

The French Energy Regulatory Commission (Commission de Régulation de l'Énergie, hereafter the CRE) consults market players.

PUBLIC CONSULTATION NO. 2023-06 OF JULY 26 2023 RELATING TO THE NEXT TARIFF FOR THE USE OF STORENGY, TERÉGA AND GÉOMÉTHANE UNDERGROUND NATURAL GAS STORAGE FACILITIES (ATS3)

Translated from the French: only the original in French is authentic

Law no.2017-1839 of December 30, 2017 putting an end to the exploration as well as the exploitation of hydrocarbons and bearing various provisions relating to energy and the environment modified the regime for third-party access to storage facilities, which has been regulated since January 1st 2018.

Articles L. 452-1 to L. 452-3 of the French Energy Code empower the French Energy Regulatory Commission (CRE) to set the terms and conditions for establishing tariffs for the use of underground natural gas storage facilities. The CRE may make any changes to the level and structure of tariffs that it deems justified, in particular in the light of an analysis of operators' accounts and foreseeable changes in operating and investment costs.

Article L. 421-3-1 of the French Energy Code stipulates that *"the underground natural gas storage infrastructures that guarantee medium and long-term security of supply for the French territory and compliance with bilateral agreements on security of natural gas supply [...] are provided for in the multi-year energy planning mentioned in article L. 141-1. These infrastructures are maintained by the operators.*

In return for the obligation to maintain storage sites in operation under the French Multi-Year Energy Plan (Programmation Pluriannuelle de l'Énergie, hereafter PPE), storage operators are guaranteed to have their costs covered, provided these costs are those of an efficient operator. Article L. 452-1 of the French Energy Code stipulates that the difference between the allowed revenue of storage operators and the revenues directly received by storage operators, notably through the auctioning of their capacities, is compensated via the gas transmission tariff, by a specific term called the storage tariff term.

The current tariff for the use of underground gas storage facilities, known as the ATS2 tariff, covers the period 2020-2023, pursuant to deliberation no. 2020-011 of January 23, 2020, deciding on the tariff for the use of Storengy, Teréga and Géométhane underground natural gas storage facilities.

Given the visibility needed by market players and the complexity of the issues to be addressed, and with the aim of conducting a broad and participatory Consultation process on the next gas infrastructure usage tariffs, the CRE organized four thematic workshops open to the public during the 1st half of 2023:

- the first, dated February 22, 2023, concerned the structure of gas distribution tariffs. This workshop provided an opportunity to present the changes envisaged by the CRE concerning the introduction of a tariff term billed according to the flow rate of users' meters, to take into account the development of back-up distribution uses. The workshop brought together 75 participants;
- the second, dated May 4, 2023, concerned the structure of gas transmission tariffs. The workshop provided an opportunity to present the changes the CRE is planning to make to the large-scale transmission system tariff structure, and in particular the tariffs applicable to interconnections. The workshop brought together 70 participants;
- the third, dated May 10, 2023, concerned green gases. This workshop provided an opportunity to present the changes envisaged by the CRE concerning the pricing applicable to the injection of renewable and low-carbon gases into the grids. The workshop was attended by 85 participants;

- the fourth, dated June 20, 2023, dealt with the future of French gas infrastructures and possible adaptations to the tariff regulation framework to take into account the decline in natural gas consumption. The workshop provided an opportunity to present the changes envisaged by the CRE concerning the depreciation schedule for the Regulated Asset Base (RAB), the inclusion of inflation in the regulated asset base, and possible incentives to control investment. The workshop was attended by 86 participants.

At the end of each workshop, the CRE received written contributions from certain players. The materials from these workshops, sent to participants, are published on the CRE website along with this Public Consultation.

This Public Consultation presents the CRE's preliminary orientations on underground gas storage infrastructure tariffs, based on its analyses and the initial feedback from market players received by the CRE, concerning the two main components of its tariff decision scheduled for the end of 2023:

- the level of costs to be covered;
- the tariff regulation framework, which corresponds to the set of multi-year incentive mechanisms designed to ensure the operator's efficiency in terms of cost control and quality of service to the user.

The CRE would like to hear the views of market players on these issues before making its decision.

At this stage, the CRE has not received any energy policy guidelines from the ministers responsible for the economy and energy, as provided for on an optional basis under the provisions of article L. 452-3 of the Energy Code. However, this Public Consultation is in line with the orientations of the PPE, which calls for a significant reduction in gas consumption accompanied by an increase in biomethane production, in order to meet France's climate objectives.

1 Key issues for future natural gas infrastructure tariffs (ATS3 tariffs)

The CRE's guidelines for the ATS3 tariff should meet the challenges of the coming tariff period (2024-2027), but should also prepare the regulatory framework for longer-term gas system issues.

The coming tariff period will be marked by the downward trend in natural gas consumption that has already been observed for several years, as called for in the PPE, and which will accelerate in 2022 as a result of high prices, efforts to reduce consumption by gas consumers and the switch by some gas consumers to other energies.

Nevertheless, the current PPE provides for the maintenance of current storage capacities, whose insurance value was reaffirmed during the gas crisis triggered by Russia's war in Ukraine.

In the following tariff periods, in order to meet France's climate objectives, consumption should continue to fall. It will raise the question of storage requirements, the sustainability of their financing and the regulatory framework applied to them.

The study on the future of gas infrastructures published by the CRE on April 4, 2023 sheds light on this issue. In particular, it shows that the reduced flexibility of green gas production will lead to a gradual change in the usage profile of storage facilities, whose sizing will be increasingly geared to peak demand.

By 2050, if peak consumption continues to fall, the entire current storage capacity may no longer be needed. Nevertheless, it will be necessary to maintain a sufficient useful volume to cope with multi-year contingencies.

Some storage facilities, notably salt caverns, could also be converted to hydrogen. Nevertheless, conversion must be cautious, ensuring that the gas system can do without the saline storage under consideration, and based on a proven need for hydrogen storage. Conversion before 2030 now seems out of the question, whatever the scenario. No conversion to hydrogen is planned for the ATS3 tariff horizon.

Furthermore, as with other gas infrastructures, and in particular in the current regulated model, which relies on transmission tariffs to compensate for a portion of storage costs, fixed storage costs will be borne by a smaller user base in the future. In view of this, the CRE is considering the changes needed to the tariff regulation framework to ensure the long-term economic sustainability of the gas system. In particular, the CRE would like to hear stakeholders' views on how to avoid passing on the fixed costs incurred by current infrastructure use to future users. This could involve accelerating the rate of amortization of operators' RAB and no longer taking inflation into account when valuing it.

Against this backdrop of falling demand for gas, controlling operators' costs and investments will be key issues in the development of the ATS3 tariff. Operators are expected to make major efforts to improve efficiency and effectiveness in the next tariff period.

2 Operators' demand

Underground storage operators Storengy, Teréga and Géométhane have each submitted a request for tariff changes, setting out their forecast costs for the period 2024-2027. They point to the impact of general cost

increases (inflation), particularly in energy prices, as well as growing obligations in terms of safety and reducing greenhouse gas emissions.

Taking into account the elements of the tariff dossiers sent to the CRE by Storengy, Teréga and Géométhane would lead to a significant increase in the costs to be covered (net operating costs (charges nettes d'exploitations, hereafter CNE) and normative capital costs (charges de capital normatives, hereafter CCN)):

- approximately €700 M/year for Storengy over the ATS3 period, compared with €512 M in 2022 (+37%);
- approximately €193 M/year for Teréga over the ATS3 period, compared with €158 M in 2022 (+22%);
- around €70 million/year for Géométhane over the ATS3 period, compared with €46 million in 2022 (+75%).

3 the CRE envisages adjustments to demand from underground gas storage operators to control the burden on end consumers

the CRE considers that the allowed revenue trajectories proposed by operators are too high. The sustained fall in gas consumption should lead to major efforts to control costs. At this stage, the CRE considers that operators' controllable expenditure should remain in line, in constant euros, with the levels observed in 2022.

the CRE has carried out its own analyses and relied on studies by external consultants, whose reports, which are not binding on the CRE, are published at the same time as this Public Consultation. These reports cover the following topics:

- an audit of Storengy, Teréga and Géométhane's demand for operating costs for the years 2024-2027;
- an audit of underground storage operators' RAB remuneration rate requests. Storengy, Teréga and Géométhane are respectively requesting a weighted average cost of capital (WACC) of 5.65%, 5.70% and 5.65% (actual before tax), corresponding to the rate requested for the transmission tariff plus a specific premium of 100 bps, versus 4.75% in the ATS2 tariff (including a specific premium of 50 bps in relation to gas transmission).

At this stage, the CRE is considering a smaller tariff increase than that requested by storage operators. The Public Consultation sets out the ranges within which the CRE is currently considering setting operators' allowed revenue for the ATS3 tariff:

- for operating costs, the adjustments recommended by the external consultant, combined with those envisaged by the CRE, constitute the lower end of the range, while operator demand constitutes the upper end;
- for the WACC, the CRE plans to construct it as the sum of the remuneration rate envisaged for the activity of transmission system operator plus a premium linked to the specific risks of the activity of operator of regulated storage sites. Assuming a 50 bps premium unchanged from the current rate, the rate range would be between 3.4% and 4.7% (actual, before tax, i.e. after deducting inflation - i.e. between 4.9% and 6.0% in nominal terms). The method used to establish this range has changed significantly compared with the ATS2 tariff (see next point).

As far as capital expenditure is concerned, the prospect of falling gas consumption makes it all the more important to be selective, with safety and storage integrity as our top priorities. At this stage, the CRE has not identified any anomalies in the trajectories proposed by the operators, apart from certain projects which have not been validated and which have been withdrawn from the investment trajectory. The trajectories adopted include Storengy's capacity development projects at Etrez and Teréga's at Lussagnet. However, the CRE will ensure that these costs are kept under control when approving storage operators' annual investments.

The CRE plans to change the method used to calculate the weighted average cost of capital to take account of the recent sharp rise in interest rates

The CRE's method for determining the weighted average cost of capital (WACC) is based on a normative WACC structure that ensures a reasonable return on invested capital. It is based on average rates over the last ten years, reflecting the long service life of gas network infrastructures. This method, which has changed very little over the last three tariff periods, has enabled us to maintain the attractiveness of energy infrastructures in France, while taking into account the fall in rates observed over the last 10 years.

After this long period of decline, interest rates have risen rapidly again over the past year or so. Storage operators, like other gas infrastructures, are calling for a change in method to take account of this recent rise in rates when setting the WACC.

At this stage, the CRE is considering changes to the method used to calculate the WACC, to take better account of the short-term dynamics of interest rates. To determine the WACC applicable during the ATS3 tariff, the CRE therefore plans to use:

- a long-term rate, according to the method used for ATS2 and previous gas tariffs, based on analysis of long-term parameters, which could range from 3.2% to 4.4% (actual, before tax, or from 4.4% to 5.6% nominal, before tax);
- a rate based on more recent economic data, which could range from 4.1% to 5.7% (actual, before tax, or 6.6% to 7.7% nominal, before tax);
- these rates are based on the rates used for gas transmission tariffs, plus a premium linked to the specific risks of the storage operator business. At this stage, the CRE considers that the risk differential with respect to transmission activity has not changed since the previous tariff period, and therefore retains an unchanged premium with respect to the ATS2 tariff, at 50 bps.

These rates can be applied to old and new assets respectively, or combined into a weighted rate. Assuming a weighting of 80% historical assets and 20 % new assets over the tariff period, the average WACC would therefore be between 3.4% and 4.7% (actual, before tax, i.e. after deducting inflation - i.e. between 4.9% and 6.0% in nominal terms).

The CRE is considering various ways of controlling the risk of price squeeze

In its study on the future of gas infrastructures, the French energy regulator the CRE notes that the need for storage is unlikely to change between now and 2030. By 2050, the estimated need is more uncertain and will depend on the level of consumption attained. However, whatever the objectives, it is unlikely that the entire current fleet will be needed. This uncertainty makes it all the more important not to burden future users.

In this Public Consultation, the CRE presents three measures that could be implemented to reduce this risk:

- de-indexing operators' RAB to inflation. The purpose of this change is to avoid passing on the cost of current inflation to future network users. This operation is economically neutral over time for operators, who would benefit in return from a nominal WACC rate (i.e. containing inflation), as is the case for the electricity transmission tariff;
- the use of declining-balance depreciation (which varies from one period to the next and can therefore be higher in the early years, then lower);
- the reduction of certain depreciation periods for long-lived assets whose economic life would be reduced.

The CRE plans to implement some or all of these changes gradually.

The CRE plans to renew incentive regulation for the sale of storage capacity

Storage operators sold all their storage capacity during the ATS2 tariff, even at the height of the crisis and with unfavorable summer-winter gas price differentials. Throughout the tariff period, they thus achieved the first objective of the storage regulation framework, which is to ensure that storage facilities are filled at the start of winter. In addition, they have demonstrated a good commercial dynamism, which has enabled them to maximize auction revenues and thus reduce the amount of the storage tariff term.

At this stage, the CRE considers that the regulatory incentive to marketing storage capacity has worked well. It plans to maintain the main elements, while modifying certain parameters at the margin.

The CRE presents its preliminary analyses on how the tariff for underground natural gas storage can be used to finance R&D activities concerning hydrogen storage.

Operators are also asking for a sharp increase in their R&D budgets, which they justify by the need to prepare for the future of their businesses, and in particular for possible diversification into hydrogen storage. At this stage of its analysis, the CRE is in favor of taking into account operators' R&D budgets, provided that research programs are coordinated between operators and that the research is related to the gas storage business. At the same time, the CRE is supporting the development of the hydrogen and CO₂ capture and storage sectors.

Apart from these changes, the CRE envisages a framework for tariff regulation in line with previous tariffs

The CRE plans to maintain the principle mechanisms of the current tariff regulation framework for the ATS3 tariff and tariffs for other gas infrastructures: four-year duration, incentive regulation to control operating costs and capital expenditure, incentive regulation of quality of service, a *posteriori* coverage of certain discrepancies via Regulatory Account ("compte de régularisation des charges et des produit" hereafter CRCP), and a framework for the annual settling of the CRCP.

The results of this regulatory framework, which has been in force for four tariff periods, are generally satisfactory in terms of the performance of gas infrastructure operators, according to the assessment appended to this Public Consultation. Nevertheless, the CRE is considering adjustments on a number of issues, such as operators' energy costs and incentive regulation applicable to non-infrastructure assets.

July 26, 2023

4 Illustrative trend in allowed revenue

By way of illustration, taking the middle of the ranges for capital costs and net operating costs presented by the CRE in the Public Consultation, the change in costs to be covered would be +6.2% between 2023 and 2024.

Illustrative key figures

Key figures 2024-2027 (current euros)			2022 achieved
	Low terminal	High terminal	
Operating costs M€/year	269	328	232
<i>Storengy</i>	195	243	161
<i>Teréga Stockage</i>	54	62	53
<i>Géométhane</i>	20	23	18
Capital expenditure M€/year	471	611	478
<i>Storengy</i>	347	444	351
<i>Teréga Stockage</i>	97	133	105
<i>Géométhane</i>	27	34	22
WACC (actual before tax)	3.4%	4.7%	4.75%
<i>of which the historical rate</i>	3.2%	4.4%	N/A
<i>of which short-term rates</i>	4.1%	5.7%	N/A
WACC (nominal before tax)	4.9%	6.0%	6.1%
<i>of which the historical rate</i>	4.4%	5.6%	N/A
<i>of which short-term rates</i>	6.6%	7.7%	N/A
Investments M€/year	333		266
<i>Storengy</i>	238		191
<i>Teréga Stockage</i>	69		42
<i>Geomethane</i>	26		33

	2024	2025	2026	2027
Inflation assumptions	2.4 %	1.8 %	1.6 %	1.6 %

Paris, July 26, 2023.

For the French Energy Regulatory Commission,

The President,

Emmanuelle Wargon

Reply to the Consultation

The CRE invites interested parties to submit their contribution by October 9, 2023 at the latest by entering their contribution on the platform set up by the CRE: <https://Consultations.cre.fr/>.

In the interests of transparency, the contributions will be published by the CRE.

If your contribution contains elements that you wish to remain confidential, a blacked-out version must also be submitted. In this case, only this version will be published. The CRE reserves the right to publish information that may prove essential for the information of all stakeholders, provided that it does not fall within the scope of legally protected secrets.

In the absence of a blacked-out version, the full version is published, with the exception of information relating to legally protected secrets.

Interested parties are invited to respond to the questions, giving reasons for their answers.

If you have any questions about the Public Consultation, please contact the CRE at tarifs-infras@cre.fr.

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1. LIST OF QUESTIONS

Tariff regulatory framework

Part 3 of this Public Consultation (see p.13) presents the tariff regulation framework currently in force for storage operators, as well as the changes envisaged by the CRE for the ATS3 tariff period.

In particular, there are questions on:

- an assessment of the current tariff framework (see p.13)

Q1: Do you agree with the conclusions of the CRE's assessment of the regulatory framework?

- the main principles applicable to storage operators (see p.14);

Q2: Do you agree with the CRE that a four-year tariff period is appropriate for all tariffs? Do you agree with the CRE's decision to renew the ATS3 rendez-vous clause?

Q3: Do you have any comments on the method for determining allowed revenue?

Q4: Are you in favor of changing the method for determining the weighted average cost of capital to better reflect changing economic conditions? If so, do you favor the introduction of a double rate, or the use of a single weighted rate?

Q5: If a single rate were to be adopted, on the basis of what weighting do you think this single rate should be established?

Q6: Are you in favor of the CRE's proposed change in incentive regulation for storage operators' stranded costs?

Q7: Are you in favor of maintaining the current regulatory framework for actual estate assets and land sales?

Q8: Are you in favor of the solution envisaged by the CRE concerning the treatment of assets sold for conversion to hydrogen?

Q9: Are you in favor of the main principles for operating and updating the CRCP as envisaged by the CRE?

- incentive regulation to control costs (see p.21);

Q10: Are you in favor of maintaining the current regulatory framework for the majority of operating costs?

Q11: Are you in favor of the CRE's position on the timetable for setting the regulatory framework and cost trajectory for implementing the future European regulation to reduce methane emissions from the energy sector?

Q12: Do you agree with the CRE's preliminary analysis of the incentive regulation of Storengy's benefit in-kind energy costs?

Q13: Do you agree with the CRE's position on the coverage of dismantling provisions?

Q14: Do you agree with the CRE's position that the level of incentives for other operating income and costs should be maintained?

Q15: Do you share the CRE's view that the energy cost incentive scheme should be reviewed?

Q16: Do you agree with the CRE's position on cost-containment incentives for infrastructure investments costing more than €20m?

Q17: Do you agree with the CRE's position that the cost-containment incentive mechanism should be renewed for infrastructure investments other than major projects?

Q18: Are you in favor of renewing the cost-containment incentive scheme for "non-infrastructure" investments?

Q19: Are you in favor of harmonizing Teréga's IS regulatory framework with that applied to other operators?

- incentive regulation of marketing (see p.30);

Q20: Do you agree with the CRE's positive assessment of the incentive regulation of storage capacity sales?

Q21: Are you in favor of the changes to the formula for calculating the marketing bonus envisaged by the CRE?

- incentive regulation of quality of service (see p.32);

Q22: Do you agree with the CRE's analysis of the possibility of incentive regulation of greenhouse gas emissions

linked to the missions of storage operators?

- incentive regulation of R&D and innovation (see p.34);

Q23: Do you have any comments on the incentive regulation framework for innovation and R&D envisaged by the CRE for the ATS3 tariff?

- adapting the tariff regulation framework to limit the risk of an excessive increase in the unit cost of transmission for future network users (see p.34).

Q24: Do you think that ending the indexation of the RAB to inflation and taking it directly into account in the remuneration rate would provide a solution to the risk of an increase in the unit cost of transmission over time? Do you have any comments on its implementation (method, progressiveness, etc.)?

Q25: Do you think that changing the depreciation method would provide a solution to the risk of an increase in the unit cost of transmission over time?

Q26: Do you agree with the CRE's analysis of the usefulness of reducing the depreciation period in response to the risk of an increase in the unit cost of transmission?

Q27: Do you agree with the CRE's analysis of the financial incentive to keep depreciated assets in service?

Q28: Do you think it would be a good idea to implement these changes now?

Q29: Do you have any other suggestions concerning the distribution of capital costs over time, with a view to addressing the risk of rising unit costs for gas transmission?

Tariff level

Part 4 of this Public Consultation (see p.42) presents the operators' tariff request, the results of the audits on net operating costs and the rate of remuneration, and the CRE's preliminary adjustments concerning the level of storage operators' costs to be covered for the ATS3 tariff period.

Q30: Do you agree with the CRE's guidelines concerning the R&D themes to be included in storage operators' cost trajectories?

Q31: Do you have any comments on the level of costs to be covered requested by operators?

Q32: Are you in favor of the guidelines envisaged by the CRE concerning the level of costs to be covered for the ATS3 period for Storengy, Teréga and Géométhane?

Other

Q33: Any other comments?

2. CONTEXT AND OBJECTIVES OF THE PUBLIC CONSULTATION

2.1 The CRE's powers

Article L. 421-3-1 of the French Energy Code stipulates that *"underground natural gas storage infrastructures that guarantee the territory's medium- and long-term security of supply and compliance with bilateral agreements on security of natural gas supply concluded by France with a Member State of the European Union or a Member State of the European Free Trade Association are provided for in the multi-annual energy programming mentioned in Article L. 141-1. These infrastructures are kept in operation by operators [...]"*.

In return, and within the limits of the obligation to maintain in operation, the storage sites considered necessary for security of supply in the multi-annual energy programming, storage operators are guaranteed to have their costs covered, insofar as these costs are those of an efficient operator.

The provisions of Articles L. 452-1, L. 452-2 and L. 452-3 of the French Energy Code provide the framework for the CRE's pricing powers.

Article L. 452-1 of the French Energy Code stipulates that *"tariffs for using the transmission networks, the commercial conditions for using these networks, as well as the tariffs for ancillary services provided by the operators of these networks or by the operators of the storage infrastructures mentioned in article L. 421-3-1, are established in a transparent and non-discriminatory manner in order to cover all the costs incurred by the transmission system operators and the operators of the storage infrastructures mentioned in the same article L. 421-3-1, insofar as*

these costs correspond to those of efficient operators. These costs take into account the characteristics of the service rendered and the costs associated with this service, including the obligations laid down by law and regulations, as well as the costs resulting from the performance of public service missions and the contracts mentioned in I of article L.121-46". These same provisions also specify that "in particular, the costs borne by operators of the storage infrastructures mentioned in article L. 421-3-1 include a normal return on invested capital, the costs mentioned in the last paragraph of article L. 421-6, the research and development expenditure required to ensure the safety of these infrastructures, and the costs incurred by these operators in modifying the nature or characteristics of the gas transported in the natural gas networks".

In addition, article L. 452-2 of the French Energy Code specifies that "the operators of the storage facilities referred to in article L. 421-3-1 shall provide the Energy Regulatory Commission, at its request, with the necessary information, in particular accounting and financial information, to enable it to deliberate on changes in tariffs for the use of natural gas networks".

In addition, article L. 452-3 of the French Energy Code stipulates that "the Energy Regulatory Commission deliberates on changes in tariffs as well as those for ancillary services provided exclusively by the operators of these networks or facilities, with, where appropriate, modifications to the level and structure of tariffs that it deems justified in the light of an analysis of the operators' accounts and foreseeable changes in operating and investment costs" "and add that "these deliberations, that could take place at the request [...] of the operators of the storage installations mentioned in article L. 421-3-1, could make provision for the evolution of tariffs as well as appropriate short- or long-term incentive measures for encouraging operators to improve their performances [...]"

Lastly, article L. 452-3 stipulates that the CRE "shall consult energy market players according to the procedures it determines".

2.2 Subject of the Consultation

The current tariff for storage operators (ATS3) covers the period 2020-2023. The CRE is consulting on the next tariff, scheduled for the period **2024-2027**.

The CRE is seeking the views of market players on the guidelines it envisages for the ATS3 tariff, in terms of the regulatory framework and the level of costs to be covered.

Some elements of the regulatory framework are also intended to apply to transmission and distribution tariffs: these are also presented in Public Consultation no. 2023-07 concerning the ATRT8 tariff of July 26, 2023, and the Public Consultation concerning the ATRD7 tariff to be published in the autumn of 2023.

While the CRE plans to maintain most of the principles in force in the ATS2 tariff in the ATS3 tariff, the changes envisaged for the next ATS3 tariff are intended to:

- adapt tariff regulation to French energy policy objectives and their consequences on the use of gas infrastructures over the medium term;
- set the regulatory framework to encourage operators to control their costs and improve the quality of service provided to users;
- study the possibility of changing the incentive scheme for marketing storage capacity.

3. TARIFF REGULATORY FRAMEWORK

3.1 The current pricing framework has enabled us to control costs over the long term and improve the quality of service and supply

The main principles of the tariff framework for gas and electricity networks and infrastructures have been stable for more than 10 years, with three main objectives:

- to encourage operators to control their costs in order to limit the impact of infrastructure tariffs on the end consumer;
- to enable operators to finance infrastructure investments;
- to aim for a high level quality of service and supply.

To achieve this, it relies on financial mechanisms designed to encourage operators to strive for efficiency over the long term. A 4-year tariff period and the principle of multi-year financial incentives based on costs and quality of service were introduced. The regulatory framework leaves a great deal of freedom in the management of each operator, enabling each to seek the most relevant performance improvements.

The CRE gives a positive assessment of this framework, which has enabled us to control costs over the long term while improving quality of service. This framework has also proved highly resilient in the face of two major crises:

the health crisis¹ and the energy price crisis, by giving operators the means to ensure business continuity under the right conditions.

In light of this assessment (see detailed assessment in Appendix 1), the CRE plans to maintain most of the current framework for the next generation of tariffs, but to modify a number of mechanisms, in particular to take better account of current economic conditions (inflation, energy prices) and the specific context of reduced gas consumption.

3.1.1 Controlling costs to limit the impact of tariffs on the end consumer

The regulatory framework provides for different incentive regulation for net operating costs and capital costs.

With regard to operating costs, the regulatory framework provides for a cost trajectory over the four years of the tariff period. Deviations from the trajectory are borne by (or to the benefit of) operators, except for a few selected items that are more difficult to predict and control, for which all or part of the deviation is covered by tariffs via the Regulatory Account (CRCP). Operators are thus encouraged to improve their efficiency over the period. The CRE ensures that the level of efficiency revealed during a tariff period is taken into account when setting subsequent tariffs, so that infrastructure users benefit from productivity gains over time. To achieve this, the operating cost trajectories set for a new tariff period are based on the expenditure levels attained by operators over the previous period.

The CRE considers that this framework has enabled operators to keep their costs under control over the long term: over the past ten years, the level of operators' net operating costs has been kept under control (close to inflation), while their infrastructures have expanded considerably. In addition, the scope and size of the CRCP proved to be well suited to protecting operators from the effects of the health crisis and the energy price crisis. Over the course of the tariff period, the CRE has modified the framework for energy costs to take better account of rising prices and volatile energy markets.

With regard to investments and capital expenditure, the regulatory framework stipulates that deviations from the trajectory are borne by the tariff and not by operators. The CRE considers that this method has enabled regulated operators to make all the investments required to fulfill their missions over the past few years. In addition, incentive regulation mechanisms (target budgets for major projects, unit costs, non-infrastructure investments, etc.) have kept investment costs under control without restricting volumes (see section 3.3.2)

As decisions to invest in energy infrastructure have long-term pricing implications, the CRE considers that the issue of controlling these costs is more than ever a priority for both gas and electricity. This is particularly true for gas, given the prospects for a long-term decline in gas consumption and the move away from fossil fuels.

3.1.2 To enable operators to finance infrastructure investments

The tariff regulation framework must guarantee a reasonable return on invested capital that enables the financing of regulated assets, while providing the right signal for investment in the energy transition and the maintenance of facilities. In this respect, the operator's level of remuneration must, on the one hand, enable it to finance the interest costs on its debt and, on the other, provide a return on equity consistent with the level of risk associated with comparable assets.

In previous tariff periods, the rate of return, or weighted average cost of capital (WACC), was applied to the regulated asset base (RAB), which aggregates the value of all assets operated by a single operator. It has been fixed for the entire tariff period and calculated on the basis of calculation parameters derived from long-term data. In particular, the risk-free rate has been calculated on the basis of long-term averages of long-maturity rates, in line with the long-life assets that make up the RAB.

The use of long-term averages in setting remuneration rates for regulated infrastructure managers would appear to be appropriate for these activities, which are characterized by long-term investments. Nevertheless, it does raise the question of investment financing. In fact, these long-term averages can diverge significantly from market rates at the time when operators can obtain financing. This is currently the case with the recent rise in interest rates, which has led the CRE to propose modifying the existing framework on this point.

Quality of service, including continuity of supply, is a major concern for infrastructure users. Incentive regulation on quality of service is one of the pillars of the regulatory framework defined by the CRE, which ensures that economic efficiency is not achieved at the cost of the services provided by these infrastructures.

3.1.3 To aim for a high level quality of service and supply.

Improving quality of service and supply incentives is an ongoing process. The relevance and usefulness of incentives must be regularly questioned to ensure that they meet the needs of infrastructure users.

Most quality of service indicators subject to financial incentives operate on a bonus/penalty basis. For each indicator, targets, corresponding to the performance deemed desirable and reasonable for the item concerned, are

¹ Deliberation of March 25, 2021 on the effects for 2020 of the COVID-19 crisis for network operators

defined by the CRE and revised on a regular basis. If the target is exceeded, a bonus is paid and, conversely, a penalty if the actual figure is below the target set by the CRE. Both bonuses and penalties are capped. Payments are made via the CRCP.

The ATS2 tariff introduced an incentive-based regulation of quality of service for storage operators. As a result, the quality of service provided by natural gas storage operators has remained at a high level overall for both incentivized and non-incentivized indicators, particularly in terms of the quality of data transmitted to market players.

A detailed assessment of gas storage operators' quality of service is presented in a dedicated section of this Consultation (section 3.5).

Q1: Do you agree with the conclusions of the CRE's assessment of the regulatory framework?

3.2 Reminder of the main principles of the pricing framework

The ATS3 tariff is based on the definition, for the coming tariff period, of an allowed revenue trajectory for each of the storage operators (Storengy, Teréga and Géométhane).

The ATS3 tariff will also establish a regulatory framework to limit the financial risk to operators and/or users for certain predefined items of income or cost, through the a regulatory account (CRCP) and, secondly, to encourage storage operators to improve their performance through incentive mechanisms.

Taking all these factors into account will enable us to set the applicable tariff for 2024, as well as the terms and conditions for its annual evolution.

3.2.1 A tariff period of around 4 years

The duration of tariff periods applied to all regulated infrastructures has been harmonized to four years.

The CRE plans to maintain the tariff period at 4 years for the next generation of tariffs for use of regulated infrastructures. In particular, the CRE considers that this period provides the market with visibility on the evolution of infrastructure tariffs, and gives operators the time they need to make productivity efforts.

In order to take into account the consequences of any major legislative or regulatory changes during this period, the CRE plans to renew the mid-period review clause currently in force in the ATS3 tariffs: thus, the possible consequences of new legislative or regulatory provisions, or of a judicial or quasi-judicial decision, could give rise to a re-examination of the tariff trajectory for the last two years of the tariff period, if the level of net operating costs retained in the ATS3 tariff were to be modified by at least 1%.

Q2: Do you agree with the CRE that a four-year tariff period is appropriate for all tariffs? Do you agree with the CRE's decision to renew the ATS3 rendez-vous clause?

3.2.2 Construction of allowed revenue for storage operators

The forecast allowed revenue is made up of the forecast net operating costs (costs nettes d'exploitation, hereafter CNE), the forecast normative capital costs (costs de capital normatives, hereafter CCN), and the settlement of the balance of the regulatory account (CRCP):

$$RA = CNE + CCN + CRCP$$

With:

- RA: forecast allowed revenue (revenu autorisé) over the period;
- CNE: projected net operating costs over the period (see 3.2.2.1);
- CCN: normative capital costs forecast over the period (see 3.2.2.2);
- CRCP: settlement of CRCP balance (see 3.2.2.3).

The tariff framework ensures that the allowed revenue is collected.

The CRE has no plans to change the elements to be taken into account in the allowed revenue.

3.2.2.1 Net operating costs

CNE is defined as gross operating costs less operating income (notably capitalized production and extra-tariff income).

Gross operating costs mainly comprise energy costs, external consumption, storage maintenance and operating costs, personnel costs and taxes.

The level of CNE is determined on the basis of all the costs necessary for the activity of storage operators, insofar as, in application of article L. 452-1 of the Energy Code, these costs correspond to those of an efficient storage operator.

3.2.2.2 Normative capital costs

CCNs include remuneration and amortization of fixed assets. The calculation of these two components is based on the valuation and evolution of assets operated by operators - the regulated asset base - and assets under construction (immobilisations en cours, hereafter AuC), i.e. investments made that have not yet given rise to the commissioning of assets.

CCN corresponds to the sum of the depreciation of the assets making up the RAB and the return on fixed capital. The latter corresponds to the product of the value of the RAB multiplied by the remuneration rate determined on the basis of the weighted average cost of capital (WACC) valuation, and the product of the value of the AuCs multiplied by the cost of debt.

$$CCN = \text{Amortization of RAB} + \text{RAB} \times \text{WACC} + \text{AuC} \times \text{cost of debt}$$

The CRE has no plans to change these principles for calculating CCNs, and intends to continue with the methods currently in force.

Q3: Do you have any comments on the method for determining allowed revenue ?

3.2.2.2.1 RAB evolution

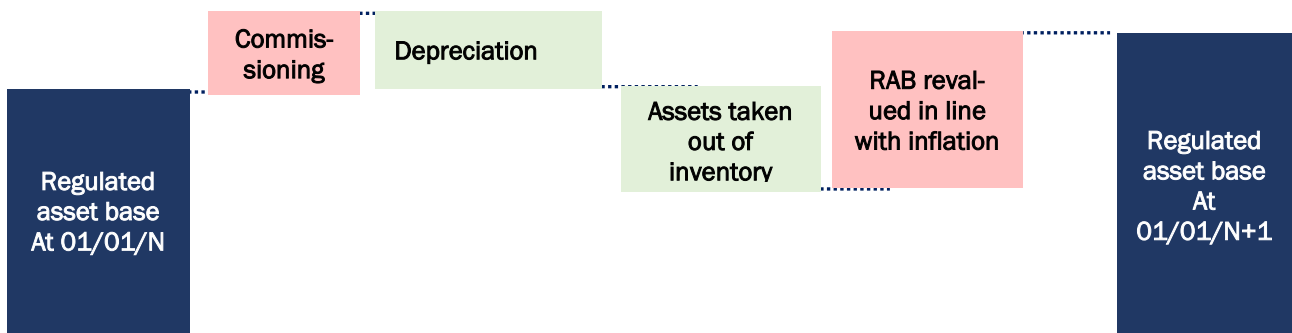
The Regulated Asset Base represents the sum of the operator's tangible and intangible fixed assets (valued at January 1st of each year):

- RAB increases when an asset is commissioned;
- RAB decreases as assets are depreciated, or if an asset is scrapped or disposed of.

Under the regulatory framework applied over the ATS2 period, assets included in the RAB are revalued annually for inflation. For this reason, the CRE has used a actual WACC for previous tariff periods that does not include inflation.

In section 3.7.4 of the Public Consultation, the CRE questions stakeholders on the most appropriate way to take inflation into account in storage operators' normative capital costs.

Factors in the evolution of RAB within the current regulatory framework



Commissioning

The agreed date of entry of assets into the RAB is January 1st of the year following their entry into service.

Depreciation of assets

In the current framework, assets are depreciated on a linear basis over their economic life (the linear depreciation method is described in section 3.7.5). Land is taken into account at its historical value, revalued and not depreciated.

The service lives adopted by the CRE for the main asset categories are as follows:

Types of assets	Normative lifetime
Cushion gas	75 years
Wells, cavities, collection	50 years
Treatment, compression, delivery and metering facilities	20 to 30 years
Real estate and constructions	30 years
Miscellaneous equipment	10 to 15 years
Software, small hardware	5 years

Assets taken out of inventory

Assets scrapped or disposed of before the end of their economic life are no longer included in RAB and do not give rise to depreciation or compensation. The pricing treatment of assets removed from inventory is described in section 3.2.2.2.3

RAB revaluation

Assets are currently revalued on January 1st of each year by the July-to-July inflation rate. The revaluation index used is the 1763852 consumer price index, excluding tobacco, for all households resident in France.

3.2.2.2.2 Return on capital

In the absence of regulated operators of listed natural gas storage sites, the CRE uses an indirect approach to define the rate of remuneration for the activity, in line with the method applied under the ATS2 tariff.

To do this, the CRE relies on the rate of remuneration for the activity of the natural gas transmission system operator (TSO). This activity is carried out by listed companies and has an economic nature similar to that of natural gas storage operators. The CRE then adjusts the WACC for natural gas transmission system operators on the basis of economic and financial considerations, by increasing this rate by a specific premium linked to the specific risks of operating regulated storage sites.

The method used to set the rate of return on TSO assets is based on the WACC for a normative financial structure. In fact, the TSO's level of remuneration must enable it to finance the interest costs on its debt and provide its shareholders with a return on equity comparable to that which they could obtain for investments involving comparable levels of risk. This cost of equity is estimated on the basis of the "Capital Asset Pricing Model" (CAPM) methodology.

In previous ATRT and ATS tariff deliberations, the CRE set a single remuneration rate that applies throughout the tariff period to all the assets making up each operator's RAB, regardless of when they were commissioned. This single rate is calculated on the basis of the observed average of various parameters over the last ten years, reflecting the long service life of gas network infrastructures.

Because we use long-term averages, the rate of return evolves with considerable inertia in relation to changes in market rates. This method, which has changed very little over the last three tariff periods, has enabled us to maintain the attractiveness of energy infrastructures in France, while taking into account the fall in rates observed over the last 10 years. It is also consistent with the fact that operators' average financing costs also evolve with a certain inertia (asset financing is managed on a global basis, with long-term debt refinanced only in part during the same tariff period).

Nevertheless, the current economic context is leading to a rise in interest rates that will only be partially taken into account in long-term averages: this is leading operators to ask that remuneration better reflect the sudden evolution of current market conditions.

The CRE has examined the ability of the current system to remunerate the new assets in a manner consistent with this new environment, and is considering, for the ATS3 period, a change in the remuneration method to better reflect current conditions. At this stage, the CRE is considering introducing a distinction between, on the one hand, a long-term rate, the terms of which would remain unchanged (i.e. a rate calculated on the basis of averages over the last ten years) and, on the other hand, a short-term rate based on shorter-term data. While such a change in method would lead to greater volatility in capital costs, it would also enable us to set operators' remuneration at a level more in line with the capital costs expected over the next few years to finance new investments.

The CRE recalls that, during the Public Consultations held in 2019 to prepare the ATRT7, ATRD6 and ATS2 tariffs, it asked market players about a similar proposal in a context of falling rates, which would have enabled consumers to benefit more quickly from improved financing conditions. Some of the participants, in particular infrastructure operators and their shareholders, had expressed their opposition to the use of short-term values, which they considered too complex and difficult to understand.

Short-term data could be taken into account, for example, by assigning the long-term rate to historical assets and the short-term rate to new assets:

- the remuneration rate applied to new assets would apply, for example, throughout the ATS3 tariff period;
- for the ATS3 tariff period, under current financing conditions, this rate could be 200 bps to 250 bps higher than the remuneration rate derived from long-term data;
- finally, after this period of, say, 4 years, the assets concerned would be included in the RAB of historical assets and remunerated at the long-term rate.

Short-term data could also be taken into account by applying a weighted average of these two rates to the entire asset base: the weighting could, for example, reflect the same weighting of historical and new assets. In return for its simplicity, this option is less flexible, as it cannot be adapted to the actual volume of investment by each operator.

Q4: Are you in favor of changing the method for determining the weighted average cost of capital to better reflect changing economic conditions? If so, do you favor the introduction of a double rate, or the use of a single weighted rate?

Q5: If a single rate were to be adopted, on the basis of what weighting do you think this single rate should be established?

3.2.2.3 Treatment of assets taken out of the inventory

Processing of stranded assets

By "stranded costs", the CRE means the residual book value of assets withdrawn from the inventory before the end of their service life, as well as costs relating to technical studies and upstream procedures that could not be capitalized if the projects were not to go ahead.

Under the current tariff framework, stranded costs are treated as follows, upon presentation of dossiers by operators:

- the cost of studies that have not been carried out for major projects approved in advance by the CRE are covered by the tariff via the CRCP;
- coverage of other stranded costs is examined by the CRE on a case-by-case basis, on the basis of substantiated dossiers presented by storage operators.

Costs to be covered by tariffs, where applicable, are taken into account at their book value, less any proceeds from disposal.

Operators' demand

Storengy and Géométhane are asking for stranded costs to be subject to a tariff trajectory based on an annual envelope. This envelope would be estimated on the basis of actual scrappage compared with commissioning for ATS2, and projected commissioning for ATS3. They are also asking the CRCP to cover the difference between this trajectory and the stranded costs actually incurred.

The CRE's preliminary analysis of the tariff treatment of stranded assets

The CRE believes that recurring and predictable stranded costs could be the subject of an incentive-based tariff trajectory, as is the case, for example, for transmission system operators. This option was not chosen for the ATS2 tariff, as storage operators did not request a trajectory.

On the other hand, it considers that the coverage of exceptional stranded costs should be dealt with on a case-by-case basis, depending on the efficiency of the costs presented by operators.

Q6: Are you in favor of the CRE's proposed change in incentive regulation for storage operators' stranded costs?

processing of sold assets

When an asset is sold by an operator, it leaves the company's assets, is no longer included in the RAB, and de facto ceases to generate capital costs (depreciation and remuneration). This sale may generate a capital gain for the operator, equal to the difference between the sale proceeds and the net book value.

Real estate and land assets

Under the current pricing framework, in the case of a sale of actual estate assets or land:

- if the sale gives rise to a capital gain, 80% of the proceeds, net of the net book value of the asset sold, are included in the CRCP, so that storage users benefit from the bulk of the gains from the resale of these assets, insofar as these users have borne the acquisition costs (the operators' allowed revenue covers the annual depreciation and remuneration of the RAB assets), while preserving an incentive for the operator to maximize this gain. The latter retains the remaining 20% of the gain;
- a sale giving rise to a book loss will be examined by the CRE, on the basis of a documented dossier presented by the operator.

The CRE's preliminary analysis of the pricing treatment of sold assets

The CRE believes that this regulatory framework for sold assets is well adapted. The inclusion of capital gains on disposals in the tariff is indeed justified, given that the tariff has contributed to financing the assets concerned.

At this stage, the CRE therefore plans to maintain the regulatory framework for actual estate assets and land sold.

Q7: Are you in favor of maintaining the current regulatory framework for actual estate assets and land sales?

Assets converted to hydrogen

European targets for reducing greenhouse gas emissions could eventually lead to the development of hydrogen storage. In this context, certain storage assets could be converted and reused for hydrogen storage.

Converting a gas storage asset to hydrogen involves removing the asset from the RAB of the operator who operates it, and transferring it to another operator (or another asset base if it's the same player, whether or not the hydrogen storage activity is regulated). This raises the question of the sale price of the assets concerned, and the sharing of any capital gains between the operator and users.

The European framework for the hydrogen market is not yet defined at this stage: on December 15, 2021, the European Commission published a legislative proposal revising the European Union's rules on access to the gas market and networks, which includes arrangements to facilitate the development of the hydrogen market. This legislative proposal is under discussion and has not yet been adopted. In its current version, the text provides for ACER to publish recommendations concerning the valuation of gas assets converted to hydrogen.

The ATS2 tariff does not provide a specific regulatory framework for assets that would be sold for conversion to hydrogen. While no cases of conversion during the next tariff period have been identified at this stage among the assets of storage operators, it is not possible to completely rule out the situation arising.

The CRE's preliminary analysis

In the absence of a European framework in force, and given the absence of any conversion cases envisaged by operators for the coming tariff period, the CRE is planning at this stage to deal with the case of assets sold with a view to conversion to hydrogen, on the basis of argued dossiers presented by storage operators. However, the CRE will be careful to ensure that the transfer price is set in such a way as to avoid cross-subsidies between gas and hydrogen storage users, and that any capital gains are shared appropriately between storage operators and users. Should future underground hydrogen storage facilities be regulated, the CRE will also ensure that future users do not have to cover costs already covered by previous gas users.

Q8: Are you in favor of the solution envisaged by the CRE concerning the treatment of assets sold for conversion to hydrogen?

3.2.2.3 CRCP

Calculation and settlement

The level of the ATS tariff is set by the CRE on the basis of assumptions about the forecast level of costs and revenues for each operator. An a posteriori adjustment mechanism, the income and cost adjustment account, has been introduced to take all or part of the differences between actual and forecast income and cost, on predefined items. As a result, the CRCP protects operators from variations in certain cost or revenue items by offsetting certain deficits, and also protects consumers by allowing the retrocession of certain surpluses. It is also used for the payment of financial incentives resulting from the application of incentive regulation mechanisms, calculated on the basis of observed results.

Calculated on December 31 of each year N, the CRCP is settled, within the limit of a +/- 5% annual rate increase associated with this settlement. If this limit is reached, and the balance of the CRCP cannot be fully settled in the tariff evolution of year N+1, the balance not settled in year N+1 is carried forward to year N+2. In addition, the balance of the CRCP at the end of the tariff period is taken into account when setting the allowed revenue for the following period. The CRCP balance is thus reset to zero at the start of each tariff period. The threshold of +/- 5% had been retained by the CRE for the ATS3 tariff.

The economic crisis experienced at the end of the tariff period led to very significant CRCP for some operators, notably due to higher energy prices and inflation, both of which were higher than in the ATS2 trajectory. This observation has led operators to request a review of the items covered by the CRCP: these requests and the CRE's guidelines are set out in section 3.3.1.3 of this Consultation.

Financial neutrality

To ensure the financial neutrality of the mechanism, the balance of the CRCP on January 1st of year N+1 is obtained by discounting the balance of the CRCP at December 31 of year N. Since the introduction of the CRCP mechanism in ATRD3, ATS1 and ATRT3, this discount rate has been defined as the risk-free rate.

Due to the high projected CRCP balance on the end of the period, several operators are requesting a change in this parameter. GRDF requests that the discount rate correspond to the nominal WACC before tax or the nominal cost of debt, as it considers that it will have to bear financing costs until the CRCP is settled. Teréga requires a discount rate of 3.30%, including a risk-free rate and a "comfort premium", which is a specific adjustment to the yield on government bonds.

The CRE would point out at this stage that the repayment of the CRCP balance is always guaranteed, regardless of its level. What's more, it is returned to the operator relatively quickly. The level of long-term risk included in the WACC or cost of debt is not relevant for discounting the balance of the CRCP. The CRE therefore considers that the risk-free rate remains the relevant parameter for discounting the CRCP balance. Nevertheless, the CRE is considering, in the context of asset remuneration (see section 3.2.2.2.2), a new method for determining the WACC, taking into account a risk-free rate based on historical parameters and a risk-free rate based on short-term data, which could be applied respectively to assets already in service and to new assets. If this method of remunerating assets were to be adopted, the CRE would consider using the risk-free rate applied to new assets to discount the balance of the CRCP.

Q9: Are you in favor of the main principles for operating and updating the CRCP as envisaged by the CRE?

3.2.2.4 Annual changes in allowed revenue

The CRE plans to change the ATS3 allowed revenue annually, starting in 2024, according to the same principles as for the previous tariff period.

The annual allowed revenue evolve each year in relation to the initial authorized annual income trajectory as follows:

$$RA_N = RA_{IN} * (1 + j)$$

Where:

- RA_N is the allowed revenue for year N at the time of annual evolution;
- RA_{IN} is the initial allowed revenue set by the CRE for year N in its ATS3 deliberation, updated for inflation;

- o j is the change in allowed revenue, expressed as a percentage, resulting from the settlement of the balance of the accruals account; j is between +5% and -5%.

The coefficient has been set at 5% for the ATS tariff, because the annual variability of storage operators' costs and revenues is greater than that of other regulated operators, for which it is set at 2%. At this stage, the CRE does not intend to change this value.

In order to take better account of the effect of inflation, the CRE has studied the possibility of taking into account, in the annual tariff update for year N , a correction for the difference in inflation for year $N-1$ between the forecast in the Finance Bill (Projet de Loi de Finances, hereafter PLF) and the actual level (or, failing that, the best estimate available when calculating the annual tariff update). As this difference has a long-term impact on costs, the CRE considers it advisable at this stage to take it into account, to prevent it from having a long-term impact on the CRCP balance. The CRE notes, however, that this measure is only useful if actual inflation is far from the PLF forecast value. This measure makes the tariff formula marginally more complex, and more sensitive to inflation.

In addition, the CRE may take into account changes in the ATS3 tariff, particularly those linked to incentive regulation mechanisms for marketing and quality of service.

3.3 Regulation as an incentive to control costs

3.3.1 Incentive regulation of operating costs

Storage tariffs are calculated on the basis of assumptions about costs and revenues, which make it possible to define development paths for the various items. As indicated in section 3.2.2.3 of this Consultation, an a posteriori regularization mechanism, the CRCP, makes it possible to take into account differences between costs and income actually recorded, and forecast costs and income on certain previously identified items.

The CRE considers that the inclusion of an item in the CRCP should be assessed in the light of the following two criteria:

- predictability: a predictable item is one for which it is possible, for both the operator and the CRE, to forecast with reasonable confidence, the level of costs incurred and revenues received by the operator over a tariff period;
- control: a controllable item is one for which the operator is in a position to control the level of expenditure/revenue over the course of a year, or has negotiating power or influence over its level, if this derives from a third party.

These principles have been in force for several tariff periods. Furthermore, the CRE considers that tariff treatment cannot be reduced to a single alternative for covering the item, between 100% and 0% of the CRCP. Thus, for certain items that are not easily controllable and/or predictable, the CRE considers it appropriate to give operators partial incentives (see section 3.3.1.2).

3.3.1.1 No CRCP coverage for most operating expenses

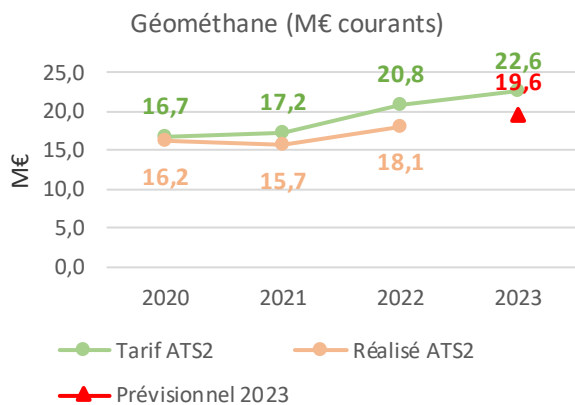
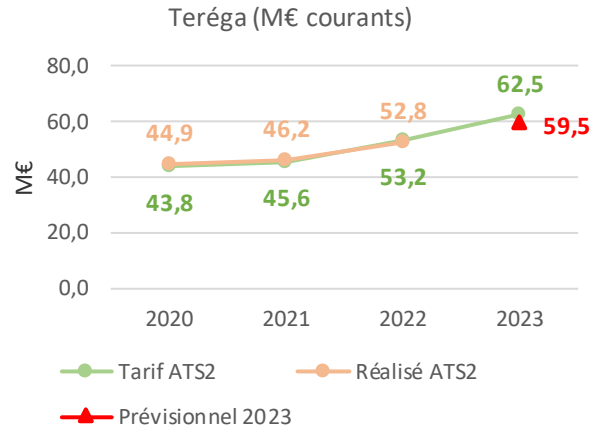
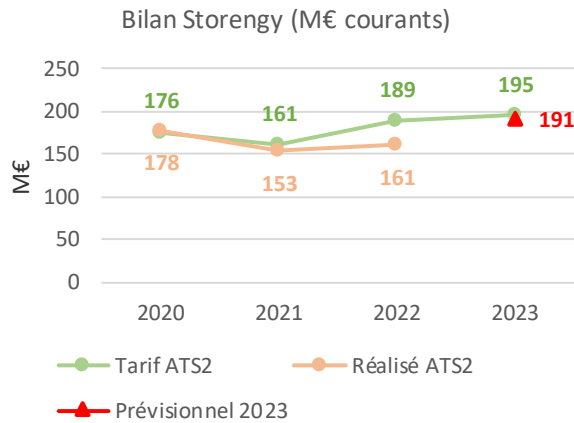
Current regulations differentiate between three categories of CNE, which are subject to specific tariff treatment:

- incentivized net operating costs: operators are incentivized to control their operating costs, and retain all productivity gains or losses that may be achieved in relation to the trajectories defined by the CRE. The majority of operators' operating costs fall into this category (purchases excluding energy, personnel costs, external services, etc.);
- partially incentivized net operating costs: certain cost items that depend on factors that are partly controllable by operators (notably energy costs) are partially recorded in the CRCP. The rate of sharing of gains or losses in relation to the forecast trajectory set by the CRE is generally between 10% and 20% (the operator retains between 10% and 20% of the difference and the remainder is borne by the tariff);
- non-incentivized net operating costs: for cost and revenue items that are difficult for operators to predict and control, variances between actual and forecast are fully taken into account in the CRCP.

The incentive levels for non-incentivized or partially incentivized costs envisaged by the CRE are detailed in section 3.3.1.2 of this Public Consultation.

Incentive regulation of net operating costs is designed to encourage operators to improve their deviations from the set trajectory, while allowing them to keep the gains made in relation to the latter.

The CRE notes that the costs incurred by operators have been lower overall than the trajectory set in the tariffs (for Teréga they have been at the same level), and that they have been falling steadily between 2020 and 2022:



In the graphs above, the net operating costs provided for in the ATS2 tariff include the following updates:

- The trajectories of energy, CO2 and consumable costs have been updated each year.
- The trajectories of other costs were set at the beginning of the tariff period, and updated each year to take into account the difference between forecast and actual inflation.

These discrepancies correspond to productivity gains by the operator, but could also be the result of an overestimation of forecast costs, due in particular to the asymmetry of information between operators and the regulator. This observation justifies the CRE's recourse to in-depth audits to analyze operators' requests during tariff work.

It is not in itself a problem for operators to beat their trajectory, since the aim of strong incentives is precisely to achieve long-term gains in the interests of end consumers. However, it is essential, and it is the CRE's responsibility, to ensure that the efforts made by operators in previous tariff periods are properly taken into account when setting tariff levels from one tariff period to the next. As such, the level of efficiency revealed by incentive regulation during a tariff period must be taken into account when setting tariffs for the following period.

Consequently, the CRE intends to maintain the CRCP coverage mechanisms differentiated by type of cost (incentivized/partially incentivized/non-incentivized for the majority of operating costs), and considers in its work on the level of operating costs for the next tariff period, that the last level achieved (adjusted for inflation) is the standard to be adopted (by 2022): any request that deviates significantly from this must be duly justified by the operator.

Q10: Are you in favor of maintaining the current regulatory framework for the majority of operating costs?

3.3.1.2 CRCP coverage of certain items

Reminder of the current framework

As indicated in section 3.2.2.3 of this Public Consultation document, the CRCP is an a posteriori adjustment mechanism used to take into account differences between actual costs and income, and forecast costs and income for certain previously identified items. These are items that are difficult for operators to predict and control.



The items concerned in the current tariff period are listed below.

Items fully covered by the CRCP:

The difference between the inflation forecast taken into account by the CRE for net operating costs and the inflation actually recorded is covered in full by the CRCP.

The costs fully covered by the CRCP are as follows:

- capital costs, taken into account at 100%, with the exception of those covered by the incentive regulation mechanism for "non-infrastructure" capital costs;
- penalties paid to customers in the event of failure to meet contractual obligations, i.e. when the operator is unable to deliver the marketed injection/withdrawal performances, 100% covered by the CRCP above an annual ceiling of €10 million for Storengy and €3 million for Teréga;
- provisions for dismantling storage sites set aside by the storage operator during the tariff period, pro rata to the assets' regulatory life;
- purchase/sale transactions relating to the constitution of additional gas stocks following the implementation of regulatory filling obligations as provided for in article L. 421-6 of the Energy Code;
- R&D operating costs, with special treatment (see section 3.6): at the end of the tariff period, if the operator has spent less than the forecast trajectory, 100% of the difference is returned to users via the CRCP. If the operator has spent more than the forecast trajectory, the difference is borne by the operator;
- costs associated with contracts with other regulated operators.

The products fully covered by the CRCP are as follows:

- revenues from the compensation tariff term paid by TSOs and revenues from the marketing of storage capacity, 100% taken into account;
- revenues from contracts with other regulated operators.

Items partially covered by the CRCP:

Two cost items are partially covered by the CRCP:

- energy costs (gas and electricity) and purchases and sales of CO₂ quotas. These have been covered since April 1st, 2023:
 - o 90% by the CRCP for the portion of the difference between actual energy consumption and the forecast reference trajectory less than or equal to, in absolute value, 50% of the forecast trajectory;
 - o 100% by the CRCP for the portion of the difference, in absolute terms, between actual energy consumption and the forecast reference trajectory, in excess of 50% of the forecast trajectory;
- consumables and effluent treatment costs specific to storage, 80% of which are included in the CRCP. The reference trajectory is updated annually. The difference between the updated trajectory and the initial trajectory is 100% covered by the CRCP.

Operator's demand:

Costs of implementing the future European regulation to reduce methane emissions from the energy sector

The European Commission has proposed the adoption of a regulation to reduce methane emissions from the energy sector in December 2021 (this has not yet been adopted). At this stage, the draft regulation provides for the introduction of methane leak detection and repair obligations for gas operators.

Storengy, Teréga and Géométhane are requesting that the forecast trajectory of costs linked to the future implementation of this regulation be updated during the tariff period, once the regulation has been adopted.

The CRE's preliminary analysis:

The CRE notes that the impact of the new regulation on methane emissions on operators' costs is still very uncertain. It will depend in particular on the provisions adopted in the regulations when they are adopted, as well as any delays in applying the new measures. This would limit the relevance of setting a cost trajectory consistent with the current version of the draft regulations.

As a result, the CRE plans to set the cost trajectory and the regulatory framework for the gas operators concerned once the regulation has been adopted.

Q11: Are you in favor of the CRE's position on the timetable for setting the regulatory framework and cost trajectory for implementing the future European regulation to reduce methane emissions from the energy sector?

Energy benefits in kind ("agent rate")

Employees of the Electricity and Gas Industries (Industries Électriques et Gazières, hereafter IEG), to which Storengy belongs, benefit from a preferential rate for gas and electricity (known as the "agent rate"). In return, each IEG company pays EDF and Engie a sum each year to cover the difference between the agent tariff and the cost price of these two companies.

Under the current framework, these costs are fully incentivized. Storengy is requesting 100% CRCP coverage for the new tariff period, in view of the uncertainties surrounding electricity and gas prices.

The CRE's preliminary analysis

The CRE notes that the amount of Storengy's payments to EDF and Engie are set under a contract negotiated between the various companies concerned: it therefore considers it justified to maintain a regulatory framework that encourages the setting of an appropriate level for this compensation.

The CRE also considers that maintaining an incentive based on the volume effect is justified, in line with the sobriety objectives set by the government.

At this stage, the CRE is therefore considering maintaining the incentive regulation of Storengy's energy benefit-in-kind costs.

Q12: Do you agree with the CRE's preliminary analysis of the incentive regulation of Storengy's energy benefit-in-kind costs?

Provisions for dismantling

Storengy, Teréga and Géométhane are requesting that all provisions for asset dismantling be covered. This request is not accompanied by a provision forecast.

Storengy and Géométhane point out that provisions could be made for dismantling:

- on saline sites to prepare their conversion to hydrogen (they would concern surface installations that could not be converted to hydrogen);
- on aquifer sites to take account of potential site closures over time, as envisaged in the CRE's study on the future of gas infrastructures.

Under the current framework, any provisions constituted by operators are covered by the ATS tariff, in proportion to the length of time the storage assets concerned are included in the regulation.

The CRE's preliminary analysis

First of all, the CRE points out that removing an infrastructure from the list of sites required for security of supply does not mean that these sites have to be dismantled, as this remains the operator's decision. Indeed, while inclusion in the regulatory perimeter requires the operator to maintain the site in operation, under Article L. 421-3-1 of the Energy Code, there is no such obligation if the site is not included in the PPE perimeter. In addition, in accordance with this article, dismantling costs cannot be covered once these sites have been removed from the regulated perimeter.

The current framework thus makes it possible to cover dismantling costs in the specific case of regulated storage.

The regulated storage sites were commissioned between 1956 and 1993. Regulation took place in 2018. As a result, the majority of sites have been operated without regulation (to date, an average of 43 years of unregulated operation and 5 years of regulated operation).

To date, operators' financial statements do not include provisions for asset dismantling.

Covering all provisions would mean covering them through the tariff, without taking into account the period of unregulated operation. The CRE therefore considers that a distribution of provisions in proportion to the time spent in regulation is balanced.

Consequently, it plans to maintain the existing framework.

Q13: Do you agree with the CRE's position on the coverage of dismantling provisions?

Performance gas purchase/sale transactions

Storengy indicates that purchase and resale (or sale and repurchase) operations may be necessary to ensure storage performance. Storengy requests that 80% of the gains and losses linked to these transactions be covered by the CRCP.

The CRE's preliminary analysis

Under the ATS2 tariff, Storengy's performance gas sales and purchases are subject to an incentive trajectory (not covered by the CRCP).

The CRE notes that these operations may in some cases be in competition with other solutions (marketing of specific storage products, purchase of additional cushion gas, etc.).

This request will therefore have to be the subject of a detailed analysis of the risk/benefit ratio for users.

Energy costs

Teréga is calling for changes to the framework for regulating energy costs. The CRE considers that the current framework for regulating energy costs functioned correctly during ATS2, and enabled storage operators to clear their CRCP. This point is dealt with in the following section (section 3.3.1.3).

Other income and cost items

The CRE plans to maintain the level of incentives for other costs and income for the coming tariff period, as their level of predictability and control by operators has not changed during the current tariff period.

Q14: Do you agree with the CRE's position that the level of incentives for other operating income and costs should be maintained?

3.3.1.3 Incentive regulation of energy charges

Storage operators' energy costs are made up of the costs of motive power and gas treatment processes (gas and electricity), as well as purchases and sales of CO₂ quotas by the operators.

To encourage operators to keep these costs under control, the incentive scheme in force during the ATS2 period provides for 80% coverage of variances in this item by the CRCP. This partial coverage is designed to encourage operators to control their costs.

However, following the significant increase in market prices in 2022, the differences between the energy item and its incentive can potentially reach very substantial amounts. This is why, in its deliberation of January 31, 2023² concerning the update of the tariff for the use of storage infrastructures, the CRE exceptionally increased the coverage of energy costs:

- 90% by the CRCP for the portion of the difference between actual energy consumption and the forecast reference trajectory less than or equal to, in absolute value, 50% of the forecast trajectory;
- 100% by the CRCP for the portion of the difference, in absolute terms, between actual energy consumption and the forecast reference trajectory, in excess of 50% of the forecast trajectory.

Operators' demand:

- For ATS3, Teréga requests an annual review of the energy cost assumptions in the allowed revenue for year N+1. As a reminder, energy cost variances between an actual year and the assumption used in the tariff deliberation are currently transferred to the CRCP.

² The CRE deliberation of January 31, 2023 concerning the annual change in the tariff for the use of Storengy, Teréga and Géométhane underground natural gas storage facilities on April 1st, 2023

- Teréga is requesting 100% coverage by the CRCP for the portion of the difference between actual energy consumption and the forecast reference trajectory, in absolute terms, exceeding 20% of the forecast trajectory.

The CRE analysis:

The CRE considers that the annual review of energy costs is not justified in view of the ATS2 balance sheet, which enabled storage operators to accumulate a small residual CRCP during ATS2.

Revising these assumptions would increase the annual variability of the storage tariff term (TTS) and require annual renegotiations between the CRE and the operator on this item.

The CRE also considers that Teréga's proposal to lower the incentive ceiling would considerably weaken the impact of incentive regulation on energy savings.

For the next tariff period, the CRE wishes to maintain a sufficient incentive for storage operators to control their energy costs. However, this incentive must not become disproportionate if energy prices develop too differently from the assumptions made. At this stage, the CRE is therefore planning to apply differentiated incentives for the volume of energy consumed and for the purchase price of this energy:

- Maintain 80% coverage of the difference between forecasted and consumed volumes, in line with the level of incentives applicable to other regulated infrastructure operators in France. The CRE considers it important to continue encouraging operators to optimize their energy consumption and consume less. The volumes forecast and consumed will be valued at the reference price defined below.
- Incentives for operators based on a reference purchase price for gas and electricity. This reference price would be determined each year, based on observed wholesale prices for a basket of reference products to be defined. This reference price would be applied to all gas and electricity volumes.

However, defining the reference price for energy purchases by storage operators is more complex than for losses by other regulated infrastructure operators. Indeed, gas and electricity consumption by storage operators is highly volatile over the year, and difficult to forecast accurately from one year to the next. Over the coming months, in-depth work will be carried out with storage operators to verify the feasibility of such a system.

Q15: Do you share the CRE's view that the energy cost incentive scheme should be reviewed?

3.3.2 Investment incentive regulation

3.3.2.1 Incentives to control costs for investments over €20m

The ATS2 tariff provides an incentive to control costs for projects with budgets in excess of €20 million: these are audited to set a target budget, and a bonus or penalty is accorded to the operator according to the difference between the target budget and actual expenditure, with a neutrality band of +/- 5% around the target budget.

During the ATS2 tariff period, the CRE audited 5 projects with budgets in excess of €20 million. On average, the audits led to -3% adjustments to the budgets presented by storage operators. These audits also make it possible to analyze operators' cost-setting methods.

The CRE has approved³ two storage capacity development projects for which it has set a maximum investment budget. For these projects, the CRE plans to examine on a case-by-case basis how to cover investment costs in excess of these ceilings. By way of illustration, the CRE could retain only 50% of excess costs.

For the other projects, the CRE is currently considering maintaining the existing framework for the ATS3 tariff.

Q16: Do you agree with the CRE's position on cost-containment incentives for infrastructure investments costing more than €20m?

3.3.2.2 Incentives to control project costs outside major projects

The above-mentioned cost-containment incentive scheme for projects costing €20m or less concerns a limited number of projects. The ATS2 tariff introduced an incentive mechanism based on the CRE's selection, without

³ Deliberation approving projects to increase gas storage capacity at the Etrez and Lussagnet sites

predefined criteria, of a few projects or categories of projects with budgets below the €20 million threshold, in order to audit them and apply incentive regulation identical to that applicable to investment projects with budgets of €20 million or more.

The CRE maintains its position on the ATS3 tariff, and plans to renew the incentive mechanism based on random selection of a few projects or categories of projects with budgets below the €20 million threshold, in order to audit them and apply incentive regulation comparable to that applicable to investment projects with budgets in excess of €20 million.

Q17: Do you agree with the CRE's position that the cost-containment incentive mechanism should be renewed for infrastructure investments other than major projects?

3.3.2.3 Cost-containment incentives for "non-infrastructure" investments

Overview of the mechanism and its objectives

Gas storage operators are encouraged to control their capital costs in the same way as their operating costs, on a scope of "non-infrastructure" costs including assets such as actual estate, vehicles and information systems (IS). This regulatory framework has been introduced in the ATS2 tariff.

This mechanism encourages operators to optimize their overall costs on these three cost items. It consists in defining, for the tariff period, the trend in capital expenditure, which is excluded from the scope of the CRCP⁴. Any gains or losses are therefore 100% retained by the operator during the tariff period. At the end of the tariff period, the actual value of the fixed assets is taken into account in the RAB, enabling gains or additional costs to be shared with infrastructure users for subsequent tariff periods.

The aim is to provide operators with the same incentives for these three items, where accounting trade-offs between capital and operating expenditure are possible.

In addition, the CRE has introduced a specific experimental mechanism for Teréga's IS costs in the ATS2 tariff. This pilot, set up at Teréga's request, encourages the operator to follow a common trajectory including operating costs and commissioning, and provides for assets to be included in the RAB on the basis of an amount fixed *ex ante* in the trajectory, and not on the basis of costs actually incurred at the end of the tariff period. The CRE has set a sharing rate of 50% of the operator's gains or losses, by including 50% of deviations from the overall trajectory in Teréga's CRCP.

Review of the ATS2 system

Overall, since the introduction of the cost-containment incentive mechanism for "non-infrastructure" investments, the trajectories achieved by operators show that there has been no drift in costs: overall expenditure envelopes are under control. This is the main objective of the mechanism.

With regard to the common framework (i.e. excluding the specific mechanism applied to Teréga's IS costs), the CRE now has more in-depth feedback enabling it to assess the effectiveness of the system more accurately. In this way, while operators are encouraged to keep overall costs under control, feedback shows that the regulatory framework provides them with flexibility, enabling them to arbitrate during the tariff period between an acquisition strategy (or in-house IS development) and a leasing strategy (or IS outsourcing). In addition, during the tariff period, it ensures that infrastructure users are not adversely affected when the operator finally adopts an acquisition strategy (through the tariff - capital costs being covered by the CRCP in nominal terms). With regard to Teréga's specific asset framework, feedback from the 2020-2023 period alone shows overall control of its costs.

The CRE has identified a drawback to these mechanisms, however, in the case of projects that were planned but not carried out during the tariff period. In fact, the fact that costs are not covered by the CRCP means that operators would be covered twice for the costs of a project that would be postponed from one tariff period to the next, if the costs relating to this project were again included in the following tariff period.

⁴ Framework applied to the scope of vehicle and property items for Teréga only.

Storengy balance sheet

In current M€	2020	2021	2022	2023 (preview)	Total	Variance (actual - forecast)
Excluding infrastructure						
CCN forecasts (adjusted for actual inflation)	11.7	12.0	15.0	17.2	55.9	
CNE forecasts (adjusted for actual inflation)	13.0	13.1	13.7	14.1	53.9	
TOTAL forecast	24.7	25.1	28.7	31.3	109.9	
CCN attained	11.7	12.0	15.1	17.4	56.2	+0.23 (+0.4 %)
CNE attained	12.9	12.5	13.7	15.1	54.2	+0.29 (+0.5 %)
TOTAL attained	24.6	24.5	28.8	32.5	110.4	+0.52 (+0.5 %)

Teréga balance sheet

In current M€	2020	2021	2022	2023 (preview)	Total	Variance (actual - forecast)
Real estate and vehicles						
CCN forecasts (adjusted for actual inflation)	2.0	2.8	4.5	4.8	14.1	
CNE forecasts (adjusted for actual inflation)	1.2	1.0	1.2	1.4	4.8	
TOTAL forecast	3.2	3.8	5.7	6.2	18.9	
CCN attained	1.7	1.8	1.9	2.3	7.7	-6.4 (-45 %)
CNE attained	1.3	1.3	1.2	1.5	5.3	+0.5 (+11 %)
TOTAL attained	3.0	3.1	3.1	3.8	13	-5.9 (-31 %)

In current M€	2020	2021	2022	2023 (preview)	Total	Variance (actual - forecast)
IS						
Planned commissioning	5.7	4.3	3.5	3.4	16.9	
CNE forecasts (adjusted for actual inflation)	5.3	5.6	6.5	6.6	24.0	
TOTAL forecast	11.0	9.9	10.0	10.0	40.9	
MES achieved	5.8	5.0	2.9	4.3	18.1	+1.2 (+7.1 %)
CNE attained	4.7	5.4	5.6	6.5	22.2	-1.8 (-7.4 %)
TOTAL attained	10.5	10.4	8.6	10.8	40.3	-0.6 (-1.4 %)

Géométhane balance sheet

In current M€	2020	2021	2022	2023 (preview)	Total	Variance (actual - forecast)
Excluding infrastructure						
CCN forecasts (adjusted for actual inflation)	1.6	1.6	1.6	1.7	6.5	
CNE forecasts (adjusted for actual inflation)	2.5	2.5	2.6	2.7	10.3	
TOTAL forecast	4.1	4.1	4.2	4.4	16.7	
CCN attained	1.6	1.6	1.6	1.7	6.4	-0.1 (-1.2 %)
CNE attained	2.5	2.6	2.6	3.1	10.8	+0.5 (+4.8 %)
TOTAL attained	4.1	4.1	4.2	4.8	17.2	+0.4 (+2.5 %)

Changes planned for the ATS3 period

Operating experience feedback from recent tariff periods shows that this regulatory mechanism is an effective incentive for "non-infrastructure" investments. However, the case of major projects that were not completed as planned during the tariff period needs to be addressed.

Operators' demand

On the whole, operators are in favor of renewing the incentive mechanism for "non-infrastructure" costs.

On the basis of initial operating experience feedback on its specific regulatory framework for IS costs, Teréga is requesting that this mechanism be maintained and that its scope of incentives be adapted to include personnel costs and costs relating to asset management in the IS field, and to exclude certain costs relating to R&D and industrial IS.

The CRE's preliminary analysis

At this stage, the CRE is considering renewing the cost-containment incentive scheme for "non-infrastructure" investments, but restating in the trajectory set for AT3, the major projects that would have been included in the ATS3 trajectory but not carried out by operators, in order to avoid double coverage of operators' costs.

With regard to Teréga's request, the CRE considers that the results do not allow us to conclude that the system is more effective than the common framework. What's more, maintaining two different mechanisms in parallel makes the system more complex. At this stage, the CRE is considering incentivizing Teréga's IS investments in the same way as those of other operators.

In this respect, and in order to harmonize regulatory frameworks between operators, the CRE is currently considering incentivizing Teréga's IS investments in the same way as those of other operators.

Q18: Are you in favor of renewing the cost-containment incentive scheme for "non-infrastructure" investments?
Q19: Are you in favor of harmonizing Teréga's IS asset regulation framework with the framework applied to other operators?

3.4 Incentive regulation of marketing**Reminder of the current framework**

Storage operators sell storage capacity on a commercial basis. The level of sales and the revenues generated by these sales depend largely on the situation of wholesale gas prices, and in particular on the gap between winter and summer prices, but also on the efficiency of operators: quality of service offered, efficiency of marketing processes, etc.

The primary aim of auctioning storage capacity is to maximize subscriptions to ensure the country's security of supply in winter. Secondly, the aim is to maximize auction revenue. Indeed, if marketing revenues do not cover the operators' allowed revenue, the difference is collected through a specific component of the gas transport tariff, paid ultimately by gas consumers.

It is therefore essential to strongly encourage storage operators to maximize both the volume of capacity sold and the revenue generated by these sales.

To this end, the CRE has set up a specific system of financial incentives. Under the ATS2 tariff, operators are awarded a bonus conditional on achieving a minimum level of subscriptions. The threshold used is the level of the latest decree relating to the minimum natural gas stocks required on November 1st for guaranteeing security of natural gas supply for the period between November 1st and March 31st.

This bonus applies to all capacity marketed at auction, including capacity marketed during subsequent additional sales of short-term products.

The bonus takes into account the revenues and the "premium" of each auction, i.e. the difference between the auction price and the seasonal storage value (which corresponds to the winter-summer spread minus the storage cost). This "surplus value" is linked in particular to the possibility for users to modulate injections and withdrawals from one day to the next, and therefore depends on storage performance. It is also the result of the level of competition at auctions, which is encouraged by the operators' commercial actions.

⁵ Each year, the Minister responsible for energy sets the minimum natural gas stocks required on 1st November to guarantee security of natural gas supply during the period between 1st November and 31st March.

The evolution of market conditions in 2022 has highlighted the limitations of the ATS2 tariff calculation formula. Adjustments have been made to the bonus calculation to maintain an incentive in a depressed market.

The bonus is currently calculated for each storage operator as follows:

$$\text{Bonus} = 0,5 \% \times \text{Auction revenue} + 5 \% \times \text{sum of auction premium for standard products}$$

With:

- Auction revenue: Revenues received by storage operators for capacity in year N as part of their auction campaigns.
- Auction premium for standard products: positive or negative, it is calculated by multiplying the capacity sold in an auction by a price term, corresponding to the difference between the auction price and the winter-summer spread, minus the cost of storage ("spread - costs" term).

If the sum of auction premiums for standard products is negative, it is not taken into account when calculating the bonus.

The auction premium is zero for N-N+1 capacities that will be marketed after April 1st N as non-standard products.

The bonus for sales of N-N+1 capacity may not exceed 2% of the operator's allowed revenue for year N.

Payment of this bonus is conditional on achieving a subscription level greater than or equal to the level set by the latest decree on minimum natural gas stocks for guaranteeing security of supply, in application of the provisions of article L. 421-4 of the French Energy Code. However, in the event that the minimum level of capacity subscribed to in France is not reached, a bonus is paid to operators whose capacity is fully subscribed.

For "short-term" sales and additional services, a bonus equal to 10% of revenues is paid regardless of whether the capacity subscription threshold is reached. There is no ceiling on this bonus.

Bonuses are included in the balance of the CRCP.

Review of the ATS2 period

Marketing objectives achieved

All H-gas capacity has been subscribed over the ATS2 period, even at the height of the crisis, when a large proportion of European storage facilities were underfilled at the start of winter 2021-2022. Similarly, all capacity was sold during the 2023-2024 capacity auction campaign, which took place under difficult market conditions with negative Winter-Summer price differentials between October and December 2022.

Operators also offered additional products during the summer of 2022, maximizing capacity utilization and generating additional revenues.

Auctions have generated an average of ~300 M€/year in revenue, representing 45% of operators' allowed revenue. Sales of additional products have generated €55 million in 2022, and €31 million to date in 2023.

Over the ATS2 period, operators received an average total annual bonus of €10 million.

The CRE considers that incentive regulation for the marketing of storage capacity has been a success. At this stage, it plans to maintain the main elements of this regulation, while making any marginal adjustments that may be necessary.

Operators' demand

Storengy wishes to maintain the marketing bonus formula defined in the last tariff update for the ATS3 period. In particular, Storengy wishes to avoid incurring a penalty if the marketing target is met.

Teréga is in favor of the changes implemented in the last tariff update, but considers that the formula does not fully cover the identified biases. Teréga therefore proposes to supplement these initial adjustments by replacing the overall cap on the marketing bonus with a cap, for each auction, on the premium share of sales generated.

The CRE analysis

While the objectives of incentive regulation have been achieved, market conditions during the 2022-2023 capacity marketing campaign have revealed the limitations of the current bonus calculation formula in "extreme" situations, which can render the incentive ineffective or disproportionate:

- The auction premium is linked more to the technical performance of the storage than to the operator's commercial efforts. Premium generated 3/4 of the marketing bonus on average over the ATS2 period.

- An auction price below the winter/summer spread leads to a negative bid premium for a given sale. This type of situation could lead to a zero (or even negative) bonus despite the achievement of the subscription target.
- Conversely, when capacity is subscribed at a zero reserve price and the winter-summer spread is negative, the formula can result in high bonuses in the absence of auction revenue, which then increases the amount to be collected by storage compensation.

As a result, the CRE is considering modifying the relative weight of the three existing financial incentives:

- operators would be guaranteed a minimum bonus if sufficient capacity is subscribed to ensure security of supply, even in the event of a deteriorated market context;
- the share of the premium retained by operators would be reduced (from 5% to 2%) in favor of the share of the incentive proportional to revenues (from 0.5% to 2%), to better reward operators' efforts to market the slowest products;
- introducing a cap for each auction on the premium share at a % of revenues, to avoid excessive bonuses in the absence of auction revenues. In this case, the overall bonus cap could be lifted.

Finally, the incentive on revenues from short-term sales could be reduced to 5% (operators retain 10% of revenues under the current framework), as this very strong incentive could lead operators to give too much preference to short-term products.

Based on A and B coefficients set at 2% and 2%, operators' bonuses would have been equivalent to the level observed over the ATS2 period.

Q20: Do you agree with the CRE's positive assessment of the incentive regulation of storage capacity sales?
Q21: Are you in favor of the changes to the formula for calculating the marketing bonus envisaged by the CRE?

3.5 Incentive regulation of quality of service

3.5.1 Reminder of the current system

The ATS2 tariff introduced an incentive regulation system for storage operators' quality of service.

Incentive regulation of operators' quality of service aims to improve the quality of service provided to infrastructure users in areas deemed particularly important for the smooth operation of the gas market.

Indicator results are published on operators' websites every month, and operators are required to produce a qualitative analysis report of their annual performance, which they also publish on their website. During the ATS2 tariff, these indicators were not financially incentivized.

The quality of service indicators and targets set are detailed in Appendix 1 of the ATS2 deliberation⁶.

3.5.2 Indicators of storage capacity unavailability

The difficulties encountered at Storengy's storage facilities during the 2018-2019 withdrawal campaign, which led to restrictions on capacity subscribed by shippers, led the CRE to propose the introduction of two indicators relating to storage site unavailability. The following indicators have been introduced in the ATS2 tariff:

- **an indicator of compliance with storage operators' maintenance schedules**, calculated on the basis of the percentage change in available capacity between the published forecast maintenance schedule and the actual maintenance schedule. This indicator is calculated annually and aggregated for each storage group;
- **an indicator to monitor the provision of information in the event** that could lead to a restriction of storage users' withdrawal and injection rights.

The indicator of compliance is given below with storage operators' maintenance schedules, calculated according to the percentage change in available capacity between the published forecast maintenance schedule and the actual maintenance schedule:

⁶ Deliberation of January 23, 2020 deciding on the tariff for use of Storengy, Teréga and Géométhane underground natural gas storage infrastructures

Percentage change in capacity between published and actual program forecasts	Storengy		Teréga	
	Injection	Withdrawal	Injection	Withdrawal
2020	0 %	0 %	1 %	3 %
2021	0 %	0 %	-1 %	0 %
2022	0 %	-1 %	1 %	1 %

The CRE notes that the results for the indicator of compliance with maintenance schedules are satisfactory for both operators. The CRE nevertheless considers that Storengy and Teréga need to harmonize the data transmitted to the market and to the CRE.

With regard to the indicator monitoring the provision of information in the event that could lead to restrictions on withdrawal and injection rights, only Storengy was forced to impose such restrictions due to industrial action and a technical incident. Shippers were informed of these restrictions with an average of 2.1 days' notice.

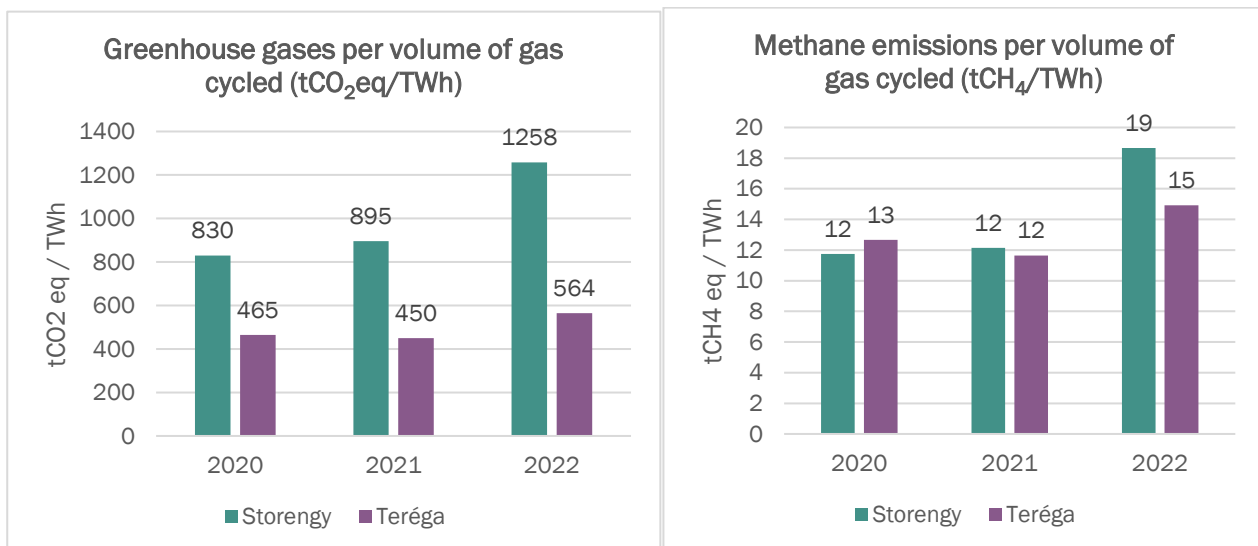
3.5.3 Environmental indicators

The CRE has introduced the following indicators into the ATS2 tariff:

monthly greenhouse gas (GHG) emissions per volume of gas injected and/or withdrawn;

methane leaks (including diffuse losses, venting and accidents/incidents) per volume of gas cycled.

A summary of these two indicators for the period 2020-2022 is given below:



In 2022, the volume of gas cycled was 20% to 25% lower than in 2020 and 2021. It appears that CO₂ and CH₄ emissions are not proportional to the volume of gas cycled. In addition to this indicator, the CRE notes that greenhouse gas and CH₄ emissions in absolute terms are up slightly for both operators.

The European regulation to reduce methane emissions in the EU energy sector will be adopted shortly. In particular, this regulation will introduce a common framework for measuring and reporting methane emissions, the obligation to investigate and repair methane leaks at facilities, and a ban on certain practices (venting, flaring).

The future regulation will impose obligations on gas infrastructure operators. Financial incentives for greenhouse gas emissions, which are currently only tracked, could then be explored.

Q22: Do you agree with the CRE's analysis of the possibility of incentive regulation of greenhouse gas emissions linked to the missions of storage operators?

3.6 Incentive regulation of R&D and innovation

Against a backdrop of rapid change in the energy landscape, operators need to have the resources they need to carry out their research and development (R&D) and innovation projects, which are essential if they are to provide



efficient, high-quality service to users, and develop their network operating tools. In return, operators must use these resources efficiently and transparently.

In order to meet these two requirements, incentive regulation of R&D and innovation (R&D&I) currently relies, for all operators, on:

- an asymmetrically incentivized R&D&I cost trajectory: at the end of the tariff period, amounts not spent over the period are returned to consumers, while trajectory overruns remain the responsibility of operators;
- annual transmission to the CRE of technical and financial information for all projects underway and completed, in place of the current report to the CRE, supplemented by a biennial public report.

During the ATS2 tariff period, Storengy's cost trajectory was €19.1 million, raised to €20.7 million under the mid-period counter. The amount spent over the period was €21 million, of which €0.3 million remained payable by the operator. Teréga's cost trajectory was €1.9 million over the period, raised to €2.5 million under the mid-period counter. The amount spent by Teréga during the period was €2.4 million. The unspent amount (€0.1m) is therefore returned to the tariff. For Géométhane, the cost trajectory was €3.1 million for the ATS2 period. The amount spent during the period was also €3.1 million.

The CRE plans to maintain these guidelines. Firstly, the CRE envisages that the arrangements for covering R&D and innovation costs will remain unchanged. This will prevent operators from having to choose between saving on their R&D&I expenditure and preparing for the future. In order to offer network operators greater flexibility in adapting their R&D&I program, the CRE is also considering keeping the revision of this trajectory mid-tariff period.

For the ATS3 tariff period, the CRE plans to maintain the incentive regulation model of the previous period, based on the following principles:

- maintenance of the incentive scheme to control the cost of operators' R&D&I-related costs, with the possibility for operators to revise this trajectory halfway through the tariff period, to give them greater flexibility in adapting their program. At the end of the ATS3 period, operators present the CRE with a financial balance sheet for the R&D&I, and amounts not spent over the period are returned to consumers (via the CRCP), while overruns on the trajectory remain the responsibility of the operator;
- transparency and monitoring of the effectiveness of expenditure associated with R&D&I are strengthened through two exercises:
 - o annual transmission to the CRE of technical and financial information on all ongoing and completed projects;
 - o biennial publication by operators of a report for the public, in line with the mechanism currently in place. Reports must be harmonized between operators, by means in particular of standardized indicators, and enriched with concrete elements concerning the benefits of projects for network users, as well as systematic feedback on demonstrators financed by the tariff;

Lastly, the *smart grids* window for gas storage operators, set up for the ATS2 tariff period, was not used. The CRE is considering not renewing it for the ATS3 tariff period.

Q23: Do you have any comments on the incentive regulation framework for innovation and R&D envisaged by the CRE for the ATS3 tariff?

3.7 Adaptation of the tariff regulation framework to limit the risk of an excessive increase in the unit cost of transmission for future network users

This part of the Public Consultation deals with the pricing methods likely to meet the need to adapt infrastructures in a context of energy transition and structural decline in fossil gas consumption by 2050. These issues were the subject of the report "Avenir des infrastructures gazières"⁷ (Future of gas infrastructures) published by the CRE in April 2023, which concluded that most existing gas infrastructures would need to remain in operation between now and 2050.

As a result, the decline in gas consumption is likely to occur at a time when network and storage operators will continue to bear significant burdens, and even new investment requirements linked to the energy transition, notably for the insertion of green gases. The relationship between the changes in allowed revenue requested by operators and their forecasts for infrastructure use over the next tariff period already illustrates this trend. This lack of

⁷ *For further information: see the study "Avenir des infrastructures gazières", the CRE (2023)

correlation between trends in consumption and costs would run the risk of unsustainable rate increases for consumers in the absence of changes to the regulatory framework.

In addition, the current tariff framework provides for linear depreciation of gas operators' assets and normative service lives linked to asset use. In the long term, without an appropriate regulatory framework, the decline in infrastructure use could lead to an inconsistency between the asset's actual service life and its depreciation period. This inconsistency could lead to a risk of stranded assets.

While the CRE has been adapting operators' regulatory frameworks for several tariff periods now, and ensuring that operators keep their investments under control, additional levers for action could be implemented.

3.7.1 Prospects for lower consumption mean a risk of higher unit transport costs

In its study "Avenir des infrastructures gazières" (Future of gas infrastructures), the CRE selected three scenarios for gas consumption up to 2050, all of which involve a departure from the Ademe trend scenario (trend scenario with biomethane production reaching 86 TWh in 2050). These three scenarios are based on the assumption of a balance between annual consumption and production in 2050, i.e. the end of fossil gas consumption and the achievement of energy sovereignty:

- Ademe's S1 scenario (165 TWh of consumption by 2050), characterized by a very sharp drop in gas use in the building sector, and the persistence of a residual heel of consumption in collective housing with individual boilers;
- Ademe's S3 scenario (245 TWh of consumption by 2050), characterized by a less pronounced decline in gas use in buildings, strong development of hybrid heat pumps and moderate growth in gas mobility;
- the System Operators' Scenario (SGR) (320 TWh of consumption in 2050), characterized by a less pronounced decline in heating use, and strong growth in hybrid heat pumps and gas mobility.

The study shows that, despite falling consumption, the sizing of French gas infrastructures is unlikely to change significantly between now and 2050:

- gas transmission and distribution networks will continue to be largely necessary. Some assets will nevertheless be releasable, in proportions that will remain limited;
- a significant proportion of storage capacity will still be required to meet the need for seasonal modulation of consumption.

Networks could also continue to expand to support the development of green gases and NGV mobility, and will need to adapt to the emergence of emergency use. As a result, gas operators' costs are unlikely to fall in the same proportions as gas consumption by 2050.

The "Future of gas infrastructures" study highlights two cumulative effects up to 2050:

1. a gradual reduction in the consumption base and in the number of customers using gas infrastructures;
2. infrastructure sizing to be maintained: operators' costs not decreasing in the same proportion or at the same speed, and could even increase as a result of investment requirements linked to the energy transition.

3.7.2 These two effects combine to create a risk of higher unit transport costs. Tariff levers exist to control the risk of cost increases per unit of gas transported and per customer

The first lever identified to limit the "scissor" effect is to adapt the distribution of capital costs over time, with the aim of increasing them in the shorter term in order to reduce them in the longer term, in line with anticipated trends in gas consumption. This will avoid passing on today's burdens to tomorrow's consumer.

Three cumulative and non-exclusive paths are presented in the following paragraphs:

1. ending RAB indexation to inflation by switching to RAB remuneration to a nominal rather than actual WACC;
2. adjusting the rate of depreciation (switch to declining-balance depreciation, higher initially and then lower), so that depreciation costs are more in line with declining gas consumption;
3. reducing the depreciation period of certain assets, where this is relevant to their actual expected service life.

In addition, these measures may not be sufficient to contain the price squeeze: the outlook for falling consumption therefore calls for more efficient investment strategies on the part of network and storage operators, so that a shrinking consumption base only has to bear optimized investment costs.

3.7.3 The risk of an increase in the unit cost of transmission and the levers for managing this risk were the subject of a thematic Consultation workshop

On June 20, 2023, a workshop was held on how to support the decline in gas consumption within an appropriate regulatory framework. The workshop was attended by 86 participants.

During the workshop, the CRE staff presented the challenges of the next generation of tariffs in relation to declining gas consumption. Gas infrastructure operators also presented their consumption trajectories for the next tariff period. The CRE's departments then went on to detail the avenues the CRE is exploring with regard to the allocation of capital costs over time and the optimized management of operators' assets.

On the whole, the CRE's proposals met with no opposition in principle, even though some participants wondered about their consequences in terms of changes in tariff levels.

With regard to the challenges posed by a drop in natural gas consumption, several players shared the CRE's view of the risk of a rise in the unit cost of transmission. Some stakeholders have raised questions about coordination with decisions taken by local authorities, customer support in the event of conversion to another energy source, and the social impact of higher energy costs.

With regard to the distribution of capital costs over time (de-indexation of the RAB, declining-balance depreciation), stakeholders mainly questioned the CRE's services on the impact of these measures on infrastructure tariffs, and on certain practical aspects of these changes (application to all assets, accounting management, etc.).

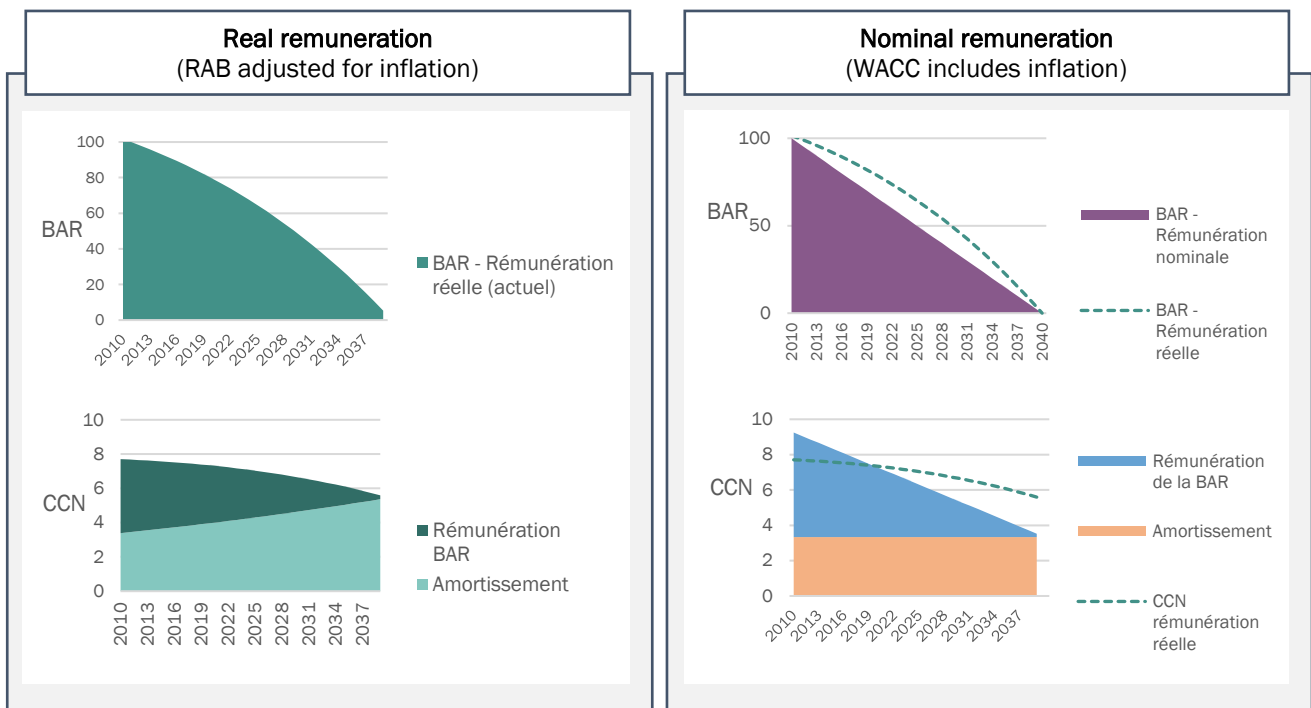
With regard to optimized management of operators' assets, two suppliers questioned the concomitance of rising costs linked to the development of biomethane and falling gas consumption, with the risk of worsening the price squeeze and making biomethane less acceptable.

3.7.4 Evolution towards nominal remuneration

Under current gas infrastructure tariffs, the book value of assets is revalued annually in line with inflation. This revalued asset base is associated with a remuneration fixed in actual terms - i.e. adjusted for inflation, insofar as this is already taken into account in the value of the RAB.

In contrast, the tariff for electricity transmission infrastructure (TURPE HTB) stipulates that the value of the asset base is the net book value of these assets. The associated remuneration is defined and fixed in nominal terms - i.e. with a risk-free rate that includes an inflation assumption.

Theoretical case of an asset commissioned in 2010 and depreciated over 30 years



In the case of actual remuneration, indexing the RAB to inflation passes on the cost of current inflation to future infrastructure users, since the amortization period increases progressively with inflation. This framework contributes to the gradual rise in the unit cost of transmission.



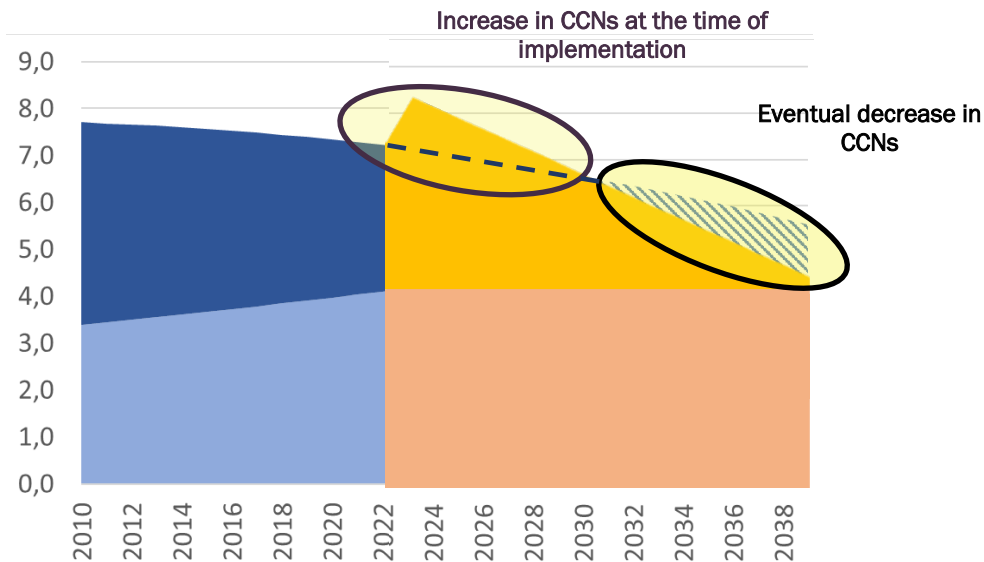
In the case of nominal remuneration, the effect of inflation is factored into the WACC. Its impact on consumers is immediate. This method results in depreciation for a given asset that is constant over time. The WACC is higher, and the compensation-related portion of CCN is therefore greater in the short term.

Both compensation methods are equivalent in the long term.

Effect of a change in method

With a switch to nominal RAB remuneration, inflation would be factored into the WACC and the value of the asset base would no longer be revalued by inflation each year.

Theoretical case - switch to nominal remuneration from 2024 onwards



The CRE's preliminary analysis

This method of remunerating RAB assumes a higher WACC than in the case of inflation-indexed RAB. It leads to a temporary increase in CCNs at the time of implementation, but these then decrease as the RAB level is reduced more rapidly.

Such a change would enable us to better control the evolution of the unit cost of gas transmission over time: at this stage, the CRE considers that this is a relevant solution to meet the risk of a rise in the unit cost of transmission over time. What's more, this development means that future users won't have to bear the brunt of current inflation.

The CRE notes, however, that this would imply a significant increase in CCNs when the method is changed. Its implementation could be gradual.

Q24: Do you think that ending the indexation of the RAB to inflation and taking it directly into account in the remuneration rate would provide a solution to the risk of an increase in the unit cost of transmission over time? Do you have any comments on its implementation (method, progressiveness, etc.)?

3.7.5 Changes in asset depreciation methods

The regulatory depreciation period for an asset must be consistent with its expected service life, to ensure that its cost is borne by the users benefiting from it, throughout its lifetime.

For a given depreciation period, there are several ways of determining the rate at which an asset is depreciated:

- linear depreciation: annual depreciation payments are equal over the life of the asset;
- declining-balance depreciation: annual depreciation payments are higher at the beginning of the asset's service life, then gradually decrease.

Under the current tariff framework, gas operators' assets are depreciated on a linear basis. This method makes sense when a *priori* stable use over time is anticipated. Conversely, declining-balance depreciation is useful to adapt



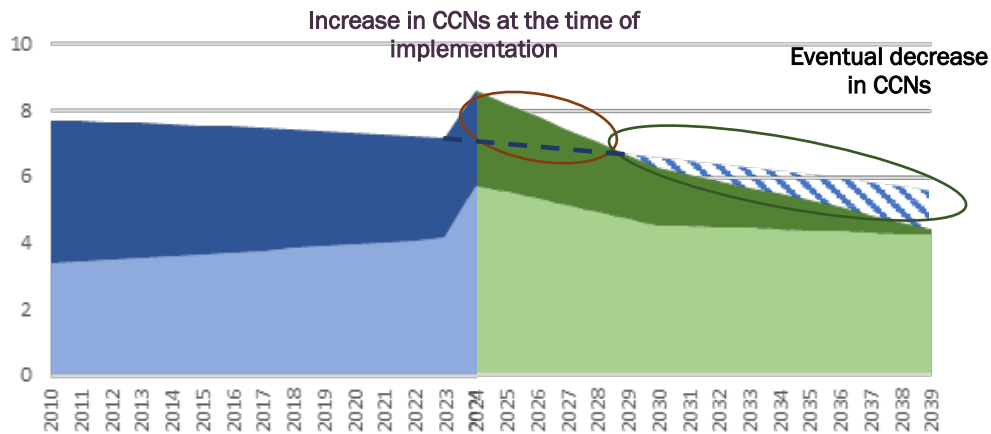
depreciation costs to diminishing use over time. Linear depreciation, which contributes to the gradual rise in unit transmission costs in the event of a sustained fall in consumption: this depreciation method could be questioned in the current context of declining gas consumption.

3.7.6 Declining-balance depreciation

Effect of a change in method

This involves modifying the depreciation schedule (while maintaining the same depreciation period) to take account of changes in the actual use of assets during a period of declining use.

CCN - Declining-balance depreciation based on consumption* implemented in 2024



* According to scenario S1 of the Gas Future study

Operators' demand

In its tariff application, Storengy is asking to implement declining-balance depreciation on all equipment and cushion gas for its aquifer sites, according to terms to be defined. Storengy specifies that if the scope were to be reduced, it would have to cover at least cushion gas and new commissionings.

The CRE's preliminary analysis

At this stage, the CRE considers that the switch from linear to declining-balance depreciation is also an appropriate response to the risk of rising unit gas transmission costs. This would make it possible to maintain consistency between the service life of assets and their regulatory life, while rebalancing the distribution of capital costs over time in relation to the expected level of asset utilization. Thus, accelerating the rate of depreciation of an asset without changing its duration is consistent with the assumption that gas infrastructures will be used less and less beyond 2050. However, this is less appropriate for assets whose economic life may be shortened or which could be converted to another use, such as hydrogen.

Finally, declining-balance depreciation generates higher CCNs at the time of implementation, but these decrease more rapidly. Like the de-indexation of the RAB, this implies a temporary increase in CCNs when the method is changed. An estimate of this increase is presented in section 3.7.8.

The CRE considers that the depreciation factor chosen could be set to limit the increase in costs when the method is changed, and re-evaluated at each tariff period, according to forecasts of changes in infrastructure use. This revision would also enable us to maintain a rate of depreciation consistent with updated consumption forecasts, and thus better reflect infrastructure usage.

Q25: Do you think that changing the depreciation method would provide a solution to the risk of an increase in the unit cost of transmission over time?

3.7.7 Reduction in depreciation period

Modifying the depreciation period of assets, where this is relevant to their expected service life, is another way of shifting the burden of depreciation onto future infrastructure users. Several operators have formulated requests to this effect in their tariff documents.



Operators' demand

In their tariff applications, storage operators propose the implementation of accelerated depreciation for certain assets:

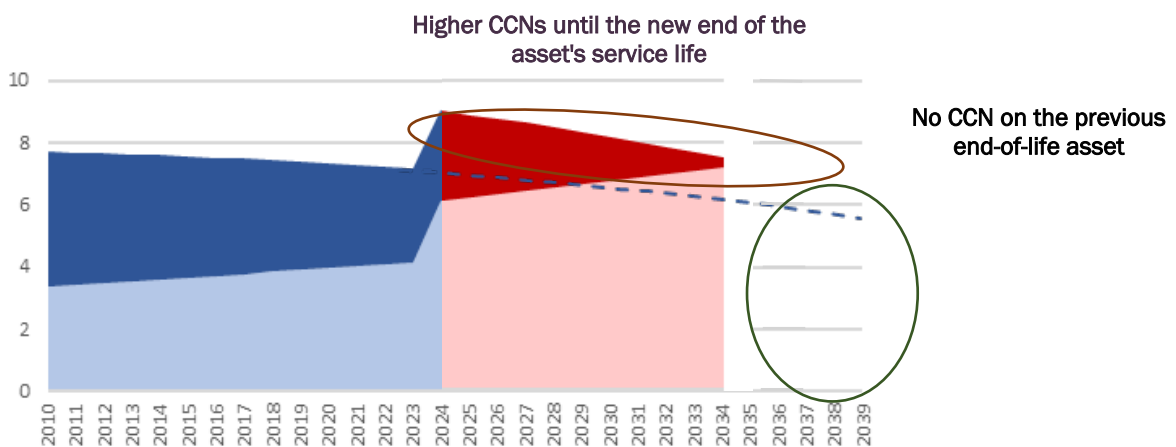
- Storengy and Géométhane are proposing to reduce the depreciation period for cushion gas and assets that cannot be converted to hydrogen on saline storage sites (so that these assets are fully depreciated on the date the site is converted to hydrogen, or by 2050 at the latest);
- Teréga proposes to reduce the depreciation period for new wells (from 50 to 30 years), as well as for new compressors (from 30 to 25 years).

Effect of a change in method

Reducing the depreciation period greatly reduces the risk of stranded costs for a given asset, by ensuring that the asset's RAB will be zero at the end of its service life, assuming that the new regulatory life corresponds to the asset's actual service life.

Reducing the depreciation period of an asset implies an increase in CCN over the remainder of its service life.

CCN - Reduction in depreciation period from 30 to 25 years, applied in 2024



The CRE's preliminary analysis

This method is relevant in the case of assets that are likely to be out of use before the end of their regulatory service life. The CRE has already reduced the depreciation period for gas assets that present a significant risk of not being used by this deadline: in the ATRD6 tariff, it decided to reduce the depreciation period for building connections and pipes from 45 to 30 years, in response to the same context of declining gas consumption. It also decided to reduce the depreciation periods for the Fos Tonkin⁸ and Montoir⁹ terminals, where there was a risk of non-subscription at the end of long-term contracts.

However, as the "Future of gas infrastructures" study illustrates, most gas infrastructures are likely to remain in service beyond 2050. Reducing the service life of other assets would therefore lead to an inappropriate decorrelation between their regulatory service life and their economic service life. This decorrelation would not be conducive to the economic efficiency of the gas system, as it could limit operators' financial incentive to keep assets in service and encourage them to renew them prematurely.

The CRE therefore considers at this stage that the relevant situations for applying this solution have already been the subject of the necessary adaptations (building connections and pipes in particular), and that it is not relevant in the case of the majority of other French gas assets. It could, however, be applied in the case of assets at risk of not being used before the end of their regulatory life. For example, the depreciation period for new assets currently depreciated over 50 years could be reduced to 40 years.

Q26: Do you agree with the CRE's analysis of the usefulness of reducing the depreciation period in response to the risk of an increase in the unit cost of transmission?

⁸ see the CRE Deliberation of December 13, 2011 concerning the decision to extend the Fos Tonkin terminal beyond October 1, 2014
⁹ see the CRE Deliberation of January 7, 2021 concerning the tariff for use of regulated LNG terminals



3.7.8 Financial incentive to keep depreciated assets in service

Operators' demand

Storengy and Géométhane propose to set up a remuneration mechanism for fully depreciated assets, without specifying its characteristics.

The CRE's preliminary analysis

The current regulatory framework provides for asset remuneration based on a normative regulatory service life: in some cases, this may turn out to be shorter than the actual service life of the assets. These are then exploited by operators without additional remuneration. In order to limit the burden on end customers, the CRE believes that operators should not base their asset replacement decisions on the level of depreciation. Instead, operators have to decide whether to replace an asset by carrying out a cost-benefit analysis of the potential costs of maintaining it in service versus renewing it. In particular, the CRE ensures that this principle is applied when approving operators' investments each year.

At this stage, the CRE considers that the storage operators' request for a return on fully depreciated assets could lead to over-remuneration of assets, without any clear financial benefit for the tariff. In fact, the potential savings in capital costs that this system will bring are still uncertain. Furthermore, when applied in isolation, this system cannot be relied upon to prevent early asset renewal.

Q27: Do you agree with the CRE's analysis of the financial incentive to keep depreciated assets in service?

3.7.9 Implementing changes

The CRE has estimated the impact of implementing nominal remuneration and declining-balance depreciation.

- As regards the switch to nominal remuneration, the estimate takes into account the application of this change to the entire RAB.
- Declining-balance depreciation is applied to all the operator's assets. The CRE assumes a depreciation rate corresponding to 1.2 times the linear depreciation rate. The increase in depreciation leads to a fall in RAB during the tariff period. The impact of this decrease is valued taking into account a WACC in the middle of the range.

The impact on operators' normative capital costs and allowed revenue is detailed in the following table:

On average over the tariff period	Storengy	Teréga Stockage	Géométhane	All operators
Nominal remuneration				
CCN developments	+9.9 %	+12.7 %	+9.1 %	+10.4 %
RA evolution	+6.3 %	+8.3 %	+5.3 %	+6.7 %
Declining-balance depreciation				
CCN developments	+8.4 %	+7.6 %	+9.7 %	+8.3 %
RA evolution	+5.4 %	+5.0 %	+5.7 %	+5.3 %

These developments will enable a gradual reduction in RAB. The impact on operators' RAB in 2027 is detailed in the following table:

	Storengy	Teréga Stockage	Géométhane	All operators
Nominal remuneration				
Impact on RAB level in 2027	-6.2 %	-5.0 %	-5.9 %	-5.9 %
Declining-balance depreciation				
Impact on RAB level in 2027	-2.9 %	-2.4 %	-3.5 %	-2.8 %

The rate increases resulting from these changes in asset remuneration methods could be mitigated to avoid excessive rate increases:

- it could be smoothed over time (over several pricing periods);

- RAB de-indexation and accelerated depreciation could be implemented gradually, for example initially on new assets or asset categories by asset category;
- the degressive depreciation coefficient could be set to limit the increase in CCNs over the short term.

Q28: Do you think it would be a good idea to implement these changes now?

Q29: Do you have any other suggestions concerning the distribution of capital costs over time, with a view to addressing the risk of rising unit costs for gas transmission?

4. TARIFF LEVEL

To determine the operators' operating cost trajectories, the CRE uses the following inflation assumptions:

	2023	2024	2025	2026	2027
CPI excluding tobacco	4.60%	2.40%	1.80%	1.60%	1.60%

These assumptions will be adjusted with the latest forecasts available at the time of the tariff decision.

4.1 Review of ATS2: operating costs

As an appendix to this Public Consultation, the CRE is publishing an assessment of the tariff regulation framework over the past 10 years, and in particular of trends in operating costs.

4.1.1 Storengy

Over the period 2020-2022, Storengy's net operating costs were lower overall than the operating costs forecast in the trajectory set by the tariff.

In current M€	2020	2021	2022
Net operating costs in ATS2 tariffs ¹⁰	175.9	161.3	188.8
Net operating costs	178.2	153.5* (147.1)	161.0* (141.1)
Difference	+2.3	-7.8	-27.9

* Over the period, Storengy reduced its own gas inventory in order to maximize the commercialization of storage capacity. Amounts have been restated to exclude exceptional income.

Over the period 2020-2022, the cumulative difference between the ATS2 tariff trajectory and the actual trajectory, adjusted for exceptional income, was -33.4 M€, or -6.3% compared with forecast costs.

The main differences can be explained by:

- tax costs below the forecast trajectory, due to the reduction in production taxes implemented from 2021 to improve business competitiveness.
- lower-than-expected operating and maintenance costs.
- personnel costs below the forecast trajectory.

Storengy's net operating costs excluding energy were 7% below the forecast trajectory for the period 2020-2022.

¹⁰ The trajectories of energy, CO₂ and consumable costs have been updated each year. The trajectories of other costs were set at the beginning of the tariff period, and updated each year to take into account the difference between forecast and actual inflation.

In current M€	2020	2021	2022
Net non-energy operating costs under ATS2 tariffs	152.2	137.5	158.6
Net operating costs excluding energy	153.8	128.7	132.9
Difference	+1.7	-8.7	-25.7

4.1.2 Teréga

Over the period 2020-2022, Teréga's net operating costs were lower overall than the operating costs forecast in the trajectory set by the tariff.

In current M€	2020	2021	2022
Net operating costs in ATS2 tariffs ¹¹	43.8	45.6	53.2
Net operating costs ¹²	44.9	46.2	52.8
Difference	+1.1	+0.6	- 0.4

Over the 2020-2022 period, the cumulative difference between the ATS2 tariff trajectory and the actual trajectory amounts to €1.3 million, or +0.8% compared with forecast costs.

The main differences can be explained by:

- actual energy costs higher than updated forecasts (the difference was partially covered by the tariff via the CRCP).
- lower-than-forecast revenues from the sale of storage capacity to the transport business (the difference was covered by the tariff via the CRCP).
- lower-than-expected operating and maintenance costs.
- lower tax costs than forecast, due to the reduction in production taxes implemented from 2021 to improve business competitiveness.

Teréga's net operating costs excluding energy were 3% below the forecast trajectory for the period 2020-2022.

In current M€	2020	2021	2022
Net non-energy operating costs under ATS2 tariffs	38.0	39.6	41.3
Net operating costs excluding energy	38.7	37.8	38.5
Difference	+0.7	-1.8	-2.8

4.1.3 Géométhane

Over the period 2020-2022, Géométhane's net operating costs were lower overall than the operating costs forecast in the trajectory set by the tariff.

In current M€	2020	2021	2022
Net operating costs in ATS2 tariffs ¹³	16.7	17.2	20.8

¹¹ The trajectories of energy, CO₂ and consumable costs have been updated each year. The trajectories of other costs were set at the beginning of the tariff period, and updated each year to take into account the difference between forecast and actual inflation.

¹² The trajectory takes information system costs into account.

¹³ The trajectories of energy, CO₂ and consumable costs have been updated each year. The trajectories of other costs were set at the beginning of the tariff period, and updated each year to take into account the difference between forecast and actual inflation.

Net operating costs	16.2	15.7	18.1
Difference	-0.5	-1.5	-2.7

Over the period 2020-2022, the cumulative difference between the ATS2 tariff trajectory and the actual trajectory amounts to -4.7 M€, or -9% compared with forecast costs.

The main differences can be explained by:

- lower tax costs than forecast, due to:
 - o on the one hand, the reduction in production taxes implemented from 2021 to improve business competitiveness.
 - o and the fact that the site's land base was lower than forecast due to the postponement of work on the new compressor shop.
- site operating costs below the forecast trajectory.

Géométhane's net operating costs excluding energy were 12% below the forecast trajectory for the period 2020-2022.

In current M€	2020	2021	2022
Net non-energy operating costs under ATS2 tariffs	16.0	16.5	18.9
Net operating costs excluding energy	15.9	14.4	15.2
Difference	-0.1	-2.2	-3.7

4.2 Operators' pricing demands and the main challenges they face

4.2.1 Storengy

In its tariff application, Storengy argues that Russia's war against Ukraine in early 2022 has led to a paradigm shift, resulting in high inflation and an increased need for security of supply.

Storengy points out that the provisions of European regulation (EU) 2022/1032¹⁴ and the " *Pouvoir d'Achat* " law¹⁵ reinforce the role of storage facilities in guaranteeing security of gas supply. He also points out that the high volatility of energy markets in recent years has made it more difficult to market the slowest storage sites (i.e. those with the lowest ratio of withdrawal rate to useful volume).

In this context, Storengy indicates that its tariff application aims to meet the following challenges:

- strengthening security of supply and energy sovereignty: Storengy wants to improve the performance of its less efficient aquifer storage facilities, and increase the capacity of its salt storage facilities by connecting two additional caverns to the Etrez site. Storengy must also complete the conversion of the Gournay storage facility to H-gas.
- strengthening risk prevention: Storengy wants to increase its spending on physical and IT security for its storage sites.
- ensuring the sustainability of the storage business: Storengy plans to step up its actions and R&D work aimed at adapting storage facilities to new gases and reducing its carbon footprint in order to respond to the acceleration of the ecological transition.

Taking into account the issues listed above, Storengy is requesting total net operating and capital costs of around €700 million/year on average for the ATS3 period, i.e. an increase of 44% on the actual figure for the ATS2 period.

The allowed revenue¹⁶ requested by Storengy, increases by 24% between 2024 and the updated 2023 allowed revenue level.

¹⁴ Regulation (EU) 2022/1032 of the European Parliament and of the Council of June 29, 2022 amending Regulations (EU) 2017/1938 and (EC) No 715/2009 as regards the storage of gas

¹⁵ Law no. 2022-1158 of August 16, 2022 on emergency measures to protect purchasing power

¹⁶ Allowed revenue includes CCN, CNE and CRCP settlement

4.2.2 Teréga

In its tariff dossier, Teréga considers that, in addition to well-identified issues such as the downward trend in consumption, the energy transition and the possible contraction in the scope of the PPE, there are new risks: increased pressure on storage facilities in the context of the gas crisis, and additional European and national obligations, particularly in terms of filling storage facilities.

Teréga nevertheless sees the ATS3 tariff as an opportunity to secure the storage business for the benefit of security of supply, and to put in place the conditions necessary for a successful energy transition by promoting the decarbonization of gases and addressing the issue of the temporal management of natural gas storage assets and the study of their potential gradual and coordinated conversion to H₂, for example.

Taking these issues into account, Teréga is requesting total net operating and capital costs of around €193 million/year on average for the ATS3 period, an increase of 14% compared with the ATS2 period.

The allowed revenue¹⁷ requested by Teréga, increases by 14% between 2024 and the updated 2023 allowed revenue level.

4.2.3 Géométhane

Géométhane states that its tariff application is intended to address the following issues:

- maintaining assets in compliance with legal and regulatory obligations: operating costs include increased maintenance in line with the aging of the site and the reduction of the environmental footprint.
- reinforcing security of supply: Géométhane's investment program includes an increase in salt storage capacity by connecting two additional cavities to its Manosque site.
- accelerating the energy transition initiatives and managing risks to the gas system in the medium to long term.

Taking into account the issues listed above, Géométhane is requesting total net operating and capital costs of around €69 million/year on average for the ATS3 period, i.e. an increase of 82% compared with the ATS2 period.

The allowed revenue¹⁸ requested by Géométhane, increases by 6% between 2024 and the updated 2023 allowed revenue level.

4.3 Net operating costs

4.3.1 Operators demand

4.3.1.1 Storengy

The forecast net operating costs presented by Storengy for the ATS3 period are as follows:

In current M€	2022 Achieved	2024	2025	2026	2027
Net operating costs	161.0* (141.1)*	231.7	237.6	249.6	253.4

* the amount has been adjusted for exceptional income of €19.8m

Storengy's request assumes a sharp rise in net operating costs (including energy costs) between the adjusted 2022 amount and 2024, of €71 million (or +44%). Net operating costs will then rise by an average of around 3% a year over the 2024-2027 period. Excluding energy, the increase between actual 2022 and demand for 2024 is +43%.

The main items in Storengy's demand that will change between 2022 and 2024 are as follows:

- "Personnel costs" (+24 M€, or +34%): this increase is mainly due to the rise in the number of full-time equivalents (FTEs) and the revaluation of salaries following the rise in inflation.
- "Energy costs" (+48% or €14 million): Storengy increases the storage utilization assumption and takes into account the rise in electricity and gas prices.
- "Maintenance" (+€11 million or +41%): this increase is mainly due to the reinforcement of preventive maintenance.

¹⁷Allowed revenue includes CCN, CNE and CRCP settlement

¹⁸Allowed revenue includes CCN, CNE and CRCP settlement

- "R&D activities" (+6 M€ or +110%): Storengy plans to step up work on methane emissions, the acceptability of mixed gas and hydrogen.
- "Operating costs" (+€6 million or +39%): Storengy expects higher operating costs.

4.3.1.2 Teréga

The forecast net operating costs presented by Teréga for the ATS3 period are as follows:

In current M€	2022 Achieved	2024	2025	2026	2027
Net operating costs	52.8	64.0	60.4	61.4	61.3

Teréga's request assumes a sharp rise in net operating costs (including energy costs) between the 2022 amount achieved and 2024, of €11.2 million (or +21%). Net operating costs would then fall by an average of around 2% a year over the 2024-2027 period. Excluding energy, the increase between achieved 2022 and demand for 2024 is +20%.

The main items showing a change between 2022 and 2024 in Teréga's demand are as follows:

- "Energy costs" (+3.5 M€, i.e. +24%): this increase is due to higher electricity and gas prices;
- "Maintenance" (+€2.9 M or +110%): Teréga anticipates an increase in maintenance work on compressors and wells.
- "Personnel costs" (+€2.0 M, or +9%): the increase was mainly due to the addition of FTEs and salary increases.
- "Technical studies" (+1.5 M€ or 121%): this increase is linked to the development of infrastructures for H₂ and CO₂.

4.3.1.3 Géométhane

Géométhane's forecast net operating costs for the ATS3 period are as follows:

In current M€	2022 Achieved	2024	2025	2026	2027
Net operating costs	18.1	22.0	22.4	22.8	23.5

Demand for Geomethane implies a sharp rise in net operating costs (including energy costs) between the 2022 amount achieved and 2024, of +3.9 M€ (i.e. +22%). Net operating costs will then rise by an average of 2.3% a year over the 2024-2027 period. Excluding energy, the increase between achieved 2022 and demand for 2024 is +33%.

The main items showing a change between 2022 and 2024 in demand for Géométhane are as follows:

- "Work and maintenance" (+129%): the increase stems from exceptional work on the wells in 2024 and the arrival of the new electrical compressor, as well as the reduction of the environmental footprint (lower emissions);
- "Member services" (+16%): this change is associated with the revaluation of the cost of contracts to ensure the operation of the site.
- "Property" (+32%): this change is associated with the revaluation of the cost of providing facilities.
- "Studies and research": (+0.6 M€, i.e. +84%): this rise is due to an increase in R&D expenditure;
- "Taxes" (+€0.3m, or +10%): this rise is due to an increase in the site's land base related to investments.
- "Energy costs (-1.0 M€ or -33%): lower energy costs.

4.3.2 The CRE's approach to analyzing net operating costs

The CRE has asked operators to present their tariff applications on the basis of the latest achieved figures, justifying any significant deviation from the 2022 figure, and breaking down each item to the nearest euro, to ensure that any additional requirements cannot be covered by resources released from actions that are coming to an end. The CRE has commissioned H3P-ORCOM to carry out an audit of the operating costs of natural gas storage infrastructure

operators. The work took place between April and July 2023. The auditor's report, based on the operators' request updated in mid-June, is published for each operator at the same time as this Public Consultation document.

This audit provides the CRE with a clear understanding of operators' operating costs and income for the ATS2 period, and of the operating costs forecast by operators for the coming tariff period (2024-2027). The results of this audit are intended to:

- provide expert advice on the relevance and justification of the trajectory of operators' operating costs for the next tariff period.
- assess the level of actual costs (2020-2022) and forecast costs (2024-2027);
- make recommendations on the efficient level of operating costs to be taken into account for the ATS3 tariff.

The CRE also analyzed a number of specific items, including R&D and energy costs.

4.3.3 Summary of external audit results and the CRE's additional adjustments to certain items

4.3.3.1 Storengy

- **External audit results**

The scope of costs audited by the auditor includes net operating costs, with the exception of the following items audited by the CRE: energy, R&D.

Based on this scope of costs, the auditor recommended the following trajectory for Storengy over the ATS3 period:

In current M€	2024	2025	2026	2027
Trajectory requested by Storengy	178	183	186	193
Achieved 2022 inflated	136	139	141	143
The auditor's trajectory	144	148	148	152
Impact on Storengy's demand	-34	-35	-38	-41

The main adjustments recommended by the auditor relate to personnel costs, the information system, maintenance, operations and site support. These adjustments are broken down as described below.

Personnel costs

Storengy aims to achieve a net increase in its workforce trajectory of around 40 FTE out of a total workforce of approximately 625 FTE over the period 2020-2023. Storengy wants to deploy FTEs to improve storage performance, cybersecurity issues, the ecological transition and the reduction of methane emissions. The operator also plans to engage in-house resources to manage certain projects that do not require external engineering.

The auditor considers that the number of new jobs requested by Storengy is overestimated. Of the forty or so positions requested by the operator, only around ten net FTEs are required in the auditor's analysis, for the following reasons:

- according to the auditor, the operator's request does not take into account possible staff reallocations within Storengy.
- some additional FTEs are not sufficiently justified or do not fall within the scope of regulated missions (e.g. for the development of H₂ storage);
- certain FTEs are linked to the future European regulation on the reduction of methane emissions in the energy sector, the dedicated resources will be the subject of an ad hoc deliberation at its implementation.

The auditor takes into account a productivity of 0.5% per year on the workforce.

In addition, the auditor corrects the forecast level of the National Basic Salary and other remuneration parameters to bring them into line with historical practices.

With regard to statutory costs, the auditor has taken into account, the latest market price assumptions for gas and electricity, as well as a lower trend in the transmission and distribution component. In addition, the auditor assumed a 10% reduction in electricity consumption, in line with the energy sobriety observed among the French, and a 10.5% reduction in gas consumption, in line with the forecast data provided.

July 26, 2023

With regard to other personnel costs, the auditor has maintained the operator's trajectory, excluding mechanical adjustments.

Overall, the auditor recommends a downward adjustment to Storengy's request for personnel-related costs of €15 million per year on average (i.e. a cumulative total of €61.2 million over the ATS3 period).

Maintenance

Storengy has constructed this item by taking the "estimated" 2023 inflated and adding to this an assumption of additional price increases in anticipation of contract renegotiation. In addition, Storengy is planning specific corrective and preventive maintenance operations over the ATS3.

The auditor considers that the renegotiation of contracts with suppliers should not be included in the trajectory, given that inflation is already taken into account in the calculation.

Furthermore, the auditor did not receive sufficient explanations to be able to guarantee the absence of any specific transaction in 2023. As a result, the auditor has constructed a cost trajectory indexing the costs incurred in 2022 to inflation.

With regard to well interventions, the consultant has adjusted the evolution of labor costs in line with the evolution of personnel costs and has retained a number of man-days worked at the level of 2022.

The result of these adjustments is a downward demand correction of -9.5 M€ per year on average (i.e. -38.1 M€ cumulated over the ATS3 period) on maintenance costs.

Information System

Storengy's "IT" item can be broken down into 3 sub-items, namely Industrial IS, which includes site management projects, Commercial IS, which includes customer interface, back-office and dispatching tools, and Transverse IS, which covers finance, internet sites and the intranet.

According to the auditor, Storengy has justified its trajectory by using actual 2022 amounts and adding new elements without providing details on 2020 and 2021 costs.

The consultant considers that it is not possible to carry out in-depth analyses on a single reference year. As a result, the auditor has retained the 2020-2022 average for the Industrial IS and Transverse IS positions. Given the downward trend observed over the 2020-2022 period on the IS sales item, the consultant has defined the trajectory from 2022 onwards.

This approach has led to an average annual adjustment of €3.5 million in Storengy's demand (i.e. a cumulative €14 million over the ATS3 period).

Support sites

Storengy has built its trajectory based on the trajectory of contract renewals for green space maintenance and inventory management. Storengy has taken into account the 2022 actual inflow for the construction of its regulatory trajectory.

The auditor has identified a trend from a [confidential] contract to inflation. As the cleaning contract has not yet been signed, the auditor has decided to apply an increase equivalent to the inflation rate communicated by the CRE for ATS3, as he considers that during negotiations, the operator should not accept an increase higher than inflation.

As the auditor was unable to obtain detailed figures from Storengy, they used the average of actual figures for 2020-2022 as a basis for building the maintenance and operating support trajectory, with the exception of additional costs incurred as a result of the French military programming law, which were duly justified by the operator.

Lastly, with regard to other costs, the auditor based themselves on the 2022 actual influenced by ATS3 concerning electronic document management, vehicle costs and travel. As for other costs, the auditor has retained the operator's trajectory, given that the amounts in the ATS3 trajectory are lower than the 2022 actual amount.

On the basis of this approach, the auditor has adopted an adjustment of -2.7 M€ on average per year (i.e. -11 M€ cumulated over the ATS3 period).

Operation

This item breaks down into three sub-items: operating support costs, consumables, and effluent treatment costs, and well and facility abandonment costs.

Storengy has based its operating support costs mainly on the framework contract with Storengy SAS, and on indexed 2022 costs for other items. For consumables and effluent treatment costs, the operator uses the 2022 actual amount for the fixed portion, and the average of the 2020-2021 ratios for the variable portion. Well and installation abandonment is based on estimates provided by an engineering firm.

The auditor has not made any adjustments to the trajectory of costs related to operating support activities. With regard to consumables, the auditor applied the 2020-2022 average given the erratic evolution of the fixed portion over the 2020-2022 period. For the variable portion, the auditor uses the average ratios observed over the period 2020-2022. Lastly, the auditor did not take into account well abandonment and installation costs initially planned for ATS2 and carried over to ATS3 or amounts that could not be quantitatively justified.

This results in a downward adjustment of -2.5 M€ per year on average (i.e. -10 M€ cumulated over the ATS3 period) on operating costs.

- **Additional CRE adjustments**

Energy costs

For the period 2024-2027, Storengy is requesting an increase in energy costs compared with actual 2022, with an increase of 50.3% between forecast 2024 and actual 2022, then an average increase of +9.1% per year over the period 2024-2027.

Storengy justifies the rise in energy costs by a return to a high level of activity at its storage facilities. Storengy therefore assumes a storage cycling rate of 95% of usable volume (UV). The energy consumption of storage operators is strongly correlated with their cycling.

Storengy's request	2022 achieved	2024	2025	2026	2027	ATS3 (annual avg.)
Gas (M€)	6.6	9.1	10.5	12.1	11.8	10.9
Volumes (GWh)	360.5	327.6	316.4	337.2	330.2	328
Electricity (M€)	14.1	26.0	25.1	35.1	33.4	29.9
Volumes (GWh)	170	189.1	197.6	206.1	208.1	200
CO ₂ (M€)	4.1	3.7	3.7	4.4	4.6	4.1
Other (taxes, depreciation...) (M€)	2.8	2.9	2.9	3.1	3.1	3.0
Total energy costs (M€)	27.7	41.7	42.2	54.7	52.9	47.9

The CRE's preliminary analysis

The CRE is considering a number of adjustments to this request:

- the assumption of 100% UV stocking at the start of winter seems reasonable. On the other hand, it does not seem appropriate to use a low point as observed only in a particular year (3% observed in 2018, a year characterized by a low storage filling rate at the start of winter and a cold end to winter). The CRE is considering an 85% storage cycling assumption (corresponding to 100% storage filling and an average low level observed over the 2012-2022 period);
- adjustment of CO₂ costs, using common adjustment assumptions for all operators. The CRE plans to retain the common price assumptions, as well as adjusting the allocation of free allowances.

These adjustments result in a trajectory 11% lower than Storengy's request, i.e. - €21.1 million over the period.

The CRE's preliminary trajectory	2022 achieved	2024	2025	2026	2027	ATS3 (annual avg.)
Gas (M€)	6.6	8.1	9.4	10.8	10.6	9.7
Volumes (GWh)	360.5	293	283	302	295	293
Electricity (M€)	14.1	23.2	22.5	31.3	29.9	26.7
Volumes (GWh)	170	169	177	184	186	179

CO ₂ (M€)	4.1	2.8	2.9	3.5	3.3	3.1
Other (taxes, depreciation...) (M€)	2.8	2.9	2.9	3.1	3.1	3.0
Total energy costs (M€)	27.7	37.02	37.7	48.8	46.8	42.6

R&D

With regard to R&D, Storengy's expenditure exceeded the trajectory set by the CRE for the ATS2 period. Storengy explains this by higher expenditure than forecast in the trajectory for the "Performance of surface storage facilities" and "Adaptation of storage facilities to renewable gas" axes.

In current M€	2020	2021	2022
Tariff trajectory	4.2	4.7	5.9
Operator costs	4.2	4.8	5.4
Deviation	0	0.1	-0.5

For the ATS3 period, Storengy is requesting an R&D budget of €39.4 M (i.e. €9.8 M/year on average over the period), divided into five areas, plus specific actions linked to R&D management and so-called "operational" R&D actions on storage sites:

- Safety and environment (€7.09m);
- Storage performance (€10.8m);
- New gases - excluding H₂ (€9.9m);
- R&D management (€0.4m);
- R&D operational (5.07 M€);
- H₂ pure (€6.0m).

For most programs, Storengy's planned expenditure for the ATS3 period has risen sharply.

The CRE's preliminary analysis

The CRE notes a number of redundancies between the planned programs, as well as a lack of explanation concerning the operational R&D item.

The CRE plans to make the following adjustments:

- The CRE considers that certain R&D projects are not directly related to the regulated missions of a storage operator (conversion to hydrogen, actions in favor of biodiversity on storage sites). Consequently, the CRE is considering not allocating a budget to these projects in the tariff at this stage.
- The CRE considers that there is insufficient evidence to justify the need to increase the cost of existing R&D programs beyond inflation.
- The CRE is also considering not taking into account most of the expenditure linked to operational R&D programs, for which the content is not sufficiently detailed in the tariff application dossier.

As a result, the CRE plans to adopt a trajectory of R&D costs representing €19.4 million over the ATS3 period, or €4.8 million/year on average. This trajectory is lower than the ATS2 trajectory of €21 million.

In current M€	2024	2025	2026	2027
Trajectory requested by Storengy	11.4	12.1	8.5	7.2
The CRE's preliminary trajectory	4.7	5.7	4.4	4.4
Impact on Storengy's demand	-6.7	-6.4	-4.1	-2.8

• **Summary of preliminary analysis**

Storengy's request would lead to a 43% increase in non-energy operating costs to be covered by the ATS3 tariff in 2024, compared with the level of costs recorded in 2022.

At this stage of its analysis, the CRE considers that the operator's request is unjustified.

The conclusions of the audit report gave rise to an exchange of views with Storengy in July 2023. Storengy was thus able to comment on the results of the consultant's work, and questioned some of the adjustments identified by the auditor during these discussions between the parties.

The level finally adopted by the CRE will depend on the results of ongoing analyses of the adjustments recommended by the auditor, and on any other adjustments envisaged by the CRE.

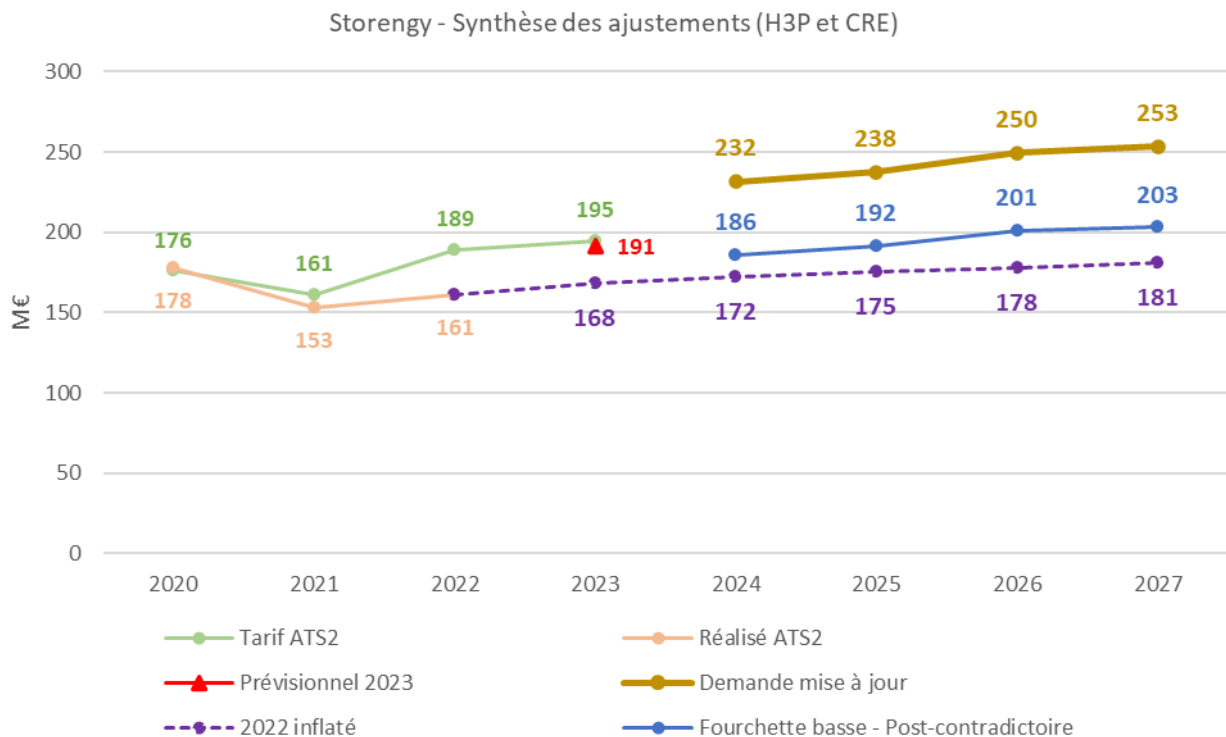
At this stage, the CRE considers that the level of Storengy's net operating costs could fall between an "upper limit" corresponding to Storengy's request, and a "lower limit" established on the basis of all the conclusions of the external audit of the operator's net operating costs and the adjustments envisaged by the CRE and presented above.

In fact, for Storengy, the low limit varies between €186 million in 2024 and €203 million in 2027, i.e. an average of €195 million over the period, and the high limit varies between €232 million in 2024 and €253 million in 2027, i.e. an average of €243 million over the period.

These average levels are still higher than the €161 million recorded in 2022:

- upper bound: 2022-2024 growth of +44% (+43% excluding energy) and a 2024-2027 CAGR of +3.0%;
- low limit: 2022-2024 growth of +16% (+12% excluding energy) and a 2024-2027 CAGR of +3.0%.

The possible trajectories for net operating cost levels are as follows:



4.3.3.2 **Teréga**

• **External audit results**

The scope of costs audited by the auditor includes net operating costs, with the exception of the following items audited by the CRE: energy, R&D.

Based on these costs, the auditors recommended the following trajectory for Teréga over the ATS3 period:



In current M€	2024	2025	2026	2027
Teréga's requested trajectory	43.7	43.9	44.6	45.5
Achieved 2022 inflated	40.7	41.4	42.1	42.7
The auditor's trajectory	37.2	37.5	38.0	38.5
Impact on Teréga's demand	-6.5	-6.4	-6.6	-6.9

The main adjustments recommended by the auditors relate to personnel costs, maintenance and overheads. These adjustments are broken down as described below.

Overheads

In its tariff dossier, Teréga has included a one-year inflation lag, justifying that inflation in year N mainly impacts costs in year N+1. The auditor did not adopt this approach, which is not consistent with the way the tariff works, which allocates resources in year N.

The auditor considers that the evolution of certain sub-items is not sufficiently justified by Teréga. For these sub-headings, the auditor applies inflation to the amounts achieved in 2022, or the average expenditure for the period 2020 - 2022, depending on whether the costs are recurring or not.

With regard to the endowment fund requested by Teréga, the auditor considers that this is a corporate choice that is not directly related to the regulated operator's missions, and consequently the auditor does not retain this cost.

This approach has led the auditor to retain an adjustment of -3.0 M€ on average per year (i.e. -12 M€ cumulated over the ATS3 period).

Maintenance

The auditor considers that the evolution of certain sub-items is not sufficiently justified by Teréga. For these sub-headings, the auditor applies inflation to the amounts achieved in 2022, or the average expenditure for the period 2020 - 2022, depending on whether the costs are recurring or not.

In addition, Teréga has requested coverage of the operating costs associated with applying the draft European regulation on reducing methane emissions from the energy sector. As indicated in section 3.3.1.2, the CRE plans to set the cost trajectory and regulatory framework for the gas operators concerned once the European regulation has been adopted.

This approach results in an adjustment of -2.0 M€ on average per year (i.e. -8.1 M€ cumulative over the ATS3 period).

Personnel costs

With regard to payroll taxes, the auditor uses the latest known rates, which are lower than those used by Teréga.

Over the ATS3 period, Teréga plans to add FTEs (combined transmission and storage) from 2024 onwards due to new requirements for the next tariff period (CO₂, H₂, methane emissions, cybersecurity, asset management, regional institutional relations).

The auditor considers that these additional requirements have either not been sufficiently justified, or are not directly related to the operator's regulated missions. Consequently, the auditor does not retain any additional FTE.

As in the case of maintenance, the auditor has identified the costs associated with the methane emissions regulation.

The auditor therefore proposes a downward adjustment to Teréga's request for personnel-related costs of - €0.9 million on average per year (i.e. a cumulative total over the ATS3 period of - €3.5 million).

- **Additional CRE adjustments**

Energy costs

For the period 2024-2027, Teréga is requesting a higher trajectory of energy costs compared to the 2022 inflow, with an increase of 24.5% between forecast 2024 and actual 2022. This trajectory then declines over the period, with an average drop of -6.6% per year.

Teréga justifies the increase in energy costs compared with 2022 by the continued use of compressors at the Lussagnet site to ensure the South to North supply pattern observed in 2023. Teréga uses a storage amplitude¹⁹ of 85% of usable volume (UV).

Teréga's request	2022 achieved	2024	2025	2026	2027	ATS3 (annual avg.)
Gas (M€)	0.3	0.9	0.8	0.8	0.7	0.8
Volumes (GWh)	17.8	21.6	20.3	20.3	19.0	20.3
Electricity (M€)	13.9	16.8	14.3	14.6	13.7	14.9
Volumes (GWh)	76.0	91.0	92.8	92.8	94.6	92.8
CO ₂ (M€)	-	-	-	-	-	-
Other (taxes, depreciation...) (M€)	0.08	0.09	0.08	0.08	0.08	0.08
Total energy costs (M€)	14.3	17.8	15.2	15.4	14.5	15.7

The CRE's preliminary analysis

The CRE does not accept any adjustment to Teréga's request and proposes to retain this trajectory for the period 2024 - 2027.

R&D

With regard to R&D, Teréga's expenditure was below the trajectory set by the CRE for the ATS2 period. Teréga explains that this under-achievement is inherent in the uncertainties associated with R&I projects.

In current M€	2020	2021	2022
Tariff trajectory	0.46	0.46	0.79
Operator costs	0.3	0.4	0.2
Deviation	-0.16	-0.06	-0.59

For the ATS2 period, Terega is requesting an R&D budget of €7.3 million (i.e. an average of €1.8 million/year over the period), broken down into five goals and two projects, plus a steering budget:

- Integrity, performance and operational safety.
- Reducing our environmental footprint.
- Renewable methanes;
- Hydrogen.
- CCUS, Capture, storage, transport and recovery of CO₂.
- Feasibility studies for the Hysow project, involving the development of infrastructures for H₂ transport and H₂ storage in salt caverns.
- The Pycasso project studies the development of CO₂ storage infrastructures.

The CRE's preliminary adjustments:

At this stage, the CRE is considering the following adjustments:

¹⁹ Difference between low stocking point (April 1st) and high stocking point (November 1st)

- Many of these positions involve activities that are not part of the regulated remit of a natural gas storage operator. At this stage, the CRE is considering not retaining them as low terminals:
 - o R&D budgets for feasibility studies on the Pycasso (CCUS) and HYSOW (Hydrogen) projects.
 - o R&D budgets for "providing CO₂ capture, transport and storage solutions to industrial companies with high CO₂ emissions";
 - o identifying, evaluating and testing alternatives to underground storage for more technically and economically competitive H₂ storage».
 - o extrapolating and adapting the techniques and tools developed for natural gas storage to future storage of other types of gas (in particular H₂ or CO₂).
- the sub-heading "Developing digital tools to improve cybersecurity". Although cybersecurity is an area of prime importance, the CRE considers that the projects presented do not fall within the scope of R&D or are not intended to be carried out by Teréga itself without Consultation with all the grid operators.
- the "occupational health and safety" item. The explanations given do not explain the increase in this item (recovery of ATS2).
- costs not allocated to a specific item or project at this stage.

The CRE is therefore considering a trajectory for R&D costs of €2.0 million over the ATS3 period, or €0.5 million/year on average, compared with actual costs of €0.6 million in ATS2.

In current M€	2024	2025	2026	2027
Teréga's requested trajectory	2.7	1.5	1.5	1.5
The CRE's preliminary trajectory	0.6	0.6	0.4	0.4
Impact on Teréga's demand	-2.1	-0.9	-1.1	-1.1

- **Summary of preliminary analysis**

Teréga's request would lead to a 20% increase in non-energy operating costs to be covered by the ATS3 tariff in 2024, compared with the level of costs recorded in 2022.

At this stage of its analysis, the CRE considers that the operator's request is unjustified.

The conclusions of the audit report gave rise to an adversarial exchange with Teréga during July 2023. Teréga was thus able to comment on the results of the consultant's work and questioned some of the adjustments identified by the auditor during these discussions between the parties.

The level finally adopted by the CRE will depend on the results of ongoing analyses of the adjustments recommended by the auditor, and on any other adjustments envisaged by the CRE.

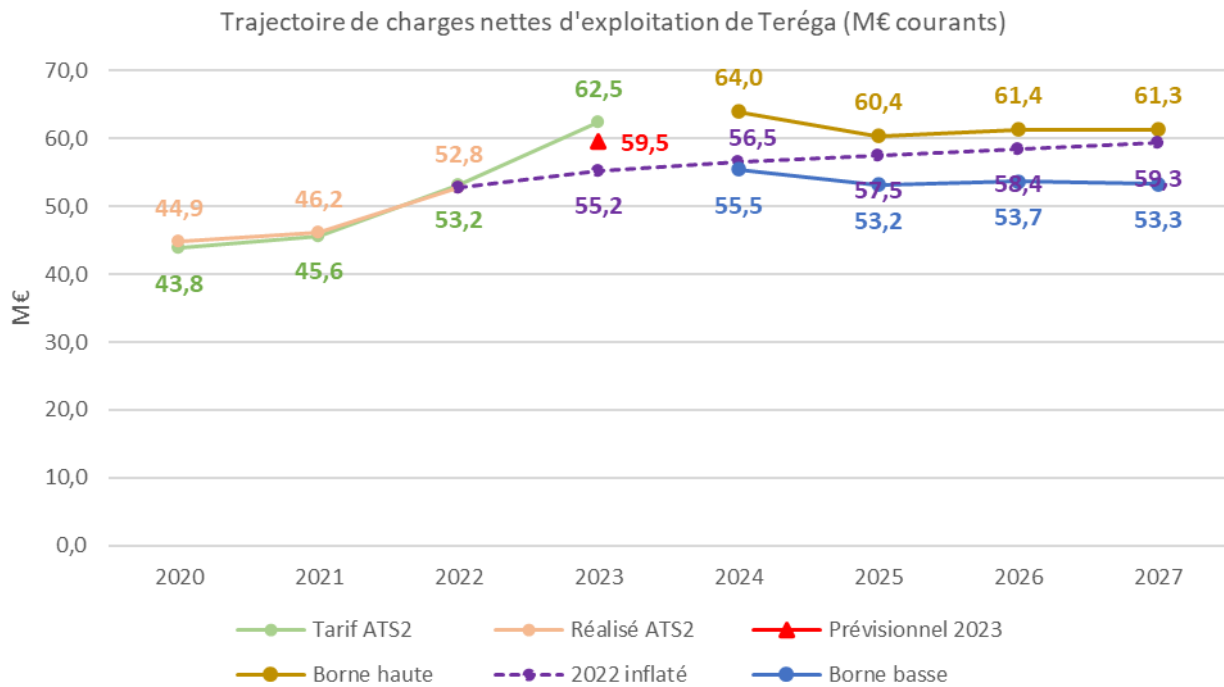
At this stage, the CRE considers that the level of operators' net operating costs could fall between an "upper limit" corresponding to Teréga's request, and a "lower limit" established on the basis of all the conclusions of the external audit of the operator's net operating costs and the adjustments envisaged by the CRE and presented above.

In fact, for Teréga, the low limit varies between €55.5 million in 2024 and €53.3 million in 2027, or €53.9 million on average over the period, and the high limit varies between €64.0 million in 2024 and €61.3 million in 2027, or €61.8 million on average over the period.

These average levels are still higher than the €52.8 million recorded in 2022:

- upper bound: 2022-2024 growth of +21% (+20% excluding energy) and a 2024-2027 CAGR of -1.4%;
- low limit: 2022-2024 growth of +5% (-2% excluding energy) and a 2024-2027 CAGR of -1.3%.

The possible trajectories for net operating cost levels are as follows:



4.3.3.3 Géométhane

External audit results

The scope of costs audited by the auditor includes net operating costs, with the exception of the following items audited by the CRE: energy, R&D.

Based on these costs, the auditors recommended the following trajectory for Géométhane over the ATS3 period:

In current M€	2024	2025	2026	2027
Path requested by Géométhane	18.8	18.9	19.2	20.0
Achieved 2022 inflated	15.5	15.8	16.0	16.3
The auditor's trajectory	17.6	17.5	17.7	17.8
Impact on Geomethane demand	1.2	1.4	1.5	2.2

The auditor's trajectory presented in the table below therefore includes Géométhane's demand for the items audited by the CRE. The CRE's adjustments to these items are presented below.

The main adjustments recommended by the auditors relate to costs associated with external consumption, taxes and member services. These adjustments are broken down as described below.

External consumption

Géométhane has built its trajectory for the Works & Maintenance item on the basis of the average for 2020-2022, to which the operator has added specific operations.

The auditor considers that they did not have sufficient details to enable them to reconstruct the trajectory and identify the specific transactions that would have taken place in 2022. The auditor has therefore built their trajectory on the basis of the past 2020-2022 average, inflated with the indices communicated by the CRE, to which they have added the specific operation of maintaining a new installation and asbestos removal work.

The other specific operations presented by the operator were not retained by the auditor, as the explanations and justifications provided by the operator did not enable them to reconstruct or justify the trajectory.

With regard to actual estate and Géosel, Géométhane has indexed the various contracts to the average trend over the last 5 years. Over the past 5 years, indexes have risen sharply in response to the recent inflationary crisis. The



auditor proposes indexing over the average of the last 10 years to limit the impact of the inflationary crisis over time,

The auditor therefore proposes a downward adjustment to Géométhane's request for external consumption of - €0.9 million on average per year (i.e., a cumulative total over the ATS3 period of - €3.5 million)

Taxes

The operator considers that tax rates will evolve in line with inflation over the ATS3 period, particularly for property tax. It also assumes that tax bases will evolve in line with the latest known rates.

The auditor recommends the use of stable tax rates over the ATS3 period. They consider that these rates do not depend on inflation but on political will and can therefore go up as well as down. With regard to changes in taxable bases, the auditor uses an average of the last 5 years of known rates, as they consider that the 2022 and 2023 rates are exceptional given the economic context, and that over the ATS3 period, rates will return to levels more in line with those observed previously.

This approach results in an adjustment of -0.5 M€ on average per year (i.e., -2 M€ cumulative over the ATS3 period).

Member benefits

To operate the Manosque site, Géométhane uses various service contracts (operating contracts, post-installation operating contract, operating assistance contract, marketing contract and administrative management contract). The value of these contracts is index-linked. To build its trajectory, Géométhane has taken into account a change in indices equal to the average change observed over the last 5 known years.

Over the past 5 years, indexes have risen sharply in response to the recent inflationary crisis. The auditor proposes indexing over the average of the last 10 years to limit the impact of the inflationary crisis over time,

This approach results in an average annual adjustment of -0.2 M€ (i.e., -0.8 M€ cumulative over the ATS3 period).

- **Additional CRE adjustments**

Energy costs

Over the period 2024-2027, Géométhane is proposing a trajectory of declining energy costs compared with actual 2022, with a 51.9% drop between forecast 2024 and actual 2022, followed by an average increase of +18.2% per year over the period 2024-2027.

Géométhane justifies these energy costs by a return to a high level of activity at its storage facilities. Géométhane therefore assumes that the²⁰ storage facilities will be cycled at 95% of their useful volume (UV).

Geomethane demand	2022 achieved	2024	2025	2026	2027	ATS3 (annual avg.)
Gas (M€)	2.5	1.39	0.9	0.48	0.14	0.7
Volumes (GWh)	22.8	28.11	20.2	12.6	4.49	16.4
Electricity (M€)	0.16	0.27	1.05	1.94	2.32	1.4
Volumes (GWh)	1.69	1.7	7.2	9.9	12.59	7.8
CO ₂ (M€)	-	-	-	-	-	-
Other (taxes, etc.) (M€)	0.13	0.13	0.1	0.06	0.02	0.08
Total energy costs (M€)	2.8	1.79	2.08	2.49	2.49	2.2

The CRE's preliminary analysis

The CRE is considering an adjustment to this request:

- the assumption of storage cycling at 100% of UV at the start of winter seems reasonable. On the other hand, it does not seem appropriate to use a low point such as that observed in a single particular year (3% observed in 2018, a year characterized by a low storage filling rate at the start of winter and a cold end to

²⁰ Difference between low stocking point (April 1st) and high stocking point (November 1st)

winter). The CRE is considering a cycling rate of 85% (corresponding to 100% filling of storage facilities and an average low level observed over the period 2012-2022).

These adjustments lead to a trajectory that is 32% lower than the demand for Geomethane, i.e., an adjustment of €1.5 million over the period.

Adjusted trajectory	2022 achieved	2024	2025	2026	2027	ATS3 (annual avg.)
Gas (M€)	2.5	0.9	0.6	0.3	0.1	0.5
Volumes (GWh)	22.8	18.8	13.6	8.5	3.0	11.0
Electricity (M€)	0.16	0.18	0.6	1.2	1.5	0.9
Volumes (GWh)	1.69	1.0	4.0	5.5	7.0	4.4
CO ₂ (M€)	-	-	-	-	-	-
Other (taxes, etc.) (M€)	0.13	0.08	0.08	0.04	0.01	0.05
Total energy costs (M€)	2.8	1.2	1.4	1.6	1.7	1.5

R&D

With regard to R&D, Geomethane expenditure between 2020 and 2022 was below the trajectory set by the CRE. Géométhane explains that the part of its R&D program concerning adaptation to renewable gases got off to a slower start than expected at the beginning of the ATS2 period.

In current M€	2020	2021	2022
Tariff trajectory	0.69	0.73	0.78
Operator costs	0.55	0.42	0.76
Deviation	-0.14	-0.31	-0.2

For the ATS3 period, Géométhane is requesting an R&D budget of €4.9 M (i.e. €1.2 M/year on average over the period), divided into two areas:

- underground & surface installation.
- adaptation to renewable gases.

Géométhane's forecast expenditure for the ATS3 period is up.

The CRE plans to make the following adjustments:

- The CRE considers that certain R&D projects do not fall within the remit of a regulated gas infrastructure operator (hydrogen conversion). As a result, the CRE is considering not allocating a budget to these projects.
- The CRE considers that the cost of existing R&D programs should not increase by more than inflation.

As a result, the CRE plans to adopt a trajectory of R&D costs representing €3.34 million over the ATS3 period, or €0.8 million/year on average.

In current M€	2024	2025	2026	2027
Path requested by Géométhane	1.4	1.3	1.1	1.0
The CRE's preliminary trajectory	0.8	0.8	0.8	0.8
Impact on Geomethane demand	-0.6	-0.5	-0.3	-0.2

• **Summary of preliminary analysis**

Demand for geomethane would lead to a 32% increase in non-energy operating costs to be covered by the ATS3 tariff in 2024, compared with the level of costs recorded in 2022.

At this stage of its analysis, the CRE considers that the operator's request is unjustified.

The conclusions of the audit report gave rise to an exchange of views with Géométhane during July 2023. Géométhane was thus able to comment on the results of the consultant's work and questioned some of the adjustments identified by the auditor during these discussions between the parties.

The level finally adopted by the CRE will depend on the results of ongoing analyses of the adjustments recommended by the auditor, and on any other adjustments envisaged by the CRE.

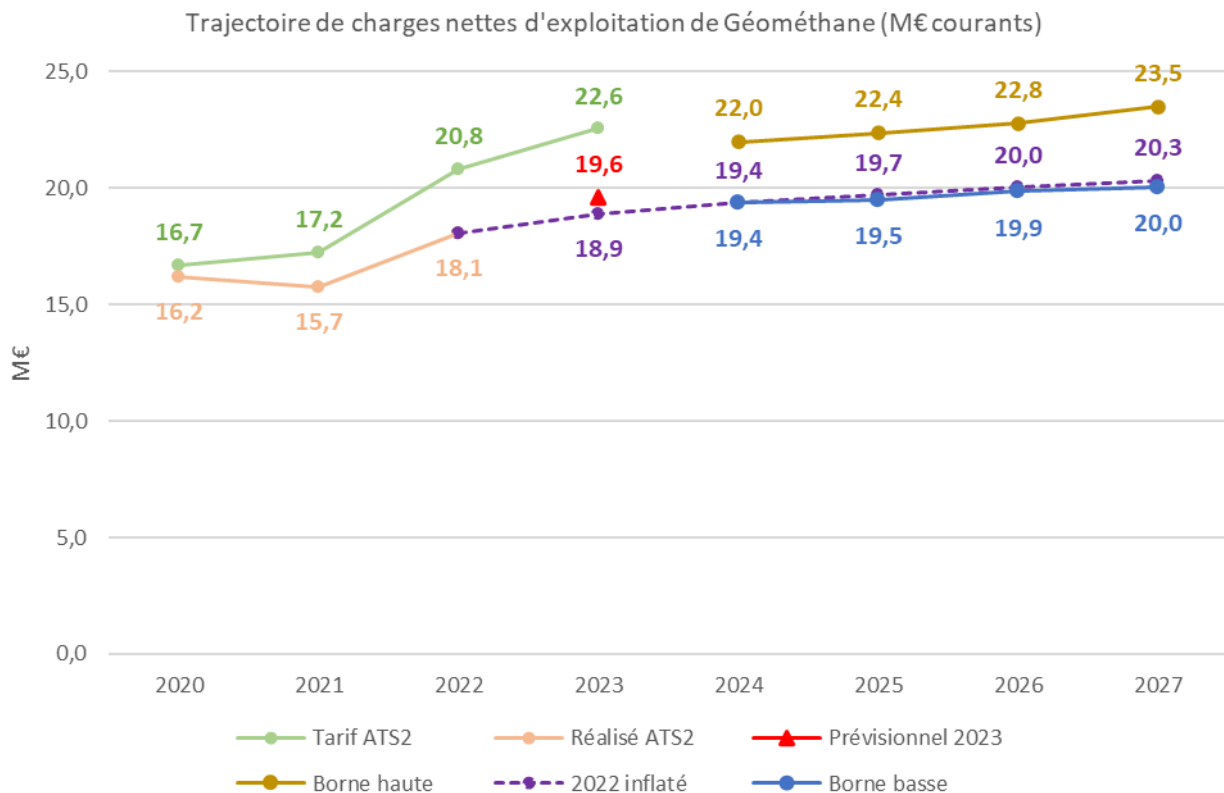
At this stage, the CRE considers that the level of operators' net operating costs could fall between a "high limit" corresponding to demand for Géométhane, and a "low limit" established on the basis of all the conclusions of the external audit of operators' net operating costs and the adjustments envisaged by the CRE and presented above.

In fact, for Géométhane, the lower limit varies between €19.4 million in 2024 and €20.0 million in 2027, i.e., an average of €19.7 million over the period, and the upper limit varies between €22.0 million in 2024 and €23.5 million in 2027, i.e., an average of €22.7 million over the period.

These average levels are still higher than the €18.1 million recorded in 2022:

- upper bound: 2022-2024 growth of +22% (+32% excluding energy) and a 2024-2027 CAGR of +2.3%.
- low limit: 2022-2024 growth of +7% (+19% excluding energy) and a 2024-2027 CAGR of +1.1%.

The possible trajectories for net operating cost levels are as follows:



Q30: Do you agree with the CRE's guidelines concerning the R&D themes to be included in storage operators' cost trajectories?



4.4 Weighted average cost of capital

4.4.1 Operators' demand

4.4.1.1 Storengy and Géométhane

Storengy and Géométhane's demand was established using a weighted average cost of capital (WACC) for gas transmission of 4.65% (actual, before tax), plus a specific premium of 100 basis points for risks specific to the gas storage business, giving an overall rate of 5.65% (actual, before tax). This request is based on the conclusions of a study commissioned by the operators of regulated natural gas infrastructures from an external consultant.

In their tariff documents, Storengy and Géométhane also use a rate of 3.8% (nominal, before tax) for AuC remuneration.

In addition, Storengy and Géométhane are asking for a mechanism to cover the costs associated with a change in the scope of regulation in line with the PPE, i.e. to cover provisions for dismantling (see section 3.3.1.2). If the CRE does not opt for such a mechanism, Storengy and Géométhane are asking for an additional WACC premium of between 446 and 1,123 basis points.

4.4.1.2 Teréga

Teréga's request was based on a WACC for gas transport of 4.7% (actual, pre-tax), plus a specific premium of 110 basis points for risks specific to the gas storage business, giving an overall rate of 5.8% (actual, pre-tax). This request is based on the conclusions of a study commissioned by the gas operators from an external consultant.

In its tariff dossier, Teréga also uses the rate of 4% (nominal, before tax) for AuC remuneration.

Supported by the deployment of a 2035 transformation plan, which should enable the Group's infrastructures to be on a "zero-carbon" trajectory by 2050. Teréga is also requesting the introduction of an additional 300 basis points bonus for investments designated as "green".

4.4.2 Summary of the results of the CRE's external audit

As part of the preparatory work on the ATS3 tariff, the CRE is re-examining the assumptions and parameters used to calculate the operators' remuneration rate. With this in mind, it asked Compass Lexecon to carry out an audit and analysis of the remuneration claims of the storage operators, two transmission system operators and GRDF, and the conclusions of their advisors. The consultant's report is published at the same time as this Public Consultation on the CRE website.

The work carried out by the auditor took place between May and July 2023. The consultant's report is published at the same time as this Public Consultation. After auditing the operators' requests, the auditor proposes several WACC ranges, depending on the assets to which they apply. For historical assets, the auditor proposes a nominal pre-tax WACC range of between 3.72% and 4.14%, i.e., an actual pre-tax WACC range of between 2.51% and 2.93%. For new assets, the auditor proposes a nominal pre-tax WACC range of between 5.69% and 6.21%, or an actual pre-tax WACC range of between 2.74% and 4.23%.

With regard to the premium specific to the storage activity, to be added to the transport WACC, the auditor concludes that the range is between 32 and 69 basis points.

4.4.3 WACC range envisaged by the CRE

The CRE does not intend to retain the operators' WACC requests for the ATS3 tariff (4.65% and 4.70%, actual before tax, requested by Storengy and Géométhane et Teréga respectively). At this stage, the CRE considers that these requests give too great a weighting to recent changes in market interest rates since the period when the ATS2 tariff was set, and that they include a number of new elements whose justifications cannot be accepted at this stage.

Nor does the CRE intend to retain the lower end of the range recommended by the auditor appointed to audit operators' requests. This low range would represent an unjustified departure from the methods and parameters used to date by the CRE, particularly as regards asset beta.

To formulate its range, CRE based itself on the consultant's approach, in which it took into account certain possible changes in parameters, sometimes over wider ranges than the auditor, such as, for example, taking into account longer maturities for the risk-free rate or a higher level of asset beta. Overall, the CRE considers that:

- the long-term rate under the method used for ATRT7 and previous tariffs, based on the analysis of long-term parameters and designed to reflect the financing conditions of historical assets, could range from 2.7% to 3.9% (actual, before tax);
- the short-term rate, based on analysis of shorter-term parameters and designed to reflect financing conditions for new assets, could range from 3.6% to 5.2% (actual, pre-tax).

These rates can be applied to old and new assets respectively or combined into a weighted rate. Based on an indicative weighting assumption of 80% historical assets and 20% new assets over the tariff period, **the average WACC would therefore be between 2.9% and 4.2% (actual, pre-tax).**

In nominal pre-tax terms, the ranges would be as follows: 3.9% - 5.1% for the historical rate, 6.1% - 7.2% for the short-term rate and 4.4% - 5.5% for the weighted rate.

At this stage, the CRE is considering maintaining the premium for risks specific to gas storage at the same level as that set for the ATS2 period, i.e. 50 basis points. This level is justified by the CRE's assessment of the risks, particularly economic, technical and geological, associated with operating natural gas storage sites, compared with gas transmission.

In addition, it plans not to retain a specific premium to cover the costs associated with a change in the scope of regulation in connection with the PPE. The same applies to an additional bonus for "green" investments.

4.5 Capital expenditure and normative capital costs

4.5.1 Storengy

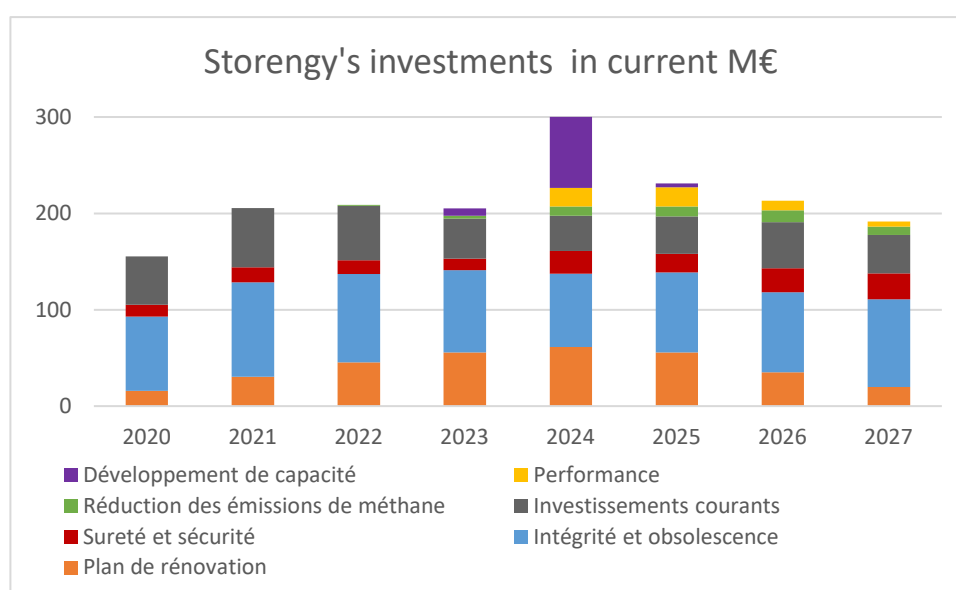
4.5.1.1 Capital expenditure trajectory

Storengy's capital expenditure trajectory over the ATS3 period is marked by an increase in capital expenditure, with average expenditure of €237 million per year over this period, compared with €207.8 million in 2022 and €202.2 million forecast for 2023.

Storengy plans the following capital expenditure over the next tariff period:

In current M€	2024	2025	2026	2027	Annual average ATS3	Annual average ATS2 (*)
Renovation plan	61.2	55.8	35	19.7	42.9	36.8
Safety - security	23.6	19.2	25.2	26.8	23.7	13.5
Integrity and obsolescence	76.2	82.9	83	91.3	83.3	88.0
Performance	19	20	10	5	14	-
Current investments	36.5	38.9	47.7	39.9	40.7	52.3
Capacity development	87.7	3.8	-	-	22.8	-
Reduction of methane emissions	9.8	10.4	12.2	8.7	10.2	-
TOTAL	314.0	231.0	213.1	191.4	237.6	190.6

(*) average of completed investment programs 2020-2022 and approved 2023.



In particular, Storengy forecasts:

- an increase in renovation expenditure, with average spending of €42.9 million per year over the ATS3 period, compared with €36.8 million over the ATS2 period. This increase in capital expenditure was driven by specific renovation projects at Chémery (€86 million over the period), Gournay (€43.7 million over the period) and the Etrez site (€83.4 million over the period);
- an increase in Performance and Capacity Development expenditure, i.e. +138 M€ over the ATS3 period. This increase is associated with the project to connect cavities at Etrez (€92 million over the ATS3 period) and the implementation of a program to improve storage performance (€54 million over the ATS3 period), which are designed to meet the challenges of security of supply;
- an increase in spending on safety and security, with average spending of €23.7 million per year over the ATS3 period, compared with €13.5 million over the ATS2 period;
- a drop in spending on the Integrity/obsolescence finality, with average spending of €83 million per year over the ATS3 period, compared with €88 million over the ATS2 period. This trend is linked to the declining trajectory of the "Pipeline Integrity Program", which is entering a phase devoted to other structures (effluent networks) that will require less investment than before 2023;
- reinforcement of the methane emissions reduction program (+37 M€);
- a drop in current capital expenditure (-46 M€) due to lower budgets for small-scale industrial and IS projects.

4.5.1.2 Capital expenditure trend

The capital expenditure forecasts presented above, combined with Storengy's desired weighted average cost of capital of 5.65%, result in the following normative capital cost request from Storengy:

In current M€	2024	2025	2026	2027	Annual average ATS3
BAR trajectory of Storengy	4,265	4,390	4,612	4,800	4,517
Request for CCN from Storengy (WACC of 5.65%)	428.3	447.6	467.2	484.6	456.9

4.5.1.3 The CRE's preliminary analysis

The CRE notes that Storengy is planning to increase its investments compared with the previous tariff period. This trajectory, with significant increases in certain categories of expenditure, calls for the following comments:

- renovation expenditure, with a 16% increase in the budget between the ATS2 and ATS3 periods. This development is notably associated with the continuation of the 3 major renovation projects at the Gournay, Chémery and Etrez sites, which will be gradually commissioned during the tariff period.
- capacity development expenditure, representing €92 million over the ATS3 period. They concern the connection of two cavities on the Etrez site. A cost-benefit analysis of the project showed positive results for consumers.
- safety and security expenditure, for which the budget has increased by 75% between the ATS2 and ATS3 periods, although Storengy has not yet specified all the projects included in this budget.
- expenditure on reducing methane emissions accounts for €37 million of the investment trajectory. The CRE has previously approved a €3 million package to reduce Storengy's methane emissions in 2023. The operator's new request concerns the continuity of this program, as well as the implementation of the future European regulation on methane emissions. As this regulation has still not been adopted by the European Commission, the CRE will ensure that expenditure relating to its application is only incurred once the final text is known.

At this stage, CRE does not envisage making any changes to the investment trajectory planned by the operator. However, it considers that in the context of structurally declining gas consumption and the risk of a rise in the associated unit cost of transmission, operators' capital expenditure needs to be kept under tight control. The CRE will ensure that these costs are kept under control when it approves the operator's investments each year, in accordance with article L. 421-7-1 of the French Energy Code.

In line with our guidelines on incentive-based regulation of investment costs for the ATS3 period (see 3.3.2), certain projects may be audited to define a target budget. This is notably the case for the Chémery renovation project, the renovation of automated systems and compression at the Etrez site, and the renovation and replacement of separators at the Gournay site.

Concerning normative capital costs

Stranded cost trajectory

Storengy's proposed stranded cost trajectory averages €12.6m/year. It includes both recurring and foreseeable scrapping, as well as other stranded costs linked to exceptional events such as the renovation projects at the Gournay, Chémery and Etrez sites. Storengy has not yet provided details of the breakdown of stranded costs.

In the absence of detailed data, the CRE is therefore proposing at this stage to set the ATS3 trajectory at the level of the recurring and foreseeable stranded costs of the 2020-2022 ATS2 achievement, which corresponds to an adjustment of - €38.9 million over the period.

In current M€	2024	2025	2026	2027
Trajectory requested by Storengy	8.9	13.4	12.4	15.6
The CRE's preliminary trajectory	3.1	3.1	3.1	3.1
Impact on Storengy's demand	-5.8	-11.3	-9.3	-12.5

Normative capital expenditure trajectory

As indicated in section 4.4.3, the CRE is currently considering a WACC value of between 3.4% (actual, pre-tax) and 4.7% (actual, pre-tax) to remunerate the two operators' regulated asset base, or 4.9% (nominal, pre-tax) and 6.0% (nominal, pre-tax).

Finally, as presented in section 3.7, the CRE is considering adapting the tariff regulation framework to limit the risk of an excessive increase in the unit cost of transmission for future users of gas infrastructures, by ending the indexation of the RAB to inflation, or by implementing a degressive depreciation of operators' assets. All other things being equal, these adjustments to the tariff framework would lead to an increase in operators' capital costs at the time of implementation.

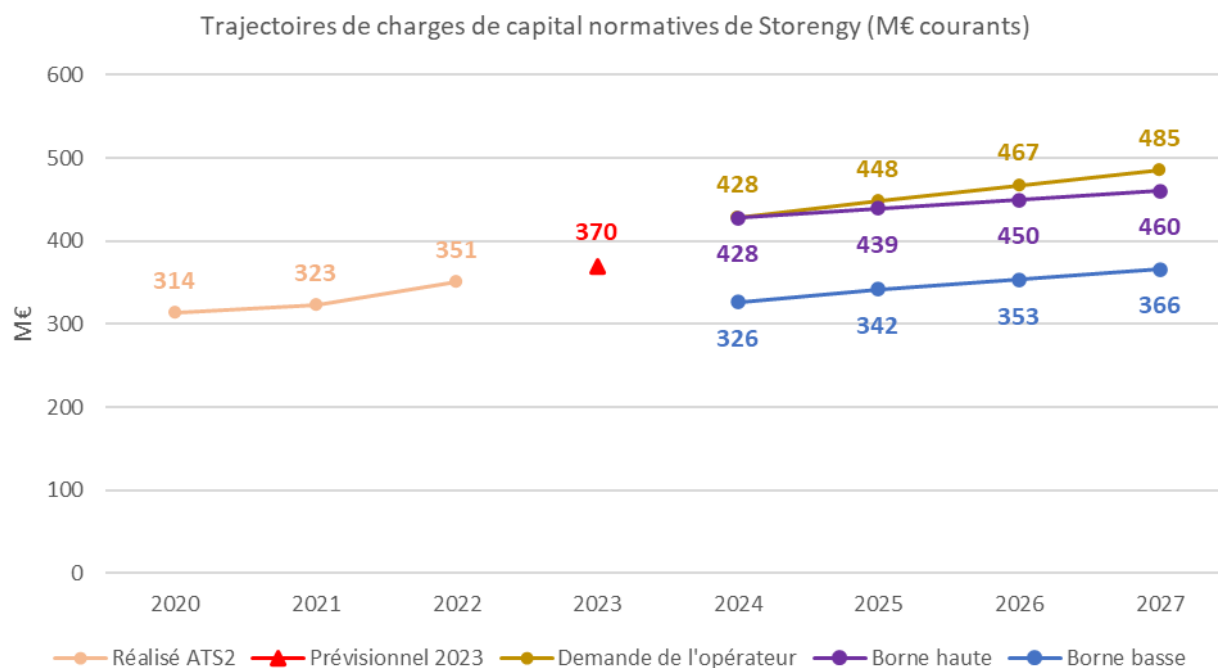
Consequently, the CRE considers at this stage that the level of operators' normative capital costs could be between:

- a "lower limit", incorporating remuneration of the asset base at the lowest WACC envisaged by the CRE (i.e. 3.4% actual, before tax);
- an "upper limit", taking into account one of the changes envisaged in the tariff framework (the end of RAB indexation to inflation, by way of illustration) and incorporating a return on the asset base at the highest WACC envisaged by the CRE (i.e., 6.0% nominal, before tax).

For Storengy, these trajectories imply the following changes:

- low limit: 2022-2024 evolution of -7% and a 2024-2027 CAGR of +2.5%;
- high limit: 2022-2024 growth of +22% and a 2024-2027 CAGR of +3.9%.

The possible trajectories of normative capital cost levels are as follows:



The corresponding RAB trajectories are shown below:

In current M€	2024	2025	2026	2027
BAR - low limit	4,287	4,402	4,614	4,793
BAR - high limit	4,186	4,236	4,382	4,494

4.5.2 Teréga

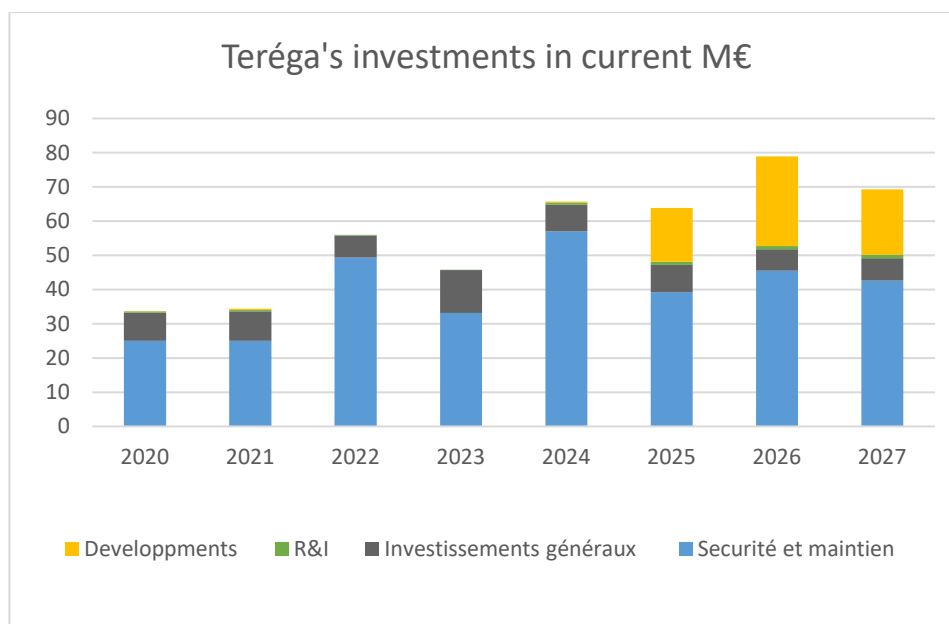
4.5.2.1 Capital expenditure trajectory

Teréga's capital expenditure trajectory over the ATS2 period is marked by an increase in capital expenditure, with average expenditure of €69.4 million per year over this period, compared with around €42 million per year over the ATS2 period.

Teréga plans the following capital expenditure over the next tariff period:

In current M€	2024	2025	2026	2027	Annual average ATS3	Annual average ATS2 (*)
Developments	0.3	15.7	26.2	19.1	15.3	0.1
Safety and maintenance	57	39.3	45.5	42.6	46.1	33.2
R&I	0.7	0.9	1	1	0.9	0.2
General investments	7.8	7.9	6.3	6.6	7.1	8.9
TOTAL	65.8	63.8	79	69.3	69.4	42.4

(*) average of completed investment programs 2020-2022 and approved 2023.



In particular, Teréga forecasts:

- an increase in development expenditure, with average spending of €15m per year over the ATS3 period, compared with €0.1m over the ATS2 period. This increase corresponds to the development of storage capacity as part of the OPSTOCK 2028 project.
- an increase in safety and maintenance expenditure associated with projects approved for completion (Securlug Phase A, reboiler and sectioning station) but also additional projects (Securlug Phase B, cushion gas injection to compensate for the declining trend in the aquifer and the storage coordination program).
- a €10 million reduction in general capital expenditure over the period. This trend reflects lower investment in information systems and actual estate.
- an increase in R&I expenditure, with average expenditure of €0.9 M per year over the ATS3 period, compared with €0.2 M/year over the ATS2 period. This development corresponds to projects linked to the reduction of greenhouse gas emissions and energy efficiency, as well as projects linked to the improvement of current industrial facilities.

The capital expenditure forecasts presented above, combined with a weighted average cost of capital of 5.8%, result in the following normative capital expenditure requirement for Teréga:

In current M€	2024	2025	2026	2027	Annual average ATS3
Teréga's RAB trajectory	1,389	1,456	1,497	1,547	1,472
Teréga's CCN request (WACC of 5.8%)	130.9	135.4	138.8	142.6	136.9

4.5.2.2 The CRE's preliminary analysis

The CRE notes that Teréga is planning an increase in investments compared with the previous tariff period. This trajectory, with significant increases in certain categories of expenditure, calls for the following comments:

- development expenditure, whose average annual budget increases sharply between the ATS2 and ATS3 periods. These costs relate to the OPSTOCK storage capacity development project, the first phase of which is designed to determine the technical possibilities. With controlled investments, Teréga can develop up to 2.3 TWh of useful volume (+7%) and 80 GWh/day of peak flow (+14%). These developments can be staggered between 2023 and 2029, with the first stage starting in winter 2023-24, subject only to the injection of 950 GWh of cushion gas, to develop 1150 GWh of useful volume and 25 GWh/day of peak flow.
- safety and maintenance expenditure, whose budget has increased by 39% between the ATS2 and ATS3 periods, relates in particular to unapproved projects that the CRE will analyze in future investment approval exercises.

- R&I capital expenditure, whose average annual budget increased by 350% between the two periods, reflects the anticipation of changes in Teréga's businesses in the future energy mix. The CRE plans to exclude R&D investments that do not relate to the operator's core business, considering that they are not part of the operator's mission and should not be covered by the tariff. This represents a downward adjustment of €3.6 million over the period.

At this stage, apart from adjusting R&D expenditure, the CRE has no plans to modify the operator's planned investment trajectory. However, it considers that in the context of structurally declining gas consumption and the risk of a rise in the associated unit cost of transmission, operators' capital expenditure needs to be kept under tight control. The CRE will ensure that these costs are kept under control when it approves the operator's investments each year, in accordance with article L. 421-7-1 of the French Energy Code.

In line with our guidelines on incentive-based regulation of investment costs for the ATS3 period (see 3.3.2), certain projects may be audited to define a target budget. These include projects to replace the H34&H35 reboilers, the injection of cushion gas to compensate for the downward trend in the water table, Securlug phase B, and the Storage coordination program.

The investment trajectory adopted by the CRE is as follows:

In current M€	2024	2025	2026	2027	Annual average ATS3	Annual average ATS2 (*)
Developments	0.3	15.7	26.2	19.1	15.3	0.1
Safety and maintenance	57	39.3	45.5	42.6	46.1	33.15
R&I	0	0	0	0	0	0.2
General investments	7.8	7.9	6.3	6.6	7.1	8.9
TOTAL	65.1	62.9	78	68.3	68.5	42.4

Concerning normative capital costs

Stranded cost trajectory

Teréga has not requested a stranded cost trajectory.

Normative capital expenditure trajectory

As indicated in section 4.4.3, the CRE is currently considering a WACC value of between 3.4% (actual, pre-tax) and 4.7% (actual, pre-tax) to remunerate the two operators' regulated asset base, or 4.9% (nominal, pre-tax) and 6.0% (nominal, pre-tax).

Finally, as presented in section 3.7, the CRE is considering adapting the tariff regulation framework to limit the risk of an excessive increase in the unit cost of transmission for future users of gas infrastructures, by ending the indexation of the RAB to inflation, or by implementing a degressive depreciation of operators' assets. All other things being equal, these adjustments to the tariff framework would lead to an increase in operators' capital costs at the time of implementation.

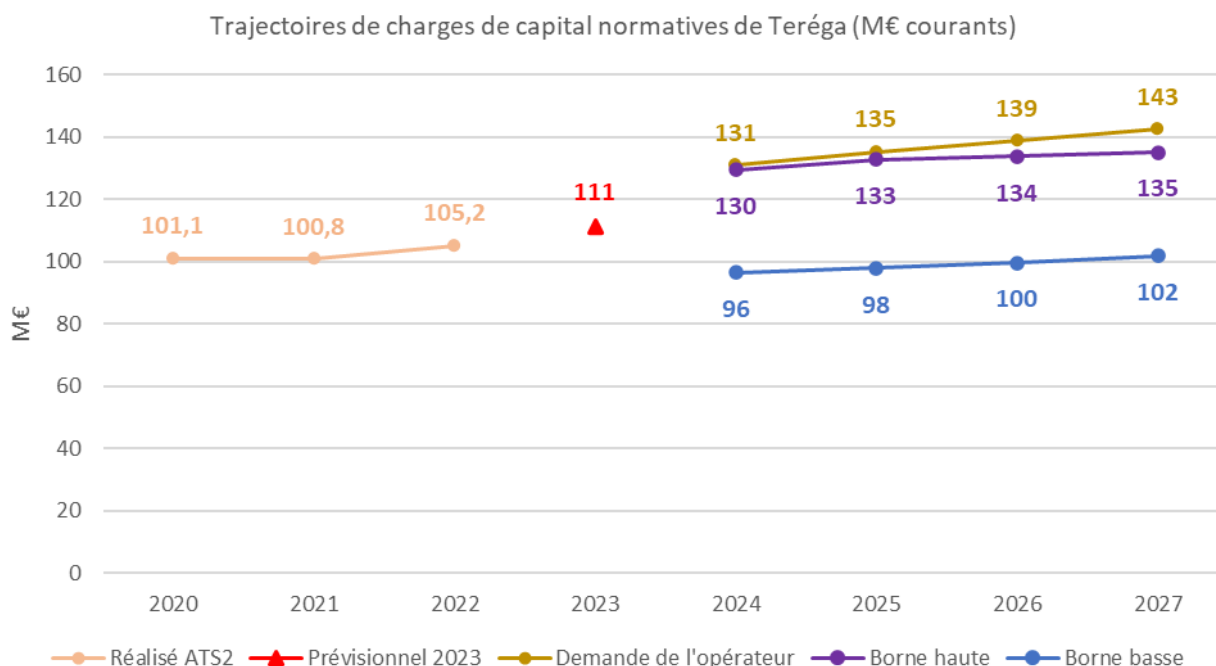
Consequently, the CRE considers at this stage that the level of operators' normative capital costs could be between:

- a "lower limit", incorporating remuneration of the asset base at the lowest WACC envisaged by the CRE (i.e. 3.4% actual, before tax);
- an "upper limit", taking into account one of the changes envisaged in the tariff framework (the end of RAB indexation to inflation, by way of illustration) and incorporating a return on the asset base at the highest WACC envisaged by the CRE (i.e., 6.0% nominal, before tax).

For Teréga, these trajectories imply the following changes:

- low limit: 2022-2024 evolution of -8% and a 2024-2027 CAGR of +1.8%.
- high limit: 2022-2024 growth of +23% and a 2024-2027 CAGR of +1.4%.

The possible trajectories of normative capital cost levels are as follows:



The corresponding RAB trajectories are shown below:

In current M€	2024	2025	2026	2027
BAR - low limit	1,390	1,457	1,499	1,548
BAR - high limit	1,357	1,425	1,444	1,471

4.5.3 Géométhane

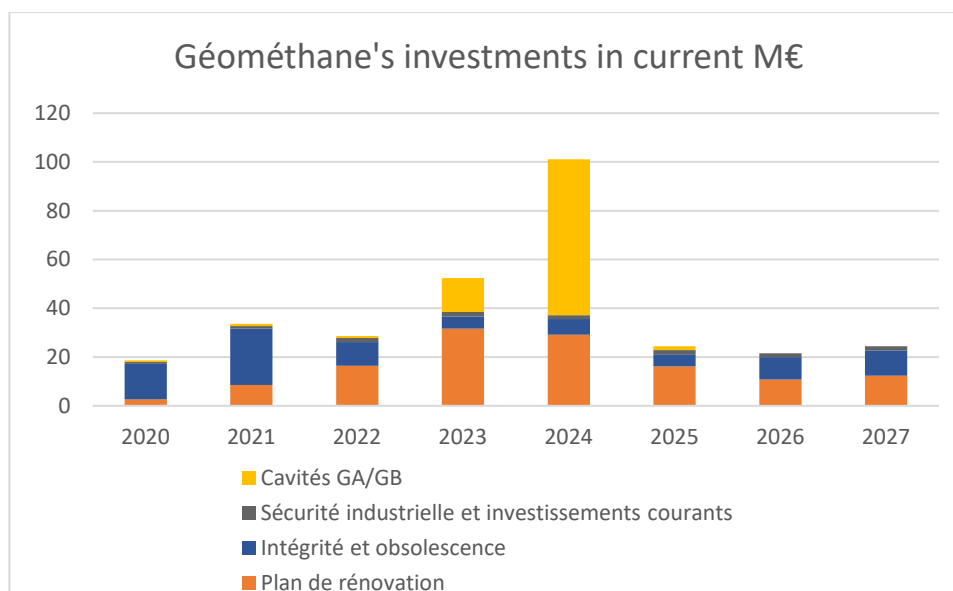
4.5.3.1 Capital expenditure trajectory

The trajectory of Géométhane's capital expenditure over the ATS3 period is marked by an increase in capital expenditure, with average expenditure of €43 million per year over this period, compared with around €33 million per year over the ATS2 period.

Géométhane forecasts the following capital expenditure over the next tariff period:

In current M€	2024	2025	2026	2027	Annual average ATS3	Annual average ATS2 (*)
Integrity and obsolescence	6.5	5	9.1	10.3	7.7	13.1
Renovation plan	29.1	16.2	10.8	12.4	17.1	14.8
New GA/GB cavities	63.9	1.5	-	-	16.3	4.0
Industrial safety and current investments	1.6	1.7	1.7	1.7	1.67	1.3
TOTAL	101.1	24.4	21.6	24.4	42.8	33.3

(*) average of completed investment programs 2020-2022 and approved 2023.



In particular, Géométhane forecasts:

- the connection of two cavities at the Manosque site, for a total budget of €65 million over the ATS3 period. Géométhane plans to increase storage capacity at its Manosque site by commissioning two new caverns known as "GA and GB", which will increase the site's useful volume by around 1.1 TWh within 2 years.
- a slight increase in spending on the renovation plan, averaging €17.1 million per year over the ATS3 period. These costs are associated with the continuation of the "Optimization and Reliability" program, which enables regulatory requirements in terms of industrial safety to be met, and the "New Surface Installations" program to be established, in particular with the commissioning of a new compressor.
- a drop in expenditure on integrity and obsolescence, with average expenditure of €7.7m per year over the ATS3 period, compared with €13.1m per year over the ATS2 period, notably with the end of the "Dorsales" project²¹. This program continues with the replacement of end-of-life equipment (upstream expansion boiler, monitoring and control system) and investments in wells.
- a slight increase in current investments (site and vehicle expenditure) and industrial safety, with average expenditure of around €1.6 million per year.

4.5.3.2 Capital expenditure trend

The capital expenditure forecasts presented above, combined with a weighted average cost of capital of 5.65%, result in the following normative capital expenditure requirement for Géométhane:

In current M€	2024	2025	2026	2027	Annual average ATS3
Geomethane RAS trajectory	256.3	360.5	511.7	520.5	412.2
Geomethane CCN request (WACC of 5.65%)	35	44	53	55	46.7

4.5.3.3 The CRE's preliminary analysis

Géométhane forecasts a 29% increase in annual capital expenditure between the ATS2 and ATS3 periods. The CRE notes that this increase is mainly due to the project to connect two cavities at the Manosque site. Géométhane is proposing to increase storage capacity at its Manosque site by commissioning two salt caverns. **At this stage, the CRE considers that the project is outside the regulatory framework provided by the PPE.**

As far as other investment requests are concerned, the CRE observes a slight drop of 9%, or around - €11 million, over the next tariff period. This decrease is mainly due to lower expenditure on the "Integrity and obsolescence" program, with the completion of the "Dorsales" project.

With the exception of the non-inclusion of the project to connect two salt caverns at the Manosque site, the CRE is not, at this stage, making any other changes to the investment trajectory for the other projects, but is continuing its

²¹ The "Dorsales" project concerns the approximately 2 km of pipelines linking the Gaude and Gontard sites. The project included the installation of pigging stations and isolation valves.

analyses (the discrepancies between the investments actually made and this trajectory are, moreover, covered by the CRCP). The various investment requests will be the subject of a dedicated analysis as part of the process of approving the annual investment budgets of natural gas storage operators, as provided for in article L. 421-7-1 of the French Energy Code.

The investment trajectory adopted by the CRE is as follows:

In current M€	2024	2025	2026	2027	Annual average ATS3
Integrity and obsolescence	6.5	5	9.1	10.3	7.7
Renovation plan	29.1	16.2	10.8	12.4	17.1
New GA/GB cavities	0	0	-	-	0
Industrial safety and current investments	1.6	1.7	1.7	1.7	1.67
TOTAL	37.2	22.9	21.6	24.4	26.5

In line with our guidelines on incentive-based regulation of investment costs for the AT2S period (see 2.3.2), certain projects and programs, such as those mentioned above, may be audited to define a target budget.

Concerning normative capital costs

Stranded cost trajectory

Géométhane has not requested a stranded cost trajectory.

Normative capital expenditure trajectory

As indicated in section 4.4.3, the CRE is currently considering a WACC value of between 3.4% (actual, pre-tax) and 4.7% (actual, pre-tax) to remunerate the two operators' regulated asset base, or 4.9% (nominal, pre-tax) and 6.0% (nominal, pre-tax).

Finally, as presented in section 3.7, the CRE is considering adapting the tariff regulation framework to limit the risk of an excessive increase in the unit cost of transmission for future users of gas infrastructures, by ending the indexation of the RAB to inflation, or by implementing a degressive depreciation of operators' assets. All other things being equal, these adjustments to the tariff framework would lead to an increase in operators' capital costs at the time of implementation.

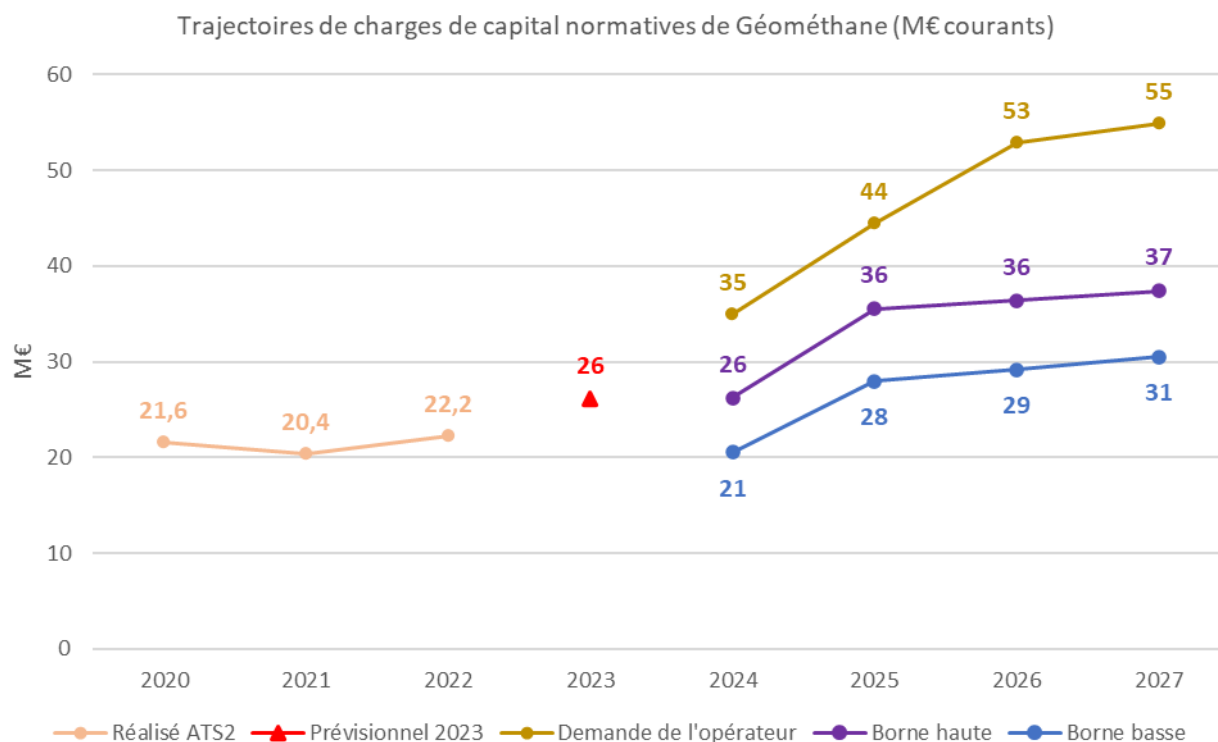
Consequently, the CRE considers at this stage that the level of operators' normative capital costs could be between:

- a "lower limit", incorporating remuneration of the asset base at the lowest WACC envisaged by the CRE (i.e., 3.4% actual, before tax).
- an "upper limit", taking into account one of the changes envisaged in the tariff framework (the end of RAB indexation to inflation, by way of illustration) and incorporating a return on the asset base at the highest WACC envisaged by the CRE (i.e., 6.0% nominal, before tax).

For Géométhane, these trajectories imply the following changes:

- low limit: 2022-2024 evolution of -7% and a 2024-2027 CAGR of +14%.
- high limit: 2022-2024 growth of +18% and a 2024-2027 CAGR of +14%.

The possible trajectories of normative capital cost levels are as follows:



The corresponding RAB trajectories are shown below:

In current M€	2024	2025	2026	2027
BAR - low limit	238	336	345	354
BAR - high limit	232	325	329	334

4.6 CRCP

The overall balance of the CRCP is calculated before the final closing of the annual financial statements. It is therefore equal to the amount to be paid or deducted from the CRCP (i) with respect to the previous year, based on the best estimate of annual costs and income (known as the estimated CRCP), and (ii) with respect to the previous year, by comparing actual costs and income with the estimate made one year earlier (known as the definitive CRCP), plus any outstanding CRCP balance for previous years.

The amount to be paid into or deducted from the CRCP is calculated by the CRE, for each past year, on the basis of the difference between actual and estimated figures, for each item concerned, in relation to the reference amounts defined in the appendix to the ATS2 deliberation. The proportion of this difference paid to the CRCP is set out in the ATS2 decision.

4.6.1 Storengy

In its tariff dossier, Storengy estimated the balance of the CRCP at December 31, 2023 at +50.6 M€ to be returned to the operator²². This balance is the sum of the following items:

- the discounted balance of the previous CRCP (i.e., 0.0 M€);
- the updated difference between the estimated balance for 2022 and the final CRCP for 2022 (i.e., +18.3 M€);
- the estimated CRCP for 2023 (i.e., +32.3 M€).

²² By convention, as far as the CRCP is concerned, a "-" sign corresponds to an amount to be returned to users, and a "+" sign to an amount to be returned to the operator

The CRCP at December 31, 2023, estimated by the CRE at this stage amounts to +25.3 M€, to be returned to the operator. This balance is the sum of the following items:

- the discounted balance of the previous CRCP (i.e., 0.0 M€);
- the updated difference between the estimated balance for 2022 and the final CRCP for 2022 (+3.9 M€), mainly due to lower-than-estimated revenues from the tariff compensation term (+3.7 M€).
- the estimated CRCP for 2023 (i.e., +21.4 M€), mainly due to:
 - o higher-than-estimated revenues from capacity sales (-€10.5 million);
 - o higher-than-expected capital costs (+15.4 M€) and energy costs (+2.6 M€).
 - o lower-than-expected income from contracts with other regulated operators (+€6.3 million).
 - o marketing bonus (+€7.0m).

The difference between Storengy's request and the level adopted at this stage by the CRE (-€25.3 million) is explained by a correction of stranded costs in 2022 (-€14.3 million) and 2023 (-€10.9 million):

- by excluding scrapping associated with maintenance and operating incidents, as these costs are considered to be part of conventional asset management.
- postponing the analysis of scrapping associated with equipment failure until the end of the legal proceedings in progress.

Storengy - CRCP at December 31, 2023		
In M€	Amounts updated for 2022	Amounts updated for 2023
Revenues from marketing and compensation tariffs	+3.7	-10.5
Infrastructure" normative capital expenditure	-0.2	+14.4
Differences in capital expenditure "excluding infrastructure" due to inflation	-	+1.0
Energy costs, CO2 quotas, consumables and effluent treatment	-	+2.6
Income and costs associated with contracts with other regulated operators	-0.1	+6.3
Bonuses and penalties resulting from various incentive regulation mechanisms	+0.6	+7.0
Stranded costs	-	0.0
Differences in CNE due to differences between the CPI assumption used to prepare the tariff and the forecast CPI	-	+0.7
Total	+3.9	+21.4
Previous CRCP balance discounted	-	
CRCP balance on December 31, 2023	+25.3	

4.6.2 Teréga

In its tariff dossier, Teréga estimated the balance of the CRCP at December 31, 2023 at +8.5 M€ to be returned to the operator²³. This balance is the sum of the following items:

- the discounted balance of the previous CRCP (i.e., +2.3 M€);
- the updated difference between the estimated balance for 2022 and the final CRCP for 2022 (i.e., -0.1 M€);
- the estimated CRCP for 2023 (i.e., +6.3 M€).

The CRCP at December 31, 2023 estimated by the CRE at this stage amounts to +8.1 M€, to be returned to the operator. This balance is the sum of the following items:

- the discounted balance of the previous CRCP (i.e., +2.3 M€);

²³ By convention, as far as the CRCP is concerned, a "-" sign corresponds to an amount to be returned to users, and a "+" sign to an amount to be returned to the operator

- the updated difference between the estimated balance for 2022 and the final CRCP for 2022 (i.e., -0.1 M€), mainly due to lower energy costs than estimated (-0.1 M€).
- the estimated CRCP for 2023 (+€5.8m), mainly due to:
 - o higher than estimated revenues from capacity sales (-2.6 M€).
 - o lower-than-expected capital expenditure (-9.8 M€).
 - o higher-than-expected energy costs (+13.1 M€).
 - o lower-than-expected income from contracts with other regulated operators (+€2.4 million).
 - o marketing bonus (+€3.4m).

The difference between Teréga's request and the level retained at this stage by the CRE (-0.7 M€) is mainly due to the application of the cap on the marketing bonus as provided for in the deliberation on the 2023 tariff update (-0.7 M€)²⁴.

Teréga - CRCP at December 31, 2023		
In M€	Amounts up- dated for 2022	Amounts up- dated for 2023
Revenues from marketing and compensation tariffs	-	-2.6
Infrastructure" normative capital expenditure	-	-9.8
Differences in capital expenditure "excluding infrastructure" due to inflation	-	+0.6
Energy costs, CO2 quotas, consumables and effluent treatment	-0.1	+13.1
Income and costs associated with contracts with other regulated operators	-	+2.4
Bonuses and penalties resulting from various incentive regulation mechanisms	-	+3.4
Stranded costs	-	-1.3
Differences in CNE due to differences between the CPI assumption used to prepare the tariff and the forecast CPI	-	-2.6
Total	-0.1	+5.8
Previous CRCP balance discounted		+2.3
CRCP balance on December 31, 2023		+8.1

4.6.3 Géométhane

In its tariff dossier, Géométhane estimated the balance of the CRCP at December 31, 2023 at -2.3 M€ to be returned to users²⁵. This balance is the sum of the following items:

- the discounted balance of the previous CRCP (i.e., 0.0 M€);
- the updated difference between the estimated balance for 2022 and the final CRCP for 2022 (i.e., +1.2 M€);
- the estimated CRCP for 2023 (i.e., -3.5 M€).

The CRCP at December 31, 2023 estimated by the CRE at this stage amounts to -2.3 M€, to be returned to the operator. This balance is the sum of the following items:

- the discounted balance of the previous CRCP (i.e., 0.0 M€);
- the updated difference between the estimated balance for 2022 and the final CRCP for 2022 (i.e., +1.2 M€), mainly due to lower-than-estimated revenues from the tariff compensation term (+1.3 M€);
- the estimated CRCP for 2023 (-3.5 M€), mainly due to:

²⁴ Deliberation of January 31, 2023 concerning the evolution of the tariff for the use of Storengy, Teréga and Géométhane underground natural gas storage infrastructures for the year 2023

²⁵ By convention, as far as the CRCP is concerned, a "-" sign corresponds to an amount to be returned to users, and a "+" sign to an amount to be returned to the operator

- lower-than-estimated revenues from tariff compensation (+0.3 M€).
- postponement of commissioning under the renovation plan, leading to lower-than-expected capital expenditure (-5.1 M€).
- higher-than-expected energy costs (+1.0 M€).
- costs associated with contracts with other regulated operators lower than estimated (-0.6 M€).
- marketing bonus (+€0.8m).

Geomethane - CRCP at December 31, 2023		
In M€	Amounts up-dated for 2022	Amounts up-dated for 2023
Revenues from marketing and compensation tariffs	+1.3	+0.3
Infrastructure" normative capital expenditure	-0.2	-5.2
Differences in capital expenditure "excluding infrastructure" due to inflation	-	+0.1
Energy costs, CO2 quotas, consumables and effluent treatment	+0.1	+1.0
Income and costs associated with contracts with other regulated operators	-	-0.6
Bonuses and penalties resulting from various incentive regulation mechanisms	-	+0.8
Differences in CNE due to differences between the CPI assumption used to prepare the tariff and the forecast CPI	-	+0.1
Total	+1.2	-3.5
Previous CRCP balance discounted	-	
CRCP balance on December 31, 2023	-2.3	

4.7 Allowed revenue

4.7.1 Operators' demand

4.7.1.1 Storengy

Storengy's request results in an increase in allowed revenue of +24.3% in 2024 compared with 2023, and an average annual increase of +3.7% over the ATS3 period.

in current M€	2023	2024	2025	2026	2027
CNE		232	238	250	253
CCN		428	448	467	485
CRCP settlement		13	13	13	13
Allowed revenue	541	673	698	730	751
Year-on-year change	-	24.3%	3.7%	4.5%	2.9%

4.7.1.2 Teréga

Teréga's request results in an increase in allowed revenue of +17.6% in 2024 compared with 2023, and an average annual increase of +1.5% over the ATS3 period.

in current M€	2023	2024	2025	2026	2027
CNE		64	60	61	61
CCN		131	135	139	143
Clearance of CRCP ATS2		2.2	2.2	2.2	2.2
Allowed revenue	168	197	198	202	206
Year-on-year change	-	17.6%	0.4%	2.2%	1.8%

4.7.1.3 Géométhane

Demand for geomethane will result in an increase in allowed revenue of +6.2% in 2024 compared with 2023, and an average annual increase of +11.3% over the ATS3 period.

in current M€	2023	2024	2025	2026	2027
CNE		22	22	23	23
CCN		35	44	53	55
Clearance of CRCP ATS2		-0.6	-0.6	-0.6	-0.6
Allowed revenue	53	56	66	75	78
Year-on-year change	-	6.2%	17.6%	13.4%	3.6%

Q31: Do you have any comments on the level of costs to be covered requested by operators?

4.7.2 The CRE analysis: Illustrative allowed revenue

At this stage, the CRE has access to the analysis provided in the audit reports on operators' operating costs and the rate of return on their capital.

In the following tables, the CRE presents an illustrative allowed revenue for each operator, using the central values of the high and low limits for net operating costs and normative capital costs presented above, as well as an estimated CRCP settlement at the end of ATS2, smoothed over the ATS3 period.

4.7.2.1 Storengy

in current M€	2023	2024	2025	2026	2027
CNE		209	215	225	228
CCN		377	390	401	413
CRCP settlement		7	7	7	7
Allowed revenue	541	593	611	633	648
Year-on-year change	-	9.4%	3.2%	3.6%	2.3%

This illustrative scenario leads to an increase in allowed revenue of +9.4% between 2023 and 2024, followed by an average increase in allowed revenue of +3.0% per year between 2024 and 2027.

4.7.2.2 Teréga

in current M€	2023	2024	2025	2026	2027
CNE		60	57	58	57
CCN		112	115	116	118
CRCP settlement		2.0	2.0	2.0	2.0
allowed revenue	168	174	173	175	177
Year-on-year change	-	3.6%	-0.1%	1.2%	0.9%

This illustrative scenario leads to an increase in allowed revenue of +3.6% between 2023 and 2024, followed by an average increase in allowed revenue of +0.6% per year between 2024 and 2027.

4.7.2.3 Géométhane

in current M€	2023	2024	2025	2026	2027
CNE		20.7	20.9	21.3	21.8
CCN		23.4	31.8	32.8	34.0
CRCP settlement		-0.6	-0.6	-0.6	-0.6
allowed revenue	53	43.5	52.1	53.5	55.1
Year-on-year change	-	-18.0%	19.9%	2.6%	3.0%

This illustrative scenario leads to an increase in allowed revenue of -18.0% between 2023 and 2024, followed by an average increase in allowed revenue of +8.2% per year between 2024 and 2027.

4.7.2.4 All operators

in current M€	2023	2024	2025	2026	2027
CNE		289	292	304	307
CCN		513	537	550	565
CRCP settlement		8	8	8	8
allowed revenue	762	810	837	862	880
Year-on-year change	-	6.2%	3.4%	3.0%	2.1%

This illustrative scenario leads to an increase in allowed revenue of +6.2% between 2023 and 2024, followed by an average increase in allowed revenue of +2.8% per year between 2024 and 2027.

Q32: Are you in favor of the guidelines envisaged by the CRE concerning the level of costs to be covered for the ATS3 period for Storengy, Teréga and Géométhane?

Q33: Any other comments?

APPENDIX 1: ASSESSMENT OF THE REGULATORY FRAMEWORK

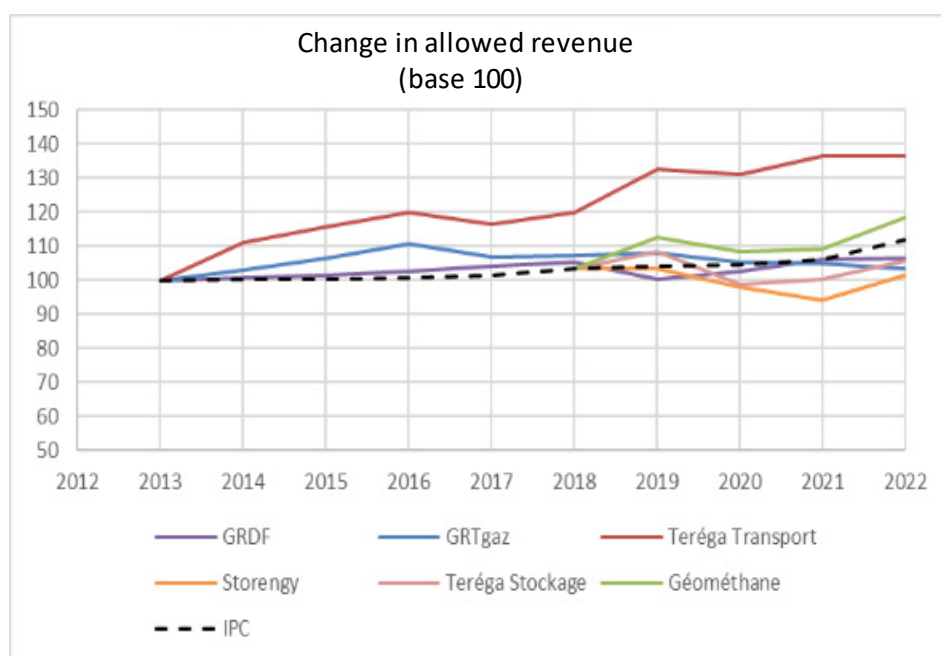
To assess the results of the regulatory framework, the following pages present a number of financial, non-financial and quality of supply and service indicators for the following operators:

GRDF (Gas distribution), GRTgaz (natural gas transport), Teréga (Natural gas transmission and storage), Storengy (Natural gas storage) Géométhane (Natural gas storage),

Financial information

1 allowed revenue

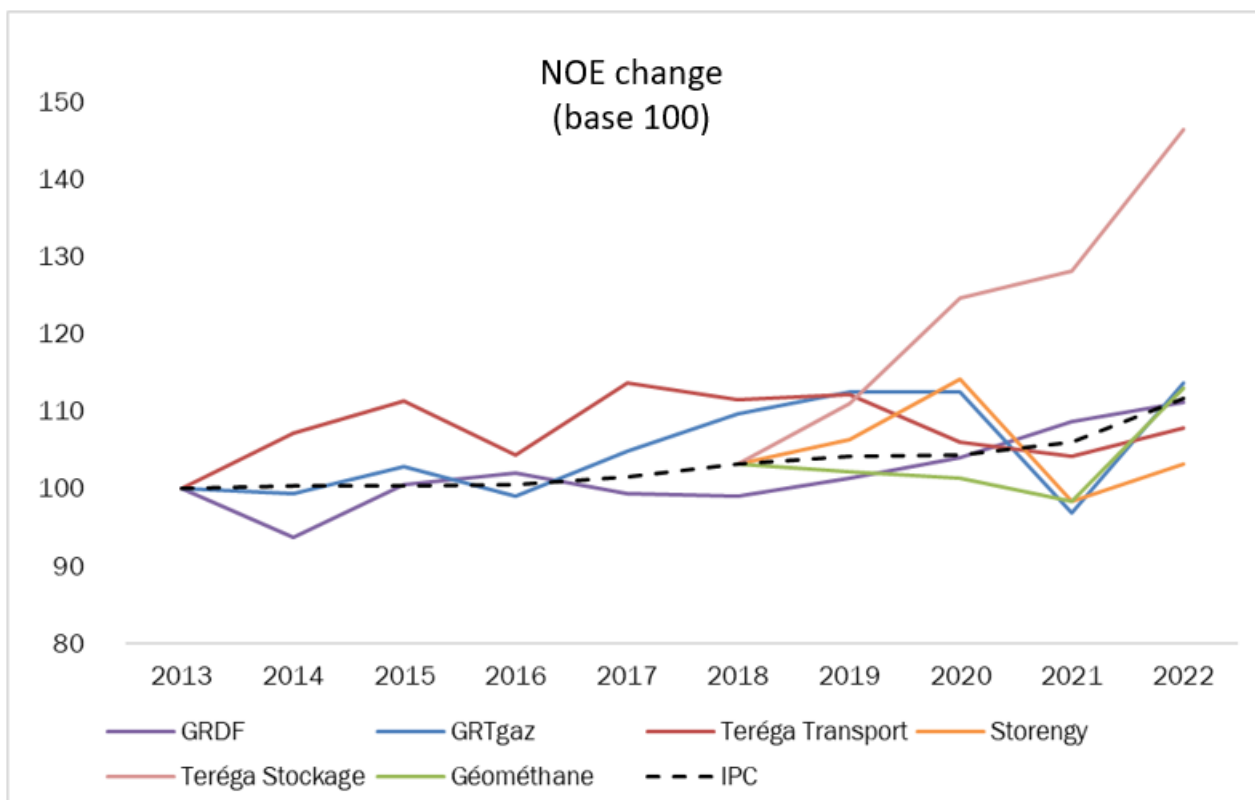
The allowed revenue of infrastructure managers is set by the CRE, and must cover the costs incurred by these managers, insofar as these costs correspond to those of an efficient infrastructure manager. Revenues generated by the payment of tariff terms or components cover this allowed revenue. The evolution of Teréga's allowed revenue is particularly sensitive to the commissioning of major transmission facilities between 2013 and 2016 (interconnections with Spain) and between 2018 and 2019 (creation of the single market zone). The trend in allowed revenues for other gas infrastructure operators has been close to that of inflation since 2013.



Year	GRDF (M€)	GRTgaz (M€)	Teréga Transport (M€)	Storengy (M€)	Teréga storage (M€)	Geomethane (M€)
2013	3,088	1,662	205			
2014	3,113	1,710	228			
2015	3,138	1,773	237			
2016	3,168	1,842	246			
2017	3,222	1,777	239			
2018	3,248	1,782	246	523	153	38
2019	3,097	1,795	271	524	161	42
2020	3,175	1,752	268	496	147	40
2021	3,274	1,747	280	477	149	40
2022	3,288	1,721	279	515	157	44

2 Net operating costs

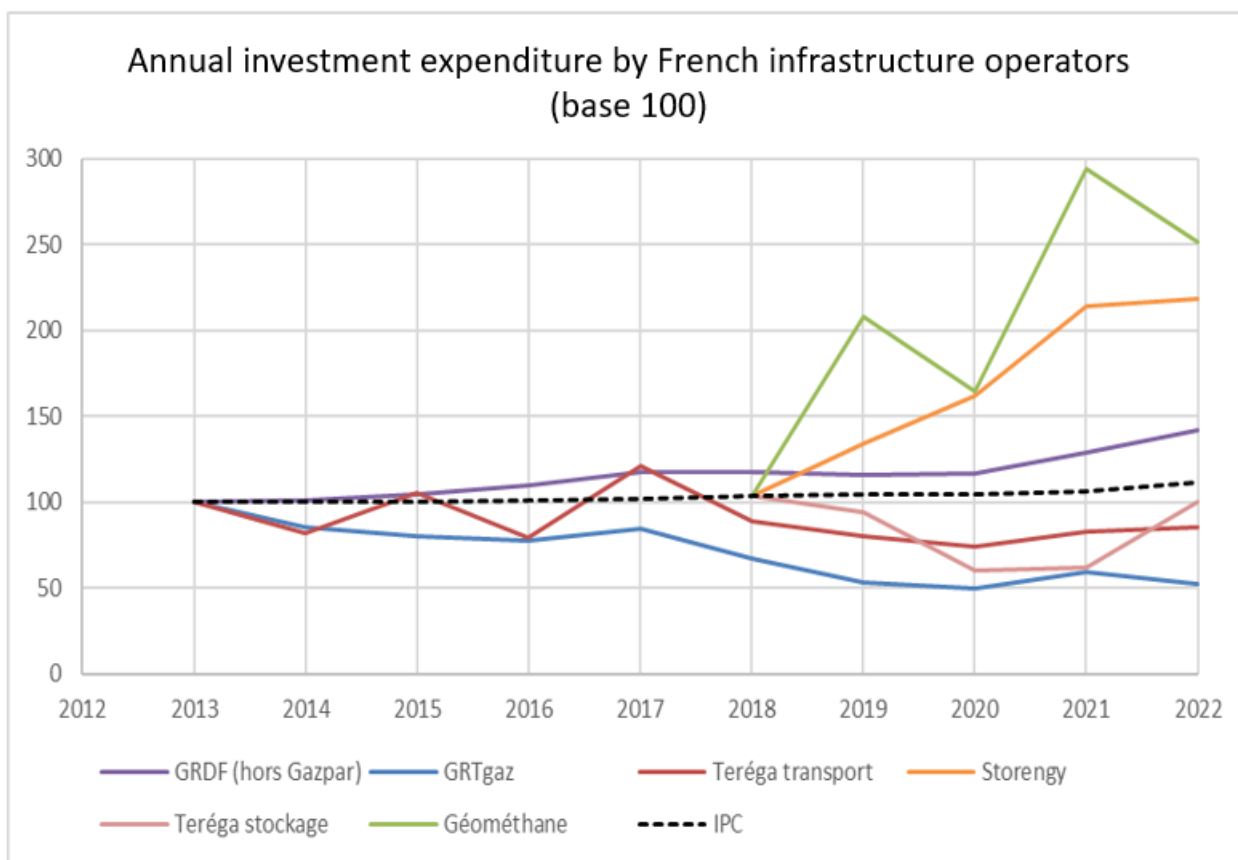
The graph below shows trends in net operating costs for the various operators (gross operating costs less operating income such as capitalized production, extra-tariff income, etc.). With the exception of Teréga stockage, net operating costs for gas infrastructure operators were close to the rate of inflation.



Year	GRDF (M€)	GRTgaz (M€)	Teréga transport (M€)	Storengy (M€)	Teréga storage (M€)	Geomethane (M€)
2013	1,414	702	67			
2014	1,325	697	72			
2015	1,423	722	75			
2016	1,444	696	70			
2017	1,406	736	76			
2018	1,401	770	75	161	37	17
2019	1,434	789	75	166	40	16
2020	1,471	789	71	178	45	16
2021	1,536	680	70	153	46	16
2022	1,573	797	72	161	53	18

3 Investments

The graph below shows the evolution of investments made by infrastructure operators in infrastructure excluding Gazpar advanced meter projects.



Capital expenditure (M€)	GRDF (excluding Gazpar)	GRTgaz	Teréga Transport	Storengy	Teréga storage	Géométhane
2013	659	777	125			
2014	666	663	103			
2015	688	624	132			
2016	721	600	100			
2017	772	657	152			
2018	776	520	111	99	58	12
2019	760	414	101	128	52	24
2020	769	385	93	155	34	19
2021	850	457	103	206	34	34
2022	937	405	107	209	56	29

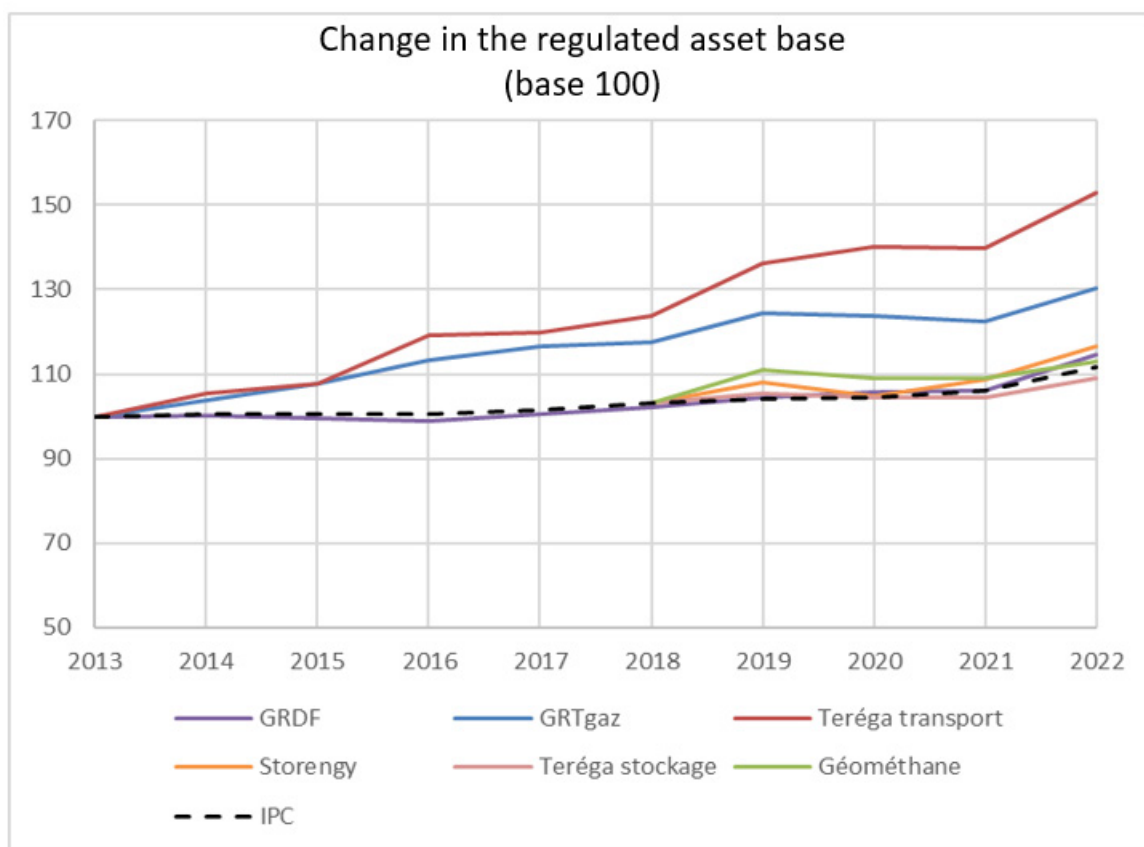
Investments by transmission system operators (TSOs) fell significantly after the completion in 2018 of the merger of zones in France, which had necessitated major reinforcements of the gas transmission network. Since 2019, the level of investment has been stable overall.

With regard to natural gas distribution, investment will increase from 2021 onwards (excluding Gazpar smart meter projects) to ensure the connection of biomethane production sites and meet heightened safety requirements.

Investments by storage operators Storengy and Géométhane have been rising since regulation began in 2018. For Storengy, this trend can be explained by a catch-up in investments to maintain storage performance, following a phase of under-investment before the start of regulation, when market conditions were particularly unfavorable for Storengy's storage facilities. For Géométhane, the increase is associated with site renovation work.

4 Regulated asset bases

Investments made by operators are included in the regulated asset base (RAB) once they have been commissioned. RAB declines in line with plant depreciation. Gas infrastructure operators' RAB is revalued each year in line with inflation. RAB increases, in constant euros, when new investments exceed depreciation of existing assets, and vice versa.



in M€	GRDF	GRTgaz	Teréga	Storengy	Teréga storage	Géo-méthane
2012	14,217	6,882	1,010			
2013	14,306	7,045	1,109			
2014	14,314	7,309	1,171			
2015	14,226	7,579	1,194			
2016	14,162	7,978	1,322			
2017	14,361	8,223	1,328			
2018	14,629	8,278	1,372	3,526	1,182	189
2019	14,925	8,774	1,510	3,686	1,205	203
2020	15,138	8,724	1,553	3,580	1,194	200
2021	15,196	8,623	1,552	3,714	1,196	199
2022	16,398	9,175	1,697	3,974	1,248	207

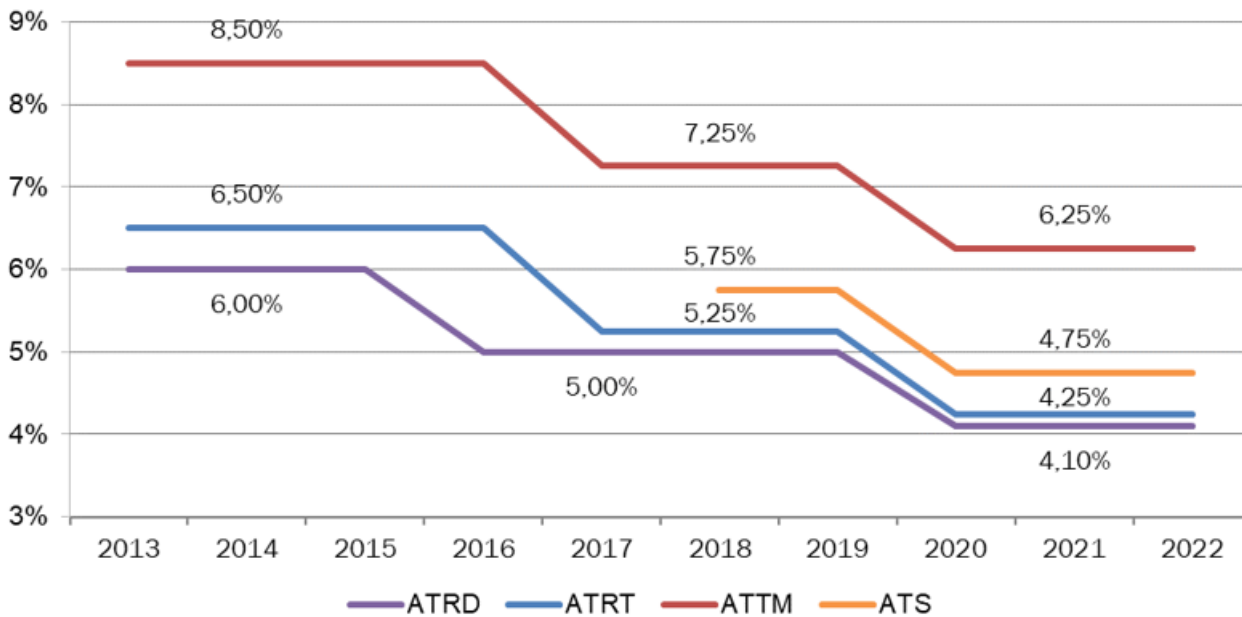
The sharp rise in RABs in current euros in 2022 is due to the application of 6.2% inflation. GRTgaz and Teréga have seen their RABs rise by much more than inflation as a result of the massive effort to reinforce the French gas transmission network between 2008 and 2019: development of interconnections, connection of LNG terminals, creation of the single market zone. The trend in other RABs was close to that of inflation.

On January 1st, 2023, the total RAB of gas infrastructure operators in mainland France (including regulated LNG terminal operators and excluding gas-operated LDCs) amounted to 34 billion euros.

5 Rates of remuneration

In previous tariff periods, the rate of return, or weighted average cost of capital (WACC), was applied to the RAB aggregating the value of all assets operated by a single operator. It has been fixed for the entire tariff period and calculated on the basis of calculation parameters derived from long-term data. In particular, the risk-free rate has been calculated on the basis of long-term averages of long-maturity rates, in line with the long-life assets that make up the RAB.

Base CMPC – gas tariffs
(actual before tax)

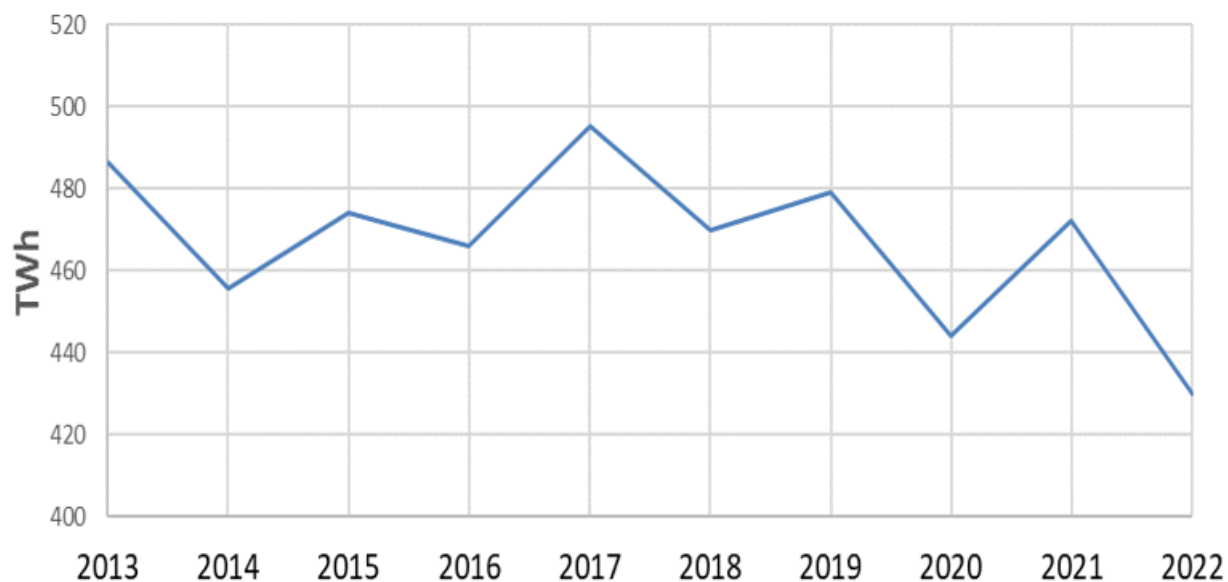


Non-financial elements

1 French consumption

Total domestic natural gas consumption in France in TWh (climate-adjusted):

Natural gas consumption in France (climate-adjusted)

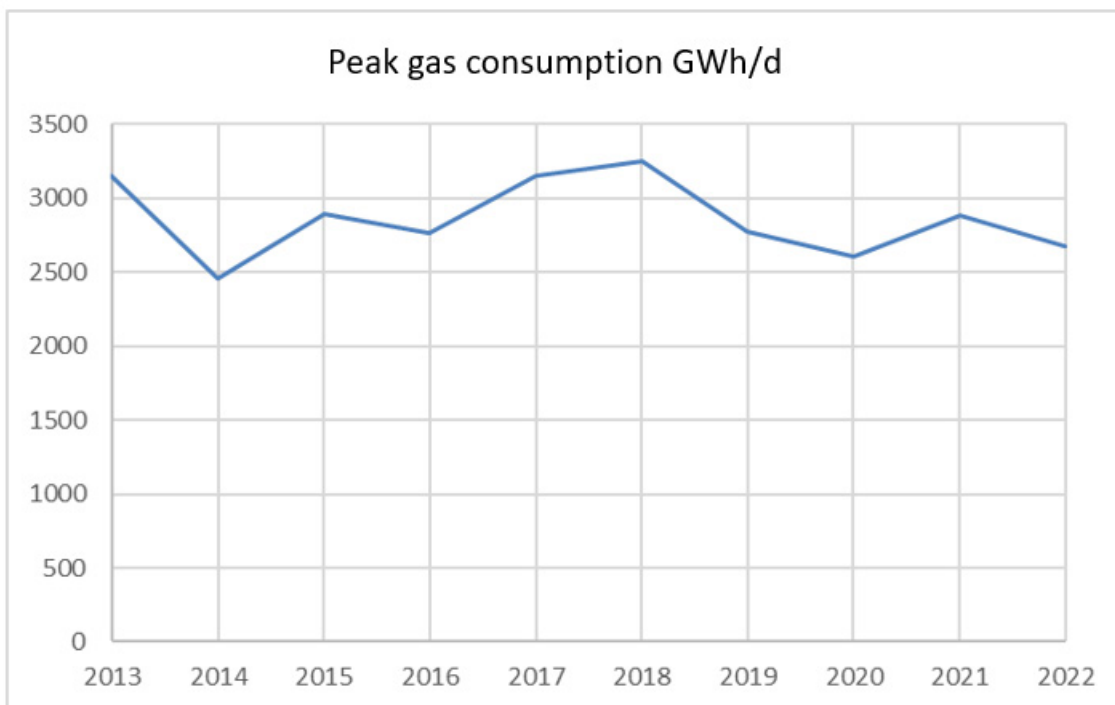


Year	Consumption corrected for climate (TWh)	GRTgaz zone	Teréga zone
2013	486	469	31
2014	456	392	27
2015	474	423	28
2016	466	465	28
2017	495	467	28
2018	470	442	28
2019	479	451	28
2020	444	419	25
2021	472	444	28
2022	430	406	24

2 Gas peak France

Peak natural gas consumption in GWh/d

In 2012, a consumption peak of 3670 GWh/d was observed on February 8, under weather conditions that corresponded to a 14% cold risk.



Year	Peak of gas consumption (GWh/d)	Zone GRTgaz	Zone Teréga
2013	3152	2940	212
2014	2461	2274	187
2015	2893	2676	217
2016	2761	2588	173
2017	3153	2930	223
2018	3253	3042	211
2019	2773	2595	178
2020	2606	2465	140
2021	2884	2758	126
2022	2676	2519	157

3 Number of customers

Number of customers	GDRF (millions)	GRTgaz	Teréga
2013	10.9	912	286
2014	10.9	948	328
2015	10.9	917	330
2016	10.9	914	331
2017	11.0	908	329
2018	11.1	908	335
2019	11.1	910	334
2020	11.2	896	341
2021	11.2	890	348
2021	11.1	879	354

4 Number of km of networks

	GDRF	GRTgaz	Teréga
2013	195,850	32,056	5,058
2014	196,940	32,153	5,065
2015	197,928	32,320	5,136
2016	198,886	32,456	5,134
2017	199,781	32,414	5,056
2018	200,715	32,548	5,080
2019	201,716	32,527	5,135
2020	202,759	32,519	5,127
2021	204,239	32,527	5,115
2021	205,809	32,618	5,099

5 Biomethane injection capacity (GWh/year)

Year	Distribution	Transport	Total
2013	81		81
2014	133		133
2015	432	85	517
2016	599	85	684
2017	931	241	1,172
2018	1,515	373	1,888
2019	2,464	600	3,064
2020	4,264	902	5,166
2021	6,707	1,502	8,209
2022	9,234	2,207	11,441
2023	9,852	2,451	12,303

APPENDIX 2: INCOME AND COST ITEMS COVERED BY THE CRCP AND COVERAGE ENVISAGED AT THIS STAGE

CRCP coverage rate envisaged at this stage		
Revenue from the tariff compensation term		100 %
Capacity sales revenue		100 %
Infrastructure" normative capital expenditure		100 %
Differences in capital expenditure "excluding infrastructure" due to inflation		100 %
Differences in net operating costs due to the difference between forecast and actual inflation		100 %
Energy costs and difference between revenues and costs related CO ₂ quotas	Difference between tariff and forecast trajectories	100 %
	Gap between forecast and actual trajectory	80 %
Consumables and effluent treatment costs	Difference between tariff and forecast trajectories	100 %
	Gap between forecast and actual trajectory	80 %
Income and costs associated with contracts with other regulated operators (notably transmission system operators)		100 %
Creation of additional gas stocks following the implementation of regulatory obligations as provided for in article L. 421-6 of the French Energy Code		100 %
Expenses related to unsuccessful studies for major projects approved in advance by the CRE or other stranded costs dealt with on a case-by-case basis, for which the CRE would approve coverage		100 %
Operator's share of dismantling provisions		100 %
Capital gains on disposal of assets (actual estate or land)		80 %
Bonuses and penalties resulting from incentive regulation mechanisms		100 %
Customer penalties		100% above the €10 M threshold
R&D costs		100% of unused costs at end of period