>3</sup> /year	0,01758100
	≥ 10 000 000 m <sup>3</sup> /year	0,01758100
Commodity (EUR/kWh)	< 10 000 000 m <sup>3</sup> /year	0,00035757
	≥ 10 000 000 m <sup>3</sup> /year	0,00001430
<b>Private LNG Autonomous Units</b>		
Energy (EUR/kWh)		0,00142075

Table 13 presents the prices of the short usage tariff, applicable to high pressure clients.

**Table 13 – Prices of transmission tariffs, short usage  
(HPC)**

Transmission Tariffs - Short usage		Price
<b>High pressure clients</b>		
Used Capacity - exit (EUR/(kWh/day)/month)	< 10 000 000 m <sup>3</sup> /year	0,005450
	≥ 10 000 000 m <sup>3</sup> /year	0,005450
Commodity (EUR/kWh)	< 10 000 000 m <sup>3</sup> /year	0,00199078
	≥ 10 000 000 m <sup>3</sup> /year	0,00163178

Table 14 presents the prices of the three flexible tariff options, applicable to high pressure clients. The document “Estrutura Tarifária no ano gás 2018-2019”<sup>13</sup> explains how these prices were obtained.

**Table 14 – Prices of flexible transmission network tariffs  
(HPC)**

Transmission Tariffs - High Pressure Clients (Flexible - Daily)		Price
Daily Capacity (April to September) EUR/(kWh/day)/day		0,003468
Daily Capacity (October to March) EUR/(kWh/day)/day		0,005780
Commodity (EUR/kWh)		0,00001430
Transmission Tariffs - High Pressure Clients (Flexible - Month)		Price
Additional Monthly Capacity (April to September) EUR/(kWh/day)/month		0,026371
Additional Monthly Capacity (October to March) EUR/(kWh/day)/month		0,052742
Commodity (EUR/kWh)		0,00001430
Transmission Tariffs - High Pressure Clients (Flexible - Annual)		Price
Annual Base Capacity EUR/(kWh/day)/month		0,017581
Additional Monthly Capacity (April to September) EUR/(kWh/day)/month		0,026371
Commodity (EUR/kWh)		0,00001430

## 2.6 DIFFERENCE IN THE LEVEL OF TRANSMISSION TARIFFS BETWEEN 2017-2018 AND 2018-2019

This section presents the difference in the level of transmission tariffs for the same type of transmission service, by tariff option, applicable during the tariff period 2017-2018 and the approved for tariff period 2018-2019.

<sup>13</sup>[http://www.erse.pt/pt/gasnatural/tarifaseprecos/2018\\_2019/Documents/PagPrincipal/Estrutura%20Tarif%C3%A1ria%20GN%202018-2019%20\(Jun18\).pdf](http://www.erse.pt/pt/gasnatural/tarifaseprecos/2018_2019/Documents/PagPrincipal/Estrutura%20Tarif%C3%A1ria%20GN%202018-2019%20(Jun18).pdf)

**Table 15 – Transmission tariffs and their variation**

**Tariff Period: 2017-2018**

Transmission Tariffs (Entry point)	Contracted Capacity	
	EUR/(kWh/hour)/day	EUR/(kWh/hour)/hour
<b>VIP (Campo Maior / Valença Minho)</b>		
Yearly product	0,00980496	
Quarterly product	0,01274640	
Monthly product	0,01470744	
Daily product	0,01960968	
Within-day product		0,00089878
<b>LNG Terminal</b>		
Yearly product	0,00980496	
Quarterly product	0,01274640	
Monthly product	0,01470744	
Daily product	0,01960968	
Within-day product		0,00089878
<b>Underground Storage</b>		
Daily product	0,00027504	
Within-day product		0,00001261

**Tariff period: 2018-2019**

Transmission Tariffs (Entry point)	Contracted Capacity	
	EUR/(kWh/hour)/day	EUR/(kWh/hour)/hour
<b>VIP (Campo Maior / Valença Minho)</b>		
Yearly product	0,00800856	
Quarterly product	0,01041096	
Monthly product	0,01201272	
Daily product	0,01601712	
Within-day product		0,00073411
<b>LNG Terminal</b>		
Yearly product	0,00800856	
Quarterly product	0,01041096	
Monthly product	0,01201272	
Daily product	0,01601712	
Within-day product		0,00073411
<b>Underground Storage</b>		
Daily product	0,00022464	
Within-day product		0,00001030

**Price level variation**

Transmission Tariffs (Entry point)	Contracted Capacity	
	EUR/(kWh/hour)/day	EUR/(kWh/hour)/hour
<b>VIP (Campo Maior / Valença Minho)</b>		
Yearly product	-0,00179640	
Quarterly product	-0,00233544	
Monthly product	-0,00269472	
Daily product	-0,00359256	
Within-day product		-0,00016467
<b>LNG Terminal</b>		
Yearly product	-0,00179640	
Quarterly product	-0,00233544	
Monthly product	-0,00269472	
Daily product	-0,00359256	
Within-day product		-0,00016467
<b>Underground Storage</b>		
Daily product	-0,00005040	
Within-day product		-0,00000231

In the virtual interconnection point (VIP) and LNG terminal, the transmission exit tariffs are zero, in both periods, reason why the information in table format is not presented.

Table 16 and Table 17 present transmission tariffs, for HPC and DSO exit points, as well as their variation between the years 2017-2018 and 2018-2019.

**Table 16 – Long and short usage transmission tariffs and their variation  
(HPC, DSO and LNG AU)**

**Tariff Period: 2017-2018**

Transmission Tariffs (Exit point)		Price
<b>Distribution Network and High Pressure Clients</b>		
Used Capacity (EUR/(kWh/day)/month)	< 10 000 000 m <sup>3</sup> /year	0,022569
	≥ 10 000 000 m <sup>3</sup> /year	0,022569
Commodity (EUR/kWh)	< 10 000 000 m <sup>3</sup> /year	0,00006426
	≥ 10 000 000 m <sup>3</sup> /year	0,00001836
<b>Private LNG Autonomous Units</b>		
Energy (EUR/kWh)		0,00182388

Transmission Tariffs - Short usage		Price
<b>High pressure clients</b>		
Used Capacity - exit (EUR/(kWh/day)/month)	< 10 000 000 m <sup>3</sup> /year	0,005642
	≥ 10 000 000 m <sup>3</sup> /year	0,005642
Commodity (EUR/kWh)	< 10 000 000 m <sup>3</sup> /year	0,00191082
	≥ 10 000 000 m <sup>3</sup> /year	0,00186492

**Tariff period: 2018-2019**

Transmission Tariffs (Exit point)		Price
<b>Distribution Network and High Pressure Clients</b>		
Used Capacity (EUR/(kWh/day)/month)	< 10 000 000 m <sup>3</sup> /year	0,017581
	≥ 10 000 000 m <sup>3</sup> /year	0,017581
Commodity (EUR/kWh)	< 10 000 000 m <sup>3</sup> /year	0,00035757
	≥ 10 000 000 m <sup>3</sup> /year	0,00001430
<b>Private LNG Autonomous Units</b>		
Energy (EUR/kWh)		0,00142075

Transmission Tariffs - Short usage		Price
<b>High pressure clients</b>		
Used Capacity - exit (EUR/(kWh/day)/month)	< 10 000 000 m <sup>3</sup> /year	0,005450
	≥ 10 000 000 m <sup>3</sup> /year	0,005450
Commodity (EUR/kWh)	< 10 000 000 m <sup>3</sup> /year	0,00199078
	≥ 10 000 000 m <sup>3</sup> /year	0,00163178

**Price level variation**

Transmission Tariffs (Exit point)		Price
<b>Distribution Network and High Pressure Clients</b>		
Used Capacity (EUR/(kWh/day)/month)	< 10 000 000 m <sup>3</sup> /year	-0,004988
	≥ 10 000 000 m <sup>3</sup> /year	-0,004988
Commodity (EUR/kWh)	< 10 000 000 m <sup>3</sup> /year	0,00029331
	≥ 10 000 000 m <sup>3</sup> /year	-0,00000406
<b>Private LNG Autonomous Units</b>		
Energy (EUR/kWh)		-0,00040313

Transmission Tariffs - Short usage		Price
<b>High pressure clients</b>		
Used Capacity - exit (EUR/(kWh/day)/month)	< 10 000 000 m <sup>3</sup> /year	-0,000192
	≥ 10 000 000 m <sup>3</sup> /year	-0,000192
Commodity (EUR/kWh)	< 10 000 000 m <sup>3</sup> /year	0,00007996
	≥ 10 000 000 m <sup>3</sup> /year	-0,00023314

**Table 17 - Transmission flexible tariffs and their variation  
(HPC)**

**Tariff Period: 2017-2018**

<b>Transmission Tariffs - High Pressure Clients (Flexible - Month)</b>	
	<b>Price</b>
Additional Monthly Capacity (April to September) EUR/(kWh/day)/month	0,028211
Additional Monthly Capacity (October to March) EUR/(kWh/day)/month	0,056422
Commodity (EUR/kWh)	0,00001836

<b>Transmission Tariffs - High Pressure Clients (Flexible - Annual)</b>	
	<b>Price</b>
Annual Base Capacity EUR/(kWh/day)/month	0,022569
Additional Monthly Capacity (April to September) EUR/(kWh/day)/month	0,028211
Commodity (EUR/kWh)	0,00001836

<b>Transmission Tariffs - High Pressure Clients (Flexible - Daily)</b>	
	<b>Price</b>
Daily Capacity (April to September) EUR/(kWh/day)/day	0,003947
Daily Capacity (October to March) EUR/(kWh/day)/day	0,006579
Commodity (EUR/kWh)	0,00001836

**Tariff period: 2018-2019**

<b>Transmission Tariffs - High Pressure Clients (Flexible - Month)</b>	
	<b>Price</b>
Additional Monthly Capacity (April to September) EUR/(kWh/day)/month	0,026371
Additional Monthly Capacity (October to March) EUR/(kWh/day)/month	0,052742
Commodity (EUR/kWh)	0,00001430

<b>Transmission Tariffs - High Pressure Clients (Flexible - Annual)</b>	
	<b>Price</b>
Annual Base Capacity EUR/(kWh/day)/month	0,017581
Additional Monthly Capacity (April to September) EUR/(kWh/day)/month	0,026371
Commodity (EUR/kWh)	0,00001430

<b>Transmission Tariffs - High Pressure Clients (Flexible - Daily)</b>	
	<b>Price</b>
Daily Capacity (April to September) EUR/(kWh/day)/day	0,003468
Daily Capacity (October to March) EUR/(kWh/day)/day	0,005780
Commodity (EUR/kWh)	0,00001430

**Price level variation**

<b>Transmission Tariffs - High Pressure Clients (Flexible - Month)</b>	
	<b>Price</b>
Additional Monthly Capacity (April to September) EUR/(kWh/day)/month	-0,001840
Additional Monthly Capacity (October to March) EUR/(kWh/day)/month	-0,003680
Commodity (EUR/kWh)	-0,00000406

<b>Transmission Tariffs - High Pressure Clients (Flexible - Annual)</b>	
	<b>Price</b>
Annual Base Capacity EUR/(kWh/day)/month	-0,004988
Additional Monthly Capacity (April to September) EUR/(kWh/day)/month	-0,001840
Commodity (EUR/kWh)	-0,00000406

<b>Transmission Tariffs - High Pressure Clients (Flexible - Daily)</b>	
	<b>Price</b>
Daily Capacity (April to September) EUR/(kWh/day)/day	-0,000479
Daily Capacity (October to March) EUR/(kWh/day)/day	-0,000799
Commodity (EUR/kWh)	-0,00000406