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Cc: *ARERA*

To the kind attention of Mr. Massimo Ricci
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19 February 2024

Subject: Consultation document - Implementation of the network code on harmonised transmission tariff structures for gas

Dear Sir/Madam,

Gas Intensive appreciates the opportunity to provide feedback on the consultation concerning the implementation of the network code on harmonized transmission tariff structures for gas during the 5th Regulatory Period (RP5), as published by E-Control on December 21, 2023. This document includes two main parts: a "GENERAL SECTION" and a "TECHNICAL ANALYSIS". The first one also shows Gas Intensive's proposals.

We believe it's crucial that, during the next transportation tariff revision process, there is a significant reduction in the tariffs for exit Arnoldstein and entry Baumgarten. This adjustment should ensure that capacity is priced fairly to prevent it from remaining unsold for extended periods. It's important to remember that one of the primary goals of REpowerEU is to decrease the EU's reliance on Russian gas. The costs associated with this endeavour should be distributed equitably among all stakeholders rather than being shouldered by only a few.

GENERAL SECTION

We recognize that the current and upcoming years entail significant changes in gas flow patterns for Austria, posing increased risks for market participants, especially those tied to long-term contracts. In this context, we hope to witness a shared responsibility, costs and risks among all stakeholders in the Austrian gas transportation system, whether shippers or Transmission System Operators (TSOs), during the forthcoming RP5. This necessitates a TSO cost methodology that ensures just and fair remuneration without over-remunerations.

The system utilization charges must adhere to principles such as equal treatment for all system users, facilitation of efficient gas trading and competition, cost orientation, and fairness of causation to the greatest extent possible.

While we acknowledge that the consultation document provides indicative figures subject to further adjustments, we trust that E-Control will make diligent efforts to reduce the tariffs beyond the proposed consultation version.

Despite the anticipated decrease in regulated costs for the 5th tariff period, the occurrence of missing gas flows and new capacity bookings due to interrupted gas supplies from Russia has compelled remaining long-term capacity holders to bear a significant portion of the TSOs' regulated costs. Consequently, RP5's overall transportation costs (sum of both capacity and commodity charges) could be much higher than those paid in RP4 (please see Figure).

Entry/Exit split		**50%**	**50%**		
		Baumgarten	**Arnoldstein**		
		Entry	Exit		
		kWh/h	kWh/h		
Transportation contract		**712.188**	**490.916**		
		kWh	kWh		
		6.238.766.880	4.300.424.160		
		€/kWh/h/a	€/kWh/h/a	transportation costs	
2020-24	RP4	0,85	4,35	**2.740.844,40 €**	
	RP5	**1,11**	**3,47**	**2.494.007,20 €**	**-9,01%** just capacity
2025		€/MWh	€/MWh	+	
	RP5	0,11972	0,13257	**1.317.012,40 €**	
				3.811.019,60 €	**39,05%** capcity+commodity 100%

Figure 1: RP5 transportation costs for Gas Intensive as sum of capacity and commodity charges, the last resulting from allocations equal to 100% of the contracted capacity.

In response to these challenges, Gas Intensive would like to share the below comments and remarks:

1. CWD

Gas Intensive positively views the introduction of the CWD tariff methodology. This marks a significant improvement compared to the previous methodology related to the distance from the virtual point (Baumgarten), as it enables a better rebalancing of cost distribution between Entry and Exit points in this new scenario. Moreover, the introduction of an annual review of the transportation tariffs' values makes this methodology -market friendly.

2. Entry/ Exit cost split of 50-50

The Entry/ Exit cost split of 50-50 for both capacitive and commodity charges is to be considered fair and adequate to current flows through the Austrian gas system.

3. Forecasted contracted capacity

Gas Intensive has observed that the forecasted capacities employed in the CDW model for determining entry/exit tariffs could be notably conservative, resulting in an unfavourable impact on the final charges. We would like to draw attention specifically to the IP Exit Arnoldstein, where the values of contracted

capacities seem to be significantly underestimated. For detailed considerations, please refer to point *A) forecasted contracted capacities 2025* in the following technical analysis.

Having in mind that the value indicated in the document could been generated by tip error, Gas Intensive kindly ask to update the indicative volume from 6.683.747 kWh/h/a to 9.890.587 kWh/h/a.

4. Regulated costs

We acknowledge the reduction in regulated costs for the 5th regulatory period. However, we note with concern that the decrease in costs has only been partially passed on to long-term capacity contract holders. It is understood that the cost decree has not been finalized, and costs may still undergo changes in both directions.

The Austrian cost methodology has certain peculiarities which have not been fully unfolded in the consultation document. This lack of clarity makes it challenging for us to form a clear opinion on the changed parameters. We believe that, even in a preliminary manner, E-Control should have disclosed the evolution of key parameters such as WACC, Assets (book value and adjusted replacement values for pipelines and compressor stations), historical revaluation factor for the equity part of assets, and reference prices for compressor costs (reference to futures contracts for natural gas, electricity and CO_2 allowances).

According to the consultation document, it appears that the risk premium of 3.5% will no longer be used, and a roll-up of past risk remunerations granted to the TSOs is considered in the future allowed revenues.

According to the E-Control METHODOLOGY PURSUANT TO SECTION 82 GASWIRTSCHAFTSGESETZ 2011 FOR THE 4th PERIOD FOR TRANSMISSION SYSTEMS OF AUSTRIAN GAS TRANSMISSION SYSTEM OPERATORS (TSOS) we understand that

> "*Any decline of committed capacities detected in the volume situation for the period 2013-2016 does not impact on the calculation of the volume situation for price control periods from 2017.* ***This prevents the remaining consumers from having to absorb the decline in capacity demand in the transmission system****. If this results in a shortfall of cost coverage for the transmission company or the parent company, such shortfall is not subject to an adjustment according to clause III.11. Instead, the* ***TSO carries the marketing risk, for which it is compensated by the risk premium included in the cost of equity and an individual risk premium***."

Over the past three regulatory periods, the committed capacity has remained relatively stable, and we've been paying a risk premium whose exact amount remains undisclosed. This risk premium has constituted an additional cost burden for us, and we have never supported it since its introduction.

Based on the points mentioned above, we disagree with the decision to eliminate the risk premium at this juncture. Indeed, this transfer of costs from decreased bookings to long-term capacity holders could have been mitigated by applying this insurance mechanism in place for three regulatory periods to reduce tariffs for the 5th regulatory period (RP).

Therefore, we believe that in the event that the risk premium is eliminated, it would be appropriate to fully allocate the accumulated funds of the risk premiums paid by shippers during the last three regulatory periods, to offset the costs in RP5.

Finally, we appreciate E-Control's decision, starting with the 4th Regulatory Period (RP4), to use financial accounting principles for new assets, irrespective of equity or debt financing. We propose that any form of over remuneration guaranteed by adjusted replacement values and the re-evaluation of 'old investments' until the end of the 2020 business year be cancelled. We suggest that the distinction for "old investments" between equity-financed and debt-financed grid assets be eliminated, transforming it into book value

retroactively to 2011. For detailed considerations, please refer to point *B) regulated cost methodology in the technical analysis.*

In light of these considerations, we kindly urge E-Control to reevaluate the inclusion of replacement values for 'old investments' in cost calculations. Specifically, we propose the complete elimination of this practice and recommend adjusting the entire Regulatory Asset Base (RAB) to book values. Additionally, we suggest allocating the funds generated by the risk factor application entirely for cost reduction and conducting a thorough examination, in line with the cost causation principle, on how new investments will be treated in RP5.

5. Commodity charge

Gas Intensive appreciates E-Control's decision to introduce a commodity charge that encompasses all commodity costs, including compressor energy costs for natural gas, electricity, and CO_2 allowances. We understand that this commodity charge will be recalculated annually, considering the real forecast of flows and the prices of futures contracts.

However, the consultation document lacks information on how the estimated €50,000,000 commodity cost is determined (for a detailed explanation, please refer to point *C) compressor energy costs* in the technical attachment).

In consideration of the factors mentioned, we kindly request that E-Control performs hydraulic calculations to accurately assess the required compressor energy at the Market Area level. Subsequently, we propose any adjustments deemed necessary to align with the findings in order to refine the proposed commodity charges.

Additionally, although not directly part of the consultation, Gas Intensive would like clarification on how guarantees related to the commodity charge will be applied by the TSOs.

6. Multipliers

Gas Intensive welcomes the introduction of higher multipliers compared to the 4th Regulatory Period. This development contributes to safeguarding the value of long-term bookings.

The stability provided by long-term contracts is crucial for TSOs' income. Therefore, it is imperative that the multipliers are not reduced from the values presented in the consultation version.

7. Tariffs for the 5th RP will be applied starting with the 1st January 2025

E-Control has indicated that the new tariffs for the 5th Regulatory Period will be implemented starting January 1, 2025. However, based on the information in *'Anlage 3 zur GSNE-VO 2013, Durchführung der Verordnung (EU) 2017/460 zur Festlegung eines Netz-kodex über harmonisierte Fernleitungs-entgeltstrukturen, ABl. Nr. L 72 vom 17.03.2017 S. 29 (NC TAR) BGBl. II - Ausgegeben am 4. Juni 2020 - Nr. 254,'* it is stated that the reference prices determined are to be applied for the fee period running from January 1, 2021, to September 30, 2024.

Therefore, we understand that the tariffs for the 5th RP will commence on October 1, 2024, and the date of January 1, 2025, mentioned in the preamble to the consultation document should be considered an error.

8. Simplified excel file

Article 30(2)(b) of the Tariff NC outlines that the simplified tariff model should empower network users to calculate transmission tariffs for the prevailing period and estimate their potential evolution beyond that period. The attached Excel file to the consultation document represents a noticeable improvement compared to the model published for the 4th Regulatory Period.

Regrettably, the Excel file accompanying the consultation lacks clarity in understanding all calculation steps leading to the new entry-exit tariffs under specific boundary conditions. This limitation hinders the ability to assess potential enhancements to the model and copying part of the data or checking tariffs for years other than 2025 is not possible. It is currently not feasible to verify the contribution of changed technical capacity to entry-exit tariffs.

GCA has indeed increased its technical capacity compared to the 4th Regulatory Period in a manner not thoroughly explained in the consultation document. This lack of explanation raises concerns, particularly in a scenario where gas flows have consistently decreased. The rationale for permitting new investments is unclear in such circumstances.

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TECHNICAL ANALYSIS

The following analysis aims to elucidate Gas Intensive's position on three specific points. Enhancements in these areas would result in a reduction in tariffs, aligning with the interests of market participants.

A. Forecasted contracted capacities 2025

In spite of a generally conservative approach in determining planned contractual capacities, which we do not support, we would like to emphasise the need for a review of the forecasted contractual capacities used for the TAG Arnoldstein Exit.

Gas Intensive has noticed that for the year 2025, a forecasted contracted capacity for the IP Arnoldstein Exit of 6.683.747 kWh/h was used by E-Control for the calculation of Entry/Exit charges. This capacity is assumed stable for the next two years, decreasing to 5.859.357 kWh/h/a for the last year (2028).

Considering the data published in ENTSOG Transparency platform[1], the capacity already booked under long-term contracts IP Arnoldstein Exit amounts to 7.476.077 kWh/h. This value is also confirmed by TAG[2] in its internet site.

[1] Source January 2024: https://transparency.entsog.eu/#/letters/data?from=2020-01-01&indicators=Physical%20Flow%2CFirm%20Technical%2CFirm%20Booked&points=at-tso-0003itp-00040exit&to=2028-10-01

[2] Source January 2024: https://www.taggmbh.at/transportkapazitaeten/endpoint/arnoldstein-exit/filter/overview/from/2025-01-01/to/2025-12-31/unit/kwhh

CSV Download

Overview | Arnoldstein Exit | 2025-01-01 - 2025-12-31 | kWh/h

Date	Technical Capacity	Available Technical Capacity Actual		Capacity Booked Total		Nomination Total		Renomination Total		Allocation Total		Measured Qua
	TC	TCA		CBT		NT		RNT		AT		M
	kWh/h	kWh/h	%	kWh/h	%	kWh/h	%	kWh/h	%	kWh/h	%	kWh/h
01.01.2025 06:00	50 014 969	50 014 969	100%	7 476 077	15%		%		%		%	
01.01.2025 07:00	50 014 969	50 014 969	100%	7 476 077	15%		%		%		%	
01.01.2025 08:00	50 014 969	50 014 969	100%	7 476 077	15%		%		%		%	

Figure 2: TAG GmbH Internet Site: booking situation for the calendar year 2025.

This value remains constant and reflects what is commonly referred to as a long-term booking situation, resulting from 20-year contracts acquired during the capacity auctions in 2008 and 2009 in connection with the new capacity made available to the market through Expansion 04 on the TAG system.

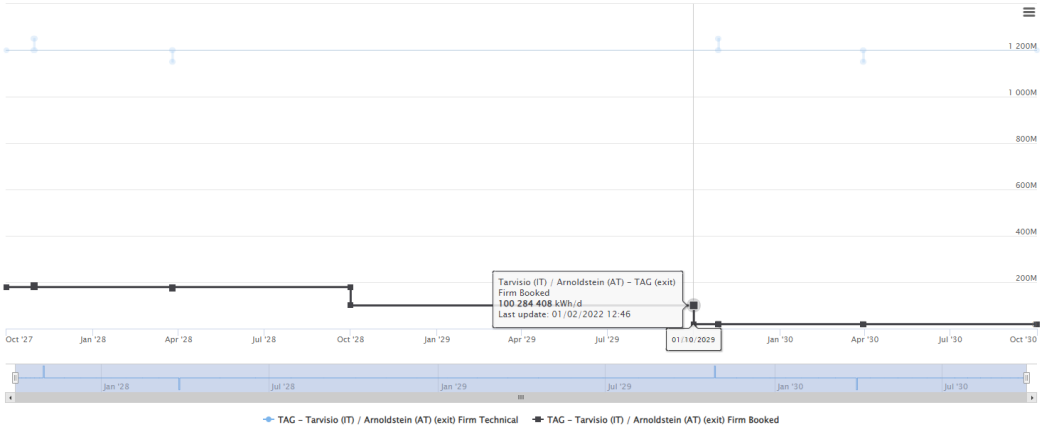

Figure 3: ENTSOG Transparency Platform: IP Exit Arnoldstein booking situation for the gas years 2028-29.

This value is 11.65% more than proposed in the model (6.683.747 kWh/h/a) (see following picture).

Please note that forecasted contracted capacity includes effects of multipliers, interruptible discounts and cross-border storage utilization

				Indicative volumes				
TSO	DIR	TYPE	NAME	2025	2026	2027	2028	
Forecasted Contracted Capacity								
GCA	Entry	FZK	FZK Entry Baumgarten	16.087.777	14.419.156	12.742.925	7.864.141	kWh/h
GCA	Entry	FZK	FZK Entry Oberkappel	10.987.013	13.111.878	14.062.693	14.029.621	kWh/h
GCA	Entry	FZK	FZK Entry Überackern	2.230.891	2.610.954	2.610.954	2.610.954	kWh/h
GCA	Entry	FZK	FZK Entry Moson	0	0	0	0	kWh/h
GCA	Entry	FZK	FZK Entry Petrzalka	0	0	0	0	kWh/h
GCA	Entry	FZK	FZK Entry Murfeld	0	0	0	0	kWh/h
GCA	Entry	FZK	FZK Entry Verteilergebiet	4.028.400	4.028.400	4.028.400	4.028.400	kWh/h
GCA	Exit	FZK	FZK Exit Baumgarten	4.599.481	2.947.158	2.947.158	2.161.436	kWh/h
GCA	Exit	FZK	FZK Exit Oberkappel	13.795.957	12.127.336	10.451.105	5.572.321	kWh/h
GCA	Exit	FZK	FZK Exit Überackern	324.117	324.117	324.117	364.632	kWh/h
GCA	Exit	FZK	FZK Exit Moson	6.142.392	4.398.470	4.398.470	4.406.869	kWh/h
GCA	Exit	FZK	FZK Exit Petrzalka	0	0	0	0	kWh/h
GCA	Exit	FZK	FZK Exit Murfeld	638.699	638.699	638.699	640.448	kWh/h
GCA	Exit	FZK	FZK Exit Verteilergebiet	21.422.795	21.422.795	21.422.795	21.481.488	kWh/h
GCA	Entry	DZK	DZK Entry ÜA (OK)	3.357.000	3.357.000	2.510.852	0	kWh/h
GCA	Exit	DZK	DZK Exit ÜA (OK)	6.431.372	6.233.937	4.224.448	0	kWh/h
GCA	Exit	DZK	DZK Exit Verteilergebiet (Bmg)	4.635.629	4.635.629	4.635.629	4.648.329	kWh/h
GCA	Exit	DZK	DZK Exit Verteilergebiet (OK)	2.378.663	2.378.663	2.378.663	2.385.180	kWh/h
GCA	Entry	UGS	Entry Speicher Penta West	0	0	0	0	kWh/h
GCA	Entry	UGS	Entry Speicher MAB	8.672.911	8.672.911	8.492.422	7.001.106	kWh/h
GCA	Exit	UGS	Exit Speicher Penta West	0	0	0	0	kWh/h
GCA	Exit	UGS	Exit Speicher MAB	7.574.727	7.574.727	7.755.216	9.264.695	kWh/h
TAG	Entry	FZK	FZK Entry Baumgarten	9.697.898	8.239.697	8.239.697	5.859.357	kWh/h
TAG	Entry	FZK	FZK Entry Arnoldstein	9.181.043	9.200.121	8.739.778	11.670.480	kWh/h
TAG	Exit	FZK	FZK Exit Arnoldstein	6.683.747	6.683.747	6.683.747	5.859.357	kWh/h
TAG	Exit	FZK	FZK Exit Verteilergebiet	3.562.672	3.562.672	3.562.672	3.562.672	kWh/h
TAG	Exit	FZK	FZK Exit VG-Kärnten	471.871	471.871	471.871	471.871	kWh/h
TAG	Entry	DZK	DZK Entry Arnoldstein (VG)	521.331	521.331	521.331	521.331	kWh/h

Figure 4: E-Control consultation document, simplified excel, forecasted contracted capacity TAG Exit Arnoldstein.

This level of booking, determined by long-term contracts, is constant until the end of September 2028, then it will decrease to 4.178.517 kWh/h/a for a year (till end of September 2029 – see Figure 3).

It is not clear why the indicative contracted capacities for the IP Arnoldstein Exit, forecasted short-term capacities included, are underestimated at the value of 6.683.747 kWh/h/a.

Furthermore, the analysis of historical flows at the IP Arnoldstein shows that from 1 January 2023 till now (end of January 2024) short-term capacity was sold on top of the levels defined by the long-term booking (7.476.077 kWh/h).

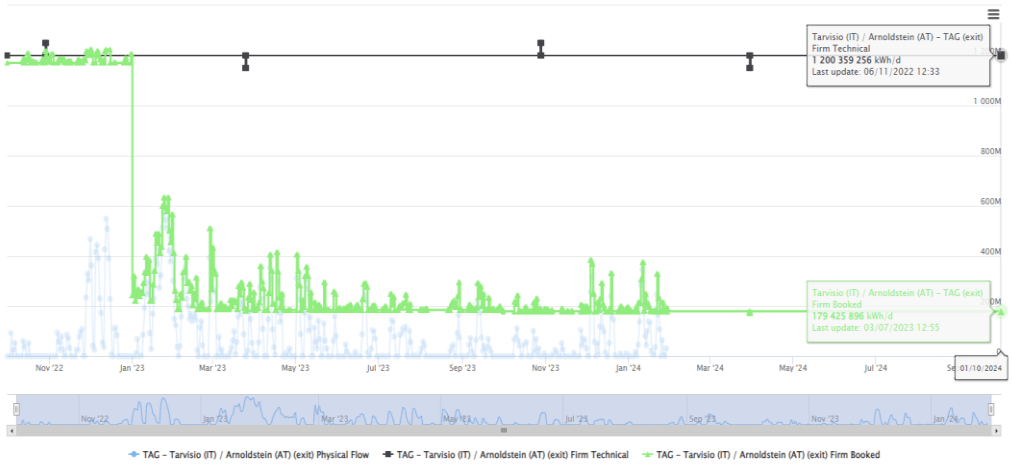

Figure 5: ENTSOG Transparency Platform: IP Exit Arnoldstein long and short-term booking situation for the calendar 2023.

Important spot activities during the last year have led to an additional booked capacity with an average value of 2.414.509 kWh/h/a. This amount, although not certain, but statistically very probable, could thus be added to the 7.476.078 kWh/h on a long-term basis, reaching 9.890.587 kWh/h.

Furthermore, this capacity will be divided between monthly, quarterly and daily bookings. Their economic contribution will be much larger than if it was booked only on an annual basis (E-Control's proposal foresees multipliers of three for the daily capacity of the new tariff period).

It is difficult for us to estimate the real contribution to additional revenues the short-term booking brings thank to multipliers. Nevertheless, even without investigating such an aspect, the introduction of the new values has a positive effect on the costs, not just from Baumgarten Entry to Arnoldstein exit as shown by the simplified model, but also for the delivery to the Austrian distribution.

		€/kWh/h/a	€/kWh/h/a	Δ €kWh/h/a	
Baumgarten	Entry	**1,11**	**1,17**	**0,06**	**5,4%**
Oberkappel	Entry	**2,97**	**2,98**	**0,01**	**0,3%**
Arnoldstein	Entry	**4,18**	**3,97**	**-0,21**	**-5,0%**
Distribution	Exit	**1,11**	**1,02**	**-0,09**	**-8,1%**
Oberkappel	Exit	**2,48**	**2,29**	**-0,19**	**-7,7%**
Arnoldstein	Exit	**3,47**	**3,21**	**-0,26**	**-7,5%**

B. Regulated cost methodology

We understand that several parameters of the Austrian cost methodology are in the process of being changed and that negotiations are ongoing between the TSOs and the Regulator to determine the allowable remuneration for RP5. Unfortunately, pursuant to Article 69 of GWG2011, Gas Intensive and

other market participants are not involved in the consultation on the TSOs' cost methodology. We hope that during the transposition of the new decarbonisation package into Austrian law, or at the first opportunity that arises with a revision of the law, Article 69 of GWG2011 could be amended.

This amendment should allow market participants, who have a net interest in the results of negotiations between TSOs and E-Control, to contribute their opinions to the official evaluation process of cost methodologies. Although regulated costs are not directly part of this consultation, we would like to take this opportunity to express that the market is very sensitive to this issue. In light of this, we would like to share our views on how specific costs should be regulated:

1. **capacity risk premium of 3,5%**. In RP4 the capacity risk premium amounts to an additional 3.50 percentage points, resulting in a pre-tax real interest rate of 10,04% for the equity side. Unfortunately, there are no publicly available documents which present the status of the RAB divided by equity and debt part of the two TSOs. Missing this information, it is not possible to calculate the real amount of funds generated by the application of the capacity risk premium since 2013. Is it possible to know that amount?

   According to the consultation document, the capacity risk premium will no longer be used in the next regulatory period, thus contributing to the decrease of the cost of capital.

   Being foreseen by E-Control as an insurance policy for the market participant / shippers to potential increase of tariffs by decreasing of bookings, we would have expected that such policy, paid by the market participants starting with the second regulatory period in 2013, would have had effect with the RP5 due to the decreased booking situation.

   In our view, if E-Control decides to abolish the mechanism, then the risk premium paid to the TSOs since the 2nd RP has to be returned to the market participants in full (net of the potential use by TSOs of funds generated by the risk premium paid by shippers during regulation periods 2, 3 and 4 due to the decrease of booked capacity below the threshold set by the regulator) by decreasing the new tariffs for RP5.

Nominal weighted average cost of capital (WACC)	
Risk-free rate of debt capital	0.560%
Premium for debt capital	1.050%
Cost of debt (pre-tax)	**1.610%**
Risk-free rate of equity capital	1.080%
Market risk premium	4.500%
Ungeared beta	0.400
Geared beta	0.850
Cost of equity (post-tax)	4.905%
Cost of equity (pre-tax)	**6.540%**
Capacity risk premium	3.50%
Cost of equity (pre-tax, incl. risk premium)	10.040%
Debt ratio of the total capital	60%
Equity ratio of the total capital	40%
Tax rate	25%
WACC (pre-tax, incl. risk premium)	**4.982%**
WACC (pre-tax, excl. risk premium)	**3.582%**

Figure 6: WACC of the RP4.

2. the **replacement values** associated with the equity-financed part of the RAB and their **historical revaluation index/factors** have functioned as a mechanism contributing to the ongoing issue of over-remuneration for Transmission System Operators (TSOs) since the commencement of the 2nd regulatory period.

   We acknowledge and commend E-Control for its prior successful efforts in reforming the system. This includes the elimination, as of Regulatory Period 4 (RP4), of the distinction between equity- and debt-financed investments. New investments, now part of the interest-bearing capital base, are calculated at book value. This restructuring also impacted asset depreciation. For assets acquired before 2020, depreciation continues based on 30-year periods for pipelines and 12-year periods for other investments. From 2021 onward, new investments follow financing accounting principles.

   The uncertainty lies in whether changes will be implemented regarding the treatment of "old investments" and the imperative to rectify the issue of over-remuneration.

   The excess remuneration significantly contributed to the TSOs' cost of capital for Regulatory Period 4 (RP4), amounting to €90,987,500.

Assets	Pipelines	Compressors	Total
GCA	326.885.300 €	154.681.800 €	**481.567.100 €**
TAG	525.491.000 €	438.068.000 €	**963.559.000 €**
	852.376.300 €	592.749.800 €	1.445.126.100 €
Cost of capital			
GCA	**31.231.700 €**		
TAG	**59.755.800 €**		
	90.987.500 €		
Depreciation	Pipelines	Compressors	Total
GCA	26.720.000 €	24.699.900 €	**51.419.900 €**
TAG	40.446.900 €	62.123.800 €	**102.570.700 €**
	67.166.900 €	86.823.700 €	153.990.600 €
OPEX	Energy	Maintenace	Total
GCA	7.500.000 €	34.153.700 €	**41.653.700 €**
TAG	65.401.900 €	35.271.400 €	**100.673.300 €**
	72.901.900 €	69.425.100 €	**142.327.000 €**

Allowed revenues RP4	
GCA	**126.092.600 €**
TAG	**278.833.200 €**
	404.925.800 €

Figure 7: RP4, data in compliance with Article 30(1)(a) e (b) Tariff NC.

This results in a return of over 22% annually, exceeding the expected official pre-tax Weighted Average Cost of Capital (WACC)of 4,982%.

Given the absence of information on negotiations between TSOs, E-Control, and social partners, we propose eliminating any previously guaranteed over-remuneration. This approach aligns with fair remuneration principles for TSOs, especially in years when many market participants face losses due to prolonged exposure to long-term contracts. This proposal adheres to the GWG2011 and European law.

To address this, we recommend abolishing the distinction for 'old investments' between equity-financed (replacement values) and debt-financed (book value) grid assets. Retroactively transforming the entire Regulatory Asset Base (RAB) into book value since 2011 would reduce regulated costs for RP5 while maintaining fair remuneration for TSOs.

3. The role of new investments and reinvestments in the Regulatory Asset Base (RAB) for RP5 remains unclear. Gas Intensive has observed changes in the technical capacity of the Transmission System Operators (TSOs), which lack explanation in the consultation document. Given the declining bookings on the existing transportation system, it is challenging to comprehend the potential expansion and creation of new technical capacity. Gas Intensive seeks clarity on the TSOs' strategy in this regard.

   We hope that any expansions or reinvestments in the network, primarily driven by the interest in transporting hydrogen in the future, will not be funded by natural gas transport. We emphasize the importance of adhering to the "cost causation" principle, wherein the costs associated with providing a service should be borne by those who benefit from or contribute to the incurrence of these costs.

C. Compressor energy costs

With respect to commodity tariffs, Gas Intensive has observed that essential information is absent, potentially resulting in an overestimation of the overall cost for compressor energy.

The prices and quantities of natural gas, electricity, and CO_2 allowances for the year 2025 and beyond, utilized by each Transmission System Operator (TSO) to project the overall costs of €50.000.000 for compressor energy, are presumed to be closely linked to the corresponding values of the respective futures contracts for the year 2025.

The projected flows, derived from the forecasted contractual capacities for the years beyond 2025, form the basis for determining the requirement for compressor energy.

Points	Forecasted flow for 2025
	MWh
Entry points GCA	141 843 857
Entry points TAG	66 969 421
Exit points GCA	143 526 582
Exit points TAG	45 057 615

Figure 8: forecasted flows for the year 2025.

Referring to Figure 9, it seems that TSOs estimated the allocations of capacities for 2025 to be approximately 40% of the forecasted contracted capacities for the same year. These values are quite low and encompass all capacities related to domestic clients and storages.

		Forecasted contracted capacity 2025			Forecast allocations 2025	
		kWh/h	Nm3/h	Nm3/y	Nm3/y	Allocation/Contracted
GCA	Entry	45.363.993	4.053.976	35.610.126.320	12.675.947.867	**36%**
TAG	Entry	19.400.272	1.733.715	15.228.953.608	5.984.756.134	**39%**
GCA	Exit	96.380.918	8.613.129	75.657.728.474	12.826.325.442	**17%**
TAG	Exit	14.752.833	1.318.394	11.580.776.146	4.026.596.477	**35%**

Figure 9: proportion of the allocated capacities over the contracted capacities for 2025.

Referring to Figure 10, which presents data solely dedicated to entry/exit points from/to other market areas, we observe an increase in allocations over contracted capacities. However, when considering both TSOs, the proportion varies from 16% (GCA Exit) to 63% (TAG Exit). Conversely, entry quantities are close to 40%. This suggests that either TSOs and E-Control anticipate a significant portion of the forecasted booked capacity to remain unutilized, or the forecasted allocations for 2025 are underestimated, leading to an increase in commodity charges. It is worth saying that the long-term UIOLI could be effective under 80% of used capacity by the network user.

			Forecasted contracted capacity 2025			**Forecast allocations 2025**	
			kWh/h	Nm3/h	Nm3/y	Nm3/y	Allocation/Contracted
out	GCA	Entry	32.662.682	2.918.917	25.639.767.224	11.188.200.818	**44%**
out	TAG	Entry	19.400.272	1.733.715	15.228.953.608	5.984.756.134	**39%**
out	GCA	Exit	31.932.017	2.853.621	25.066.205.311	3.984.236.448	**16%**
out	TAG	Exit	6.683.747	597.296	5.246.651.801	3.317.468.532	**63%**

Figure 10: proportion of the allocated capacities over the contracted capacities for 2025 just at the entry and exit points with other market areas.

According to the information published by E-Control for the 4th regulatory period, the total of the commodity component included in the capacitive tariff is €7,500,000 for GCA and €65,400,000 for TAG (amounting to €72,900,000 for the Market Area East). For the current consultation, an aggregated value of €50,000,000 has been proposed for compressor energy costs.

From the consultation document, we can infer that the estimated booked capacity for the 5th regulatory period has consistently decreased compared to the 4th regulatory period. Simultaneously, it's noteworthy that technical capacities have undergone changes, particularly for GCA.

RP4					RP5				
		Technical kWh/h	**Booked** kWh/h	Booked in % of tech. capacity			**Technical** kWh/h	**Booked** kWh/h	Booked in % of tech. capacity
GCA	EN	**59.139.150**	45.566.631	**77%**	**GCA**	EN	**73.311.786**	39.276.215	**54%**
	EX	**79.483.538**	67.579.017	**85%**		EX	**84.053.142**	67.943.832	**81%**
	Tot	138.622.688	113.145.648	**82%**		Tot	157.364.928	107.220.047	**68%**
TAG	EN	75.725.751	58.175.902	**77%**	**TAG**	EN	76.318.373	25.488.050	**33%**
	EX	54.625.182	53.690.694	**98%**		EX	54.049.512	10.718.290	**20%**
	Tot	130.350.934	111.866.596	**86%**		Tot	130.367.885	36.206.340	**28%**

Figure 11:Comparison of technical and booked capacities of the 4th and 5th regulatory period for TSOs and entry and exit points.

Booked capacity in % for RP5 compared to RP4 with constant technical capacity (RP4)		
GCA	En	**-14%**
	Ex	**1%**
	Tot	**-5%**
TAG	En	**-56%**
	Ex	**-80%**
	Tot	**-68%**

Figure 12: Decrement (increment) of booked capacities for the RP5 in comparison to 4th regulatory period, for TSOs and entry and exit points, by maintaining as reference values the technical capacities of RP4.

With this evidence, it seems plausible that the forecasted flows will decrease significantly from RP4 to RP5.

	Operational expenditures in 1.000 EUR – incl. compressor energy (for each year of the regulatory period 2021-2024)
GCA	41.653,7 (incl. compressor energy: 7.500,0)
TAG	100.673,3 (incl. compressor energy: 65.401,9)
Total	**142.327,0 (incl. compressor energy: 72901,9)**

Figure 13: operational expenditures for the RP4 according to Article 30 (1)(b)(iii)(4) TAR NC.

Based on the current market prices for gas, electricity, and CO_2 allowances, as depicted in the following images, Gas Intensive believes that these prices are approximately 50% higher than those used for RP4.

OTC-Preise Gas (EUR/MWh) (Quelle: GANEXO)						
Produkt	THE	THE Vortag	TTF	TTF Vortag	ZEE	ZEE Vortag
Day Ahead	29,71	28,78	29,31	28,41	27,74	29,27
BOM	29,92	28,83	29,33	28,31	29,24	28,96
Feb 2024	28,88	28,53	28,21	28,11	28,93	28,31
Mär 2024	30,04	29,04	29,38	28,30	29,91	27,89
Apr 2024	30,17	29,32	29,61	28,59	30,06	29,15
Q2/2024	30,04	29,35	29,62	28,60	27,61	28,82
Q3/2024	30,72	29,83	30,23	29,40	31,31	29,89
Q4/2024	33,34	33,48	32,89	32,64	33,18	32,72
Jahr 2025	33,46	33,35	32,70	32,54	32,81	32,49
Jahr 2026	30,87	30,76	29,97	29,87	30,59	30,24
Jahr 2027	28,40	28,20	27,52	27,32	28,84	28,18

Figure 14: 31 January Gas futures prices3

Strom Terminmärkte (EUR/MWh) (Quelle: EEX)				
Zeitraum	DE Base	DE Peak	AT Base	AT Peak
Feb 2024	70,33	81,85	75,42	87,48
Mär 2024	66,75	71,79	71,38	76,67
Apr 2024	64,11	63,84	66,17	65,87
Q2/2024	64,19	64,20	66,27	66,25
Q3/2024	73,30	74,17	75,53	76,45
Q4/2024	87,62	105,50	94,07	111,65
Jahr 2025	80,53	89,87	85,03	95,07
Jahr 2026	72,75	82,45	77,00	87,45
Jahr 2027	68,09	79,00	72,09	84,00

Emissionen	
Produkt	Wert
EUA (EEX)	
Jahr 2025	65,74 Eur/t
Jahr 2026	67,96 Eur/t
Jahr 2027	70,33 Eur/t
EUA (Spectron)	
Jahr 2025	66,24 Eur/t
Jahr 2026	68,35 Eur/t
Jahr 2027	n/a

Figure 15: Electricity and CO_2 allowance futures prices.

Considering this, it is hard to imagine a significant increase in the GCA's energy costs from 7.500.000 euro to 26.000.000 euro, given also the 5% decrease in expected flows.

	Energy costs		
	RP4	RP5	
GCA	7.500.000,00 €	26.000.000,00 €	**247%**
TAG	65.400.000,00 €	24.000.000,00 €	**-63%**
Tot	72.900.000,00 €	50.000.000,00 €	**-31%**

Figure 16: difference in energy costs between the two regulatory periods.

[3] Source Energate messenger 31 January 2024.

As for TAG, costs of 24.000.000 € represent a 63% reduction from the previous quantities used in RP4. The overall decrease in booked capacity between the two regulatory periods amounts to 68%, with a more pronounced 80% reduction at the IP exit Arnoldstein (quantity really significant for the evaluation of annual consumption a transportation system with a predominant flow).

It's crucial to emphasize that the costs for compression energy are not linear but follow a parabolic relationship with the increasing transported flow in the pipeline, a fundamental hydraulic principle applicable to all pipeline systems.

According to this physical law, it can be envisioned that if the topology and physical characteristics of the pipeline remain unchanged, a linear decrease in the transported quantity results in a much more substantial decrease in transportation costs.

As a consequence, below certain flow quantities (~15% of the technical capacity), the need for compressor energy tends towards zero. Concerning GCA, the increase in technical capacity, as shown in the previous picture, can contribute to a better hydraulic outcome, leading to reduced compressor energy usage.