

APPENDIX TO CONSULTATION DOCUMENT 502/2022/R/GAS ON TARIFF REGULATORY CRITERIA FOR THE NATURAL GAS TRANSMISSION AND METERING SERVICE FOR THE SIXTH REGULATORY PERIOD (6PRT)

ANALYSIS AND SIMULATIONS

1. Whereas

- 1.1 Consistently with the transparency requirements of the TAR NC, this Appendix makes available the data and information – in addition to the ones contained in the consultation document – which, pursuant to Article 26 of the TAR NC, must be published as part of the final consultation of the regulatory criteria for the 6PRT.
- 1.2 It should be pointed out that the estimates of revenues and tariff levels set out in this Appendix, reflecting specific assumptions on the estimated reference revenues and capacities to be allocated, are to be understood as indicative, in line with what is explicitly provided for in Article 26, paragraph 1, letter a), point iii. and letters b) and d), and, therefore, do not constrain ARERA in any way and cannot constitute future concessions to transmission users.

2. Information on the technical characteristics of the transmission grid

- 2.1 Pursuant to Article 26, paragraph 1, letter a), point i) of the TAR NC, the information referred to in Article 30, paragraph 1, letter a), points i), iv) and v) of the TAR NC is set out below, namely:
 - a) the forecasted contracted capacity at entry and exit points (Table 1:);
 - b) the structural representation of the transmission grid with an adequate degree of detail (Figure 1 and Figure 2);
 - c) additional technical information on the transmission grid (Table 2: and Table 3:).

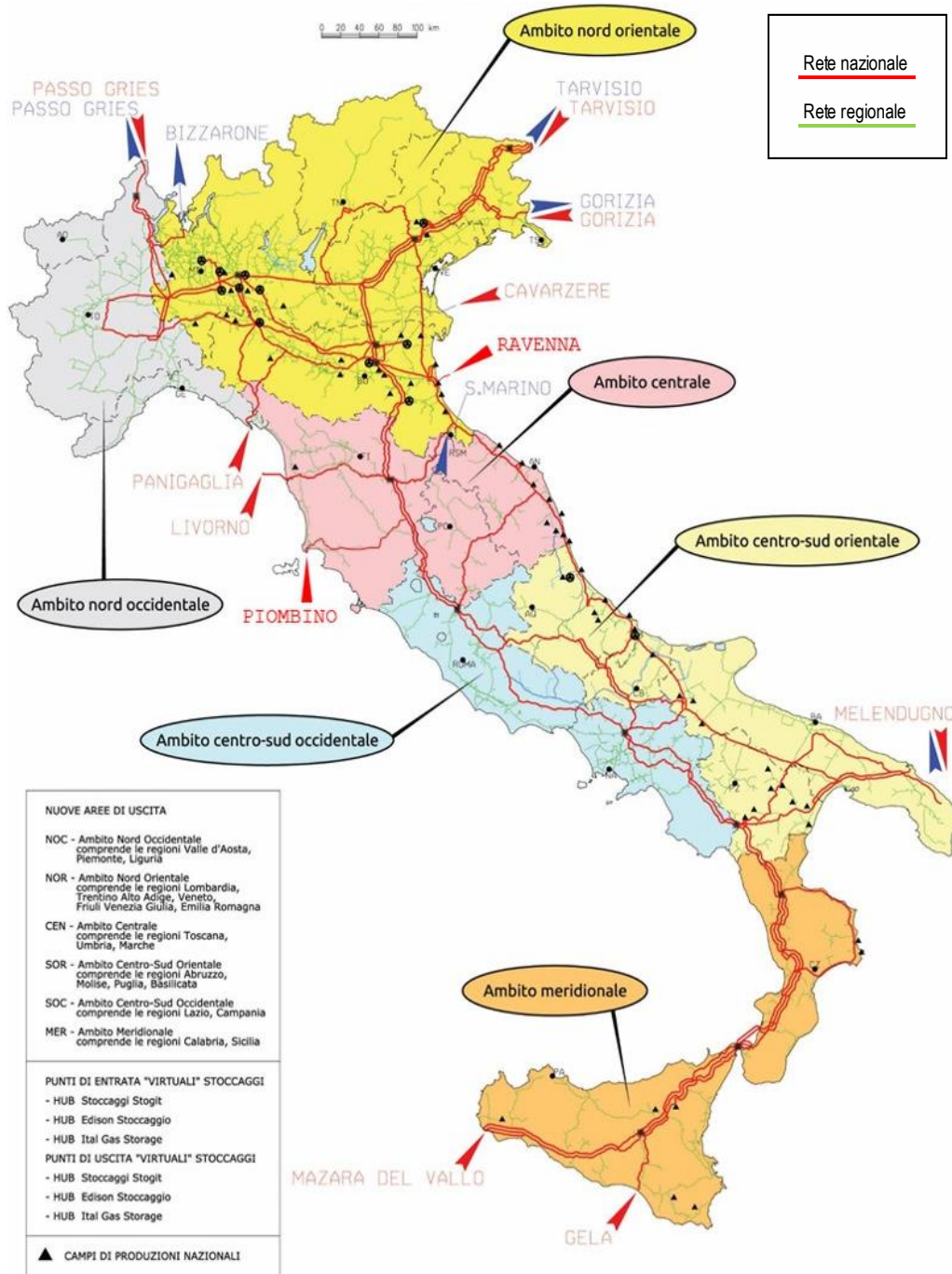
Table 1: Forecasted contracted capacities for the year 2024 (MSm³/d)

Entry points	2023	2024		Exit points	2023	2024	
Mazara del Vallo	60,65	70,00	15%	Delivery points <15 km	211,49	206,99	-2%
Gela	12,00	13,20	10%	Delivery points >15 km	230,15	225,26	-2%
Passo Gries (CH)	12,18	15,30	26%	San Salvo	16,84	16,84	0%
Tarvisio (AT)	68,80	20,00	-71%	Sabbioncello	5,58	5,58	0%
Gorizia (SI)	0,00	0,00	0%	Minerbio	12,33	12,33	0%
Melendugno TAP	25,44	25,40	0%	Sergnano	11,18	11,18	0%
GNL Panigaglia	5,20	8,10	56%	Settala	5,58	5,58	0%
GNL Cavarzere	22,90	24,40	7%	Brugherio	3,36	3,36	0%
GNL OLT Livorno	11,20	11,30	1%	Ripalta	10,61	10,61	0%
FSRU Ravenna ⁽¹⁾	-	7,00	-	Corte	8,41	8,41	0%
FSRU Piombino ⁽¹⁾	-	14,00	-	Collalto	3,42	3,42	0%
Hub 1 - Ripalta	0,39	0,60	54%	Cellino	0,72	0,72	0%
Hub 2 - Ravenna	2,27	1,79	-21%	Castel Bolognese	2,23	2,23	0%
Hub 3 - Rubicone	0,72	0,98	37%	Bordolano	8,41	8,41	0%
Hub 4 - Falconara	3,54	3,75	6%	Cornegliano	1,44	1,44	0%
Hub 5 - Pineto	0,74	0,45	-39%	Bizzarone (CH)	0,83	0,84	1%
Hub 6 - S.Salvo	0,13	0,16	26%	Gorizia (SI)	0,00	0,10	
Hub 7 - Candela	0,20	0,17	-15%	R. S. Marino	0,36	0,37	3%
Hub 8 - Monte Alpi	3,35	3,67	10%	Passo Gries (CH)	2,60	4,10	58%
Hub 9 - Crotone	1,02	0,93	-9%	Melendugno TAP	0,41	0,40	-2%
Hub 10 - Gagliano	0,43	0,49	15%	Tarvisio (AT)	2,60	12,10	365%
San Salvo	19,27	19,27	0%	TOT	538,55	540,27	0%
Sabbioncello	6,64	6,64	0%				
Minerbio	18,67	18,67	0%				
Sergnano	18,67	18,67	0%				
Settala	13,25	13,25	0%				
Brugherio	3,22	3,22	0%				
Ripalta	7,84	7,84	0%				
Corte	4,02	4,02	0%				
Collalto	4,34	4,34	0%				
Cellino	0,80	0,80	0%				
Castel Bolognese	2,83	2,83	0%				
Bordolano	8,03	8,03	0%				
Cornegliano	2,25	2,25	0%				
TOT	340,96	331,51	-3%				

Source: Snam Rete Gas S.p.A. based on the best estimates available to date.

⁽¹⁾ Hypothesised entry into operation of FSRU Piombino in the year 2023, and FSRU Ravenna in mid-year 2024.

Figure 1: Representation of the network of natural gas pipelines to the year 2024



Source: Snam Rete Gas S.p.A.

Figure 2: Representation of the network of natural gas pipelines to the year 2024 – Detail of national production



Source: Snam Rete Gas S.p.A.

Table 2: Transmission company networks in 2021 (km)

Company	National Network	Regional Network	TOT
Consorzio della Media Valtellina per il trasporto del gas	-	51	51
Energie Rete Gas	-	142	142
GP Infrastrutture Trasporto	-	42	42
Infrastrutture Trasporto Gas	83	-	83
Metanodotto Alpino	-	76	76
Netenergy Service	-	35	35
Retragas	-	421	421
Snam Rete Gas	9.572	23.112	32.684
Società Gasdotti Italia	661	1.058	1.719
TOT	10.316	24.937	35.253

Source: ARERA, Annual survey on regulated sectors.

2.2 In relation to points on the transmission grid, the system has 6 interconnection points with foreign systems, 13 points to/from storage facilities, about 70 entry points from national production, about 80 entry points from biomethane production, 3 entry points from LNG regasification terminals, and more than 6,800 redelivery points¹. Of these, most relate to interconnections between transmission grids and distribution networks, and to industrial customers; there are also around 130 redelivery points that supply thermoelectric plants, and over 800 redelivery points for motor vehicles filling stations (Table 3:).

Table 3: Number of redelivery points on the transmission grid by type

Company	Distribution	Industrial	Power plants	Vehicle stations	Other	TOT
Consorzio della Media Valtellina per il trasporto del gas	13	-	-	-	-	13
Energie Rete Gas	18	14	-	-	-	32
GP Infrastrutture Trasporto	4	-	-	-	116	120
Infrastrutture Trasporto Gas	-	-	-	-	-	-
Metanodotto Alpino	11	1	4	-	3	19
Netenergy Service	-	16	-	1	2	19
Retragas	98	103	2	6	90	299
Snam Rete Gas	2.850	2.334	116	807	6	6.113
Società Gasdotti Italia	108	95	3	30	5	241
TOT	3.102	2.563	125	844	222	6.856

Source: redelivery points database communicated by transmission operators as part of tariff proposals for the year 2023. Only those points at which capacity was planned to be allocated in 2023 were considered.

¹ Considering only those points at which capacity allocation has been envisaged in 2023.

3. Indicative revenue information

3.1 Pursuant to Article 26, paragraph 1, letter b) of the TAR NC, the information referred to in Article 30, paragraph 1, letter b), points i), iv) and v) of the TAR NC is set out at Table 4: below, namely:

- the target revenues of the transmission system operator;
- transmission services revenue, showing revenues to be recovered by capacity-based tariffs, and revenue to be recovered by commodity-based tariffs;
- the following ratios for the transmission services revenue:
 - capacity-commodity split, meaning the breakdown between the revenue from capacity-based transmission tariffs and the revenue from commodity-based transmission tariffs;
 - entry-exit split, meaning the breakdown between the revenue from capacity-based transmission tariffs at all entry points and the revenue from capacity-based transmission tariffs at all exit points;
 - intra-system/cross-system split, meaning the breakdown between the revenue from intra-system network use at both entry points and exit points and the revenue from cross-system network use at both entry points and exit points calculated as set out in Article 5 of the TAR NC.

3.2 The same Table 4: also shows the indicative revenues for the transmission metering service, classified as a non-transmission service.

Table 4: Information required under Article 26, paragraph 1, letter b) of the TAR NC

<i>(Values in millions of €)</i>	2023	2024	
Indicative target revenue	2.413	2.989	24%
Indicative transmission services revenue	2.367	2.947	24%
to be recovered by capacity-based tariffs	1.791	1.892	6%
<i>at entry points</i>	502	473	-6%
<i>at exit points</i>	1.290	1.419	10%
to be recover by commodity-based tariffs	576	1.055	83%
Capacity-commodity split	76 / 24	64 / 36	
Entry-exit split	28 / 72	25 / 75	
Intra-system / cross-system split			
<i>Comp_{CAP}</i>	0,6%	3,8%	
<i>Comp_{COMM}</i>	0,0%	0,0%	
Non-transmission service revenue (metering)	45	42	-7%

Revenues for the year 2024 were estimated on the basis of the following assumptions: value of the rate of return on recognised invested capital (WACC) equal to 5.1%, which is equal to the value used for the purpose of determining the tariffs for the year 2023; remuneration of fixed assets in progress according to the recommendation put forward in the DCO, using a rate equal to 1.86% for the remuneration of assets under development whose expenditure was incurred in the years 2020 and 2021; value of the gross fixed capital formation deflator relevant for updating the value of assets for the year 2024 equal to 3.3%, based on the average annual change recorded in the last four quarters available; valuation of the quantities recognised to cover losses, fuel gas and UFG equal to 33 €/GJ (119 €/MWh), based on the quotations in the last available month of forward products at VTP with delivery in the year 2024; valuation of the component to cover ETS charges equal to 83.25 €/tCO₂, based on the results of the 2022 auctions as available at the time of publication of this document. The estimate also takes into account new investments that, based on the information provided by the operators, are expected to contribute to the value of the recognised invested capital, as well as assets that are reaching the end of their useful life. The estimate does not take into account any reconciliation of revenues related to year 2022.

For operating costs, the estimate was made considering the actual 2021 operating cost level.

4. Indicative information on charges

Capacity-based charges

4.1 In compliance with Article 26, paragraph 1, letter a), points iii) and iv) of the TAR NC, in the following Table 5: are listed:

- a) the approved reference prices for the year 2023;
- b) the indicative reference prices for the year 2024, calculated according to the methodology set out in Article 8 of the TAR NC;
- c) indicative reference prices for the year 2024, calculated according to the methodology proposed in this consultation.

4.2 The simulations take into account the entry into operation of two new entry points from FSRU, assumed at Piombino (during the year 2023, and thus fully operational in 2024) and at Ravenna (mid-2024). With regard to simulations on the tariff impacts of the methanization of Sardinia, as well as the entry into operation of the exit point at Gela, please refer to the following Chapters 7 and 8.

Table 5: Capacity-based charges and comparison of reference price methodologies

[euro/year/Scm/day]		Charges approved for year 2023	Indicative charges for year 2024, determined according to the methodology set out in Art. 8 of the TAR NC	Indicative charges for year 2024, determined according to the proposed methodology	Δ 2023	Δ art. 8 TAR NC
Entry	Mazara del Vallo	€ 3,208491	€ 6,0	€ 3,0	-6%	-50%
	Gela	€ 2,941395	€ 5,5	€ 2,8	-6%	-50%
	Passo Gries (CH)	€ 1,309781	€ 2,4	€ 1,2	-7%	-50%
	Tarvisio (AT)	€ 1,317727	€ 2,5	€ 1,2	-7%	-50%
	Gorizia (SI)	€ 1,237010	€ 2,3	€ 1,1	-8%	-50%
	Melendugno TAP	€ 2,133742	€ 4,0	€ 2,0	-6%	-50%
	GNL Panigaglia	€ 1,068528	€ 2,0	€ 1,0	-6%	-50%
	GNL Cavarzere	€ 0,965054	€ 1,8	€ 0,9	-7%	-50%
	GNL OLT Livorno	€ 1,284901	€ 2,4	€ 1,2	-6%	-50%
	FSRU Ravenna ⁽¹⁾	-	€ 1,7	€ 0,9	-	-50%
	FSRU Piombino ⁽¹⁾	-	€ 2,4	€ 1,2	-	-50%
	Produzione Hub 1 - Nord-Occid.	€ 0,852486	€ 1,6	€ 0,8	-7%	-50%
	Produzione Hub 2 - Nord-Orient.	€ 0,845975	€ 1,6	€ 0,8	-7%	-50%
	Produzione Hub 3 - Rubicone	€ 0,875385	€ 1,6	€ 0,8	-7%	-50%
	Produzione Hub 4 - Falconara	€ 1,000593	€ 1,9	€ 0,9	-6%	-50%
	Produzione Hub 5 - Pineto	€ 1,160661	€ 2,2	€ 1,1	-6%	-50%
	Produzione Hub 6 - S.Salvo	€ 1,365902	€ 2,6	€ 1,3	-6%	-50%
	Produzione Hub 7 - Candela	€ 1,516806	€ 2,9	€ 1,4	-6%	-50%
	Produzione Hub 8 - Monte Alpi	€ 1,828994	€ 3,4	€ 1,7	-6%	-50%
	Produzione Hub 9 - Crotone	€ 2,279243	€ 4,3	€ 2,1	-6%	-50%
Produzione Hub 10 - Gagliano	€ 2,744635	€ 5,2	€ 2,6	-6%	-50%	
Hub Stoccaggio	€ 0,467787	€ 0,9	€ 0,4	-7%	-50%	
Exit	Delivery points <15 km	€ 2,556618	€ 1,9	€ 2,8	9%	50%
	Delivery points >15 km	€ 2,703044	€ 2,0	€ 2,9	9%	50%
	Hub Stoccaggio	€ 1,167947	€ 0,9	€ 1,3	11%	50%
	Bizzarone (CH)	€ 2,967050	€ 2,2	€ 3,3	11%	50%
	Gorizia (SI)	€ 2,629669	€ 2,1	€ 3,2	20%	50%
	R. S. Marino	€ 2,130504	€ 1,6	€ 2,4	10%	50%
	Passo Gries (CH)	€ 3,280872	€ 2,4	€ 3,7	12%	50%
	Melendugno TAP	€ 3,627945	€ 2,5	€ 3,7	2%	50%
	Tarvisio (AT)	€ 3,265130	€ 2,3	€ 3,4	6%	50%

⁽¹⁾ Hypothesised entry into operation of FSRU Piombino in the year 2023, and FSRU Ravenna in mid-year 2024.

The indicative reference prices for the year 2024 have been determined on the basis of the estimated revenues for the year 2024, using as drivers the best estimate of the forecasted contracted capacity at the time of publication of this document, based on data supplied by Snam Rete Gas. The most up-to-date forecast capacity values will be used when approving the tariffs for the year 2024.

4.3 As regards the difference in the level of transmission tariffs between the approved charges for the year 2023 and the indicative charges for the year 2024 according to the proposed methodology, it is noted that:

- a) revenues to be recovered through capacity-based transmission tariffs increase by 6%; the change in the entry-exit split, from 28/72 to 25/75, has an impact

of approximately -11% on revenues to be recovered at entry points and of approximately +4% on revenues to be recovered at exit points; the combination of these effects results in a change of approximately -6% in revenues to be recovered at entry points and of approximately +10% in revenues to be recovered at exit points;

- b) forecasted contracted capacities show a change of about -2.8% at entry points, while they are essentially stable at exit points (+0.3%);
- c) on average, the impact on the tariff charges given by (i) change in revenues to be recovered through capacity charges, (ii) change in the entry-exit split and (iii) change in the forecasted contracted capacities is equal to approximately -3.0% for entry charges and +9.7% for exit charges.

4.4 As regards the comparison between the indicative charges for the year 2024 according to the proposed methodology and those determined on the basis of the methodology set forth in Article 8 of the TAR NC, it is noted that the difference (-50% on entry charges, +50% on exit charges) is solely due to the different entry/exit split, equal to 25/75 in the proposed methodology (instead of 50/50).

Commodity-based charges and non-transmission tariffs

4.5 In compliance with Article 26, paragraph 1, letter a) of the TAR NC, the following Table 6: shows the indicative values of:

- the commodity-based charges;
- transmission metering service tariffs.

Table 6: Other charges

		Charges approved for year 2023	Indicative value for year 2024
Commodity-based charge CV_U (€/Sm ³)		€ 0,0069920	€ 0,012
Complementary revenue recovery charge CV_{FC} (€/Sm ³)		€ -	n.d.
Metering charge CM_T (€/y/Sm ³ /d)		€ 0,101164	€ 0,096
End users metering charge CM_{CF} (€/y/Sm ³ /d)	$Q_{ero} < 4.000 \text{ Sm}^3/\text{h}$	€ 0,441043	€ 0,905
	$Q_{ero} > 4.000 \text{ Sm}^3/\text{h}$		€ 0,136

The charges were determined on the basis of estimated revenues for the year 2024. The charge to cover variable costs was determined using volumes for the year 2022 as the driver, based on an estimate supplied by Snam Rete Gas. The metering charge was determined using the best estimate of the expected capacity to be allocated at the time of publication of this document as the driver. The most up-to-date forecast capacity values will be used when approving the tariffs for the year 2024.

5. Allocation of costs

5.1 The following Table 7: shows the results, components and details of the cost allocation assessment under Article 5 of the TAR NC, based on the indicative values of the charges for the year 2024.

Table 7: Cost allocation assessment under Art. 5.1 of the TAR NC

<i>Revenue</i> ^{intra} _{cap}	€ 1.804.588.665	<i>Revenue</i> ^{intra} _{comm}	€ 1.011.902.050
<i>Revenue</i> ^{cross} _{cap}	€ 87.751.158	<i>Revenue</i> ^{cross} _{comm}	€ 42.603.444
<i>Driver</i> ^{intra} _{cap}	525.740.308	<i>Driver</i> ^{intra} _{comm}	162.203.519.276
<i>Driver</i> ^{cross} _{cap}	26.555.602	<i>Driver</i> ^{cross} _{comm}	6.829.147.678
<i>Ratio</i> ^{intra} _{cap}	0,34%	<i>Ratio</i> ^{intra} _{comm}	0,62%
<i>Ratio</i> ^{cross} _{cap}	0,33%	<i>Ratio</i> ^{cross} _{comm}	0,62%
Comp _{cap}	3,80%	Comp _{comm}	0,00%

6. Simplified tariff model

6.1 At the same time as this consultation document is published, the main transmission operator will make available a simplified tariff model enabling network users to calculate, on an indicative basis, the applicable transmission tariffs for the year 2024 (consistent with those presented in Table 5:) and for subsequent years.

7. Insight into the tariff impact of methanization in the Region of Sardinia

7.1 The Prime Ministerial Decree of 29 March 2022 identified the works and facilities required to phase out the use of coal in Sardinia and decarbonise the island's industrial segments. In addition to the sections of the transmission grid to be built on the territory of the Region of Sardinia, the following activities and facilities have been identified to be included in the so called "virtual pipeline" between the island and the mainland:

- a) the plant upgrading of the Panigaglia regasification terminal, operated by Gnl Italia S.p.A., to allow the loading of LNG onto barges, including the modernisation of the terminal, in order to guarantee the continuity of operations for the duration of the virtual pipeline's operation;
- b) the adjustment of the functionality of the offshore regasification terminal in Livorno, managed by OLT Offshore LNG S.p.A., to allow a greater number of berths, aimed at loading LNG onto barges for the virtual pipeline;
- c) a Floating Storage and Regasification Unit (FSRU) in the port of Portovesme with a net storage capacity adequate to serve the South industrial and

thermoelectric segment, as well as the consumption basin of the metropolitan city of Cagliari;

- d) an FSRU in the port of Porto Torres with a net storage capacity adequate to serve the North industrial and thermoelectric segment, as well as the consumption basin of the metropolitan city of Sassari;
- e) a regasification plant in the Oristano port area with a net storage capacity adequate to serve the users around this location;
- f) an LNG transmission service by means of dedicated shuttle vessels, supplied in compliance with Community and national regulations and carried out according to the most appropriate operating method based on cost-effectiveness and efficiency criteria, in order to guarantee security of supply, intended to supply the FSRUs at Portovesme and Porto Torres and the terminal at Oristano, starting, under normal operating conditions, from the terminals at Panigaglia and Livorno;
- g) the works instrumental to the construction or adaptation of the facilities referred to in the preceding points, including any dredging necessary for the adaptation of the existing terminals, the installation of the FSRUs and the construction of the regasification plant referred to at letter e).

7.2 With regard to the criteria for the recognition of the costs associated with the virtual pipeline between the Region of Sardinia and the mainland, ARERA postponed the assessments to a specific proceeding initiated with resolution 279/2022/R/com, in which the modalities for the realisation of this connection and the relative entity will be assessed in detail, also in view of the expected development of gas demand on the island.

7.3 Since the interventions represented are still being assessed by ARERA, the analyses in this Chapter are merely indicative in nature and do not contribute to constituting any legitimate expectations on the part of the operators as to the tariff recognisability of the investments referred to. The information reported was reconstructed on the basis of public data and information (in some cases incomplete) acquired within the framework of the proceedings initiated with resolution 279/2022/R/com and the Network Development Plans.

7.4 For the sole purpose of providing a preliminary estimate of the tariff impact, the costs of constructing the transport grid in the Sardinia Region as well as the costs related to the virtual pipeline were considered according to the following assumptions:

- a) the implementation of the “first phase” works for the Sardinian grid; the data consider investment costs totalling € 234 million (of which € 175 million for methane pipelines, and € 59 million for connections), and operating costs of € 4 million per year, as resulting from the 2022 Development Plan of the company Enura;
- b) the upgrading of existing terminals, in particular:

- i. for Panigaglia, an overall cost of € 200 million is considered for the upgrading² and modernisation works³, based on the information provided by Snam in the Consultation Document on the facility configuration of the virtual pipeline for Sardinia prepared pursuant to resolution 279/2022/R/com (hereinafter referred to as the “Facility Configuration Document”);
 - ii. for OLT Livorno, no costs were considered for the unloading barge increase project because Snam, in the Facility Configuration Document, stated that it does not involve modification works and therefore does not entail investment costs;
 - c) the development of regasification plants in the Region of Sardinia, near Portovesme, Porto Torres and Oristano, in particular:
 - i. for Portovesme, an investment cost of € 313 million (including costs for the adaptation of the quay of the industrial port for about € 44 million), and operating costs of € 15 million per year, based on the information provided by Snam in the Facility Configuration Document;
 - ii. for Porto Torres, an estimated investment cost of € 135 million; in the Facility Configuration Document, Snam states that the cost estimates are not presented because the tender for the procurement is underway; the value is therefore estimated on the basis of the overall cost of the Portovesme and Porto Torres terminals indicated by Snam Rete Gas in its 2022 Development Plan (for a total of € 404 million) net of the costs for the Portovesme FSRU (without considering the costs of upgrading the port); operating costs are not considered here;
 - iii. for Oristano, an investment cost of € 100 million and operating costs of € 6 million per year, based on the information provided by Snam in the Facility Configuration Document;
 - d) for the transmission service by means of shuttle vessels, Snam states in the Facility Configuration Document that cost estimates are not presented as the tender for the procurement of the service is ongoing.
- 7.5 The value of revenues to be recovered through transmission tariffs was estimated by considering:
 - a) a useful life of 50 years for methane pipelines and 25 years for other facilities;
 - b) a regulated rate of return on capital of 5.1%, which is equal to the rate of return recognised for the transmission service for the purpose of determining the charges for the year 2023.
- 7.6 A summary of the main economic magnitudes of the works attributable to the methanization of the Sardinia Region can be found at Table 8:.

² Changes to the terminal to allow vessel reloading.

³ Referred to as “rejuvenation” to extend the useful life up to an additional 25 years, and interventions to increase the admissibility of ships.

Table 8: Main works attributable to the methanization of the Sardinia Region ^(*)

		Costs		Allowed revenue (M€/year)		
		CAPEX (M€)	OPEX (M€/year)	Remuneration and depreciation	OPEX	TOT
Sardinia Network (Phase 1)	Enura pipelines	175,0	4,0	12,4	4,0	20,6
	Enura connections	59,0		4,2		
Inteventions on existing terminals	Panigaglia	200,0	-	18,2	-	18,2
	OLT	-	-	-	-	-
Sardinia terminals	FSRU Portovesme	313,0	15,0	28,5	15,0	43,5
	FSRU Porto Torres	135,0	n.d.	12,3	n.d.	12,3
	Rigassificatore Oristano	100,0	6,0	9,1	6,0	15,1
LNG transmission service with dedicated shuttle vessels		n.d.	n.d.	n.d.	n.d.	n.d.
TOT		982,0	25,0	84,7	25,0	109,7

^(*) Purely indicative analyses that do not contribute to the operators' legitimate expectations regarding the tariff recognisability of the investments referred to.

- 7.7 In order to estimate the tariff impact of the inclusion of the transmission grid of the Sardinia Region, the tariff drivers of the quantities of gas transported, and of the capacities planned to be allocated, have also been estimated on the basis of the data relating to the demand for natural gas that can be served by transmission grids estimated by Snam and the Electricity Transmission Grid Operator in the Scenarios or Demand Document for electricity and natural gas relating to the Region of Sardinia prepared pursuant to resolution 279/2022/R/com (hereinafter referred to as the "Scenarios Document"), and the data relating to forecasted contracted capacity estimated by Snam Rete Gas. In particular:
- the Scenarios Document forecasts a demand for natural gas that can be served by grid sections of 730 MSm³ in 2030, and 760 MSm³ in 2040;
 - the forecasted contracted capacity at the exit points of the Sardinian transmission grid is estimated at 0.3 MSm³/d in 2024, 0.7 MSm³/d in 2025, 1.1 MSm³/d in 2026, and 1.5 MSm³/d in 2027.
- 7.8 For the sole purpose of the simulations in this section, a natural gas demand of 365 MSm³ (equal to 50% of the expected demand in 2030), and a forecasted contracted capacity equal to 1.5 MSm³ (equal to the forecasted contracted capacity in 2027) are considered.
- 7.9 The estimated tariff impacts of these works are made on the assumption that the relevant operating costs are included in the recognised operating costs to be recovered through the commodity-based charge CV_U , and the capital costs follow the criteria for the recognition of investments and are therefore included in the costs to be recovered through capacity-based charges.
- 7.10 With reference to the commodity-based charge, it is possible to estimate a change with respect to the CV_U value estimated for the year 2024 of approximately +1.9% (as a result of an increase of approximately +2.4% in revenues to be recovered through the variable charge, and an increase of approximately +0.4% in volumes used as drivers).

7.11 In relation to the capacity-based charges, it is possible to estimate average variations with respect to the charges estimated for the year 2024 equal to +4.5% for the entry charges, and +4.2% for the exit charges (as an effect of an increase of approximately +4.5% of revenues to be recovered through capacity charges, and an increase of approximately +0.3% only of the planned capacities to be allocated at the exit points).

8. Insight into tariff impacts of the exit point at Gela

8.1 In order to estimate the tariff impact of the entry into operation of the future exit point at Gela, the following was considered:

- a) an investment cost of approximately € 8 million⁴ and a consequent tariff charge of approximately € 0.8 million per year (equal to 0.04% of revenues to be recovered through capacity-based charges estimated for 2024);
- b) a forecasted contracted capacity equal to 2.74 MSm³/d (corresponding to approximately 0.44% of the forecasted contracted capacity at the exit points for the year 2024), which takes into account the minimum pressure guaranteed by the main transmission operator at the Gela point.

8.2 On the basis of the same parameters used to estimate the tariffs for the year 2024, the effect of the entry into operation of the exit point at Gela is estimated to be approximately +0.04% on the entry charges, and -0.40% on the exit charges; the inclusion of this exit point in the tariff methodology does not entail significant changes in the relative ratios between the entry and exit charges. The specific exit charge at Gela is estimated at € 4.2/year/Sm³/d.

8.3 In the case of applying a 50% discount, the effect on exit charges would be approximately -0.20% overall, and the specific exit charge would be approximately € 2.1/year/Sm³/d.

⁴ As reflected in the Snam Rete Gas 2022 Network Development Plan.