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CRE COMMISSION DE RÉGULATION DE L'ÉNERGIE

Deliberation no. 2024-21

Deliberation of the French Energy Regulatory Commission of 30 January 2024 on the decision on the tariff for the use of the underground natural gas storage infrastructures of Storengy, Teréga and Géométhane

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

The session was attended by: Emmanuelle WARGON, president, Anthony CELLIER, Ivan FAUCHEUX, Valérie PLAGNOL and Lova RINEL, Commissioners.

Law no. 2017-1839 of 30 December 2017, putting an end to the research and exploitation of hydrocarbons and containing various provisions relating to energy and the environment, modified the regime of access of third parties to storage facilities, which has been regulated since 1 January 2018.

Articles L. 452-1 and L. 452-3 of the Energy Code give authority to the Energy Regulation Commission (CRE) to set the methodology for establishing tariffs for the use of natural gas underground storage. According to the provisions of article L. 452-3 of the Energy Code, CRE may make "*changes* to *the level and structure of tariffs that it considers justified, notably in light of analysis on the operators' accounts and the foreseeable evolution of operating and investment expenses".*

Article L. 421-3-1 of the Energy Code provides that *"underground natural gas storage infrastructures that guarantee the security of supply of the territory in the medium and long term, and compliance with bilateral agreements relating to the security of natural gas supply [...] are provided for by the multi-annual energy programming mentioned in article L. 141-1. These infrastructures are maintained in operation by the operators".*

The ATS3 tariff will take effect from 1 April 2024.

In return for the obligation to keep storage sites in operation, as specified by the multi-year energy programme (PPE), storage operators Storengy, Teréga and Géométhane are guaranteed to have their costs covered, insofar as these costs are those of an efficient operator. Article L. 452-1 of the Energy Code provides that the difference between the allowed revenue of storage operators and the revenue directly received by storage operators, notably through commercialisation of their capacities at auction, is compensated *via* the tariff for use of natural gas transmission networks, by a specific term called "storage tariff term".

CRE adopts this deliberation after a broad consultation of the stakeholders. Between February and September 2023, CRE organised five thematic workshops open to the public, then a public consultation on the next ATS3 tariff[1], from 26 July 2023 to 9 October 2023. Thirty-six (24) responses were received and non-confidential responses are published on CRE's website. Following this consultation, CRE organised three round tables with suppliers and their associations, consumer associations, licensing authorities and local authorities on CRE's guidelines on gas distribution, transport and storage tariffs. Finally, CRE interviewed the storage operators (Storengy, Teréga and Géométhane), as well as their shareholders.

This decision is notably based on the business plans sent by the storage operators as well as on numerous exchanges with them, on internal analyses, on reports from external auditors[2] and on the opinions expressed by stakeholders in response to the public consultation, during round tables or hearings.

1. Main challenges of the next gas storage tariff (ATS3 tariff)

The ATS tariff only deals with the allowed revenue level of operators and incentive regulations, unlike natural gas transmission and distribution tariffs which also include the definition of unit tariffs (tariff structure). In addition to the objectives of predictability and continuity pursued by CRE in general in its tariff decisions, the ATS3

[1] Public consultation no. 2023-06 of 26 July 2023 on the next tariff for use of the underground natural gas storage infrastructures of STORENGY, TEREGA and GEOMETHANE (ATS3)

[2] An audit of the demand in terms of operating expenses of Géométhane, Storengy and Teréga for the period 2024-2027, as well as an audit of the demand for the rate of remuneration of the regulated assets of natural gas storage operators, Géométhane, Storengy and Teréga, both published on CRE's website.

tariff meets the challenges of the 2024-2027 period, but also prepares the underground gas storage for the longer-term problems of the gas system.

a. Controlling the costs of storage operators

The upcoming tariff period will be marked by continuation of the downward trend in natural gas consumption already observed for several years and constituting an objective of the PPE. This decline in consumption accelerated in 2022 due to the effect of high gas prices, the frugality of gas consumers and the shift of some gas consumers towards other forms of energy. This anticipated decline, which is expected to continue over several tariff periods, will mechanically lead to a reduction in the basis on which gas infrastructure operators collect their revenues.

This perspective has led CRE to make changes to the tariff regulatory framework to ensure the long-term economic sustainability of the gas system.

CRE will be particularly vigilant and selective in examining any new investment project submitted by the storage operators. CRE will ensure that these projects meet the priority objectives of security, infrastructure integrity and compliance with the objectives set by the PPE in terms of security of supply for France. In order to achieve these objectives, the ATS3 tariff takes into account the recent rise in rates observed on the markets to protect the financing capacity of operators.

In this context, CRE also considers that controlling the costs of storage operators is a key issue. The operating expense trajectories used to establish the ATS3 tariff meet this challenge.

b. Preparing for storage for the increase in renewable and low-carbon gases

The ATS3 tariff gives operators the means to contribute to the energy transition, particularly with regard to the resources allocated to the reception of gas from sustainable sources in the storage facilities as well as to research and development.

The current PPE provides for an overall decreasing trajectory of gas consumption, and a transformation of the energy mix, including, in particular, development of gas from sustainable sources. The PPE has set a target of 14 to 22 TWh per year of biogas injected into the networks by 2028. The development observed in recent years, with more than 10 TWh of renewable gas injected by the beginning of 2023, is expected to continue. Therefore, operators will have to prepare their storage accordingly, including a probable increase in impurities in methane mixtures (H_2, $O_{2,...}$).

c. Ensuring security of supply

The current PPE provides for stability of the current storage capacities, the insurance value of which was reaffirmed during the gas crisis caused by the war started by Russia in Ukraine. The ATS3 tariff gives operators the means corresponding to this objective, including additional resources allocated to maintenance.

d. Capacity to adapt to short- and long-term changes

The study on the future of gas infrastructures published by CRE on 4 April 2023[3] shows that some storage facilities, notably salt caverns, could be converted for hydrogen. Nevertheless, conversion decisions must be prudent by ensuring that the gas system can transition from the saline storage in question and by relying on a demonstrated need for hydrogen storage. A conversion before 2030 now seems unforeseeable, regardless of the scenario chosen.

Thus, no hydrogen conversion planned during the next tariff period. The ATS3 tariff also provides resources to allow operators to study the feasibility of such conversions.

[3] Report from CRE, “Future of gas infrastructure in 2030 and 2050, in a context of achieving carbon neutrality”, April 2023

2. Tariff regulatory framework

The review of previous tariff periods, the feedback from the workshops and the public consultation showed that the incentive regulation framework is working well and only requires marginal improvements in order to take evolutions of the gas system into account. Consequently, CRE renews, for the ATS3, the main incentive regulation mechanisms in force in the ATS2, adjusting them when necessary: the incentive regulation for controlling operating expenses and investment expenses, the incentive regulation on service quality and research and development, or the coverage after-the-fact of certain deviations via the CRCP.

The ATS2 tariff period has notably shown that the tariff framework did, in fact, protect operators during the health crisis and the energy price crisis, while limiting the impact on customer bills.

For the ATS3 period, CRE makes several changes to the tariff regulation framework for the ATS2 period, made necessary by the context.

CRE is changing the method of calculating the weighted average cost of capital (WACC) to take into account the increase in rates observed recently

CRE's method of determining the weighted average cost of capital is based on a WACC with a normative structure to ensure an appropriate return on capital invested. Until now, it was based on the average of the rates observed over the last ten years, reflecting the long lifespan of gas network infrastructures. This method, which has changed very little over three tariff periods, has made it possible to maintain the attractiveness of the energy infrastructure in France, while taking into account the downward trend in rates observed over the past 10 years.

After this long period of decline, interest rates have been rising rapidly for about a year.

Faced with this new situation, CRE is changing the method of calculating the WACC to better account for the short-term dynamics of interest rates.

To determine the WACC applicable during the ATS3 tariff, CRE retains:

- a rate determined according to the method used for the ATS2 and ATS1, based on the analysis of long-term parameters, which shows a real rate of 3.7% before taxes (i.e. 4.9% nominal before taxes, from which is restated the average inflation of 1.2% observed over the last ten years);
- a rate based on taking into account more recent economic data which shows a real rate of 5.5% before taxes (i.e. 7.6% nominal before taxes, from which is restated the average forecast inflation of 2.0%[4] over the ATS3 tariff period).

These rates are combined into a weighted rate that will apply during the ATS3 period. This weighting is based on a normative distribution of the respective share of old assets and new assets in the ATS3 tariff period for a gas operator, i.e. 80% of historical assets and 20% of new assets.

For ATS3, the WACC is a real rate of 4.6%, before taxes (or a nominal rate of 5.9% before taxes from which inflation is restated). Its level is down 0.15 points compared to that of ATS2.

It is composed of a premium relating to the specific risk of the underground natural gas storage activity of 50 base point (bps), unchanged compared to the ATS2 period, and the weighted WACC at the real rate of 4.1%, before taxes corresponding to the level adopted for the ATRT8.

This 4.1% weighted WACC level takes into account:

- through its component based on long-term parameters, the financing costs of existing assets, with interest rates in markets that have remained very low over a long period;
- through its component based on recent economic data, the rise in interest rates observed since 2022 and its consequences on the financing costs of new assets;
- a decline in asset *beta* from 0.50 to 0.47, to notably reflect the resilience of regulated activities compared to other sectors of the economy during the recent crises (Covid 19, gas crisis...). However, risks persist for the future of gas infrastructures, which justifies retaining a higher *beta* than that of electricity networks.

[4] Inflation restatement is obtained by the real WACC formula before corporate tax = (1 + nominal WACC before corporate tax) / (1 + inflation) – 1

CRE is preparing for the future by changing the framework for new assets

In its study on the future of gas infrastructures, CRE notes that a significant part of the gas storage will remain necessary through 2050 (even if certain saline caverns could be converted to hydrogen) even in scenarios of significant decrease in consumption. This observation leads to setting a different pricing framework for new assets in order to accelerate their depreciation.

As such, CRE retains the following tariff framework for assets that will enter the regulated asset base (RAB) from 2024:

- new assets are recorded in the RAB at book value, to which the nominal WACC rate (i.e. containing inflation) set by CRE at 5.9% applies, as is the case, for example, for the electricity transmission tariff;
- reduction of the depreciation periods of the new assets with long lifespans, i.e. the change from a depreciation period of new wells, caverns and collection equipment from 50 to 30 years.

The regulatory framework for assets entered into the RAB previously is not changed.

3. Tariff Level

Storengy, Teréga and Géométhane have each made a request for tariff changes that present their estimated costs for the period 2024-2027. They report contending with the general increase in costs (inflation), including energy prices, as well as increasing obligations in terms of safety or reduction of greenhouse gas emissions.

Taking into account the elements of the tariff files sent to CRE by Storengy, Teréga and Géométhane would have led to a significant increase in the expenses to be covered (which correspond to the sum of net operating expenses and normative capital expenses). These would total 963 M€/year on average over the period, compared to 710 M€ in expenses to be covered in 2022 (+36%).

In particular, these requests showed a significant increase in net operating expenses, while gas consumption is on a downward trend.

At the end of its analyses and the additional exchanges it has had with operators since the public consultation of 26 July 2023, CRE considers that the increase in charges to be covered is less significant than that requested by the storage operators. In particular, it plans to limit the increase in net operating expenses of operators, while leaving them the financial leeway to maintain a high level of security and to be a player in the energy transition. CRE is not modifying the investment trajectory presented by Storengy and Teréga. It does not retain a capacity development project in the trajectory presented by Géométhane. Furthermore, it does not retain the level of WACC requested by the operators.

Overall, the level of expenses to be covered during the ATS3 period totals, on average, 849 M€/year for all operators, an increase of 20% compared to the level achieved in 2022 of 710 M€. The increase is notably explained by additional expenditure to maintain the availability of storage facilities essential to ensure the security of supply (notably the continuation of investments to renovate the existing equipment and an increase in maintenance costs).

Operating expenses

At the end of its analyses, CRE selected operating expense trajectories that gave Storengy, Teréga and Géométhane the means to:

- to have the necessary resources to fulfil all their missions and, in particular, to guarantee the industrial safety of their facilities, with maintenance of the level of expenditure achieved during ATS2;
- increase maintenance expenses to limit the decline in performance of the aquifer storage;
- face new cybersecurity challenges;
- continue their R&D work on the core business that contributes to strengthening the safety, sustainability and efficiency of storage facilities;
- have a budget to study the conversion of their assets to hydrogen.

Over the period of 2024-2027, the level of the trajectory of net operating expenses excluding system purchases[5] set by CRE for Storengy is 4.9% higher than the level of realised expenses for 2022, updated for inflation[6]. From 2025, it includes gains in efficiency of 1% per year on controllable charges (excluding staff costs). The increase is explained in particular by strengthening of the maintenance of aquifer storage and an increase in operating expenses for information systems, which is partly offset by a decrease in IT investments.

Over the period 2024-2027, the trajectory of net operating expenses excluding system purchases set by CRE for Teréga is slightly lower than the level of 2022 expenses updated for inflation (-0.8% over the period).

Over the period 2024-2027, the trajectory of net operating expenses excluding system purchases set by CRE for Géométhane is, overall, 9.6 % above the level of 2022 expenses updated for inflation. This evolution is notably explained by an increase in maintenance expenses associated with commissioning of a compressor and the mechanical evolution of the costs of service contracts.

The average level of net operating expenses retained for ATS3 totals 207 M€/year for Storengy, 57 M€/year for Teréga and 20 M€/year for Géométhane (respectively, excluding system purchases of 164 M€/year, 43 M€/year and 18 M€/year).

The trajectories of net operating expenses set by CRE for the ATS3 tariff period corresponds to an overall budget. The storage operators will distribute this budget between the different types of charges, according to their management choices.

The ATS3 tariff also provides for a rendez-vous clause to integrate any charges that could be related to implementation of the European regulation to reduce methane emissions once adopted, as well as a rendez-vous clause related to external events that could result in an increase in operating expenses of more than 1%.

Capital Charges

CRE retains a real WACC of 4.6%, before taxes (i.e. 5.9% nominal before taxes).

This level corresponds to the level used for the ATRT8 tariff (4.1%) to which is added a premium relating to the specific risk of the underground natural gas storage activity, set, as for ATS2, at 50 basis points.

CRE has not made any change to the investment trajectory presented by Storengy and Teréga. The trajectory of Géométhane, on the other hand, has been modified. In fact, CRE has not included a project to develop Géométhane capacities in its investment trajectory, as this project is not part of the regulatory scope set by the PPE. In the context of the structural decline in gas consumption, operators' capital expenditure will have to be controlled. CRE will notably monitor control of these expenses at the time of annual approval of the investments of storage operators, as specified by the provisions of articles L. 134-3 and L. 421-7-1 of the Energy Code.

The average level of capital charges to be covered for the ATS3 period is:

- 409 M€/year on average for Storengy;
- 119 M€/year on average for Teréga;
- 36 M€/year on average for Géométhane.

Finally, it is recalled that the "infrastructure" investments of the storage operators are covered by the tariff according to the completed work observed at 100% by means of the regulatory account (CRCP) and that the operators are protected from the evolution of inflation by the tariff.

Evolution of the level of allowed revenue

The allowed revenue of storage operators corresponds to the sum of expenses covered and clearance of the CRCP balance. Taking these elements into account, the allowed revenue totals:

- for Storengy, 620 M€/year on average over the ATS3 period, including 579 M€ in 2024, an increase of 7.0% compared to the allowed revenue for 2023 of 541 M€;
- for Teréga, 176 M€/year on average over the ATS3 period, including 170 M€ in 2024, an increase of 1.7%[7] compared to the allowed revenue for 2023 of 168 M€;
- for Géométhane, 56 M€/year on average over the ATS3 period, including 49 M€ in 2024, a decrease of -7.6%[8] compared to the allowed revenue for 2023 of 53 M€.

[5] For storage operators, system purchases correspond to energy charges
[6] Taking into account a correction of the effect of changes in revenue forecasts of a contract with another regulated operator
[7] Teréga's allowed revenue in 2023 includes a CRCP balance to be returned to the operator of 8 M€. The total CCN and CNE is up +9.4% between 2023 and 2024.
[8] The ATS2 tariff trajectory specified for commissioning of the new compressor in 2023. Commissioning is now planned for the end of 2024, which shifts the increase in allowed revenue.

In total, the average level of allowed revenue of storage operators for the ATS3 period is 851 M€ per year on average over the 2024-2027 period. Between 2023 and 2024, the allowed revenue of operators is up 4.8%. It then evolves on average by 3.9%/year over the period of 2024-2027.

4. Transparency

CRE publishes on its website, in addition to this deliberation:

- the external audit of the request for operating expenses of Storengy, Teréga et Géométhane for the period 2024-2027;
- the external audit of the request for remuneration rates for regulated assets of the natural gas storage of Storengy, Teréga et Géométhane;
- non-confidential responses to the public consultation of 26 July 2023;
- an English translation of the tariff deliberation.

The Energy Council, consulted by CRE on the draft decision, issued its opinion on 25 January 2024.

Key figures

Key figures 2024-2027 (current euros)		
	ATS3	*2022 realised*
Operating expenses M€/year	**284**	232
Storengy	207	*161*
Teréga Storage	57	*53*
Géométhane	20	*18*
Capital charges M€/year	**564**	478
Storengy	409	*351*
Teréga Storage	119	*105*
Géométhane	36	*22*
WACC (real before tax)	**4.6%**	4.75%
of which historical rate	*4.2%*	*N/A*
of which short-term rate	*6.0%*	*N/A*
WACC (nominal before tax)	5.9%	6.1%
of which historical rate	*5.4%*	*N/A*
of which short-term rate	*8.1%*	*N/A*
Investments M€/year	**333**	266
Storengy	237	*191*
Teréga Storage	69	*49*
Géométhane	24	*27*

	2024	2025	2026	2 027
Inflation assumptions	2.5%	2.0%	2.0%	1.8%

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1. CRE's power and tariff development process

1.1 CRE's power

Article L. 421-3-1 of the Energy Code provides that *"underground natural gas storage infrastructures that guarantee the security of supply of the territory in the medium and long term and respect of the bilateral agreements relating to the security of natural gas supply established by France with a Member State of the European Union or a Member State of the European Free Trade Association are specified by the multi-annual energy programming mentioned to in Article L. 141-1. These infrastructures are maintained in operation by the operators* [...] *".*

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

Articles L. 452-1, L. 452-2 and L. 452-3 of the Energy Code govern the authority of CRE over tariffs.

Article L. 452-1 of the Energy Code provides that *"the tariffs for use of the transmission networks, the commercial conditions for use of these networks, as well as the tariffs for the ancillary services carried out by the operators of these networks or by the operators of the storage infrastructures mentioned in Article L. 421-3-1, shall be established in a transparent and non-discriminatory manner in order to cover all the costs incurred by the operators of the transmission networks 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 related to this service, including the obligations set by law and regulations as well as costs resulting from the performance of public service missions and the contracts mentioned in I of article L. 121-46".*

It specifies that *"costs incurred by the operators of the storage infrastructures mentioned in Article L. 421-3-1 include normal remuneration for the capital invested, the costs mentioned in the last paragraph of Article L. 421-6, the research and development expenses necessary for the security of these infrastructures and the costs incurred by these operators for modification of the nature or characteristics of the gas transported in the natural gas networks".*

In addition, Article L.452-2 of the Energy Code provides that *"the methods used to establish the tariffs for use of natural gas transmission networks,* [...] *are set by the Energy Regulation Commission*" and specifies that "*the operators of the storage facilities mentioned in Article L. 421-3-1 shall send the Energy Regulation Commission, at its request, the elements, notably accounting and financial, necessary for it to deliberate on changes in the tariffs for the use of natural gas networks*".

In addition, Article L.452-3 of the Energy Code provides that *"the Energy Regulation Commission shall deliberate on tariff developments as well as on those of ancillary services carried out exclusively by the operators of these networks or these facilities with, where appropriate, changes in the level and structure of tariffs that it considers justified in light of analysis of the accounting of operators and the foreseeable evolution of operating and investment expenses"* and adds that *"these deliberations, which may take place at the request [...] of the operators of the storage facilities mentioned in Article L. 421-3-1, may provide for a multi-annual framework of tariff developments as well as appropriate short-term or long-term incentive measures to encourage operators to improve their performance* [...]*".*

Article L. 452-3 also provides that CRE "*shall, in accordance with the procedures it determines, consult the stakeholders in the energy market*".

By this deliberation, CRE defines the allowed revenue and the regulatory framework for natural gas storage operators, Storengy, Teréga and Géométhane, for the ATS3 period through years 2024 to 2027.

1.2 Tariff Development Process

1.2.1 Consultation of stakeholders

Given the need for stakeholder visibility and the complexity of the topics, CRE organised five thematic workshops open to the public between February and September 2023:

- the first, held on 22 February 2023, concerned the tariff structure of gas distribution tariffs. This workshop notably made it possible to present the evolutions foreseen by CRE concerning the introduction of a tariff term invoiced according to the throughput of users' meters and aimed at taking into account the development of back-up uses in distribution. This workshop was attended by 75 participants;

- the second, held on 4 May 2023, concerned the tariff structure of gas transmission tariffs. This workshop notably made it possible to present the changes foreseen by CRE concerning the tariff structure of the large transport network, in particular the tariffs applicable to interconnections. This workshop was attended by 70 participants;
- the third, held on 10 May 2023, concerned green gases. This workshop notably made it possible to present the changes foreseen by CRE concerning the pricing applicable to the injection of renewable and low-carbon gases into the networks. This workshop was attended by 85 participants;
- the fourth, held on 20 June 2023, focused on the future of French gas infrastructures and the possible adaptations of the tariff regulation framework to take into account the decrease in natural gas consumption. This workshop notably made it possible to present the evolutions foreseen by CRE concerning the depreciation chronicle of the RAB, to acknowledge inflation in the RAB and possible incentives for controlling investments. This workshop was attended by 86 participants;
- finally, the fifth workshop, held on 13 September 2023, was devoted to GRDF's quality of service and made it possible to present the changes foreseen by CRE on various service quality indicators, including commissioning times, the quality of metering and complaint processing times. This workshop was attended by 61 participants.

At the end of these workshops, CRE organised a public consultation published in French and English, which took place from 23 July 2023 to 9 October 2023, and collected 24 responses. Non-confidential responses to this consultation are published on CRE's website.

Following this consultation, CRE organised three round tables with suppliers, consumer associations, and licensing and local authorities to gather their comments on the guidelines presented in the public consultations on distribution, transport and storage tariffs and on the impact of these tariff guidelines on consumers.

Finally, CRE interviewed the storage operators on several occasions, as well as their respective shareholders.

1.2.2 Transparency

In the interest of transparency, CRE published the external studies conducted in the framework of development of the ATS3 tariff. These studies cover the following topics:

- an audit of demand in terms of operating expenses of Storengy, Teréga and Géométhane for the period 2024-2027[9];
- an audit of the request for remuneration rates for regulated assets of the natural gas storage of Storengy, Teréga et Géométhane[10].

2. Tariff regulatory framework

2.1 Assessment and challenges of the tariff regulation framework

Stable in its main principles for more than 10 years, the tariff framework for gas and electricity networks and infrastructures has three main objectives:

- encourage infrastructure managers to control their costs to limit the impact of infrastructure tariffs on the end consumer;
- enable operators to finance the necessary infrastructure investments;
- aim for a high level of quality of service, security and continuity of routing.

To do this, it relies on financial mechanisms to encourage infrastructure managers to seek efficiency over time. Thus, a four-year tariff period and the principle of multi-year financial incentives on costs and quality of service were introduced. The regulatory framework leaves wide freedom in the management of each of the infrastructure operators, allowing each of them to seek the most relevant performance improvements.

[9] Audit of demand in terms of operating expenses of Storengy, Teréga and Géométhane for the period 2024-2027
[10] Audit of the request for remuneration rates for regulated assets of the natural gas storage of Storengy, Teréga et Géométhane

CRE draws up a positive assessment of this framework, which has made it possible to control costs over time while improving the quality of service. This framework has also been very resilient in the face of two major crises, the health crisis[11] and the energy price crisis, by giving operators the means to ensure business continuity under good conditions.

Most respondents to the public consultation share CRE's conclusions on the positive outcome of the regulatory framework for the ATS2 period, which made it possible to effectively control costs for the benefit of the end customer, make the necessary investments and operate gas infrastructures under good conditions in an unprecedented context of supply crisis.

Given this assessment (see detailed assessment in Appendix 1 of the public consultation), CRE decided, for ATS3, to renew the essential parts of ATS2, while nonetheless changing a few mechanisms. In particular, storage operators have asked to be more protected from the impact of the volatility of current economic conditions (inflation, energy prices).

2.2 Reminder of the main principles of the tariff framework

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

The ATS3 tariff will also sets a regulatory framework in order to limit the financial risk of operators and/or users for certain predefined expense or product items, through a regulatory account (CRCP) and, on the other hand, to encourage storage operators to improve their performance through incentive mechanisms.

Taking all these elements into account makes it possible to establish the rate applicable for 2024 as well as its terms of annual evolution.

2.2.1 Scope of regulation

Pursuant to Articles L. 421-3-1, L. 421-10 and L. 452-1 of the Energy Code, the costs of storage operators and their revenues are considered within the scope of storage infrastructures specified by the Multi-year Energy Programming (PPE). They are taken into account insofar as they correspond to those of an efficient operator.

Upon entry into the regulation, decree no. 2016-1442 of 27 October 2016[12] on multi-year energy programming took into account all active and reduced-operation sites within this scope.

Subsequently, the decree of 26 December 2018[13] changed this scope. The 3 reduced-operation sites of Storengy (Soings-en-Sologne, Saint-Clair-sur-Epte and Trois-Fontaines) as well as the Lussagnet phase 1 (Teréga) and Manosque 2 (Géométhane) projects have been removed from the scope of the infrastructures considered necessary for security of supply. Thus, they are not included in the scope of regulated sites.

The decree of 21 April 2020[14] specifies the perimeter of the infrastructures considered necessary for security of supply:

"Until publication of the revision of this PPE, the underground natural gas storage infrastructures considered necessary for the security of supply of the territory in the medium and long terms are those mentioned below, for storage capacities of 138.5 TWh in volume and 2,376 GWh/d in extraction flow for a filling corresponding to 45 % of the useful volume:

Infrastructure	*Operator*	*Year of commissioning*	*Type of storage*
Beynes	*Storengy*	*1956*	*Aquifère*
Céré-la-Ronde	*Storengy*	*1993*	*Aquifère*
Cerville-Velaine	*Storengy*	*1970*	*Aquifère*
Chémery	*Storengy*	*1968*	*Aquifère*
Etrez	*Storengy*	*1980*	*Salin*
Germigny-sous-Coulomb	*Storengy*	*1982*	*Aquifère*
Gournay	*Storengy*	*1976*	*Aquifère*
Lussagnet/ Izaute	*Teréga*	*1957*	*Aquifère*
Manosque	*Géométhane*	*1993*	*Salin*
Saint-Illiers-la-Ville	*Storengy*	*1965*	*Aquifère*
Tersanne/ Hauterives	*Storengy*	*1970*	*Salin*

"

[11] Deliberation of 25 March 2021 involving communication on the effects of the COVID-19 crisis for network operators for the year 2020
[12] Decree no. 2016-1442 of 27 October 2016 on multi-year energy programming
[13] Decree no. 2018-1248 of 26 December 2018 on gas storage infrastructures necessary for security of supply
[14] Decree no. 2020-456 of 21 April 2020 on the multi-year energy programme

2.2.2 Determination of the allowed revenue of storage operators

In this deliberation, on the basis of the tariff file sent by the operators and its own analyses, CRE sets the forecast allowed revenue of each storage operator for the period 2024-2027. Allowed revenue covers the costs of operators on a calendar basis to the extent that these correspond to those of an efficient operator.

This forecast allowed revenue of the storage operators consists of the forecast net operating expenses (CNE), the forecast normative capital expenses (CCN), settlement of the balance of the regulatory account (CRCP):

$$RA = CNE + CCN + CRCP$$

With:

- RA: projected allowed revenue over the period;
- CNE: projected net operating expenses over the period (see 3.3);
- CCN: projected normative capital costs over the period (see 3.4);
- CRCP: settlement of the CRCP balance (see 3.5).

The tariff framework makes it possible to guarantee collection of the allowed revenue.

2.2.2.1 Net operating expenses

Net operating expenses (CNE) are defined as gross operating expenses from which operating income is deducted (capitalised production and non-tariff income in particular).

Gross operating expenses consist mainly of energy expenses, external consumption, storage operation and maintenance expenses, personnel expenses and taxes.

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

2.2.2.2 Normative capital charges

Normative capital charges (CCN) include the remuneration and depreciation of fixed capital. The calculation of these two components is based on the valuation and evolution of assets operated by operators – the regulated asset base (RAB) – and assets under construction (AuC), i.e. investments made that have not yet given rise to the commissioning of assets.

The CCN corresponds to the sum of the depreciation of the constituent assets of the RAB and the return on fixed capital. The latter corresponds to the product of the value of the RAB by the weighted average cost of capital (WACC) and the product of the value of the AuCs by the cost of debt.

CCN = Depreciation of the RAB + (RAB x WACC) + (AuC x cost of debt)

2.2.3 Cost of capital and investment coverage

2.2.3.1 Limit the risk of an excessive increase in the unit cost of routing for future network users

In its study on the Future of Gas Infrastructures[15], CRE shows that despite the decline in consumption, the sizing of the French gas infrastructure is not expected to change significantly by 2050:

- gas transmission and distribution networks will remain largely necessary. Assets will nevertheless be able to be released, in proportions that will remain limited;
- a significant share of storage capacity will still be needed to meet the need for seasonal modulation of consumption.

[15] CRE, "Future of gas infrastructure in 2030 and 2050, in a context of achieving carbon neutrality", 2023

The networks could also continue to develop to support the development of green gases, and will have to adapt to the emergence of back-up use. Thus, the charges of gas operators are not expected to decrease in the same proportions or at the same rate as gas consumption by 2050, thus leading to an increase in the unit cost of transport ("scissor" effect).

The lever identified to limit the "scissor" effect is to adapt the distribution of capital charges over time, with the objective of increasing them in the shorter term in order to reduce them in the longer term, in line with the anticipated evolution of gas consumption. This avoids having tomorrow's consumer bear today's burdens.

In the public consultation, CRE presented three options to allow this reallocation of capital charges over time:

1. end the inflation indexation of the RAB by moving to remuneration of the RAB at a nominal WACC and no longer real;
2. adapt the rate of depreciation (switch to declining balance depreciation, higher at the beginning and then reduced), so that depreciation costs are more consistent with the decrease in gas consumption;
3. reduce the depreciation period of certain assets.

Even if the risk of margin squeeze is well identified, most respondents do not share or do not fully share the guidelines presented by CRE. Many respondents fear implementation that is too abrupt at a time when the tariff is already rising sharply. Others consider this development impossible to deploy in such short timeframes and are concerned about their economic neutrality. Finally, a gradual implementation was mentioned by various respondents.

CRE takes into account feedback from the public consultation, according to which not all the measures foreseen within the public consultation should be implemented. In fact, CRE considers that implementation of these measures applied to all the assets of the RAB of storage operators cannot be foreseen due to escalation in the tariff increase that it would cause.

Consequently, CRE decides, with the objective of continuity of the regulatory framework, to partially retain two of the measures presented by applying them only to new assets that will enter the RAB from 1 January 2024:

- New assets are no longer revalued against inflation and are, in return, subjected to a nominal WACC (i.e. including inflation);
- The new "wells, caverns, collection" type assets are depreciated over 30 years instead of 50 years (these assets are the storage equipment, excluding cushion gas, for which the depreciation period is the longest).

These future measures each have effects of less than 1% on the tariff increase.

2.2.3.2 Manner of calculating the regulated asset base (RAB)

The regulated asset base (RAB) represents the sum of tangible and intangible fixed assets in the assets of the operator (valued on 1 January of each year):

- the RAB increases when an asset is put into service;
- the RAB decreases with the depreciation of assets, or if an asset is scrapped or sold.

For so-called "historical" assets entered in the RAB through 1 January 2023:

For the ATS3 tariff, CRE renews the manner of calculating the RAB in effect for the ATS2 tariff.

The value of the RAB is established on the basis of a methodology of the "current economic costs" type, the essential principles of which were adopted by the Special Commission established by article 81 of the Amending Finance Law of 28 December 2001, responsible for setting the sale price, by the State, of its natural gas transmission networks.

Since 2006, the contractual date of entry of assets into the RAB is set at 1 January of the year following their commissioning. The gross values of the assets are restated for the revaluation differences authorised in 1976 and the subsidies received for making these investments.

Once included in the RAB, the assets are revalued on 1 January of each year for inflation from July to July. For this reason, CRE uses a real WACC that does not include inflation. Since 2016, the revaluation index used is the 1763852 index of consumer prices excluding tobacco, for all households residing in France.

Assets are depreciated on a straight-line basis based on their economic life. The land is taken into account at its revalued historical value without depreciation.

The lifespans used by CRE for the main asset classes are as follows:

Category of assets	Normal lifespan
Cushion gas	75 years
Wells, caverns, collection	50 years
Processing, compression, delivery, metering facilities	20 to 30 years
Real Estate and construction	30 years
Miscellaneous equipment	10 to 15 years
Software, light equipment	5 years

For so-called "new assets" entered the RAB from 1 January 2024:

the value of the RAB is calculated from the net book value of the assets in service. The contractual date of entry of assets into the RAB is 1 January of the year following their commissioning.

Assets are depreciated on a straight-line basis based on their economic life. The land is taken into account at its revalued historical value without depreciation. The gross values of assets are restated for the subsidies received for realising these investments.

The lifespans used by CRE for the main asset classes are as follows:

Category of assets	Normal lifespan
Cushion gas	75 years
Wells, caverns, collection	**30 years**
Processing, compression, delivery, metering facilities	20 to 30 years
Real Estate and construction	30 years
Miscellaneous equipment	10 to 15 years
Software, light equipment	5 years

CRE applies a nominal WACC for assets entering the RAB from 1 January 2024.

2.2.3.3 Methods for calculating the weighted average cost of capital (WACC)

The method used to set the rate of return on assets is based on the WACC with a normative financial structure. In fact, the level of remuneration of the network operator must, on one hand, allow it to finance interest charges on its debt and, on the other hand, provide its shareholders with a return on equity comparable to that which they could obtain for investments with comparable levels of risk. This cost of equity is estimated on the basis of the methodology known as the "financial asset valuation model" (MEDAF).

In the public consultation of 26 July 2023, CRE foresaw changing the method of calculating the WACC to take recent rate increases into account.

To determine the WACC applicable during the ATS3 tariff, CRE plans to retain:

- a rate determined according to the method used for the ATS2 and previous tariffs, based on the analysis of long-term observed parameters (for example: 10-year average of risk-free rates);
- a rate based on taking more recent economic data into account.

CRE specified in its public consultation that these rates could be applied respectively to old and new assets, or combined in a weighted rate.

Concerning determination of the level of the WACC, storage operators and their shareholders are generally in favour of adjusting the WACC method to take the recent increase in interest rates into account, while suppliers and consumer associations are against it, arguing that the stability of the method should prevail.

On the other hand, most respondents are against the introduction of a double rate and support a weighted rate.

Given the feedback on the public consultation, CRE decided, for the ATS3 tariff period, to change the method of calculating the weighted average cost of capital by weighting two rates, one based on an analysis of long-term parameters (as in ATS2) and the other taking more recent economic data into account.

This weighting is based on a normative distribution of the respective share of old assets and new assets in the ATS3 tariff period for a gas operator.

2.2.3.4 Terms of remuneration of assets under construction

In the public consultation of 26 July 2023, CRE indicated that it was not in favour of remuneration for AuC at the WACC, as requested by some operators, as this would reduce the strong incentive for operators to put assets into service as soon as possible.

For ATS3, CRE renews the principle of remuneration of assets under construction (AuC) at the cost of nominal debt before taxes as specified by ATS2, in line with the methodology generally used for interim interest.

The amount of these AuCs is equal to the average, for each year of application of the tariff, between their estimated level on 1 January and that on 31 December, taking into account capital expenditure and commissioning of assets done during the year.

2.2.4 Treatment of assets removed from inventory

2.2.4.1 Treatment of stranded costs

By "stranded costs", CRE means the residual book value of assets removed from inventory before the end of their economic life, as well as expenses relating to technical studies and preliminary work that could not be capitalised if the projects were not carried out.

Stranded costs are treated as follows, upon presentation of the files by the operators:

- recurring or foreseeable stranded costs are subject to a tariff trajectory on the basis of an annual envelope set in this deliberation;
- the costs of studies without follow-up for major projects that have been the subject of prior approval by CRE are covered by the tariff via the CRCP;
- the coverage of other stranded costs is examined by CRE on a case-by-case basis, on the basis of substantiated cases submitted by the storage operators.

The costs to be covered, if any, by the tariffs are taken into account up to their book value minus any sale proceeds.

2.2.4.2 Treatment of transferred assets

When an asset is sold by an operator, it leaves its assets, leaves the RAB and ceases, in fact, to generate capital charges (depreciation and remuneration). This sale may, if applicable, generate a capital gain for the operator, equal to the difference between the sale proceeds and the net book value.

In the tariff framework provided for in the ATS2 tariff, in the case of a transfer of real estate assets or land:

- if the disposal gives rise to an accounting gain, 80% of the net proceeds from the disposal of the net book value of the transferred asset are included in the CRCP so as to have network users benefit from most of the gains from the resale of these assets, insofar as these users have incurred the acquisition costs (the allowed revenue of the operators covering the annual depreciation and remuneration of the RAB assets), while preserving an incentive for the operator to maximise this gain. The latter retains the remaining 20% of the gain;
- a sale resulting in a book loss will be subject to examination by CRE, on the basis of detailed documentation submitted by the operator.

In its public consultation, CRE foresaw renewing the regulatory framework for real estate assets and land sold, as specified in ATS2, and applying it for the ATS3 period. Inclusion in the tariff of gains from disposal is, in fact, justified, considering that the tariff participated in financing the assets concerned. The majority of stakeholders are in favour of this renewal.

Consequently, CRE decides to renew this regulatory framework for real estate assets and land sold for the ATS3 period.

2.2.4.3 Treatment of decommissioning costs

In their tariff files, Storengy, Teréga and Géométhane request coverage of all provisions for decommissioning the assets they could constitute. This request is not accompanied by a provisional provision trajectory.

During ATS2, the provisions made by the operators were covered by the tariff in proportion to the duration of presence of the storage assets concerned in the regulation.

CRE recalls, first of all, that the removal of infrastructure from the list of sites necessary for security of supply does not require the dismantling of these sites. This decision remains the decision of the operator. In fact, if inclusion in the scope of the regulation requires, under Article L. 421-3-1 of the Energy Code, that the operator maintain the site in operation, there is, *conversely,* no obligation if the site is not within the scope of the PPE.

Furthermore, in accordance with this article, the decommissioning costs could not be covered once these sites were outside the regulated scope.

Thus, the framework specified by ATS2 makes it possible to cover the dismantling costs in the specific case of regulated storage.

Regulated storage sites were commissioned between 1956 and 1993. The regulation took place in 2018. Thus, the sites were mainly operated without regulation (on average 43 years of unregulated operation and 5 years of regulated operation).

To date, the operators' accounts do not include provisions for the dismantling of assets.

Coverage of all provisions would lead to coverage by the tariff that would not take into account the operating period outside the scope of the regulation, i.e. before 2018.

Consequently, for ATS3, CRE decides to maintain the framework provided by ATS2. Thus, in accordance with Article L. 421-3-1 of the Energy Code, the decommissioning costs could not be covered if these sites were outside the regulated scope. However, these sites will have contributed to security of supply during their presence in the regulation. Consequently, in the event that storage operators establish, during the ATS3 period, provisions for dismantling in their accounts, the ATS3 tariff will cover part of it, in *proportion* to the duration of presence of the assets concerned in the regulation. These provisions will be 100% covered by the CRCP.

The majority of stakeholders who have expressed themselves on this orientation, presented in CRE's public consultation of 26 July 2023, are in favour of it.

2.2.4.4 Case of assets converted to hydrogen

European objectives for reducing greenhouse gas emissions could eventually lead to the development of hydrogen storage sites. In this context, some storage infrastructures could be converted and reused for the transport of hydrogen.

The conversion of an asset from gas storage to hydrogen storage assumes the removal of this asset from the RAB of the operator that operates it, and its transfer to another operator (or another asset base if it is the same operator, regardless of whether 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 the users.

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

The ATS2 tariff did not provide a specific regulatory framework for assets that would be sold for conversion to hydrogen. While no cases of conversion during the ATS3 tariff period have been identified at this stage among the assets of the storage operators, it is, however, not possible to exclude that the situation could arise.

In the absence of a European framework in force and given the absence of conversion cases envisaged by the storage operators for the ATS3 tariff period, CRE considered, in its public consultation, handling the assets sold for conversion to hydrogen on a case-by-case basis, on the basis of substantiated files submitted by the storage operators. CRE will be careful to ensure that the transfer price is set in such a way as to avoid cross-subsidization between users of the gas and hydrogen storage, and that the sharing of any added value between storage operators and users is relevant. In the event that future hydrogen storage is regulated, CRE will also ensure that the future hydrogen users do not have to cover costs already covered by previous gas users.

The vast majority of respondents are in favour of the guidelines presented by CRE in its public consultation.

Some respondents mention, in particular, the need to avoid cross-subsidies.

Given the absence of a European framework, the absence of an asset transfer foreseen for the ATS3 tariff period and the lack of visibility, to date, of the economic models of the hydrogen sector, CRE decides, for the ATS3 tariff period, to handle the assets transferred for conversion to hydrogen on a case-by-case basis, on the basis of substantiated dossiers submitted by the storage operators.

2.2.5 Regulatory account (CRCP)

2.2.5.1 Calculation and settlement

The level of the ATS3 tariff is set by CRE based on assumptions about the estimated level of expenses and revenues of each operator. An a posteriori adjustment mechanism, the regulatory account, has been introduced in order to take into account all or part of the differences between the expenses and income actually recorded and the projected expenses and income, for predefined items. Thus, the CRCP protects operators from the variation of certain cost or revenue items by offsetting certain deficits, and also protects the consumer

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 the observed results.

For ATS3, the CRCP calculated on 31 December of each year N, is cleared, within the limit of an annual price change associated with this clearance of +/- 5%. For the ATS3 tariff, CRE maintains the threshold of +/- 5% retained for the ATS2 tariff.

In the event that this clearance limit is reached and does not permit full clearance of the CRCP balance in the tariff evolution of year N+1, the balance not cleared during year N+1 is carried over to year N+2. In addition, the CRCP balance observed at the end of the tariff period is taken into account when establishing the allowed revenue for the following period. Thus, the CRCP balance is reset to zero at the beginning of each tariff period.

2.2.5.2 Financial neutrality of the system

In order to ensure the financial neutrality of the system, the CRCP balance on 1 January of year N+1 is obtained by updating the CRCP balance on 31 December 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 a large projected CRCP balance at the end of the period, several operators have requested a change in this parameter. GRDF requested that the discount rate correspond to the nominal WACC before taxes or the nominal cost of the debt, as it considers that it must incur financing costs pending settlement of the CRCP. Teréga requested a discount rate of 3.30%, incorporating a risk-free rate and a “comfort premium”, which is a specific adjustment to the yield on government bonds.

CRE recalls that the refund of the CRCP balance is always guaranteed, regardless of its level. In addition, it is returned to the operator in a relatively short term. The level of long-term risk included in the level of the WACC or of the cost of debt is not relevant for updating the CRCP balance. Thus, CRE considers that the risk-free rate remains the relevant parameter for updating the CRCP balance.

Nevertheless, CRE foresaw, in its public consultation, retaining the risk-free rate applied to new assets to update the balance of the CRCP, in line with the new framework for the remuneration of assets (see section 2.2.3) and the pace of clearance of the CRCP. The new method of determining the WACC takes into account a risk-free rate based on historical parameters and a risk-free rate on short-term data that apply, respectively, to historical assets and new assets.

Some of the respondents to the public consultation, including suppliers and infrastructure operators, are in favour of the guideline of CRE for updating the CRCP at the short-term risk-free rate.

Some actors (mainly infrastructure operators) are in favour of remuneration of the CRCP at the WACC, in order to compensate for the financing costs pending clearance of the CRCP balance.

Other contributors ask to retain remuneration of the CRCP at the cost of the debt, in order to offset the cost of debt for the storage operators who can use this financial leverage pending clearance of the balance of the CRCP.

CRE maintains its analyses presented in the public consultation, and decides to update the CRCP balance at the risk-free rate based on short-term data applied to new assets during the ATS3 tariff period, i.e. a rate of 3.8%.

2.2.6 Constitution of gas stocks by operators

Underground natural gas storage operators may be required to build up natural gas stocks, notably in the following cases:

- constitution of gas stocks strictly necessary for operation and maintenance of performance of a storage site (so-called "performance gas");
- constitution of additional gas stocks following implementation of legislative and regulatory filling obligations as specified in Article L. 421-6 of the Energy Code.

For these transactions, the gains or losses generated by gas purchases and sales are calculated on the date of resale of the gas. The gas stored is remunerated at the same rate as that of assets under construction (cost of nominal debt, before tax). The level of this rate is specified in paragraph 3.4.1 of this deliberation.

The operations of constituting additional gas stocks following implementation of legislative and regulatory filling obligations as specified in Article L. 421-6 of the Energy Code are covered by the CRCP.

2.2.7 Collection of allowed revenue

The collection of allowed revenue of Storengy, Teréga and Géométhane is done for each calendar year:

- on one hand, through revenue collected directly by storage operators from their customers, mainly from commercialisation of underground natural gas storage capacities, the terms of which are set by CRE in the deliberation of 7 October 2022[16];
- on the other hand, in the event that the revenue collected directly by the operators is less than their allowed revenue, through compensation collected by transmission system operators (TSOs) from their customers and paid back to the storage operators. The terms of collection and repayment of this compensation are stated in CRE deliberation no. 2023 – 22 of 30 January 2024 (ATRT8).

2.3 Terms for annual evolution of the tariff

2.3.1 A tariff period of around four years

The ATS3 tariff will apply for a period of about four years. It aims to cover expenses for calendar years 2024 to 2027. It will evolve annually according to the procedures described in 2.3.3 of this deliberation.

In their responses to the consultation of 26 July 2023, market participants expressed their support for maintaining this duration of about 4 years, considering, like CRE, that it offers the market visibility on the evolution of infrastructure tariffs and that it gives operators the time necessary to undertake productivity efforts.

2.3.2 Rendez-vous clauses

Rendez-vous clause at mid-tariff period

The ATS3 tariff provides, as was the case for the previous tariff, a rendez-vous clause which may be activated by storage operators after two years.

Thus, the possible consequences of new legislative or regulatory provisions or a judicial or quasi-judicial decision may give rise to review of the tariff trajectory for the last two years of the tariff period (2026 and 2027), if the level of net operating expenses retained in the ATS3 tariff is changed by at least 1%.

Rendez-vous clause regarding the impact of the future regulation on the reduction of methane emissions in the energy sector

The ATS3 tariff also provides for a rendez-vous clause to take into account the additional charges that could result from the future regulation on the reduction of methane emissions in the energy sector. In view of the uncertainties that remain on the nature of the measures that will be imposed on the storage operators and the resulting costs, CRE decides not to set a cost trajectory *a priori* on this item. The majority of respondents to the public consultation expressed this view. Each storage operator may, once the methane emission reduction regulation has been published, request a review of its net operating cost trajectory to take into account the new costs directly resulting from this regulation. The storage operator will submit a duly substantiated file to CRE. If necessary, CRE may also provide incentive regulation schemes dedicated to these measures.

2.3.3 Annual change in allowed revenue

The annual allowed revenue changes each year from the initial annual allowed revenue trajectory as follows:

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

Where:

- RA_N is the allowed revenue for year N at the time of the annual change;
- RA_{IN} is the initial allowed revenue set by CRE for year N in its updated ATS3 inflation deliberation;
- j is the change in allowed revenue, expressed as a percentage, resulting from clearance of the balance of the regulatory account; j is between +5% and -5%.

The coefficient is set at 5% for the ATS3 tariff because the annual variability of storage operators' costs and revenues is higher than that of other regulated operators.

In addition, CRE may take into account, during the annual changes to the ATS3 tariff, changes, notably related to regulatory measures, encouraging commercialisation and quality of service.

2.3.3.1 Calculation of the CRCP balance on 1 January of year N

The overall balance of the CRCP is calculated before the final closure of the annual accounts. Thus, it is equal to the amount to be paid or deducted from the CRCP (i) for the past year, on the basis of the best estimate of annual expenses and revenues (known as the estimated CRCP), and (ii) for the previous year, by comparison

[16] Deliberation of CRE of 7 October 2022 on the decision on the terms for commercialization of natural gas storage capacities, applicable from October 2022

between the expenses and revenues realised and the estimate that had been done a year earlier (known as the final CRCP), to which is added the balance of the CRCP not cleared for previous years.

The projected balance of the CRCP as of 31 December 2023 is taken into account for development of the projected revenues of the ATS3 tariff and cleared over the 4 years of the tariff. It is, thus, reset to 0 on 1 January 2024.

The final deviations to be paid to the CRCP for the year 2023 will be taken into account at the time of the annual update of 1 April 2025. The reference amounts and coverage rates used to calculate this final balance are defined in CRE's deliberation no. 2020-011 of 23 January 2020, and in CRE deliberation no. 2023 46 of 31 January 2023.

The amount to be paid or deducted in the CRCP is calculated by CRE, on 31 December of each year, according to the deviation from the realised, for each item concerned, from the reference amounts defined in Appendix 2. All or part of the difference is paid to the CRCP, the share is determined according to the coverage rate provided for by this deliberation.

The expenses and revenues covered for all or part of the CRCP for the ATS3 period are stated in 2.4.2 of this deliberation.

2.3.3.2 Calculation of the coefficient, notably with a view to clearance of the CRCP balance

The evolution of the allowed revenue to be recovered takes into account a coefficient j which is notably intended to clear, by 31 December of year N, the balance of the CRCP on 31 December of year N-1. Coefficient j is capped at +/- 5%.

Coefficient j is determined in such a way that the income to be recovered makes it possible to equalize within the limit of the ceiling of coefficient j:

- the forecast allowed revenue updated for inflation (see appendix 2 of the deliberation);
- the CRCP balance.

2.4 Cost control incentive regulation

2.4.1 Regulatory incentive of operating charges

The ATS2 tariff provided that net operating expenses, with the exception of certain predefined items that were difficult for operators to control, were the subject of a 100% incentive.

In view of the positive assessment of previous tariff periods and the favourable assessment of stakeholders formulated as part of the public consultation of 26 July 2023, CRE is renewing this principle for the ATS3 tariff.

Thus, with the exception of the types of expenses and revenues covered in whole or in part by the CRCP, presented in 2.4.2 of this deliberation, any deviation from the trajectory set for the ATS3 period will remain the loss or gain of the operator.

2.4.2 CRCP coverage of certain expense and revenue items

The ATS3 tariff is calculated on the basis of assumptions about charges and revenue, which make it possible to define evolution trajectories for the various items. As indicated in 2.2.5.1 of this deliberation, an a posteriori adjustment mechanism, the CRCP, makes it possible to take into account the differences between the expenses and the income actually recorded, and the projected expenses and income of certain previously identified items. These are items that are unpredictable for operators and difficult to control.

CRE considers that the integration of an item in the CRCP must notably be addressed in light of the following two aspects:

- predictability: a predictable item is an item for which it is possible, for the operator and for CRE, to predict, with reasonable confidence, the level of costs incurred and revenue collected by the operator over a tariff period;
- control: a controllable item is an item for which the operator is able to control the level of expenses/revenue during a year, or has bargaining power or influence over its level, if it is derived from a third party.

These principles have been in effect for several tariff periods and are widely supported by the stakeholders who responded to the public consultation. Moreover, the tariff treatment cannot be reduced to a single alternative in terms of the coverage of the item, between 100% and 0% in the CRCP. Thus, for certain items that are poorly controllable and/or predictable, CRE considers that it is relevant to offer partial incentives to operators.

In its public consultation of 26 July 2023, CRE foresaw several changes compared to the ATS2 period concerning coverage of the expenses and revenue of storage operators by the CRCP:

Charges for energy benefits ("agent tariff"):

Employees of the Electricity and Gas Industries (IEG) branch and retirees who have worked for at least 15 years in this branch, including GRDF, GRTgaz and Storengy, benefit from a preferential tariff for gas and electricity (known as the "agent tariff"). Each company in the branch that employs employees with IEG status who are part of the IEG pays EDF and Engie, in return, an amount each year to cover the difference between the agent tariff and the cost that these two companies indicate they incur for the supply of energy to employees benefiting from the agent tariff.

Under ATS2, these expenses were fully incentivized, like the majority of operating expenses. Storengy requests that they now be 100% covered by the CRCP for the ATS3 tariff period, due to uncertainties affecting electricity and gas prices. GRDF requested that the differences due to price effects, i.e. the differences between the reference electricity and gas tariffs chosen by EDF and ENGIE and the electricity and gas tariffs set for the IEG agents, be covered by the CRCP.

The amount of the operators' repayments to EDF and Engie is set within the framework of a contract negotiated between the various companies concerned. At the time of the public consultation, CRE considered that it was justified to maintain a regulatory framework that encouraged determination of a relevant level. In the public consultation, CRE also foresaw maintaining an incentive relating to the volumes of energy consumed.

Some actors share CRE's analysis presented in its public consultation and argue that maintaining this incentive is justified from the perspective of the energy conservation policy. Nevertheless, a large number of actors evoke the unpredictable and uncontrollable nature of energy prices to justify coverage of ANE expenses in the CRCP. For example, GRDF requested that the differences due to price effects, i.e. the differences between the reference electricity and gas tariffs chosen by EDF and ENGIE and the electricity and gas tariffs set for employees benefiting from the agent tariff, be covered by the CRCP.

CRE decides to maintain the incentive on the "volume" part of the ANE charges, considering that it is partly controllable and predictable by Storengy in that the storage operator can, in particular, carry out actions to encourage the beneficiaries of the agent tariff to adapt their energy consumption and that the consumption conservation efforts also apply to beneficiaries of the agent tariff.

With regard to price effects, CRE decided to cover 100% of the CRCP for the effects related to changes in market prices and taxes on energy prices due to the lack of control and predictability of price developments. Thus, for the ATS3 tariff period, it retains a reference price for electricity and gas based on regular and objective publications:

- for electricity, CRE retains the regulated tariffs for the sale of electricity (excluding tariff shield effects);
- for gas, CRE retains the benchmark sale price for gas, adapted to the average consumption of the beneficiaries of the agent tariff.

The price difference between the forecast trajectory and these references, observed each year at the time of the annual evolution, will be covered by the CRCP at 100%.

On the other hand, differences resulting from a reference price for calculation of the ANE different from that used by CRE will not be covered in the CRCP. The calculation methods are described in the confidential appendix 3 of this deliberation.

Energy charges (motive energy and CO_2 quotas):

For the ATS3, Teréga requested that the annual update of the energy charge assumptions be taken into account directly in its allowed revenue for year N and not via the CRCP. CRE is not in favour of this, and wishes to maintain incentive regulation (price and volume) for this item.

In the coming months, CRE will continue the substantive work initiated with the storage operators for the implementation of such a system during ATS3. At this stage, CRE maintains the incentive framework as specified at the end of the ATS2[17].

Provisions for dismantling

Storage operators ask for coverage of all provisions for dismantling the assets they could constitute. Under ATS2, the provisions that could have been made by the operators were covered by the ATS tariff in proportion to the duration of presence of the storage assets concerned in the regulation.

[17] Deliberation of CRE of 31 January 2023 on the decision on evolution of the tariff for use of the underground natural gas storage infrastructures of Storengy, Teréga and Géométhane for 2023

Thus, the framework specified by ATS2 makes it possible to cover the dismantling costs in the specific case of regulated storage.

CRE considers that the *pro rata temporis* coverage is balanced and renews ATS2 framework for ATS3, as indicated in section 2.2.4.3.

Buying/selling operations of performance gas

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

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

Storengy's performance gas purchase and sales operations were subject to an incentive trajectory under the ATS2 tariff (without CRCP coverage). The majority of respondents to the public consultation are in favour of maintaining this framework.

Based on the responses to the public consultation, CRE decides to renew this mechanism for ATS3.

Capacity development in Etrez

CRE has approved a capacity development project at the Storengy site in Etrez. As specified in CRE deliberation no. 2023-210, completion of this project would lead to 4.2 M€ in operating expenses in 2025, which will be integrated into the CRCP.

Consequently, the items included in the scope of the CRCP for the ATS3 tariff are as follows.

Items covered in full by the CRCP:

The expenses fully covered by the CRCP are as follows:

- capital charges, taken into account at 100%, with the exception of those which are the subject of the incentive regulation mechanism for capital charges "excluding infrastructure";
- penalties paid to customers in the event of breach of contractual obligations, i.e. when the operator is unable to deliver the commercialised injection/withdrawal performance, 100% covered by the CRCP beyond an annual ceiling of 10 M€ for Storengy and 3 M€ for Teréga. Thus, operators are incentivized on this item up to this cost ceiling, beyond which the financial impact is neutralized, so as not to make them bear too significant a risk in the event of an exceptional situation (see section 2.6 of this deliberation);
- provisions for the dismantling of storage sites that could be set up by the storage operator during the tariff period, in proportion to the regulatory lifespan of the assets;
- operations of purchase - sale relative to the constitution of additional gas stocks following implementation of legislative and regulatory filling obligations as specified in Article L. 421-6 of the Energy Code;
- R&D operating expenses, with special treatment (see section 2.8): at the end of the tariff period, if the operator has spent less than the forecast trajectory, the difference is returned to users at 100% via the CRCP. If the operator has spent more than the forecast trajectory, the difference remains the responsibility of the latter;
- the difference between the forecast inflation taken into account by CRE for operating expenses and the inflation actually observed.
- charges associated with contracts with other regulated operators, notably transport network operators; This tariff treatment is generally neutral for users of regulated infrastructures;
- costs of studies not continued for major projects that have been the subject of prior approval by CRE or other stranded costs handled on a case-by-case basis, for which CRE approves coverage.
- if the capacity development project on the Storengy site in Etrez is approved, the operating expenses necessary for realisation of this project as specified in CRE deliberation no. 2023-210.

The revenue fully covered by the CRCP is as follows:

- revenues from the compensation tariff term paid by the TSOs and revenues from the commercialisation of storage capacities. The reference trajectory is updated annually;
- revenues associated with contracts with other regulated operators;

Items partially covered in the CRCP:

The following expense items are partly covered by the CRCP:

- energy costs (gas and electricity) and purchases and sales of CO_2 quotas. :
    - at 90% by the CRCP for the fraction of the difference between the realised and the reference forecast trajectory of energy charges less than or equal, in absolute value, to 50% of the forecast trajectory;
    - at 100% by the CRCP for the fraction of the difference between the realised and the reference forecast trajectory of energy charges, in absolute value, beyond 50% of the forecast trajectory;
    - the difference between the updated trajectory and the initial trajectory is covered at 100% in the CRCP.
- Consumables and effluent treatment charges specific to storage, taken into account for 80% in the CRCP. The reference trajectory is updated annually. The difference between the updated trajectory and the initial trajectory is covered at 100% in the CRCP;
- gains realised in the context of the sale of real estate assets or land, taken into account at 80% in the CRCP;
- deviations from the reference trajectory of the Teréga "TOTEX" experiment, calculated at the end of the ATS3 period, covered at 50% in the CRCP;
- differences of benefits charges for energy related to price deviations from the electricity and gas price reference retained by CRE are covered at 100 % in the CRCP (see confidential appendix). The rest of these differences in expenses are not covered by the CRCP.

In addition, the bonuses and penalties resulting from the various incentive regulation mechanisms described in the following parts (incentive regulation of investments in 2.4.3, incentive regulation on commercialization in 2.5, incentive regulation of quality of service in 2.6, and incentive regulation of R&D&I in 2.8 of the deliberation) are paid to the storage operators via the CRCP.

2.4.3 Incentive regulation of investments

2.4.3.1 Incentive to control costs for investments with a budget of more than 20 M€

The ATS2 tariff provided an incentive to control costs for projects with a budget of more than 20 M€: the latter are the subject of an audit to set a target budget, and a bonus or penalty is applied to the operator according to the difference between the target budget and the actual expenditure, with a neutrality band of +/- 5% around the target budget.

During the ATS2 tariff period, CRE audited 5 projects with a budget of more than 20 M€. On average, audits led to reported budget adjustments of - 3% for storage operators. These audits also make it possible to analyse the costing methods of operators.

CRE approved[18] two storage capacity development projects for which it set a maximum investment budget. For these projects, CRE plans to study the coverage of investment costs beyond these ceilings on a case-by-case basis. As an illustration, CRE could retain only 50% of the excess costs.

For the other projects, CRE foresaw maintaining, in its public consultation, the existing measures for the ATS3 tariff.

The majority of respondents are in favour of maintaining the target budget scheme following an audit for projects with a budget of more than 20 M€.

Consequently, for investment projects for which the decision to commit expenses would be taken starting from publication of this deliberation and whose estimated budget would be greater than or equal to 20 M€:

- CRE will audit the budget presented by the storage operator and set a target budget;
- whatever the investment expenditure made by the storage operator, the asset will enter the RAB at its real value when it is put into service (minus any subsidies);
- if the investment expenditure made by the storage operator for this project is between 95% and 105% of the target budget, no premium or penalty will be applied;
- if the investment expenses incurred are less than 95% of the target budget, the storage operator will benefit from a premium equal to 20% of the difference between 95% of the target budget and the investment expenses incurred;

[18] Deliberation of CRE of 26 July 2023 approving projects to increase the gas storage capacities of the Etrez and Lussagnet sites

- if the investment expenses incurred are greater than 105% of the target budget, the storage operator will incur a penalty equal to 20% of the difference between the investment expenses incurred and 105% of the target budget.

2.4.3.2 Incentive to control the costs of projects without a budget of less than 20 M€

The ATS2 tariff introduced an incentive mechanism based on selection by CRE, without predefined criteria, of a few projects or categories of projects whose budget is below the threshold of 20 M€, in order to audit them and apply an incentive regulation identical to that applicable to investment projects whose budget is greater than 20 M€.

The majority of respondents are in favour of renewal of the incentive mechanism, part of which emphasises the need for the target budgets to remain exceptional in view of the costs involved. A few respondents, half of them infrastructure operators, are against it, for this same reason of loss of efficiency of the mechanism on smaller projects.

In view of the responses to the public consultation, CRE decided to renew, for ATS3, the incentive mechanism for controlling the costs of projects with a budget of less than 20 M€ specified by ATS2.

2.4.3.3 Incentive to control costs for investments "excluding infrastructure"

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

In fact, these expense items are, by nature, likely to give rise to trade-offs between investments and operating expenses. Therefore, this mechanism encourages operators to globally optimise all of their expenses on these three cost items. It consists in defining, for the tariff period, the evolution trajectory of capital charges, which are excluded from the scope of the CRCP[19]. Therefore, 100 % of realised gains or losses are retained by the operator during the tariff period. At the end of the tariff period, the actual value of fixed assets is taken into account in the RAB, which allows, for the following tariff periods, sharing of the gains or additional costs with the users of the infrastructures.

In its public consultation of 26 July 2023, CRE considered renewing the incentive regulation mechanism for controlling investments "*excluding infrastructure*", considering that the feedback on the last tariff periods showed that this regulation mechanism effectively encouraged operators to control their costs.

In addition, CRE has introduced a specific experimental mechanism in the ATS2 tariff for charges relating to Teréga's IS. This mechanism incentivizes the operator on a common trajectory including operating expenses and commissioning, and provides that the assets enter the RAB on the basis of an amount set *ex ante* in the trajectory, and not on the basis of the expenses actually incurred at the end of the tariff period. CRE has set a sharing rate of 50% of the operator's gains or losses by integrating the deviations from the overall trajectory for up to 50% into the Teréga CRCP.

In its public consultation of 26 July 2023, CRE foresaw, for the ATS3 period, reconsidering the relevance of this specific framework applied to Teréga's IS investments in relation to the framework applied to other operators.

Most stakeholders consider that a single regulatory framework could be applied to the IS investments of all operators. Teréga is nevertheless opposed to removal of the specific mechanism on its IS investments by claiming that this regulatory framework is more suited to its activity while being more efficient from a regulatory point of view.

CRE considers that the elements shared by Teréga (keeping to project schedules, better efficiency) and the assessment carried out by CRE make it possible to continue the experimentation of this specific regulatory framework for an additional tariff period.

Teréga requests that the costs related to the industrial IS be excluded from the scope of incentive regulations "excluding infrastructures". CRE considers that this type of expenditure must remain incentivised in the same way as other IS expenditure, due to the possibility of trade-offs between investments and operating expenses.

Consequently, for the ATS3 tariff, CRE renews all the incentive regulation mechanisms for the control of investments "*outside infrastructure*" applied to the various operators (including the specific experimental mechanism on Teréga's IS charges).

During the ATS3 period, the capital charges for the so-called "*non-infrastructure*" assets incentivized will be calculated from the forecast values defined in section 3.4.3 of this deliberation. At the end of the tariff period, CRE will conduct an analysis of the commissioning trajectories of the investments concerned in order to ensure

[19] Framework applied solely to the scope of items relating to vehicles and real estate for Teréga.

that any gains made during the tariff period are not offset by higher charges for the following tariff periods due, for example, to delays in certain projects.

The estimated amount of investments "*excluding infrastructure*" subject to this incentive regulation for Storengy, Teréga and Géométhane are, respectively, 12.2 M€ and 0.04 M€ per year on average (vehicles and real estate only for Teréga) or, respectively, about 5.1 %, 5.2 % and 0.2 % of the total investments planned in the operator's trajectory for ATS3.

The commissioning trajectory for Teréga's IS is set in section 3.4.3 of this deliberation. These investments represent approximately 1.3% of the operator's investments over the ATS3 period.

2.5 Incentive regulation on commercialisation

CRE recalls that the primary objective of auctioning storage capacities is to maximise subscriptions to ensure security of the country's supply during the winter. In a second step, the objective of maximising the revenue from auctions is sought. In fact, if the commercialisation revenues do not cover the allowed revenue of the operators, the difference is collected via a specific component of the gas transmission tariff, ultimately paid by gas consumers.

It is, therefore, essential to strongly encourage storage operators to maximise, on one hand, the volume of capacity sold and, on the other hand, the revenue from these sales.

During ATS2, CRE set up a specific financial incentive scheme for this purpose. Thus, the ATS2 tariff specified a mechanism granting operators a bonus that was contingent on reaching a minimum subscription level. The threshold adopted was the level of the last decision relating to the minimum natural gas stocks necessary on 1 November to guarantee the security of natural gas supply during the period between 1 November and 31 March[20].

This bonus applied to all capacities sold at auction, including capacities sold in subsequent additional sales of short-term products. Calculation of the bonus took into account the revenues and the "premium" of each auction, i.e., the difference between the auction price and the seasonal value of the storage (which corresponds to the winter-summer spread minus the cost of storage). This "additional value" is notably linked to the possibility for users to modulate injections and withdrawals from one day to the next and, therefore, depends on performance of the storage facilities. It is also the result of the level of competition in auctions, which is favoured by the commercial actions of operators.

CRE considers that the incentive regulation for the commercialisation of storage capacities specified by ATS22 has been successful. All the capacities commercialised during this period were subscribed. The very deteriorated market conditions in 2022 nevertheless highlighted the limitations of the bonus calculation formula, which was adapted[21] in order to maintain sufficient incentive for the 2023-2024 capacity commercialisation campaign.

In fact, "extreme" market conditions can make the incentive ineffective or disproportionate:

- the auction premium is more related to the technical performance of the storage than to the commercial efforts of the operator. On average, the premium generated three quarters of the commercialisation bonus 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 reaching the subscription objective:
- Conversely, when capacities are subscribed at a null reserve price and the winter-summer spread is negative, the formula could result in high bonuses in the absence of auction revenues; this bonus would then increase the amount to be collected by the storage compensation.

Consequently, in its public consultation of 26 July 2023, CRE foresaw new developments of financial incentives. In particular, CRE foresaw:

- guaranteeing a minimum bonus to operators when sufficient capacity is subscribed to ensure security of supply, including in the event of a degraded market context;
- reducing the share of premium retained by operators (from 5% to 2%) in favour of the share of incentive proportional to revenues (from 0.5% to 2%), to better reward operators' efforts to commercialise the slowest products;

[20] Each year, the Minister of Energy sets, by decree, the minimum stocks of natural gas necessary on 1 November to guarantee the security of natural gas supply during the period between 1 November and 31 March.
[21] Deliberation Deliberation of the French Energy Regulatory Commission of 31 January 2023 on the decision on evolution of the tariff for use of the underground natural gas storage infrastructures of Storengy, Teréga and Géométhane for 2023

- introducing a cap for each auction of the premium share at a percentage of revenues to avoid excessive bonuses in the absence of auction revenues. In this case, the overall bonus cap would have been removed.

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

While no respondent to the public consultation is opposed to implementing a guaranteed minimum bonus if enough capacity is subscribed to ensure security of supply, the other developments were the subject of favourable feedback from respondents. Some stakeholders ask for a reduction in the share of the bonus depending on the auction premium. Others would prefer that the ATS2 incentive mechanisms be carried over into ATS23.

In view of the responses to the public consultation, CRE decided to develop the incentive regulation for commercialisation of storage capacities for ATS3 as follows:

1. a minimum bonus is introduced. If the payment conditions described below are met, the bonus will be *at least* 1 M€ for the capacities commercialised by Storengy and 0.3 M€ for the capacities commercialised by Teréga;
2. the share of premium retained by operators is reduced in favour of an increase in the incentive depending on revenues. The bonus for sales of N/N+1 capacities[22] commercialised as standard[23] and non-standard products will be calculated for each storage operator as follows:

$$Bonus = 2\,\% \times Recettes\ d'enchères + 2\,\% \times somme\ de\ premium\ d'enchères\ des\ produits\ standards$$

Where:

- Auction revenues: the revenues received by storage operators for the capacities of year N in the framework of their auction campaigns.
- Premium auction of standard products: positive or negative, it is calculated by multiplying the capacity sold during an auction by a price term, corresponding to the difference between the auction price and the winter-summer spread from which the cost of storage is subtracted (term "spread – costs"):
  - for capacity auctions for year N taking place before April N-1, consistent with the references for calculating the reserve price set in CRE's deliberation of 7 October 2022: the term "spread – costs" corresponds to the difference between the Winter bid $(N)_j$ price and the Summer ask price $(N)_j$[24] on the TTF, published by ICIS, reduced by 0.75/MWh;
  - for the auction of B gas storage capacities, consistent with the references for calculating the reserve price set in CRE's deliberation of 7 October 2022: the term "spread – costs" corresponds to the difference between the Winter settlement $(N)_j$ price and the Summer settlement $(N)_j$ price on the PEG published by Powernext, from which the bid-ask spread is subtracted, then reduced by 0.70 €/MWh;
  - for the capacity auctions of year N-N+1 taking place between 1 April N-1 and 31 March N, the term "spread – costs" corresponds to the difference between the *settlement* prices of winter *N* and summer *N* on the PEG, as published by Powernext, on the last trading day preceding the closing day of the auction (D-1 for D), reduced by 0.75€/MWh.

  If the sum of the bidding premiums of the standard products is negative, it is not taken into account in calculation of the bonus.

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

The bonus for an auction of N-N+1 capacities cannot exceed 100% of the revenues of this auction.

The payment of these bonuses is contingent on reaching a subscription level greater than or equal to the level set by the latest decree relating to minimum natural gas stocks to guarantee security of supply, in application of the provisions of Article L. 421-4 of the Energy Code. However, in the event

[22] Contracts for the use of storage capacity between 1 April N and 31 March N+1
[23] A so-called "standard" storage product corresponds to all the N/N+1 capacities commercialised at a given PITS with the same injection and extraction characteristics as presented in October N-1 by the operators.
[24] Average over the last 10 trading days

that the minimum level of subscription to the France network is not reached, a bonus is paid to operators whose capacities are fully subscribed.

3. The incentive on revenues from short-term sales remains as expected at the end of ATS2[25]. Operators retain 10% of these revenues.

The bonuses are integrated into the CRCP balance of year N.

2.6 Penalties in case of restriction of rights of customers of underground storage

When sold capacities are finally unavailable, in particular due to technical failures, the storage operator publishes restrictions on the injection or extraction rights of its customers. In this case, the storage access contract may provide for penalties for the operator to be paid to its customer as compensation.

For the ATS3 tariff, CRE maintains the manner of calculating these penalties in effect during ATS2. Thus, in the event of a restriction of the injection or extraction capacities subscribed by a customer giving rise to the payment of a penalty by the operator, this penalty will be calculated on the basis of the amount due by the customer over the duration of the restriction and the restriction rate:

- in the event of a restriction of extraction capacities during the gas winter period (November-March), the penalty will be equal to the amount due by the customer over the duration of the restriction, multiplied by the restriction rate;
- in the case of a restriction of injection or extraction capacities during the gas summer period (April-October), the penalty will be equal to half of the amount due by the customer over the duration of the restriction, multiplied by the restriction rate.

For example, in the case of a 20% restriction of extraction capacity during an entire gas winter month, the penalty will be 20% * 1 * 1/12 * total cost of capacity purchased by the customer.

2.7 Incentive regulation for service quality

2.7.1 Reminder of the ATS2 measures

The incentive regulation for service quality of operators aims to improve the service quality provided to users of infrastructures in areas considered to be particularly important for proper functioning of the gas market.

CRE has introduced a quality of service incentive regulation system for storage operators for the ATS2 tariff. CRE renews this system for the ATS3 tariff.

The results of the indicators are published on the operators' websites each month and the operators will prepare a qualitative analysis report of their annual performance which they will also publish on their website. These indicators are not financially incentivized on the effective date of the ATS2 tariff, but may become so at the time of an annual tariff update.

2.7.2 Indicators relating to the unavailability of storage capacities

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

- an indicator of compliance with the maintenance programs of the storage operators, calculated according to the variation (in percentage) of the capacity made available between the published forecast maintenance program and the maintenance program executed. Monitoring of this indicator is calculated annually and aggregated for each storage group;
- an indicator for monitoring the availability of information in case of an event that may lead to a restriction of the extraction and injection rights of storage facility users.

CRE notes that the results of the indicator of compliance with maintenance programs are satisfactory for storage operated by Storengy and Teréga.

Regarding the indicator for monitoring the availability of information in case of an event that could lead to a restriction of extraction and injection rights, only Storengy was forced to carry out such restrictions due to social demonstrations and a technical incident. These restrictions were all notified to shippers with an average of 2.1 days' notice.

CRE decides to maintain these indicators in the ATS3 tariff.

[25] Deliberation of CRE of 31 January 2023 on the decision on evolution of the tariff for use of the underground natural gas storage infrastructures of Storengy, Teréga and Géométhane for 2023

2.7.3 Environmental indicators

The ATS2 tariff included two indicators relative to the environment, not financially incentivized:

- monthly greenhouse gas emissions (GES) related to the volume of gas injected and/or extracted;
- methane leaks (including diffuse losses, venting and accidents/incidents) related to the volume of gas cycled.

The European regulation to reduce methane emissions in the European Union energy sector will be adopted shortly. In particular, this regulation will introduce a common framework on the measurement and reporting of methane emissions, the obligation to investigate and repair methane leaks on installations, as well as the prohibition of certain practices (venting, flaring).

The future regulation will impose obligations on gas infrastructure operators. The financial incentive for greenhouse gas emissions, currently only tracked, could then be studied.

The majority of respondents to the public consultation are in favour of incentive regulation of GES emissions, but believe, like CRE, that it is useful to wait for the adoption of a definitive text on methane emissions to define the incentive.

CRE decides to maintain the indicators relating to monthly greenhouse gas emissions and methane leaks in the ATS3 tariff. CRE will study the possibility of creating financial incentives for these indicators once the European regulation on the reduction of methane emissions is adopted.

2.8 R&D&I incentive regulation

In the context of a rapidly changing energy landscape, storage operators must have the necessary resources to conduct their research and development and innovation (R&D&I) projects, which are essential to provide an efficient and quality service to users and to upgrade their tools for operating their storage sites. Storage operators must, in return, use these resources efficiently and transparently.

In order to meet these two requirements, the incentive regulation of R&D and innovation (R&D&I) of ATS2 was based, for all operators, on:

- an asymmetrically incentivized R&D&I cost trajectory, which can be revised at mid-term: at the end of the tariff period, the amounts not spent over the period are returned to the consumers while the overruns of trajectories remain the responsibility of the operators;
- annual transmission to CRE of technical and financial information for all ongoing and completed projects and the publication of a biennial public report, in line with the mechanism currently in place. The reports will have to be harmonised between the operators, notably through standardised indicators, and enriched with concrete information concerning the benefits of the projects for the users of the storage facilities, as well as systematic feedback on the demonstrators financed by the tariff.

In its public consultation, CRE foresaw maintaining the incentive terms of ATS2. At this stage, CRE considers that these terms do not encourage operators to make trade-offs between savings on their R&D&I expenses and preparation for the future. Furthermore, the update of the mid-term trajectory review makes it possible to offer more flexibility to storage operators in adapting their R&D&I program.

For the public consultation, CRE also considered not renewing the *smart grid* counter.

The majority of respondents are in favour of maintaining the current incentive arrangements and not renewing the *smart grid* counter.

Given the feedback to the consultation, CRE maintains the guidelines presented in the public consultation and decides to renew the incentive regulatory framework for R&D&I of ATS2 to ATS3 and not to renew the *smart grid* counter for the ATS3 tariff period.

3. Level of charges to be covered

3.1 Tariff requests of operators and the main issues they associate with them

3.1.1 Storengy

In its tariff request, Storengy argues that the war started by Russia against Ukraine in early 2022 led to a paradigm shift that translates into high inflation and an increased need for security of supply.

Storengy indicates that the provisions of European Regulation (EU)[26] 2022/1032 and the "*Purchasing Power*" law[27] strengthen the role of storage facilities in guaranteeing security of gas supply. Moreover, it points out that the high volatility of energy markets in recent years makes it more difficult to commercialise the slowest storage sites (i.e. with the lowest ratio between extraction flow and useful volume).

In this context, Storengy indicates that its tariff request aims to address the following issues:

- strengthen security of supply and energy sovereignty: Storengy wants to improve the performance of its least efficient aquifer storage facilities and increase the capacity of saline storage facilities by connecting two additional caverns at the Etrez site. Storengy must also complete the conversion of the Gournay storage to H gas;
- strengthen risk prevention: Storengy wants to increase its spending on physical and IT security of storage sites;
- ensure sustainability of the storage activity: Storengy plans to strengthen its actions and R&D aimed at adapting storage to new gases and reducing its carbon footprint in order to respond to acceleration of the ecological transition.

Since the public consultation, Storengy has updated its net operating expenses trajectory (see section 3.3.1.1).

Taking into account the issues listed above leads Storengy to request a total of net operating expenses (updated) and capital expenses of 700 M€/year on average for the ATS3 period, an increase of 44% compared to the realised of the ATS2 period.

The allowed revenue[28] corresponding to the updated Storengy request would increase by 24% in 2024 compared to the updated level of allowed revenue for 2023.

3.1.2 Teréga

In its tariff file, Teréga considers that, beyond the well-identified issues such as the trend of decline in consumption, the energy transition and possible reduction in the scope of the PPE, new risks are added: increased pressure on storage in the context of the gas crisis, additional European and national obligations, notably in terms of filling storage.

Teréga nevertheless considers the ATS3 tariff as an opportunity to secure the storage activity for the benefit of security of supply, and to put in place the necessary conditions for a successful energy transition by promoting the decarbonisation 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 hydrogen, for example.

Since the public consultation, Teréga has updated its net operating expenses trajectory (see section 3.3.1.2).

Taking these issues into account has led Teréga to request total net operating expenses (updated) and capital expenses of 193 M€/year on average for the ATS3 period, an increase of 14% compared to the realised of the ATS2 period.

The allowed revenue[29] corresponding to the updated Teréga request would increase by 14% between 2024 and updated level of allowed revenue for 2023.

[26] Regulation (EU) 2022/1032 of the European Parliament and the Council of 29 June 2022 amending regulations (EU) 2017/1938 and (EC) no .715/2009 as regards gas storage
[27] LAW no. 2022-1158 of 16 August 2022 on emergency measures for the protection of purchasing power
[28] Allowed revenue includes CCNs, CNEs and clearance of the CRCP
[29] Allowed revenue includes CCNs, CNEs and clearance of the CRCP

3.1.3 Géométhane

Géométhane indicates that its tariff request aims to address the following issues:

- maintaining assets in compliance with legislative and regulatory obligations: operating expenses include the strengthening of maintenance in connection with ageing of the site and reduction of the environmental footprint;
- strengthening security of supply: Géométhane's investment programme includes an increase in saline storage capacity by connecting two additional caverns at its Manosque site;
- accelerating energy transition actions and controlling risks to the gas system in the medium to long term.

Taking into account the issues listed above leads Géométhane to request a total of net operating expenses and capital expenses of around 69 M€/year on average for the ATS3 period, or an increase of 82% compared to the realised of the ATS2 period.

The allowed revenue[30] requested by Géométhane would increase by 6% between 2024 and updated level of allowed revenue for 2023.

3.2 Responses to the public consultation

In part 4 of the public consultation, CRE presented the operators' tariff request, the results of the audits on net operating expenses and the remuneration rate, as well as CRE's preliminary adjustments concerning the level of storage operators' expenses to be covered for the ATS3 tariff period.

The majority of suppliers and some consumers express their concern about the level of charges to be covered by operators. Some stakeholders believe that any lasting increase in charges must be justified. They also question the discrepancy between the decrease in gas consumption and the increasing expenditure requests of the storage operators. The storage operators, their shareholders and the trade unions consider that the operators' requests are justified.

With regard to R&D expenses, the suppliers who expressed themselves share the position of CRE and consider that only expenses related to regulated activities should be covered by the tariff. Operators, their shareholders and their partners support the requests of the operators. Finally, some stakeholders want the tariff to cover at least part of the costs of converting the storage to other energy carriers.

3.3 Net operating expenses

To set the net operating expense trajectories of operators, CRE uses the following inflation assumptions (updated since the public consultation):

	2023	2024	2025	2026	2027
CPI excl. tobacco	4.8%	2.5%	2.0%	2.0%	1.8%

3.3.1 Request of operators

3.3.1.1 Storengy

The projected net operating expenses presented by Storengy for the ATS3 period are as follows:

In current M€	2022 Realised	2024	2025	2026	2027
Net operating expenses	161.0* (141,1)*	231.7	237.6	249.6	253.4

** the amount is restated from an exceptional revenue of 19.8 M€*

The request of Storengy implies a sharp increase in net operating expenses (including energy expenses) between 2022, retreated, and 2024, of 71 M€ (or +44%). Net operating expenses would then increase by approximately 3% per year on average over the period 2024-2027. Excluding energy, the increase between 2022 realised and the 2024 request is +43%.

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

[30] Allowed revenue includes CCNs, CNEs and clearance of the CRCP

- "staff costs" (+ 24 M€ or +34%): this increase is mainly explained by the increase in the number of full-time equivalents (FTEs) and the increase in salaries following the increase in inflation;
- "energy costs" (+14 M€ or +48%): Storengy increases the assumption of storage use and takes into account the increase in electricity and gas prices;
- "maintenance" (+11 M€ or +41%): this increase is notably associated with the strengthening of preventive maintenance;
- "R&D activities" (+6 M€ or +110%): Storengy plans to strengthen work on methane emissions, mixed gas acceptability and hydrogen;
- "operation" (+6 M€ or +39%): Storengy anticipates an increase in operating expenses.

Since the public consultation, Storengy has updated its request for net operating expenses, taking into account the new inflation assumptions, changes in energy prices and changes in the tax rules specified by the draft finance law for 2024.

The forecast net operating charges requested by Storengy, updated for these items, are as follows:

In current M€	2022 Realised	2024	2025	2026	2027
Net operating expenses	161.0* (141,1)*	232.4	237.8	249.4	251.1

** the amount is restated from an exceptional revenue of 19.8 M€*

3.3.1.2 Teréga

The projected net operating expenses presented by Teréga for the ATS3 period are as follows:

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

The request of Teréga implies a sharp increase in net operating expenses (including energy expenses) between the amount for 2022, realised, and 2024, of 11.2 M€ (or + 21%). Net operating expenses would then decrease by approximately 2% per year on average over the period 2024-2027. Excluding energy, the increase between 2022 realised and the 2024 request is 20%.

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

- "energy costs" (+3.5 M€ or +24%): this evolution comes from the increase in electricity and gas prices;
- "maintenance" (+2.9 M€ or +110%): Teréga anticipates an increase in maintenance work on compressors and wells;
- "staff costs" (+2.0 M€ or +9%): the increase is mainly associated with the addition of a dozen FTEs and salary increases;
- "technical studies" (+1.5 M€ or 121%): this increase is linked to the development of infrastructures for H_2 and CO_2.

Since the public consultation, Teréga has updated its request for net operating expenses, taking into account the new inflation assumptions, changes in energy prices and changes in the tax rules specified by the draft finance law for 2024.

The forecast net operating charges requested by Teréga, updated for these items, are as follows:

In current M€	2022 Realised	2024	2025	2026	2027
Net operating expenses	52.8	62.0	59.9	62.5	62.0

3.3.1.3 Géométhane

The forecast net operating expenses, presented by Géométhane for the ATS3 period, are as follows:

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

Géométhane's initial request assumes a sharp increase in net operating expenses (including energy expenses) between 2022, realised, and 2024, of +3.9 M€ (or + 22%). Net operating expenses would then increase by approximately 2.3% per year on average over the period 2024-2027. Excluding energy, the increase between 2022 realised and the 2024 request is 33%.

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

- "work and maintenance" (+1.7 M€ or +129%): the increase comes from exceptional work on wells in 2024 and the arrival of the new electric compressor as well as reduction of the environmental footprint (reduction of emissions);
- "member services" (+1.2 M€ or +16%): this change is associated with revaluation of the cost of contracts to ensure operation of the Manosque site;
- "real estate" (+0.8 M€ or +32%): this change is associated with revaluation of the cost of making facilities available;
- "studies and research": (+0.6 M€ or +84%): this increase comes from an increase in R&D expenditure;
- "taxes and duties" (+0.3 M€ or +10%): this increase comes from an increase in the property base of the site in connection with investments;
- "energy costs" (-1.0 M€ or -33%): declining energy costs.

3.3.2 Analytical approach retained

CRE has asked operators to present their tariff request in light of the latest realised figures by justifying any significant deviation from the 2022 realised and by breaking down each item to the first euro, in order to ensure that any additional needs cannot be covered by resources released by actions that are ending. CRE mandated the firm H3P-ORCOM to conduct an audit of the operating expenses of the natural gas storage infrastructures. The work took place between April and July 2023. The auditor's report, based on the operators' request updated in mid-June, was published for each of the operators at the same time as the public consultation document.

This audit allowed CRE to have a good understanding of the operators' operating expenses and revenues recorded during the ATS2 period and the projected operating expenses presented by the operators for the ATS3 tariff period. The results of this audit are intended to:

- provide expertise on the relevance and justification of the trajectory of operators' operating expenses for ATS3;
- assess the level of actual (2020-2022) and projected (2024-2027) expenses;
- make recommendations on the efficient level of operating expenses to be taken into account for the ATS3 tariff.

CRE also audited certain specific items, in particular R&D expenditure and energy charges.

The conclusions of the audit reports gave rise to exchanges with the operators during the month of July 2023. As such, the storage operators were able to express their observations on the results of the auditor's work.

Following the public consultation, exchanges continued between the storage operators and CRE on a number of items of net operating expenses. The level finally adopted by CRE is the result of these exchanges with the operators and of its analyses on the adjustments recommended by the auditor.

3.3.3 Summary of the results of the audit and additional CRE adjustments on certain items

3.3.3.1 Storengy

- **Results of the external audit**

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

For this cost scope, at the end of his work, the auditor recommended the following trajectory for Storengy over the ATS3 period:

In current M€	2024	2025	2026	2027
Trajectory requested by Storengy in its tariff file	178	183	186	193
Realised 2022 inflated	136	139	141	143
Trajectory of the auditor	144	148	148	152
Impact on Storengy demand	-34	-35	-38	-41

The main adjustments recommended by the auditor relate to personnel costs, the information system, maintenance, operation and site support. This adjustments are distributed as described hereafter.

Costs related to staff

Storengy wishes to achieve a net increase in its workforce trajectory of about forty FTEs out of a workforce of about 625 FTEs over the period 2020-2023. Storengy wants to deploy FTEs to improve storage performance, work on cybersecurity matters, the ecological transition and the reduction of methane emissions. The operator also plans to commit internal resources in connection with the management of certain projects that do not require the use of external engineering.

The auditor considers that the number of job creations requested by Storengy is overestimated. Of the forty positions requested by the operator, only about ten net FTEs are necessary in the auditor's analysis, for the following reasons:

- the operator's request, according to the auditor, does not take into account the possible reallocation of staff 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 H_2 storage);
- some FTEs are related to the future European regulation concerning the reduction of methane emissions in the energy sector.

The auditor takes into account redeployments of up to 3 FTEs per year, i.e. 0.5% of the workforce.

In addition, the auditor makes a correction of the estimated level of the national base salary (SNB) and other remuneration parameters to align them with historical practices.

With regard to the status charges, with regard to the agent tariff, the auditor took into account more up-to-date gas and electricity market price assumptions, as well as weaker evolution of the transmission and distribution part. In addition, the auditor retained a lower volume of electricity consumption by 10%, consistent with the energy conservation observed among the French, and a decrease in gas consumption of 10.5%, in accordance with the forecast data communicated.

Regarding other personnel expenses, the auditor retained the trajectory of the operator excluding mechanical adjustments.

Overall, the auditor retains a downward adjustment compared to Storengy's request of staff-related expenses of 15 M€ on average per year (i.e. a cumulative total over the ATS3 period of 61.2 M€).

CRE's analysis

CRE retains a recruitment trajectory that is slightly higher than that recommended by the auditor in order to take into account: the level of staff observed at the end of October 2023, the cybersecurity issues that Storengy will have to face during ATS3 and strengthening of maintenance teams.

CRE only partially retains corrections to the forecast level of the SNB and other remuneration parameters. CRE aligns them with historical practices observed, taking into account the effects of recent data on the SNB and other elements of remuneration.

With regard to the ANE, CRE updates the energy price assumptions and retains a projected consumption of electricity higher than that of the auditor. The consumption trajectory incorporates implementation by the

agents of conservation efforts, in the same way as the rest of French households, in order to encourage regulated operators to promote conservation within the IEGs.

Discussions with Storengy led to the correction of the auditor's staff expense calculation model.

Maintenance / Operation

Maintenance

Storengy developed this item by taking the estimate of 2023, adjusted for inflation, and adding a hypothesis of additional price increases in anticipation of the renegotiation of contracts. To this, Storengy adds specific corrective and preventive maintenance operations planned during the ATS3 period.

The auditor considers that the renegotiation of contracts with suppliers does not need to be included in the trajectory since inflation is already taken into account in the calculation.

In addition, the auditor has not received sufficient explanations to guarantee the absence of a specific transaction in 2023. As a result, the auditor developed an expense trajectory by indexing expenses incurred in 2022 to inflation.

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

This results in a downward adjustment of -9.5 M€ per year on average for transport (i.e. a cumulative amount of -38.1 M€ over the ATS3 period) on maintenance charges.

CRE's analysis

CRE shares the auditor's analysis on the lack of details on development of the trajectory excluding new expenses. It notes that it is, therefore, difficult to identify expenses that are reduced or exceptional expenses. The approach based on an inflated 2022 realised makes it possible to avoid taking into account only increased exceptional expenses.

In the absence of regular maintenance since 2012, the performance of wells has gradually deteriorated at all aquifer sites. To address this decline, Storengy foresees extensive well cleaning to reduce accumulated silt, resumption of regular maintenance, separator cleaning, installation of well utilization selectivity system to limit well flooding, and polymer injection into wells.

In order to limit the decline in the performance of Storengy's aquifer storage facilities, CRE adds part of these expenses to the auditor's trajectory in order to give Storengy the means to maintain the performance of aquifer storage facilities.

Information System

The "IT" item of Storengy is broken down into 3 sub-items, the Industrial IS which integrates projects concerning site management, the Commercial IS which includes customer interface, back-office and dispatching tools, as well as the cross-functional IS relating to finance, websites and the intranet.

According to the auditor, Storengy justified its trajectory by using the actual of 2022 and adding new elements, without providing details on the realised figures for 2020 and 2021.

The auditor considers that he cannot perform precise analyses for a single reference year. Therefore, the auditor retained the 2020-2022 average, adjusted for inflation, for the Industrial IS and Cross-functional IS items. Given the downward trend observed over 2020-2022 on the commercial IS item, the auditor defined the trajectory from 2022 onwards.

This approach leads him to retain an adjustment of -3.5 M€ on average per year of Storengy's request (i.e. a cumulative amount of -14 M€ over the ATS3 period).

CRE's analysis

CRE conducted analysis of IS expenses including operating expenses and capital expenses. CRE notes that the increase in operating expenses is offset by a decrease in capital expenses over the ATS3 period. The analysis confirms Storengy's justification for the evolution of its expenses, with replacement of in-house developments by purchases of licenses or online solutions.

CRE accepts the operator's request.

Support sites

Storengy developed its trajectory based on the trajectory of contract renewals made for green space maintenance and inventory management items. With regard to the regulatory item, Storengy took into account the 2022 realised, adjusted for inflation, to develop its trajectory.

The auditor retains an evolution of the contract relating to the maintenance of green spaces and security against inflation. With regard to the cleaning contract, which has not yet been signed, the auditor decided to apply an increase equivalent to the evolution of inflation communicated by CRE for ATS3, because he considers that during the negotiation, the operator should not accept an increase higher than inflation.

Not having obtained numerical details from Storengy, the auditor took the average of the realised 2020-2022, adjusted for inflation, to develop the trajectory of the maintenance and operating supports, with the exception of the additional costs resulting from the military programming law which were duly justified by the operator.

Finally, with regard to other expenses, the auditor relied on the 2022 realised, adjusted for inflation over the ATS3, concerning electronic document management, the cost of vehicles and travel. As for the other expenses, the auditor kept the trajectory of the operator, since the amounts of the ATS3 trajectory are lower than the 2022 realised.

This approach leads the auditor to retain an adjustment of -2.7 M€ on average per year (i.e. a cumulative amount of -11 M€ over the ATS3 period).

CRE's analysis

CRE shares the auditor's analysis. CRE retains the adjustments recommended by the auditor.

Operations

The item is broken down into three sub-items: expenses related to the operating support activity, expenses for consumables and effluent treatment and abandonment of wells and installations.

With regard to the expenses related to the operating support activity, Storengy relied mainly on the framework contract with Storengy SAS as well as on the indexed 2022 expenses for the other items. For consumables and effluent treatment charges, the operator retains the 2022 realised figure for the fixed part and on the basis of the average of the 2020-2021 ratios for the variable part. The well abandonment and installation sub-station is costed taking into account estimates from an engineering company.

The auditor does not make any adjustments to the trajectory of expenses related to the operating support activities. With regard to consumables, the auditor applied the 2020-2022 average taking into account the erratic evolution of the fixed part on the 2020-2022 realised. For the variable part, the auditor retains the average ratios observed over the 2020-2022 period. Finally, the auditor did not retain the well abandonment and installation expenses initially foreseen for ATS2 and carried forward to ATS3, as well as the amounts that could not be quantitatively justified by the operator.

This results in a downward adjustment of -2.5 M€ per year on average for transport (i.e. a cumulative amount of -10 M€ over the ATS3 period) on operating charges.

CRE's analysis

Storengy requests that expenses for demolition that were planned to be carried out in ATS2 be covered during the ATS3 period. Storengy points out that demolition costs greater than the costs specified by the ATS2 tariff trajectory did not make it possible to carry out this work. CRE observes that Storengy's operating expenses as a whole were below the ATS2 tariff trajectory. Consequently, CRE considers that Storengy had the means to carry out this work and that it is, therefore, not intended to be included in the expenses of the ATS3 tariff period.

Discussions with Storengy led to the auditor's calculation model being corrected. Thus, CRE adopts a slightly higher trajectory than that of the auditor.

Methane emissions

At this stage, CRE does not retain any new expenses associated with the reduction of methane emissions. As specified in paragraph 2.3.2, the storage operator may, once the methane emission reduction regulation has been published, request a review of its net operating cost trajectory to take into account the new costs directly related to this regulation.

- **Additional adjustments by CRE**

Energy charges

Over the 2024-2027 period, Storengy requests an increase in energy charges compared to the 2022 realised, with an increase of 50.5% between the 2024 forecast and the 2022 realised, then over the 2024-2027 period, an average increase of +8.3% per year.

Storengy justifies the increase in energy charges by a return to a high level of activity of storage facilities. Storengy thus retains an assumption of storage cycling of 95% of the useful volume (VU). The energy consumption of storage operators is strongly correlated with their cycling.

Request of Storengy	2022 realised	2024	2025	2026	2027	ATS3 (annual average)
Gas (M€)	6.6	9.1	10.5	12.1	11.8	**10.9**
Volumes (GWh)	*360.5*	*328*	*316*	*337*	*330*	***328***
Electricity (M€)	14.1	26.0	25.1	35.1	33.4	**29.9**
Volumes (GWh)	*170*	*189*	*198*	*206*	*208*	***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 charges (M€)	**27.7**	**41.7**	**42.2**	**54.7**	**52.9**	**47.9**

CRE's analysis

CRE retains several adjustments in relation to this request:

- Storage cycling: the assumption of filling the storage to 100% of the VU at the beginning of winter is reasonable. On the other hand, it does not seem relevant to retain a low level as observed only during a particular year (3% observed in 2018, a year marked by a low fill rate of storage at the beginning of winter and the end of a cold winter). CRE adopts an assumption of 85% storage cycling (corresponding to 100% storage filling and an average low level observed over the period 2012-2022);
- Price of electricity and gas: CRE updated the prices based on the levels observed in the markets during the first half of November. Furthermore, CRE does not accept Storengy's request regarding purchases of guarantees of origin for biomethane and green electricity, which are not mandatory;
- CO2 charges: CRE uses price assumptions as well as an adjustment of the evolution of the allocation of common free quotas for all operators.

These adjustments lead to a trajectory that is 11% lower than Storengy's request, an adjustment of 21.7 M€ over the ATS3 period.

CRE's trajetory	2022 realised	2024	2025	2026	2027	ATS3 (avg. annual)
Gas (M€)	6.6	8.5	10.6	11.6	11.0	10.4
Volumes (GWh)	*360.5*	293	283	302	295	293
Electricity (M€)	14.1	19.6	22.0	31.5	29.9	25.7
Volumes (GWh)	*170*	169	177	184	186	179
CO_2 (M€)	4.1	3.2	3.3	3.9	3.6	3.5
Other (taxes, depreciation…) (M€)	2.8	2.7	2.7	2.8	2.8	2.8
Total energy charges (M€)	**27.7**	**34.0**	**38.6**	**49.8**	**47.4**	**42.5**

Research and Development (R&D)

Regarding R&D, Storengy's expenses were higher than the trajectory set by CRE during the ATS2 period. Storengy explains this by higher expenses than those foreseen in the trajectory for the "Performance of storage surface facilities" and "Adaptation of storage to renewable gas".

For the ATS3 period, Storengy is requesting an R&D budget of 39.4 M€ (or 9.8 M€/year on average over the period), divided over five areas, to which are added specific actions related to R&D management and so-called "operational" R&D actions at storage sites:

- storage performance (10.8 M€);
- new mixed gases (9.9 M€);
- safety and environment (7.1 M€);
- Pure H_2 (6,0 M€);
- Operational R&D (5.1 M€);
- R&D management (0.4 M€).

CRE's analysis

CRE notes that, for most programmes, Storengy's planned expenditure for the ATS3 period is rising sharply: the budget requested by Storengy (39.4 M€) increases by more than 85% between ATS2 and ATS3.

In its analysis, CRE considered it important to select projects that are directly related to the core business of the storage operator and that contribute to strengthening the safety, sustainability and efficiency of storage facilities.

Therefore, CRE retains the following expenses:

- Storage performance (10.6 M€);
- New mixed gases (6.6 M€);
- Safety and environment (4.1 M€);
- Operational R&D (0.8 M€).

Consequently, CRE retains a budget of 22.1 M€ for the ATS3 period, with the possibility of revision at mid-period.

Conversion of assets

In the context of the energy transition, CRE considers that it is desirable for storage operators to have a budget to study the impact of a conversion of assets that can be reused for other gases (notably hydrogen). CRE retains expenditure for ATS3 over the period equivalent to 0.1% of the average level of the regulated asset base excluding cushion gas over the period, i.e. 2.8 M€ over the period.

Efficiency

At the end of the line-by-line analysis, Storengy's non-energy operating expenses trajectory would increase by 5.1% per year on average over the period 2022-2027, which represents 37 M€ more than the 2022 expenditure updated for inflation and adjusted for the effect of the change in forecast revenue from a contract with another regulated operator.

In a context of rising energy costs and decreasing gas consumption, CRE considers that operators must make their best efforts to control their costs.

As a result, CRE therefore retains an efficiency of 1%/year of controllable expenses excluding personnel charges from 2025, i.e. 6.3 M€ between 2025 and 2027.

- **Summary of CRE's analysis**

In summary, the following tables present the trajectory of net operating expenses, resulting from adjustments retained by CRE for the ATS3 tariff.

Storengy, in M€ current	2022 re-alised	2024	2025	2026	2027
Request of Storengy		232.4	237.8	249.4	251.1
Adjustment retained by CRE		-37.5	-34.7	-34.7	-36.2
Trajectory retained by CRE	161.0* (141.1)	**194.9**	**203.1**	**214.7**	**214.9**

** the amount is restated from an exceptional revenue of 19.8 M€*

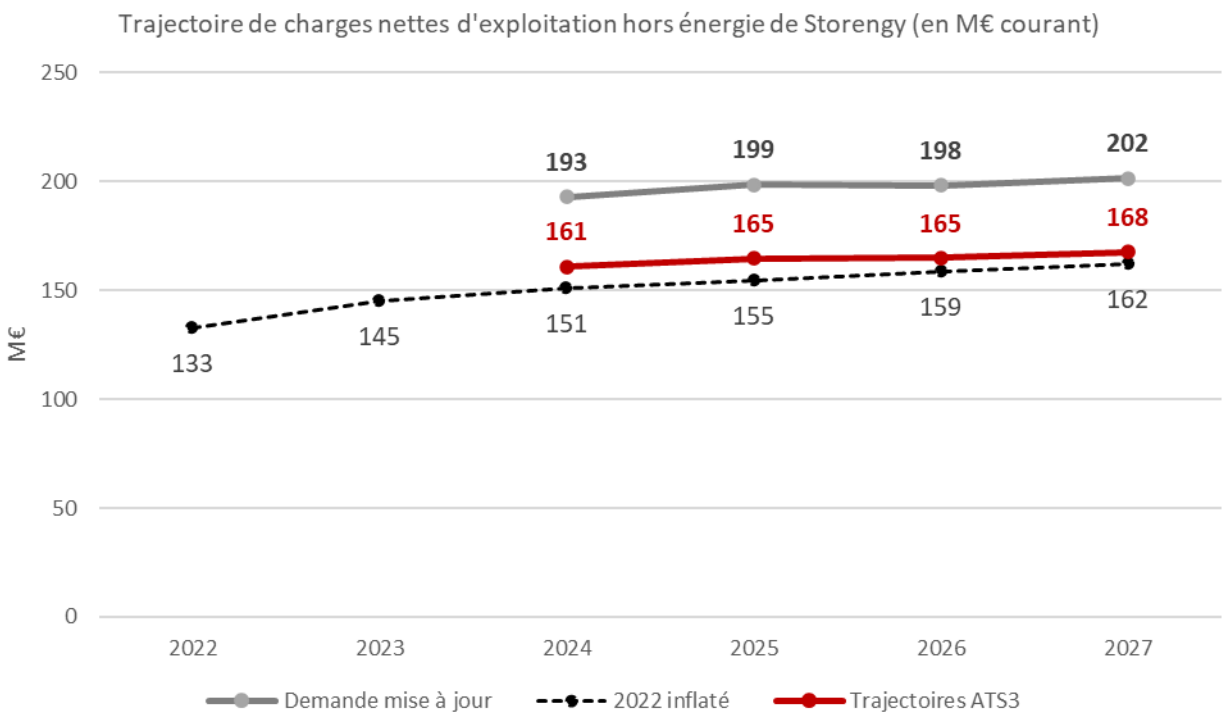
Storengy, in M€ current – excl. energy	2022 realised	2024	2025	2026	2027
Request of Storengy		192.8	198.6	198.4	201.5
Adjustment retained by CRE		-31.9	-34.1	-33.4	-33.9
Trajectory retained by CRE	**132.9**	**160.9**	**164.5**	**164.9**	**167.6**

The trajectory retained by CRE gives Storengy the means to:

- maintain a remuneration policy aligned with historical practices, taking into account the effects of recent data on the SNB and other elements of remuneration;
- strengthen its maintenance expenses to limit the decline in performance of its aquifer storage facilities (the trajectory is 4% higher than the 2022 realised, updated for inflation, and strengthening of maintenance teams);
- face the new cybersecurity challenges by retaining the expenses requested by the operator with, in particular, strengthening of the teams in charge of these subjects;
- continue its R&D work on the core business that contributes to strengthening the safety, sustainability and efficiency of storage facilities;
- have a budget to study the conversion of its storage to new gases (2.8 M€ over the period).

The ATS3 tariff also provides for a rendez-vous clause to integrate the charges related to implementation of the European regulation to reduce methane emissions.

Thus, the trajectory set by CRE forecasts a 21% increase in the net operating expenses of Storengy between 2022 and 2024 (+21% excluding energy). Net operating expenses then change by +3.3% per year on average over the period 2024-2027 (+1.4%/year excluding energy).



2022 inflated: the inflated level realised is corrected for the effect of changes in forecast expenses of a contract with another regulated operator.

3.3.3.2 Teréga

- **Results of the external audit**

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

For this cost scope, at the end of his work, the auditor recommended the following trajectory for GRTgaz over the ATS3 period:

In current M€	2024	2025	2026	2027
Trajectory requested by Teréga	43.7	43.9	44.6	45.5
Realised 2022 inflated	40.7	41.4	42.1	42.7
Trajectory of the auditor	37.2	37.5	38.0	38.5
Impact on Teréga demand	-6.5	-6.4	-6.6	-6.9

The main adjustments recommended by the auditor relate mainly to personnel costs, maintenance, and structural costs. This adjustments are distributed as described hereafter.

Overhead costs

In its tariff file, Teréga incorporated an inflation lag of one year, justifying that the inflation of year N mainly affects the expenses of year N+1. The auditor did not adopt this approach, which is not consistent with operation of the tariff that allocates resources in year N.

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

With regard to the endowment fund requested by Teréga, the auditor considers that this is a company choice that is not directly related to the missions of the regulated operator, therefore the auditor does not retain this expense.

This approach leads the auditor to retain an adjustment of -3.0 M€ on average per year (i.e. a cumulative amount of -12 M€ over the ATS3 period).

CRE's analysis

Teréga provided additional elements to justify its expenses for guard services. CRE accepts the operator's request.

CRE retains the communication expenses and the endowment fund in continuity with existing expenses.

Maintenance

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

Furthermore, Teréga requested the coverage of operating costs related to application of the European regulation concerning the reduction of methane emissions of the energy sector. The auditor adjusted the expenses in line with setting of the trajectory of charges as well as the regulatory framework for the gas operators concerned once the European regulation is adopted.

This approach leads to retaining an adjustment of -2.0 M€ on average per year (i.e. a cumulative amount of -8.1 M€ over the ATS3 period).

CRE's analysis

Teréga provided additional elements to justify certain maintenance expenses. These expenses relate to regulatory and compliance controls, curative maintenance and preventive maintenance of wells and compressors as well as waste management expenses.

Costs related to staff

With regard to social charges, the auditor retains the last known rates, which are lower than those retained by Teréga.

Over the ATS3 period, Teréga plans to add about ten FTEs (combined transport and storage) from 2024 due to new needs for the next tariff period (CO_2, H_2, methane emissions, cybersecurity, asset management, regional institutional relations).

The auditor considers that these additional needs have not been sufficiently justified, or that they are not directly related to the regulated missions of the operator. As a result, the auditor does not retain any additional FTEs.

As for maintenance, the auditor did not retain the expenses related to the regulation concerning methane emissions.

As a result, the auditor recommends a downward adjustment compared to Teréga's request of staff-related expenses of -0.9 M€ on average per year (i.e. a cumulative total over the ATS3 period of -3.5 M€).

CRE's analysis

CRE retains a recruitment trajectory higher than that recommended by the auditor in order to take into account the cybersecurity issues that Teréga will have to face during the ATS3 period, and to meet the needs of regional institutional relations.

CRE retains the salary evolution trajectory requested by Teréga.

CRE notes that Teréga's request includes participation that is significantly higher than in the past. CRE maintains a level aligned with historical practices.

Information system:

CRE conducted analysis of IS expenses including operating expenses and capital expenses. CRE notes that the change in total expenses is less than the 2022 realised, inflated for the overall scope of Teréga (transport and storage).

CRE retains a level of operating expenses comparable to the operator's request. In particular, CRE does not retain the effects of inflation lag (see structural costs).

Imposts and taxes:

CRE updates the calculation of taxes taking the latest expected rates into account.

Methane emissions

At this stage, CRE does not retain any new expenses associated with the reduction of methane emissions. As specified in paragraph 2.3.2, the storage operator may, once the methane emission reduction regulation has been published, request a review of its net operating cost trajectory to take into account the new costs directly related to this regulation.

- **Additional adjustments by CRE**

Energy charges

Over the 2024-2027 period, Teréga requests an increase in energy costs compared to 2022, with an increase of 24% between the 2024 forecast and 2022.

Teréga justifies the increase in energy charges compared to 2022 by the continued use of compressors at the Lussagnet site to ensure the supply schema withà South-North flows observed in 2023. Teréga retains storage[31] of 85% of the VU.

Request of Teréga	2022 realised	2024	2025	2026	2027	ATS3 (avg. annual)
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 charges (M€)	**14.3**	**17.8**	**15.2**	**15.4**	**14.5**	**15.7**

CRE's analysis

Volumes

CRE retains Teréga's projected consumption volumes.

Price

CRE updated the prices based on the levels observed in the markets during the first half of November.

In addition, Teréga requested an increase in the ceiling of the domestic tax on natural gas consumption (TICGN) and the coverage of its purchases of guarantees of origin for electricity.

CRE does not accept these requests because: 1) CRE retains the last known TICGN rate; 2) purchases of guarantees of origin are not mandatory.

These adjustments lead to a trajectory that is 11% lower than Teréga's request, or an adjustment of 7.1 M€ over the period.

[31] Difference between the low stock filling point (1 April) and the high stock filling point (1 November)

CRE's trajectory	2022 realised	2024	2025	2026	2027	ATS3 (avg. annual)
Gas (M€)	0.3	0.9	0.9	0.8	0.7	**0.8**
Volumes (GWh)	*17.8*	*21.6*	*20.3*	*20.3*	*19.0*	***20.3***
Electricity (M€)	13.9	13.3	11.9	14.0	13.1	**13.1**
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 charges (M€)	**14.3**	**14.2**	**12.9**	**14.9**	**13.8**	**13.9**

Research and Development (R&D)

Regarding R&D, Teréga's expenditure was 0.15 M€ lower than the trajectory set by CRE during the ATS2 period (2.5 M€). Teréga explains that this under-attainment is inherent in the uncertainties related to R&I projects.

For the ATS3 period, Teréga requests an R&D budget of +208% compared to ATS2 realised, i.e. 7.3 M€ (1.8 M€/year on average over the period), divided across five purposes and two projects, to which is added the steering budget;

- Purposes:
  - Integrity, performance and operational security (1.3 M€);
  - Hydrogen (1.0 M€);
  - CCUS, Capture, Storage, Transport and Recovery of CO_2 (0.6 M€);
  - Reduction of the environmental footprint (0.2 M€);
  - New mixed gases (0.2 M€);
- Projects:
  - Feasibility studies for the Hysow project, consisting of developing H2 transport and H2 storage infrastructures in saline caverns (1.2 M€);
  - Studies of the Pycasso project on the development of CO2 storage infrastructure (2.0 M€).

The budget dedicated to R&D management is 0.6 M€.

CRE's Analysis

In its analysis, CRE considered that it is important to select projects that are directly related to the core business of the storage operator and that contribute to strengthening the safety, sustainability and efficiency of storage facilities.

It therefore retains an R&D expense trajectory of 3.7 M€ over the ATS3 period, or 0.9 M€/year on average.

Conversion of assets

In the context of the energy transition, CRE considers that it is desirable for storage operators to have a budget to study the impact of a conversion of assets that can be reused for other gases (notably hydrogen), for assets for which this is likely. CRE retains expenditure for ATS3 over the period equivalent to 0.1% of the average level of the regulated asset base excluding cushion gas over the period, i.e. 0.5 M€ over the period.

Efficiency

At the end of the line-by-line analysis, CRE notes that operating expenses excluding energy are close to the level of expenses incurred in 2022, inflated (-1.3 M€ over the ATS3 period).

CRE does not retain any additional efficiency for Teréga.

- **Summary of CRE's analysis**

The following tables present the trajectory of net operating expenses adopted by CRE for the ATS3 tariff:

Teréga, in M€ current	2022 realised	2024	2025	2026	2027
Request of Teréga		62.0	59.9	62.5	62.0
Adjustments retained by CRE		-5.1	-4.2	-4.4	-4.6
Trajectory retained by CRE	**52.8**	**56.9**	**55.7**	**58.1**	**57.4**

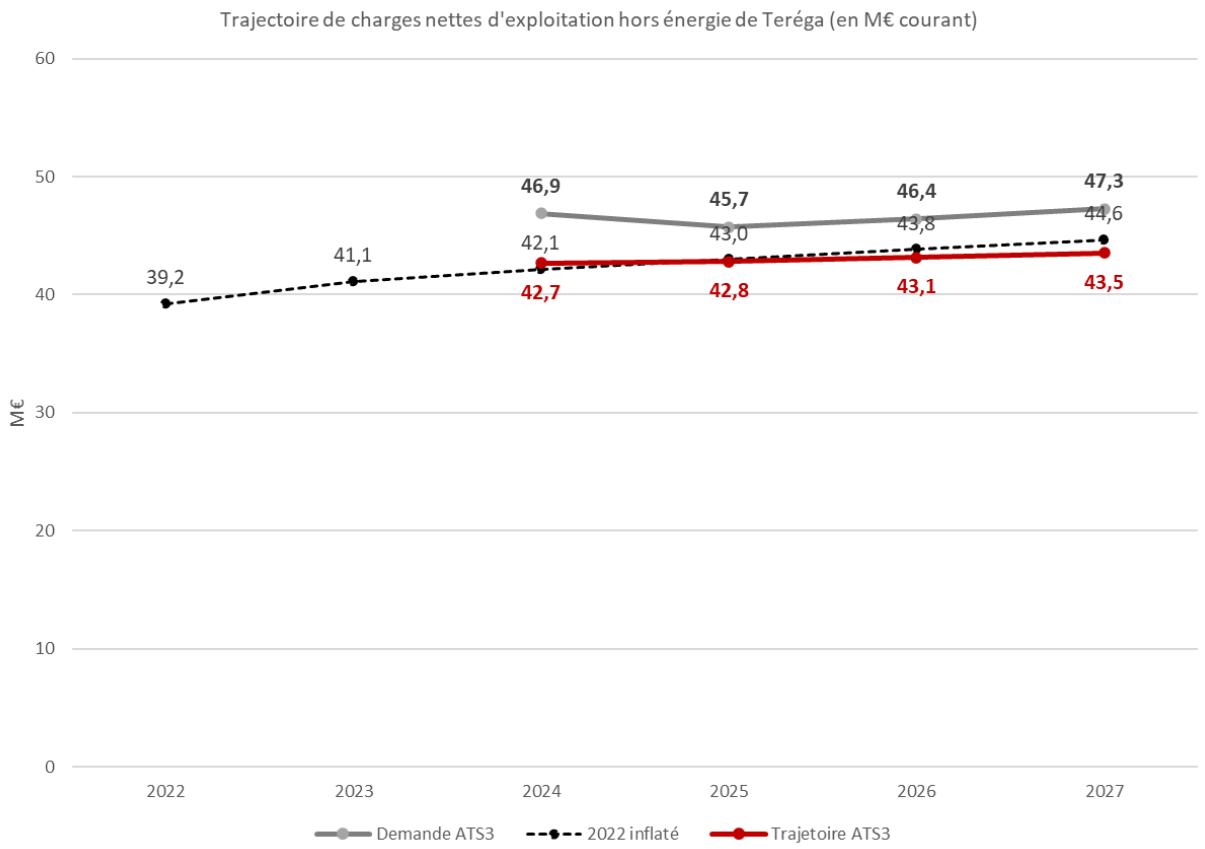
Teréga, in M€ current – excl. energy	2022 realised	2024	2025	2026	2027
Request of Teréga		46.9	45.7	46.4	47.3
Adjustments retained by CRE		-4.2	-2.9	-3.3	-3.7
Trajectory retained by CRE	**39.2**	**42.7**	**42.8**	**43.1**	**43.5**

The trajectory chosen by CRE will allow Teréga to:

- maintain a remuneration policy aligned with historical practices observed and taking into account the effects of recent data;
- have the necessary staff to fulfil its missions, including with regard to cybersecurity, institutional affairs and biomethane integration;
- implement its maintenance program and, thus, operate its assets under optimal safety conditions and taking into account the evolution of the use of its storage (the trajectory is 11% higher than the 2022 realised, updated for inflation);
- face the new cybersecurity challenges by retaining the bulk of the expenses requested by the operator with regard to information systems;
- continue its R&D work on the core business that contributes to strengthening the safety, sustainability and efficiency of storage facilities;
- have a budget to study the conversion of its storage to new gases (0.5 M€ over the period).

The ATS3 tariff also provides for a rendez-vous clause to integrate the charges related to implementation of the European regulation to reduce methane emissions.

Thus, the trajectory set by CRE forecasts a 7.8% increase in the net operating expenses of Teréga between 2022 and 2024 (+ 8.9% excluding energy). Net operating expenses then change by +0.3% per year on average over the period 2024-2027 (+0.7% / year excluding energy).



3.3.3.3 Géométhane

- **Results of the external audit**

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

For this cost scope, at the end of his work, the auditor recommended the following trajectory for Géométhane over the ATS3 period:

In current M€	2024	2025	2026	2027
Trajectory requested by Géométhane	18.8	18.9	19.2	20.0
Realised 2022 inflated	15.5	15.8	16.0	16.3
Trajectory of the auditor	17.6	17.5	17.7	17.8
Impact on Géométhane demand	1.2	1.4	1.5	2.2

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

The main adjustments recommended by the auditor relate to costs for external consumption, taxes and member services. These adjustments are distributed as described hereafter.

External consumption

Géométhane developed its trajectory for the “Work & Maintenance” item starting from the average of the realised figures for 2020-2022, to which the operator added specific operations.

The auditor believes that he did not have enough details to reconstruct the trajectory and identify the specific operations that took place in 2022. Thus, the auditor developed his trajectory on the basis of the past average for 2020-2022, inflated by the indices communicated by CRE, to which he added the specific operation of maintenance of the new compressor post commissioned (2025) and the asbestos removal work.

The other specific operations presented by the operator were not retained by the auditor because the explanations and justifications provided by the operator did not allow him to reconstruct or justify the trajectory.

With regard to the Real Estate and Géosel item, Géométhane adopted an indexation of the various contracts on the average evolution of the last five years. Evolution of the indices over the last five years is marked by a significant increase linked to the recent inflationary crisis. The auditor proposes to retain indexation based on the average of the last ten years in order to limit the impact of the inflationary crisis over time,

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

CRE's Analysis Géométhane provided additional elements to justify the additional expenses on the wells, dehydration and clearing obligations. CRE retains the operator's request for these expenses.

CRE maintains the auditor's adjustment on the indexation of contracts. The trajectory has been updated taking into account the latest known indices.

Imposts and taxes

The operator considers that the tax rates will change with inflation over the ATS3 period, particularly for property tax. He also retains an evolution of the tax bases corresponding to the last known rates.

The auditor recommends retaining stable tax rates over the ATS3 period. He considers that these rates do not depend on inflation and can, therefore, go up as well as down. Regarding evolution of the tax bases, the auditor retains an average of the last five years of the known rates because he considers that the 2022 and 2023 rates are exceptional given the economic context and that, over the ATS3 period, the rates will return to a level more in line with the levels observed previously.

This approach leads to retaining an adjustment of -0.5 M€ on average per year (i.e. a cumulative amount of -2 M€ over the ATS3 period).

CRE's Analysis

Following discussions with Géométhane, CRE adopted an evolution of the taxable bases to inflation. The trajectory adopted by CRE incorporates the latest known rates.

Member services

To ensure operation of the Manosque site, Géométhane uses various service contracts (operating contracts, new post-installation operating contract, operating assistance contract, commercialisation contract and administrative management contract). The amount of these contracts changes according to indices. To develop its trajectory, Géométhane took into account a change in the indices equal to the average change observed over the last five years known.

Evolution of the indices over the last five years is marked by a significant increase linked to the recent inflationary crisis. The auditor recommends indexing to the average of the last 10 years in order to limit the impact of the inflationary crisis over time,

This approach leads to retaining an adjustment of -0.2 M€ on average per year (i.e. a cumulative amount of -0.8 M€ over the ATS3 period).

CRE's Analysis

CRE maintains the auditor's adjustment on the indexation of contracts. The trajectory has been updated taking into account the latest known indices.

- **Additional adjustments by CRE**

Energy charges

Over the 2024-2027 period, Géométhane requests a lower trajectory of energy charges compared to the 2022 realised, with a decrease of -35.7% between the 2024 forecast and the 2022 realised, then over the 2024-2027 period, an average increase of +11.7% per year.

Géométhane justifies these energy charges by a return to a high level of activity of storage facilities. Géométhane thus retains an assumption of storage cycling[32] of 95% of the VU.

In addition, the commissioning, scheduled for the end of 2024, of a new electric compressor leads to a decrease in gas consumption in favour of electricity consumption.

[32] Difference between the low stock filling point (1 April) and the high stock filling point (1 November)

Request of Géométhane	2022 realised	2024	2025	2026	2027	ATS3 (avg. annual)
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,…) (M€)	0,13	0.13	0.1	0.06	0.02	**0.08**
Total energy charges (M€)	**2.8**	**1.79**	**2.08**	**2.49**	**2.49**	**2.2**

CRE's Analysis

Volume

The assumption of filling the storage to 100% of the VU at the beginning of winter is reasonable. On the other hand, it does not seem relevant to retain a low level as observed only during a particular year (3% observed in 2018, a year marked by a low fill rate of storage at the beginning of winter and the end of a cold winter). CRE retains cycling of 85% (corresponding to 100% storage filling and an average low level observed over the period 2012-2022).

Price

CRE updated the prices based on the levels observed in the markets during the first half of November.

These adjustments lead to a trajectory that is 18% lower than Géométhane's request, an adjustment of 1.9 M€ over the period.

Adjusted trajectory	2022 realised	2024	2025	2026	2027	ATS3 (avg. annual)
Gas (M€)	2.5	1.4	0.7	0.3	0.1	**0.6**
Volumes (GWh)	*22.8*	25.2	13.5	8.4	3.0	**12.5**
Electricity (M€)	0.16	0.2	0.8	1.5	1.8	**1.1**
Volumes (GWh)	*1.69*	1.5	4.8	6.6	8.4	**5.3**
CO_2 (M€)	-	-	-	-	-	**-**
Other (taxes,…) (M€)	0,13	0.12	0.06	0.04	0.02	**0.06**
Total energy charges (M€)	**2.8**	**1.7**	**1.5**	**1.9**	**1.9**	**1.8**

Research and Development (R&D)

Regarding R&D, Géométhane's spending between 2020 and 2022 was below the trajectory of ATS2 (3.1 M€). Géométhane explains that the part of its R&D programme concerning adaptation to renewable gases started more slowly than expected at the beginning of the ATS2 period.

For the new Géométhane tariff period, an R&D budget of 4.9 M€ (i.e. 1.2 M€/year on average over the period) is foreseen, which is divided into three areas:

- underground & surface installation (0.6 M€);
- adaptation to renewable gases: studies within the framework of the Hygreen/GéoH2 projects (3.3 M€);
- adaptation to renewable gases – studies of a cavern cycling demonstrator with hydrogen (1.0 M€).

The last two projects aim to prepare the conversion of Géométhane facilities for hydrogen storage.

CRE's Analysis

In its analysis, CRE considers that it is important to select projects that are directly related to the core business of the storage operator and that contribute to strengthening the safety, sustainability and efficiency of storage facilities.

CRE is in favour of Géométhane continuing to study the operation of the Manosque site in terms of caverns and surface installations. Therefore, it retains the underground & surface installation subjects (0.6 M€) in their entirety.

CRE does not retain the expenses related to the demonstration of cycling the cavern with hydrogen. Regarding the studies relating to the Hygreen/GeoH2 projects, CRE only retains the expenses of 2024.

CRE therefore adopted a trajectory of 1.3 M€ over the period.

Conversion of assets

In the context of the energy transition, CRE considers that it is desirable for storage operators to have a budget to study the impact of a conversion of assets that can be reused for other gases (notably hydrogen). For the next tariff period, CRE retains 0.1% of the average level of the regulated asset base excluding cushion gas over the period, i.e. 0.3 M€ over the period.

Efficiency

At the end of the line-by-line analysis, Géométhane's non-energy operating expenses trajectory would increase by 3.9% per year on average over the period 2022-2027, which represents 6.5 M€ more than the 2022 expenditure updated for inflation. This evolution is notably explained by an increase in maintenance expenses associated with commissioning compressors and evolution of the costs of service contracts.

In addition, the organisation of Géométhane with a single asset limits the levers for reducing operating expenses.

As a result, CRE does not retain an efficiency objective for Géométhane.

- **Summary of CRE's analysis**

The following tables present the trajectory of net operating expenses adopted by CRE for the ATS3 tariff:

Géométhane, in M€ current	2022 realised	2024	2025	2026	2027
Request of Géométhane		22.0	22.4	22.8	23.5
Adjustments retained by CRE		-0.9	-2.9	-2.8	-3.1
Trajectory retained by CRE	**18.1**	**21.1**	**19.5**	**20.0**	**20.4**

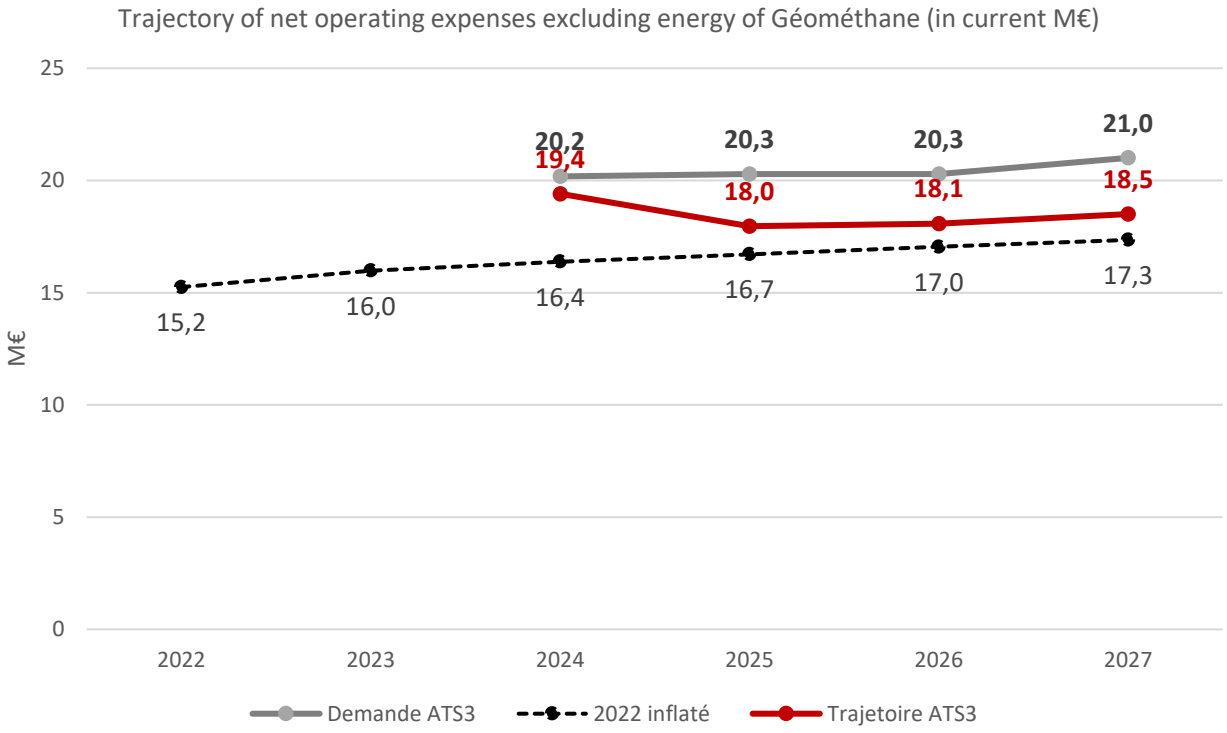
Géométhane, in M€ current – excl. energy	2022 realised	2024	2025	2026	2027
Request of Géométhane		20.2	20.3	20.3	21.0
Adjustments retained by CRE		-0.8	-2.3	-2.2	-2.5
Trajectory retained by CRE	**15.2**	**19.4**	**18.0**	**18.1**	**18.5**

The trajectory chosen by CRE will allow Géométhane to:

- implement its maintenance program (in particular with commissioning of the new compressor) and, thus, operate its assets under optimal safety conditions;
- continue its R&D work on the core business of the storage operator and that contributes to strengthening the safety, sustainability and efficiency of storage facilities;
- have a budget to study the conversion of its storage to new gases (0.3 M€ over the period).

The ATS3 tariff also provides for a rendez-vous clause to integrate the charges related to implementation of the European regulation to reduce methane emissions.

Thus, the trajectory set by CRE forecasts an increase of + 16.6% in the net operating expenses of Géométhane between 2022 and 2024 (+ 27.2% excluding energy). Net operating expenses then change by - 1.1% per year on average over the period 2024-2027 (-1.6%/year excluding energy).



3.4 Calculation of normative capital charges

3.4.1 Average weighted cost of capital

3.4.1.1 Request of operators

The requests of Storengy and Géométhane were established using a WACC for gas transport of 4.65% (real, before tax), plus a specific premium of 100 basis points for the specific risks of the gas storage activity, i.e. an overall rate of 5.65% (real, before tax). This premium is developed on a 50 bps basis as specified in ATS2, incremented by 50 bps to cover the new risks that have appeared since ATS2 (in particular relating to regulatory obligations affecting, on one hand, operational activity and, on the other hand, economic activity). This request is based on the conclusions of a study commissioned by the gas operators from an external auditor.

In its tariff file, Storengy a,d Géométhane also use the rate of 3.8% (nominal, before taxes) for the remuneration of AuCs. This rate is developed with a rate of remuneration for AuCs of transport infrastructure operators at 2.8%, increased by the risk premium of 100 basis points.

Teréga's request was established using a WACC for the transport of natural gas of 4.7% (real, before tax), plus a specific premium of 110 basis points for the specific risks of the gas storage activity, i.e. an overall rate of 5.8% (real, before tax). This request is based on the conclusions of a study commissioned by the operator from an external auditor. In its tariff file, Teréga also uses a rate of 4.0% (nominal, before taxes) for the remuneration of AuCs. This rate is developed with a rate of remuneration for AuCs of transport infrastructure operators at 2.9%, increased by the risk premium of 110 basis points.

3.4.1.2 Summary of the results of the external audit of CRE

In the context of work to prepare the ATS3 tariff, CRE re-examined the assumptions and parameters used to calculate the operators' remuneration rate. For this purpose, it asked Compass Lexecon to perform an audit and analysis of the remuneration requests of the two TSOs, the storage operators and GRDF on the basis of the conclusions of their advisers. The auditor's report was published at the same time as the public consultation of 26 July 2023 on CRE's website.

After auditing the operators' request, the auditor recommended several ranges of WACCs depending on the assets to which they apply. For historical assets, the auditor recommends a range of WACC, nominal before tax, of between 3.72% and 4.14%, i.e. a before-tax range of real WACC between 2.51% and 2.93%. For new assets, the auditor recommends a nominal before-tax range of WACC of between 5.69% and 6.21%, i.e. a before-tax range of real WACC between 2.74% and 4.23%.

For the specific storage premium, the auditor recommends maintaining a level of 50 basis points compared to the WACC of the ATRT8 tariff of GRTgaz and Teréga, i.e. a level identical to that set by CRE for the ATS2 period.

3.4.1.3 CRE's Analysis

CRE's method of determining the weighted average cost of capital is based on a WACC with a normative structure to ensure an appropriate return on capital invested. Until now, it was based on the average of the rates observed over the last ten years, reflecting the long lifespan of gas network infrastructures. This method, which has changed very little over three tariff periods, has made it possible to maintain the attractiveness of the energy infrastructure in France, while taking into account the downward trend in rates observed over the past 10 years.

After this long period of decline, interest rates have been rising rapidly for about a year. Faced with this new situation, CRE is changing the method of calculating the WACC to better account for the dynamics of short-term interest rates.

In the July 2023 public consultation, CRE indicated that it foresaw a WACC in a range of between 2.9% and 4.2% (real before tax), based on weighting of a long-term rate according to the method used for the ATRT7, and a short-term rate based on the analysis of shorter-term parameters and retaining a weighting of 80/20, respectively, between the two terms. This range was down compared to the WACC of the ATRT7 tariff (4.25%). In nominal rate before taxes, the range was 4.4% - 5.5%.

In this context and taking into account the feedback from the public consultation, CRE decides, for the ATRT8 tariff period, to change the method of calculating the weighted average cost of capital by weighting two rates:

- a rate determined according to the method used for ATRT7 and previous tariffs, based on the analysis of long-term parameters, which shows a real rate of 3.7% before taxes (i.e. 4.9% nominal before taxes, before restatement of the average inflation of 1.2% observed over the last ten years);
- a rate based on taking into account more recent economic data which shows a real rate of 5.5% before taxes (i.e. 7.6% nominal before taxes, before restatement of the average forecast inflation of 2.0% over the ATRT8 tariff period).

The weighting chosen by CRE is based on a normative distribution of the respective share of new and old assets, evaluated during the ATS3 tariff period for a gas operator, and is set for the tariff period in question at 80% for the rate based on long-term data, and 20% for the rate based on more recent data.

As a reminder, the WACC is calculated by applying the following formulas:

$$\text{Nominal WACC before corp. tax} = [(\text{TSR} + \text{debt spread}) \times (1 - \text{financial expense deductibility} \times \text{corp. tax}) / (1 - \text{corp. tax})] \times g + (\text{TSR} + \beta \times \text{PRM}) / (1 - \text{corp. tax}) \times (1 - g)$$

$$\text{Real WACC before corp. tax} = (1 + \text{nominal WACC before corp. tax}) / (1 + \text{inflation}) - 1$$

For the ATRT8 tariff, CRE retains the value of 4.1% (real, before taxes) as WACC to remunerate the so-called "historical" assets of the RAB of gas TSOs. For so-called "new assets", CRE retains a WACC of 5.4% (nominal, before taxes).

For the ATS3 tariff period, CRE retains the value of 4.6% (real, before taxes) as WACC to remunerate the so-called "historical" assets of the RAB of gas storage operators. For so-called "new assets", CRE retains a WACC of 5.9% (nominal, before taxes).

The level of this rate reflects an increase in the WACC of the ATRT tariff of +50 basis points. The level of this increase, unchanged from that used in the ATS2 tariff, is justified by the absence of changes in the risks, in particular economic, technical and geological risks of the activity of operator of natural gas storage sites compared to the gas transport activity.

The rounded values retained by CRE for each of the parameters of the WACC of transport activities are shown in the table below:

ATRT8 WACC parameters (rounded values)			
	Long-term data	Short-term data	**Weighted value (80% - 20%)**
Nominal risk-free rate (TSR)	1.3%	3.8%	**1.8%**
Spread of debt	1.1%	0.5%	**1.0%**
Bêta of assets		**0.47**	
Bêta in equity (β)		**0.82**	
Market Risk Premium (MRP)		**5.2%**	
Leverage (debt/(debt+equity)) (g)		**50%**	
Corporate tax rate (IS)		**25.83%**	
Cost of debt (nominal, before corp. tax)	2.4%	4.3%	**2.8%**
Cost of equity (nominal, after corp. tax)	5.5%	8.1%	**6.0%**
WACC (nominal, before corp. tax)	4.9%	7.6%	**5.4%**
Inflation	1.2%	2.0%	**1.3%**
WACC (real, before corp. tax)	3.7%	5.5%	**4.1%**

Compared to the values taken into account to define the WACC of the ATRT7 tariff, the main changes, consistent with the evolution of macroeconomic and financial data, notably relate to evolution of the risk-free rate, the beta of assets and taxation.

The risk-free rate is set at 1.8% and is determined by observing the yields of French government bonds ("OAT"), considered the least risky investments. This rate is determined by the weighting between the 10-year average of the OAT with a 15-year maturity and the average of the four implied forward rates of years 2024 to 2027 of an OAT with a 15-year maturity. The weighting used is 80/20 for the tariff period considered as stated above. For determination of the risk-free rate, CRE has retained the observation of the yields of OATs no longer of a 10-year maturity as was the case until now, but of a 15-year maturity.

The debt spread is set at 1.0% and is determined on the observation of average bond yields iBoxx EUR NF 10+ BBB; for long-term data over a 10-year average and for short-term data over a 1-year average. The weighting between these two values is also 80/20 for the tariff period considered as described above.

Compared to the previous tariff period, the beta of the asset is lowered from 0.5 to 0.47. CRE bases its decision on market observations and betas of the activity of gas operators in Europe. This decrease is also justified by the level of protection provided by the regulatory framework of the ATS3 tariff, which provides greater protection to operators, notably against changes in energy prices. In addition, the regulatory framework showed its strong resilience during the successive Covid and energy crises. Overall, CRE considers that the regulatory framework is consistent with a measured decline in the asset beta to 0.47. In fact, risks persist for the future of gas infrastructures, which justifies retaining a higher *beta* than that of electricity network tariffs.

CRE also takes into account the reduction in the standard corporate tax rate to 25.0%, combined with the social contribution corresponding to 3.3% of the amount of the corporate tax, i.e. a tax rate of 25.83%.

In accordance with what is stated in paragraph 2.2.3.4, assets under construction (AuC) are remunerated at the cost of the nominal debt before tax of the ATRT tariff (2.8% for the ATRT8 tariff) plus the specific storage premium, i.e. a total of 3.3%.

3.4.2 Investments

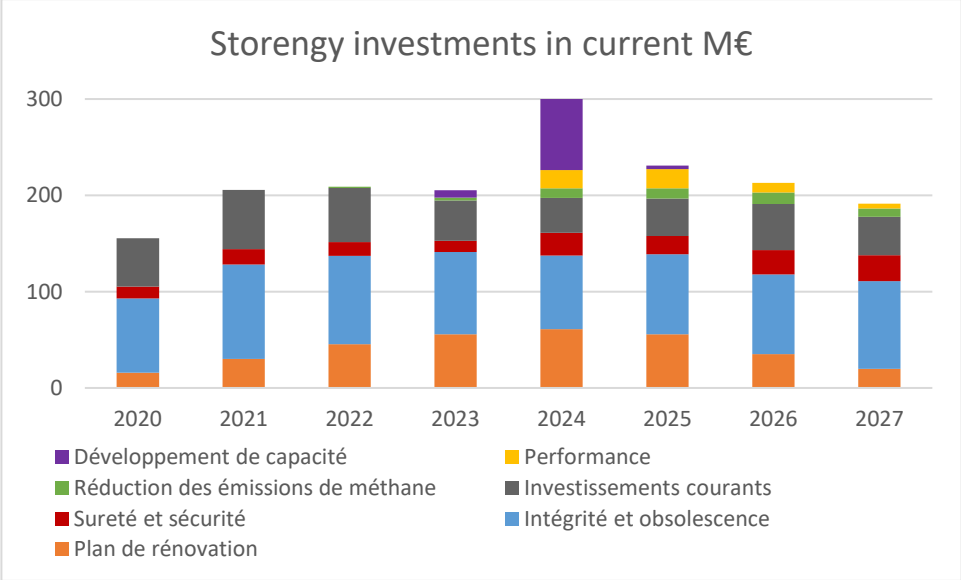
3.4.2.1 Storengy

The trajectory of Storengy's capital expenditure over the ATS3 period is marked by an increase of investment expenses, with average expenditure of 237 M€ per year over this period, while it was around 191 M€ per year over the ATS2 period.

Storengy anticipates the following capital expenditures during ATS3:

In current M€	2024	2025	2026	2027	ATS3 annual average	ATS2(*) annual average
Renovation plan	61.2	55.8	35	19.7	42.9	36.9
Safety – Security	23.6	19.2	25.2	26.8	23.7	13.6
Integrity and obsoles-cence	76.2	82.9	83	91.3	83.4	88.1
Performance	19	20	10	5	13.5	-
Current investments	36.5	38.9	47.7	39.9	40.8	51.3
Development of capac-ity	87.7	3.8	-	-	22.9	0.4
Reduced methane emissions	9.8	10.4	12.2	8.7	10.3	1.1
TOTAL	**314.0**	**231.0**	**213.1**	**191.4**	**237.4**	**191.3**

(*) average of investment programs carried out for 2020 - 2022 and approved for 2023.



In particular, Storengy foresees:

- an increase in renovation expenditure, with average expenditure of 42.9 M€ per year over the ATS3 period, compared to 36.9 M€ over the ATS2 period. This increase in investments is driven by the specific renovation projects of Chémery (86 M€ over the period), Gournay (43.7 M€ over the period) and the Etrez site (83.4 M€ over the period);
- an increase in expenditure on Performance and Capacity Development, i.e. +138 M€ over the ATS3 period. This increase is associated with the project to connect caverns in Etrez (92 M€ over the ATS3 period) and the implementation of a programme aimed at improving the performance of storage facilities (54 M€ over the ATS3 period) which aim to meet supply security challenges;
- an increase in expenses for the Safety – security purpose, with average expenses of 23.7 M€ per year over the ATS3 period, compared to 13.6 M€ over the ATS2 period. This increase in investments is particularly related to the physical security of sites (+25 M€) and cybersecurity (+16 M€);
- a decrease in expenditure for the Integrity/obsolescence purpose, with average expenditure of 83 M€ per year over the ATS3 period compared to 88 M€ over the ATS2 period. This evolution is linked to a decreasing trajectory of the "Pipeline Integrity Program" which is entering a phase dedicated to other structures (effluent networks) that will require less investment compared to the realised prior to 2023;

- strengthening of the methane emission reduction programme (+37 M€);
- a decrease in current investments (-46 M€) related to the decrease in the budget of small industrial and IS projects.

CRE's Analysis

CRE notes that Storengy expects an increase in investments compared to the previous tariff period. This trajectory, with significant increases in certain categories of expenditure, elicits the following comments:

- renovation expenses, for which the budget increases by 16% between periods ATS2 and ATS3. This development is notably associated with continuation of the three major renovation projects of the Gournay, Chémery and Etrez sites, which will be put into service gradually during the tariff period;
- capacity development expenses which represent 92 M€ over the ATS3 period. They relate to the connection of two caverns at the Etrez site. This project has been the subject of a cost-benefit analysis that presents positive results for consumers;
- safety and security expenses, for which the budget increases by 75% between the ATS2 and ATS3 periods, without Storengy having specified, at this stage, all the projects contained in this budget;
- expenses related to the reduction of methane emissions represent 37 M€ in the investment trajectory. CRE has previously approved a budget of 3 M€ to reduce Storengy's methane emissions in 2023[33]. The operator's new request concerns the continuity of this programme, as well as implementation of the future European regulation concerning methane emissions. As this regulation has not been adopted, CRE will ensure that the expenditure relating to its application is only incurred once the final text is known.

CRE does not make any changes to the investment trajectory planned by the operator. However, it considers that in the context of the structural decline in gas consumption and the risk of an increase in the associated unit cost of transport, operators' capital expenditure must be controlled as well as possible. CRE will monitor control of these expenses at the time of annual approval of the operator's investments, as specified by the provisions of article L. 421-7-1 of the Energy Code.

In accordance with the incentive regulation of investment costs for the ATS3 period (see 2.4.3), certain projects may be the subject of audits to define a target budget. This is particularly the case for the renovation of PLCs at the Etrez site, as well as the renovation and change of separators at the Gournay site.

The investment trajectory adopted by CRE is as follows:

In current M€	2024	2025	2026	2027	ATS3 annual average
Renovation plan	61.2	55.8	35	19.7	42.9
Safety – Security	23.6	19.2	25.2	26.8	23.7
Integrity and obsoles-cence	76.2	82.9	83	91.3	83.4
Performance	19	20	10	5	13.5
Current investments	36.5	38.9	47.7	39.9	40.8
Development of capac-ity	87.7	3.8	-	-	22.9
Reduced methane emissions	9.8	10.4	12.2	8.7	10.3
TOTAL	**314.0**	**231.0**	**213.1**	**191.4**	**237.4**

3.4.2.2 Teréga

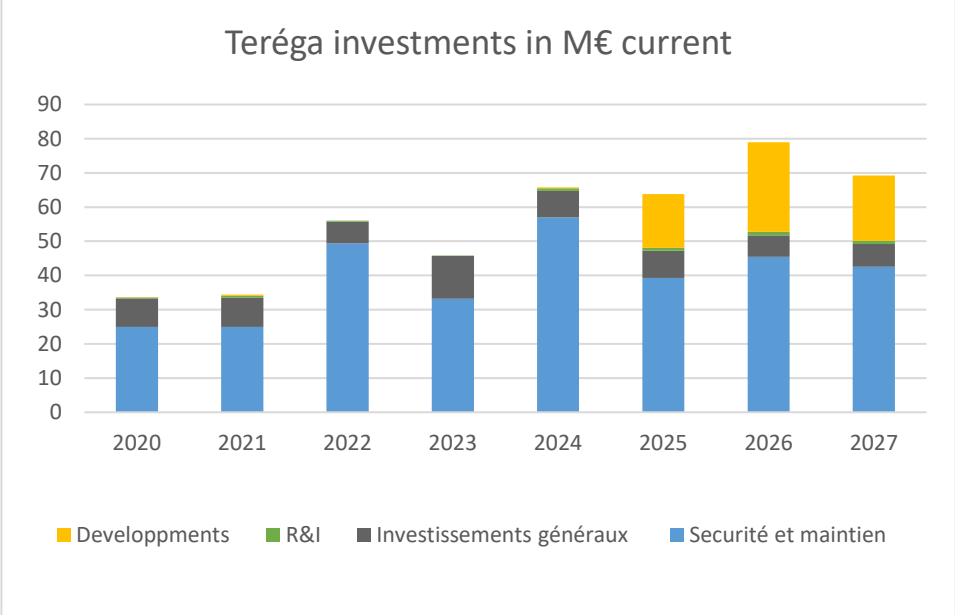
The trajectory of Teréga's capital expenditure over the ATS3 period is marked by an increase of investment expenses, with average expenditure of 69.4 M€ per year over this period, while it was around 49 M€ per year over the ATS2 period.

[33] Deliberation of CRE of 26 January 2023 approving the investment program of Storengy for 2023

Teréga anticipates the following capital expenditures during ATS3:

In current M€	2024	2025	2026	2027	ATS3 annual average	ATS2(*) annual average
Developments	0.3	15.7	26.2	19.1	15.3	7.0
Safety and maintenance	57	39.3	45.5	42.6	46.1	32.9
R&I	0.7	0.9	1	1	0.9	0.3
General investments	7.8	7.9	6.3	6.6	7.1	8.7
TOTAL	**65.8**	**63.8**	**79.0**	**69.3**	**69.4**	**48.8**

(*) average of investment programs carried out for 2020 - 2022 and approved for 2023.



In particular, Teréga foresees:

- an increase in development expenditure, with average expenditure of 15 M€per year over the ATS3 period compared to 7 M€ over the ATS2 period. This increase corresponds to the development of storage capacities within the framework of the OPSTOCK 2028 project;
- an increase in security and maintenance expenses associated with projects whose implementation has been approved (Securlug Phase A, reboiler and sectioning station) but also projects that CRE has not approved (Securlug Phase B, the injection of cushion gas to compensate for the downward trend of the aquifer and the storage coordination program);
- a decrease of 10 M€ over the period of expenses related to general investments. This development corresponds to a decrease in investments in IS and real estate;
- an increase in R&I expenditure, with average expenditure of 0.9 M€ per year over the ATS3 period compared to 0.3 M€/year over the ATS2 period. This evolution corresponds to projects related to the reduction of greenhouse gas emissions and energy efficiency as well as projects related to improvement of the current industrial tools.

CRE's Analysis

CRE notes that Teréga expects an increase in investments compared to the previous tariff period. This trajectory, with significant increases in certain categories of expenditure, elicits the following comments:

- development expenditure, for which the average annual budget increases sharply between the ATS2 and ATS3 periods. These expenses are related to the storage capacity development project, called "OPSTOCK", the first phase of which aims to determine the technical possibilities. Teréga has the opportunity to develop, with controlled investments, up to 2.3 TWh of useful volume (+7%) and 80 GWh/day of peak throughput (+14%). These developments can be spread over 2023 and

2029, with a first stage starting in the winter of 2023-24, only contingent on an injection of cushion gas, in the amount of 950 GWh, to develop 1150 GWh of useful volume and 25 GWh/day of peak flow;

- security and maintenance expenses, for which the budget increases by 40% between the ATS2 and ATS3 periods, notably relate to projects that CRE has not yet approved and that it will analyse in the ATS3 investment approval exercises;
- R&I investment expenditure, for which the average annual budget increases by 200% between the two periods, is the result of anticipating changes in Teréga's business lines in the future energy mix.

In addition, CRE questions certain R&D investments, which may not be essential for fulfilment of the operator's missions.

CRE does not make any changes to the investment trajectory planned by the operator. However, it considers that in the context of the structural decline in gas consumption and the risk of an increase in the associated unit cost of transport, operators' capital expenditure must be controlled as well as possible. CRE will monitor control of these expenses at the time of annual approval of the operator's investments, as specified by the provisions of article L. 421-7-1 of the Energy Code.

In accordance with its guidelines on the incentive regulation of investment costs for the ATS3 period (see 2.4.3), certain projects may be the subject of audits to define a target budget. This is notably the case of projects to replace the H34&H35 reboilers, the injection of cushion gas to compensate for the downward trend of the aquifer, Securlug phase B, and the Storage coordination program.

The investment trajectory adopted by CRE is as follows:

In current M€	2024	2025	2026	2027	ATS3 annual average
Developments	0.3	15.7	26.2	19.1	15.3
Safety and maintenance	57	39.3	45.5	42.6	46.1
R&I	0.7	0.9	1.0	1.0	0.9
General investments	7.8	7.9	6.3	6.6	7.1
TOTAL	**65.8**	**63.8**	**79.0**	**69.3**	**69.4**

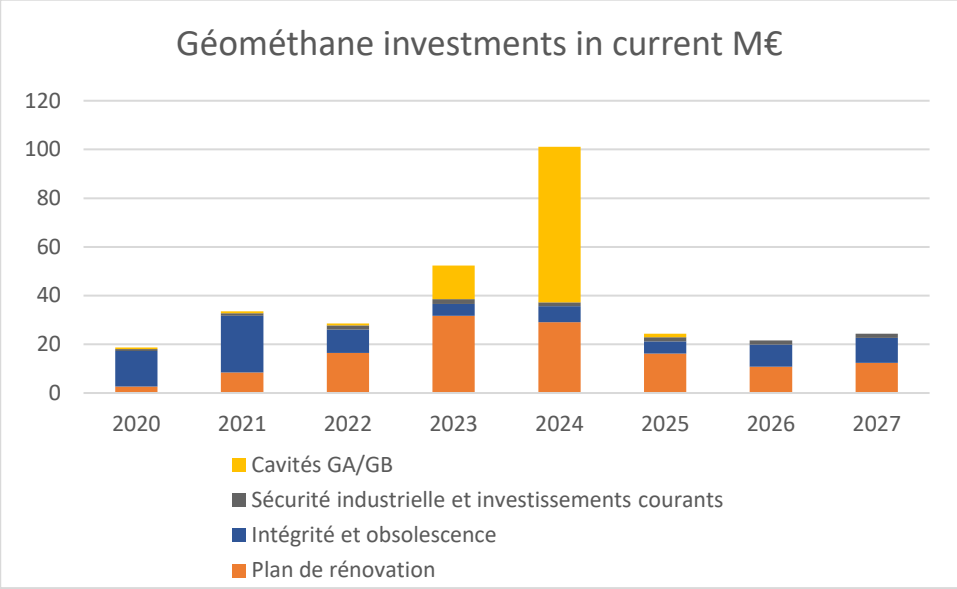
3.4.2.3 Géométhane

The trajectory of Géométhane's capital expenditure over the ATS3 period is marked by an increase of investment expenses, with average expenditure of 43 M€ per year over this period, while it was around 28 M€ per year over the ATS2 period.

Géométhane forecasts the following capital expenditures during ATS3:

In current M€	2024	2025	2026	2027	ATS3 annual average	ATS2(*) annual average
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	13.2
New GA/GB caverns	63.9	1.5	-	-	16.3	-
Industrial security 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**	**27.6**

(*) average of investment programs carried out for 2020 - 2022 and approved for 2023.



In particular, Géométhane foresees:

- a connection of two caverns at the Manosque site for a total budget of 65 M€ over the ATS3 period. Géométhane wishes to increase the storage capacities of its Manosque site by using two caverns called "GA and GB", which will increase the useful volume of the site by about 1.1 TWh within two years;
- a slight increase in expenses related to the renovation plan, to 17.1 M€ per year on average over the ATS3 period. These expenses are associated with continuation of the "Optimisation and Reliability" programs which makes it possible to meet regulatory requirements in terms of industrial safety and "New surface installations", notably with the commissioning of a new compressor;
- a decrease in expenditure on integrity and obsolescence, with average expenditure of 7.7 M€ per year over the ATS3 period compared to 13.1 M€ per year over the ATS2 period, including the end of the "Dorsales" project[34]. This program continues with the replacement of end-of-life equipment (upstream expansion boiler, control and command system) and investments in wells;
- a slight increase in current investments (site and vehicle expenses) and industrial security, for which the average expenses are around 1.6 M€ per year.

CRE's analysis

Géométhane forecasts annual investment expenditure up by 55% between the ATS2 and ATS3 periods. CRE notes that this increase is mainly due to the project to connect two caverns at the Manosque site. Géométhane is asking to increase the storage capacity of its Manosque site by using two saline caverns. CRE notes that the project is outside the regulatory framework specified by the PPE.

[34] The "Dorsales" project concerns the pipes of about 2 km that connect the Gaude and Gontard sites. The project included the installation of scraping stations and the installation of isolation valves.

With regard to other investment requests, CRE observed a slight decrease of 4%, or approximately – 1.1 M€, over the next tariff period. This decrease is mainly explained by lower expenditure for the "integrity and obsolescence" programme, with the completion of the "Dorsales" project.

With the exception of failure to take the project into account to connect two salt caverns at the Manosque site, CRE does not modify the investment trajectory of the other projects. The various investment requests will be the subject of dedicated analysis as part of the approval exercise for the annual investment budgets of natural gas storage operators, specified by Article L. 421-7-1 of the Energy Code.

The investment trajectory adopted by CRE is as follows:

In current M€	2024	2025	2026	2027	ATS3 annual average
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 caverns	0	0	0	0	0
Industrial security 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 accordance with the incentive regulation of investment costs for the ATS3 period (see 2.3.2), certain projects and programmes may be the subject of audits to define a target budget.

3.4.3 Trajectory of normative capital charges

3.4.3.1 Storengy

The table below presents the forecast trajectory of the RAB and the assets under construction (AuC) of Storengy from 2024 to 2027:

Regulated asset base (RAB) and assets under construction (AuC)					
Storengy, in M€ current	**2024**	**2025**	**2026**	**2027**	**ATS3 annual average**
RAB at 01/01/N	4242	4358	4561	4719	**4470**
Service start-ups*	208.8	310.9	281.8	347.8	**287.3**
Amortisation	-162.9	-173.0	-180.9	-190.1	**-176.7**
Revaluations	78.4	76.9	67.9	59.1	**70.6**
Scrapping	-8.1	-12.1	-11.0	-13.6	**-11.2**
RAB at 31/12/N	4358	4561	4719	4922	**4640**
Assets under construction (AuC)	515.2	578.6	489.8	410.1	**498.4**

*Investments entering the bar

The forecast base of regulated assets breaks down as follows:

Regulated asset bases (RAB) as of 01/01/N	2024	2025	2026	2027
Storengy	**4242**	**4358**	**4561**	**4719**
Wells and collections, treatment facilities, compression	*2072*	*2173*	*2281*	*2440*
Cushion gas	*1769*	*1778*	*1859*	*1863*
Real estate, land	*314*	*307*	*312*	*307*
Other (various materials, IT, etc.)	*87*	*100*	*109*	*108*

The table below details the forecast trajectory of Storengy's normative capital charges (CCN) from 2024 to 2027:

Storengy, in M€ current	Average 20-22	2024	2025	2026	2027	ATS3 annual average
Depreciation of assets in service	**138.7**	162.9	173.0	180.9	190.1	**176.7**
Remuneration of assets in service	**175.5**	197.4	205.4	218.5	229.0	**212.6**
Compensation of AuC	12.4	17.0	19.1	16.2	13.5	**16.4**
Recurring or predictable stranded costs	-	3.7	3.7	3.7	3.9	**3.8**
Total of normative capital charges	**326.7**	**381.0**	**401.2**	**419.2**	**436.5**	**409.5**
Of which CCN "excluding infrastructure"		17.8	20.3	19.3	18.4	19.0

The table below details the specific trajectory of RAB, AuC and CCN for Storengy's "non-infrastructure" assets from 2024 to 2027, which are the subject of a specific regulation defined in 2.4.3.3 of the deliberation.

Storengy, in M€ current	2024	2025	2026	2027	ATS3 annual average
RAB at 01/01/N	49.7	52.6	48.7	44.3	48.8
Depreciation of assets in service	15.0	17.3	16.3	15.6	16.1
Remuneration of assets in service	2.4	2.8	2.7	2.5	2.6
Assets under Construction (AuC)	12.5	9.1	7.8	6.6	9.0
Compensation of AuC	0.4	0.3	0.3	0.2	0.3
Total CCNs “excl. infrastructures”	**17.8**	**20.3**	**19.3**	**18.4**	**19.0**

3.4.3.2 Teréga

The table below presents the forecast trajectory of the RAB and the AuCs of Teréga from 2024 to 2027:

Regulated asset base (RAB) and Assets under Construction (AuC)					
Teréga, in M€ current	**2024**	**2025**	**2026**	**2027**	**ATS3 annual average**
RAB at 01/01/N	**1 384**	**1 452**	**1 496**	**1 544**	**1 469**
Service start-ups*	88.7	65.2	73.0	65.0	**73.0**
Amortisation	-46.9	-46.7	-47.0	-47.7	**-47.1**
Revaluations	25.6	25.3	22.6	19.9	**23.4**
RAB at 31/12/N	**1 452**	**1 496**	**1 544**	**1 582**	**1 518**
Assets under construction (AuC)	79.5	55.8	62.4	64.1	**65.5**

*Investments entering the bar

The forecast base of regulated assets breaks down as follows:

Regulated asset base (RAB) as of 01/01/N	2024	2025	2026	2027
Teréga	**1 384**	**1 452**	**1 496**	**1 544**
Wells and collections, treatment facilities, compression	*335*	*389*	*413*	*449*
Cushion gas	*966*	*981*	*1000*	*1014*
Real estate, land	*47*	*46*	*46*	*45*
Other (various materials, IT, etc.)	*36*	*35*	*36*	*36*

The table below details the forecast trajectory of Teréga's CCN charges from 2024 to 2027:

Teréga, in M€ current	Average 20-22	2024	2025	2026	2027	ATS3 annual average
Depreciation of assets in service	42.4	46.9	46.7	47.0	47.7	**47.1**
Remuneration of assets in service	59	64.5	68.7	71.4	74.5	**69.8**
Compensation of AuC	0.9	2.6	1.8	2.1	2.1	**2.2**
Recurring or predictable stranded costs	-	0	0	0	0	**0**
Total of normative capital charges	**102.3**	**114.0**	**117.3**	**120.5**	**124.3**	**119.0**
Of which CCN "excluding infrastructure"		9.7	9.0	9.0	9.2	9.2

- **Trajectory of normative capital charges "excluding infrastructure"**

The table below details the specific trajectory of RAB, AuC and CCN under the assets "excluding infrastructure – real estate and vehicles" of Teréga from 2024 to 2027, which are the subject of a specific regulation defined in 2.4.3.3 of the deliberation.

Teréga, in M€ current	2024	2025	2026	2027	ATS3 annual average
RAB at 01/01/N	*14.2*	*13.1*	*12.7*	*13.5*	***13.4***
Depreciation of assets in service	*5.5*	*4.7*	*4.3*	*4.3*	***4.7***
Remuneration of assets in service	*0.7*	*0.7*	*0.7*	*0.8*	***0.7***
Assets under Construction (AuC)	*2.7*	*3.0*	*3.4*	*2.6*	***2.9***
Compensation of AuC	*0.1*	*0.1*	*0.1*	*0.1*	***0.1***
Total CCNs "excl. infrastructure – real estate and vehicles"	**6.3**	**5.5**	**5.1**	**5.2**	***5.5***

- **Trajectory of expenses related to IS**

The table below details the specific trajectory of Teréga's IS-related expenses from 2024 to 2027, which are the subject of a specific regulation defined in 2.4.3.3 of the deliberation.

Teréga, in M€ current	2024	2025	2026	2027	ATS3 annual average
RAB at 01/01/N	*22.6*	*24.1*	*25.4*	*25.0*	***24.3***
Depreciation of assets in service	*2.1*	*2.2*	*2.5*	*2.6*	***2.4***
Remuneration of assets in service	*1.2*	*1.3*	*1.4*	*1.4*	***1.3***
Assets under Construction (AuC)	*1.9*	*1.8*	*1.5*	*2.1*	***1.8***
Compensation of AuC	*0.1*	*0.1*	*0.0*	*0.1*	***0.1***
Total CCNs “excl. infrastructures – IS”	**3.4**	**3.5**	**3.9**	**4.0**	***3.7***

Teréga, in M€ current	2024	2025	2026	2027	ATS3 annual average
IS commissioning	*4.3*	*4.2*	*5.0*	*4.1*	***4.4***
IS OPEX	6.8	7.0	7.2	7.3	***7.1***
IS TOTEX	**11.1**	**11.2**	**12.2**	**11.4**	**11.5**

3.4.3.3 Géométhane

The table below presents the forecast trajectory of the RAB and the AuC of Géométhane from 2024 to 2027:

Regulated asset base (RAB) and Assets under Construction (AuC)					
Géométhane, in M€ current	**2024**	**2025**	**2026**	**2027**	**ATS3 annual average**
RAB at 01/01/N	255.2	351.6	358.6	366.3	**332.9**
Service start-ups*	103.4	19.1	21.2	30.9	**43.6**
Amortisation	-11.9	-16.7	-17.5	-18.6	**-16.2**
Revaluations	4.8	4.7	4.1	3.5	**4.2**
RAB at 31/12/N	351.6	358.6	366.3	382.1	**364.6**
Assets under construction (AuC)	151.9	79.3	82.9	85.0	**99.8**

*Investments entering the bar

The forecast base of regulated assets breaks down as follows:

Regulated asset base (RAB) as of 01/01/N	2024	2025	2026	2027
Géométhane	**255**	**352**	**359**	**366**
Wells and collections, treatment facilities, compression	*170*	*268*	*276*	*284*
Cushion gas	*39*	*40*	*40*	*40*
Real estate, land	*43*	*43*	*42*	*41*
Other (various materials, IT, etc.)	*2*	*2*	*2*	*2*

The table below details the forecast trajectory of Géométhane's CCNs from 2024 to 2027:

Géométhane, in M€ current	Average 20-22	2024	2025	2026	2027	ATS3 annual average
Depreciation of assets in service	9.6	11.9	16.7	17.5	18.6	**16.2**
Remuneration of assets in service	9.7	11.8	17.6	18.1	18.6	**16.5**
Compensation of AuC	3.3	3.4	0.9	1.0	1.1	**1.6**
Maintain availability of GA/GB caverns	1.5	1.7	1.7	1.7	1.7	**1.7**
Recurring or predictable stranded costs	-	0	0	0	0	**0**
Total of normative capital charges Of which CCN "excluding infrastructure"	**22.6**	**28.7** 1.9	**36.9** 1.8	**38.3** 1.8	**40.1** 1.8	**36.0** 1.8

The table below details the specific trajectory of RAB, AuC and CCN for Géométhane's "non-infrastructure" assets from 2024 to 2027, which are the subject of a specific regulation defined in 2.4.3.3 of the deliberation.

Géométhane, in M€ current	2024	2025	2026	2027	ATS3 annual average
RAB at 01/01/N	20.9	20.4	19.9	19.4	**20.1**
Depreciation of assets in service	0.9	0.9	0.9	0.9	**0.9**
Remuneration of assets in service	1.0	0.9	0.9	0.9	**0.9**
Assets under Construction (AuC)	0.0	0.01	0.04	0.04	**0.02**
Compensation of AuC	0.0	0.0	0.0	0.0	**0.0**
Total CCNs "excl. infrastructures"	**1.9**	**1.8**	**1.8**	**1.8**	**1.8**

3.5 CRCP as at 31 December 2023

3.5.1 Storengy

In its tariff file, Storengy estimated the CRCP balance as of 31 December 2023 at +37.4 M€, to be returned to the operator[35]. This balance is the sum of the following:

- the updated remainder of the previous CRCP (or 0.0 M€);
- the updated difference between the estimated balance for 2022 and the final 2022 CRCP (i.e. +18.1 M€);
- the estimated CRCP for 2023 (i.e. +19.3 M€).

At this stage, the CRCP at 31 December 2023 estimated by CRE totals +12.2 M€, to be returned to the operator. This balance is the sum of the following:

- the updated remainder of the previous CRCP (or 0.0 M€);
- the updated difference between the estimated balance for 2022 and the final 2022 CRCP (i.e. +3.8 M€), which is mainly due to lower than estimated revenue from term tariff compensation (+3.7 M€);
- the estimated CRCP for 2023 (i.e. + +8.4 M€), which is mainly explained by:
    - higher than estimated sales revenue for capacity (-27.4 M€);
    - higher than expected expenses for capital expenses (+12.3 M€) and energy (+3.4 M€);
    - lower than estimated revenue associated with contracts with other regulated operators (+6.3 M€);
    - the commercialisation bonus (+11.7 M€).

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

- by not retaining scrapping associated with maintenance and operational incidents, as these charges are considered to be part of the traditional management of equipment assets;
- by postponing the analysis regarding scrapping associated with equipment failure after the end of ongoing legal proceedings.

[35] By agreement, with regard to the CRCP, a "-" sign corresponds to an amount to be returned to users, and a "+" sign to an amount to be returned to the operator

Storengy - CRCP as at 31 December 2023		
In M€	**Updated amounts for year 2022**	**Updated amounts for year 2023**
Revenue from commercialisation and from the offsetting tariff term	3.7	-27.4
Normative capital charges "infrastructures"	-0.2	12.3
Capital expense differences "excluding infrastructure" due to inflation	0.0	0.9
Energy charges, CO2 quotas, consumables and effluent treatment	-0.1	3.4
Charges and revenue associated with contracts with other regulated operators	-0.1	6.3
Bonuses and penalties resulting from different incentive regulation mechanisms	0.6	11.7
Stranded costs	0.0	0.0
CNE deviations due to deviations between the CPI assumption used when developing the tariff and the forecast CPI	0.0	1.1
Total	**3.8**	**8.4**
Remainder of previous CRCP updated	**0.0**	
CRCP balance as at 31 December 2023	**12.2**	

CRE will calculate the deviations from the reference trajectory for R&D expenses over the ATS2 period once the 2023 expenses are definitively known.

3.5.2 Teréga

In its updated tariff file, Teréga estimated the CRCP balance as of 31 December 2023 at -0.7 M€, to be returned to the users[36]. This balance is the sum of the following:

- the updated remainder of the previous CRCP (i.e. + 2.3 M€);
- the updated difference between the estimated balance for 2022 and the final 2022 CRCP (i.e. + -0.1 M€);
- the estimated CRCP for 2023 (i.e. -2.9 M€).

At this stage, the CRCP at 31 December 2023 estimated by CRE totals -1.9 M€, to be returned to the users. This balance is the sum of the following:

- the updated remainder of the previous CRCP (or +2.3 M€);
- the updated difference between the estimated balance for 2022 and the final 2022 CRCP (i.e. -0.1 M€), which is mainly due to lower than estimated energy charges (-0.1 M€);
- the estimated CRCP for 2023 (i.e. + -4.2 M€), which is mainly explained by:
    - higher than estimated sales revenue for capacity (-7.5 M€);
    - lower than expected expenses for capital expenses (-10.2 M€);
    - higher than expected expenses for energy (+8.9 M€);
    - lower than estimated revenue associated with contracts with other regulated operators (+2.4 M€);
    - the commercialisation bonus (+3.4 M€).

The difference between Teréga's request and the level retained at this stage by CRE (-0.7 M€) is mainly explained by application of the ceiling on the commercialisation bonus as specified by the 2023 tariff update deliberation[37] (-0.7 M€).

[36] By agreement, with regard to the CRCP, a "-" sign corresponds to an amount to be returned to users, and a "+" sign to an amount to be returned to the operator

[37] Deliberation of 31 January 2023 on the decision on evolution of the tariff for use of the underground natural gas storage infrastructures of Storengy, Teréga and Géométhane for 2023

Teréga– CRCP at 31 December 2023		
In M€	**Updated amounts for year 2022**	**Updated amounts for year 2023**
Revenue from commercialisation and from the offsetting tariff term	0.0	-7.5
Normative capital charges "infrastructures"	0.0	-10.7
Capital expense differences "excluding infrastructure" due to inflation	0.0	0.5
Energy charges, CO2 quotas, consumables and effluent treatment	-0.1	8.9
Charges and revenue associated with contracts with other regulated operators	0.0	2.4
Bonuses and penalties resulting from different incentive regulation mechanisms	0.0	3.4
CNE deviations due to deviations between the CPI assumption used when developing the tariff and the forecast CPI	0.0	-1.3
Total	**-0.1**	**-4.2**
Remainder of previous CRCP updated	**2.3**	
CRCP balance as at 31 December 2023	**-1.9**	

CRE will calculate the deviations from the reference trajectories for Teréga's R&D charges and "TOTEX" experimentation over the ATS2 period once the 2023 expenses are definitively known.

3.5.3 Géométhane

In its updated tariff file, Géométhane estimated the CRCP balance as of 31 December 2023 at -2.7 M€, to be returned to the users[38]. This balance is the sum of the following:

- the updated remainder of the previous CRCP (or 0.0 M€);
- the updated difference between the estimated balance for 2022 and the final 2022 CRCP (i.e. + +1.2 M€);
- the estimated CRCP for 2023 (i.e. -3.9 M€).

At this stage, the CRCP at 31 December 2023 estimated by CRE totals -2.7 M€, to be returned to the operator. This balance is the sum of the following:

- the updated remainder of the previous CRCP (or 0.0 M€);
- the updated difference between the estimated balance for 2022 and the final 2022 CRCP (i.e. +1.2 M€), which is mainly due to lower than estimated revenue from term tariff compensation (+1.3 M€);
- the estimated CRCP for 2023 (i.e. + -3.9 M€), which is mainly explained by:
    - lower than estimated revenue from the compensation tariff term (+0.4 M€);
    - a postponement of commissioning as part of the renovation plan which leads to lower than expected charges with regard to capital charges (-5.7 M€);
    - higher than expected expenses for energy (+1.0 M€);
    - lower than estimated charges associated with contracts with other regulated operators (-0.6 M€);
    - the commercialisation bonus (+0.8 M€).

[38] By agreement, with regard to the CRCP, a "-" sign corresponds to an amount to be returned to users, and a "+" sign to an amount to be returned to the operator

Géométhane - CRCP as at 31 December 2023		
In M€	Updated amounts for year 2022	Updated amounts for year 2023
Revenue from commercialisation and from the offsetting tariff term	1.3	0.4
Normative capital charges "infrastructures"	-0.2	-5.7
Capital expense differences "excluding infrastructure" due to inflation	0.0	0.1
Energy charges, CO2 quotas, consumables and effluent treatment	0.1	1.0
Charges and revenue associated with contracts with other regulated operators	0.0	-0.6
Bonuses and penalties resulting from different incentive regulation mechanisms	0.0	0.8
CNE deviations due to deviations between the CPI assumption used when developing the tariff and the forecast CPI	0.0	0.1
Total	**1.2**	**-3.9**
Remainder of previous CRCP updated	**0.0**	
CRCP balance as at 31 December 2023	**-2.7**	

CRE will calculate the deviations from the reference trajectory for R&D expenses over the ATS2 period once the 2023 expenses are definitively known.

3.6 Allowed revenue over the period 2024-2027

The allowed revenues of Storengy, Teréga and Géométhane for the 2024-2027 period are defined as the sum of the following:

- net operating expenses (see paragraph 3.3);
- normative capital charges (see paragraph 3.4);
- clearance of the balance of the CRCP calculated on 31 December 2023 (see paragraph 3.5).

3.6.1.1 Storengy

The forecast allowed revenue of Storengy breaks down as follows:

Storengy, in M€ current	2024	2025	2026	2027	Average 24-27
Net operating expenses	194.9	203.1	214.7	214.9	206.9
Normative capital charges	381.0	401.2	419.2	436.5	409.5
Clearance of CRCP balance (previous CRCP balances + 2022 balance + 2023 estimate)	3.2	3.2	3.2	3.2	3.2
Allowed revenue	**579.1**	**607.5**	**637.2**	**654.7**	**619.6**

Storengy's allowed revenue evolves accordingly by 7.0% between 2023 and 2024 and by +4.2% on average per year over the ATS3 period.

3.6.1.2 Teréga

The forecast allowed revenue of Teréga breaks down as follows:

Teréga, in M€ current	2024	2025	2026	2027	Average 24-27
Net operating expenses	56.9	55.7	58.1	57.4	57.0
Normative capital charges	114.0	117.3	120.5	124.3	119.0
Clearance of CRCP balance (previous CRCP balances + 2022 balance + 2023 estimate)	-0.5	-0.5	-0.5	-0.5	-0.5
Allowed revenue	**170.5**	**172.5**	**178.0**	**181.2**	**175.5**

Teréga's allowed revenue evolves accordingly by +1.7% between 2023 and 2024 and by +2.1% on average per year over the ATS3 period.

3.6.1.3 Géométhane

The forecast allowed revenue of Géométhane breaks down as follows:

Géométhane, in M€ current	2024	2025	2026	2027	Average 24-27
Net operating expenses	21.1	19.5	20.0	20.4	20.2
Normative capital charges	28.7	36.9	38.3	40.1	36.0
Clearance of CRCP balance (previous CRCP balances + 2022 balance + 2023 estimate)	-0.7	-0.7	-0.7	-0.7	-0.7
Allowed revenue	**49.0**	**55.6**	**57.6**	**59.8**	**55.5**

Géométhane's allowed revenue evolves accordingly by -7.6% between 2023 and 2024 and by +6.8% on average per year over the ATS3 period.

4. Tariff for use of the underground natural gas storage infrastructures of Storengy, Teréga and Géométhane

4.1 Collection of allowed revenue

4.1.1 Commercialisation of storage capacities

Storage capacities that are not already under contract are commercialised by auction according to the terms set by CRE.

The revenues from the commercialisation of storage capacities and ancillary products, collected by storage operators from their customers, cover the allowed revenue of the operators.

4.1.2 Compensation by transmission system operators of missing revenue

In the event that the revenue collected directly by the operators is less than their allowed revenue, the transmission system operators collect compensation from their customers and pay it back to the storage operators. The terms of collection and repayment of this compensation are stated in the deliberation no. 2024-22 of 30 January 2024 on the decision on the tariff for use of the GRTgaz and Teréga natural gas transmission network.

In the event that the auction revenues are greater than the allowed revenue of the storage operators, the storage tariff term is negative and results in a repayment to the shippers.

4.2 Penalties

When sold capacities are finally unavailable, in particular due to technical failures, the storage operator publishes restrictions on the injection or extraction rights of its customers.

Thus, in the ATS3 tariff, in case of a restriction of the injection or extraction capacities subscribed by a customer giving rise to the payment of a penalty by the operator, this penalty will be calculated on the basis of the amount due by the customer over the duration of the restriction and the restriction rate:

- in the event of a restriction of extraction capacities during the gas winter period (November-March), the penalty will be equal to the amount paid by the customer for the capacity, multiplied by the restriction rate over the period of the restriction;
- in the case of a restriction of injection or extraction capacities during the gas summer period (April-October), the penalty will be equal to half of the amount due by the customer over the duration of the restriction, multiplied by the restriction rate.

Penalties are 100% covered in the CRCP beyond an annual ceiling of 10 M€ for Storengy and 3 M€ for Teréga. Thus, operators are incentivized on this item up to this cost ceiling, beyond which the financial impact is neutralised, so as not to make them bear too significant a risk in the event of an exceptional situation (see 2.4.2).

CRE's decision

CRE sets the tariff for use of the underground natural gas storage infrastructures of Storengy, Teréga and Géométhane from 2024, according to the methodology and parameters stated in this deliberation.

CRE notably sets:

- the tariff regulation framework and incentive regulation parameters applicable to GRTgaz and Teréga for a period of approximately 4 years (part 2);
- the trajectory of operating expenses, the WACC and the projected evolution of the tariff (part 3);
- the tariff applicable from 2024 (part 4).

The Energy Council, consulted by CRE on the draft decision, issued its opinion on 25 January 2024.The decision will be published in the Journal Officiel de la République Française and on CRE's website. It will be sent to the Minister for the Economy, Finance and Industrial and Digital Sovereignty.

Deliberated in Paris, 30 January 2024.

For the Energy Regulation Commission,

The president,

Emmanuelle WARGON

APPENDIX 1: TRACKING INDICATORS OF SERVICE QUALITY

In application of the principles defined in the "Regulatory framework" part of this tariff deliberation, CRE maintains, for the ATS3 period, the quality of service monitoring mechanism set up in the ATS2 tariff for the three natural gas storage operators, on the points considered as priorities for proper functioning of the gas market. This monitoring consists of indicators sent by operators to CRE and made public on their website.

The following indicators are monitored without a financial incentive in 2024:

- compliance with the maintenance programs of storage operators;
- availability of information in case of an event that may lead to a restriction of the extraction and injection rights of storage facility users;
- greenhouse gas emissions related to the volume of gas transmitted;
- methane leaks (including diffuse losses, venting and accidents/incidents) related to the volume of gas cycled.

The service quality regulation system may change during the ATS3 tariff period. In particular, in view of the future European regulation on the reduction of methane emissions. This regulation will introduce a common framework on the measurement and reporting of methane emissions, the obligation to investigate and repair methane leaks on installations, as well as the prohibition of certain practices (venting, flaring). CRE will study the possibility of creating financial incentives for these indicators once the European regulation on the reduction of methane emissions is adopted.

Storage operators, when commissioning a major version of an application that contributes to the production of certain indicators, are authorised to neutralise one day per year for the calculation of said indicators. They are required to notify market participants with one month's notice of the indicative date of commissioning, and then confirm the effective date of this commissioning one week in advance.

1. Indicator for monitoring compliance with storage operators' maintenance programs

Indicator description	Calculation of indicator	Frequency of reporting to CRE and of publication	Date of implementation
Compliance by operators with the annual maintenance program	**Change (as a percentage) between the capacity proposed in the forecast maintenance program and the capacity actually made available at the end of the year** (one aggregate value per storage group (1))	Annual	1 January 2020

(1): 6 storage groups:
- *Sediane B;*
- *Sediane North;*
- *Serene North;*
- *Serene Atlantique;*
- *Saline;*
- *Southwest.*

2. Indicator for monitoring the availability of information in the event of capacity restrictions

Information	Frequency of publication	Calculation of indicator	Frequency of reporting to CRE and of publication
Information(1) in case of events that may lead to a restriction of users' rights	Upon occurrence of an event leading to capacity restriction	Number of capacity-restricted days for which information was made available compared to the total number of capacity-restricted days	Annual

Tracking of the average notice period	Upon occurrence of an event leading to capacity restriction	Average number of days between announcement of the notice and the start of the capacity restriction period	Annual
Date of implementation:	1 January 2020		

(1): the information to be published is:

- *events that led to the failures;*
- *the storage groups concerned:*
- *the restriction period per group;*
- *the restriction rate per group.*

3. Environmental indicators

Indicator description	Calculation of indicator	Frequency of reporting to CRE and of publication	Date of implementation
Greenhouse gas emissions related to the volume of gas transmitted	**Monthly greenhouse gas emissions/Monthly Volume of gas injected and/or extracted** (a value tracked by operator)	Annual	1 January 2020
Methane emissions related to the volume of gas transmitted	**Monthly methane emissions/Monthly Volume of gas injected and/or extracted** (a value tracked by operator)		1 January 2020

APPENDIX 2: References for annual update of the tariff for use of the underground natural gas storage infrastructures of Storengy, Teréga and Géométhane

1. Capital Charges

For years 2024 to 2027, the reference capital charges taken into account for the annual update of the allowed revenue are those defined in the following table:

CCN forecast, in M€$_{current}$	2024	2025	2026	2027
Storengy	381.0	401.2	419.2	436.5
Teréga	114.0	117.3	120.5	124.3
Géométhane	28.7	36.9	38.3	40.1

2. Net operating expenses

For years 2024 to 2027, the reference net operating expenses taken into account are those defined in the following table:

CNE forecast, in M€$_{current}$	2024	2025	2026	2027
Storengy	194.9	203.1	214.7	214.9
Teréga	56.9	55.7	58.1	57.4
Géométhane	21.1	19.5	20.0	20.4

For years 2025 to 2027, the amount taken into account at the time of the update of the authorised for year N is equal to the reference value of year N:

- divided by the forecast inflation between year 2022 and year *N*;

	2023	2024	2025	2026	2027
Forecast inflation between year 2022 and year *N*	4.8%	7.4%	9.6%	11.8%	13.8%

- multiplied, for years 2025, 2026 and 2027, by the real inflation rate between 2022 and year N-2. Real inflation is defined as the change in the average value of the consumer price index excluding tobacco, as calculated by the INSEE for all households in France (referenced INSEE 1763852), observed over calendar year N-2, compared to the average value of the same index observed over calendar year 2022;
- multiplied by the real inflation rate between year N-2 and year N-1, or else its best estimate, defined as the change in the average value of the consumer price index excluding tobacco, as calculated by the INSEE for all households in France (INSEE reference 1763852);
- multiplied by the forecast inflation for year N, taken into account in the draft finance law for year N.

3. Calculation and clearance of the CRCP balance

Storengy

Storengy, in M€$_{current}$	Rate	2024	2025	2026	2027
Revenue from the compensation tariff term	100 %	The amount of compensation is calculated annually at the end of the auction campaign (March of year N).			
Revenue from the commercialisation of storage capacities	100 %	The amount is set annually at the end of the auction campaign (March of year N).			
Normative capital charges "infrastructures"	100 %	363.2	380.8	399.9	418.2
Energy expenses and purchases and sales of CO_2 quotas	100 %	-	38.6	49.8	47.4
	90 %[39]	34.0	Updated annually		
Charges for consumables and effluent treatment	100 %	-	5.9	5.9	5.9
	80%	5.3	Updated annually		
Deviations of benefits charges for energy related to price deviations from the electricity and gas price reference adopted by CRE	100 % of the price effect	5.5	5.0	5.3	4.9
Reference for the calculation of differences in capital charges "excluding infrastructure" due to inflation	100 %	17.8	20.3	19.3	18.4
Charges and revenue associated with contracts with other regulated operators (revenue)	100 %	38.1	38.0	38.5	38.1
Penalties paid to customers	100% above the 10 M€ threshold	0	0	0	0
Share of decommissioning provisions made by the operator	100 %	0	0	0	0
Bonuses and penalties resulting from different incentive regulation mechanisms	100 %	0	0	0	0
Gains on disposal of real estate or land assets	80%	0	0	0	0
Costs for abandoned studies and stranded costs for which CRE approves the coverage	100 %	0	0	0	0
Constitution of additional gas stocks following implementation of regulatory obligations as specified in Article L. 421-6 of the Energy Code	100 %	0	0	0	0
R&D charges	100% of unused charges at the end of the period	6.5	6.6	4.8	4.2
Operating expenses necessary for realisation of the capacity development project at the Storengy site in Etrez	100 %	0	0	0	0

Furthermore, with regard to net operating expenses, for the years 2024 to 2027, the amount taken into account for calculation of the CRCP balance takes into account the difference between projected inflation and actual inflation.

[39] The coverage is 90% for the fraction of the difference between the realised and the forecast trajectory less than or equal to 50% (in absolute value) of the forecast trajectory, and 100% beyond.

This amount is equal to the reference value for year *N*:

- divided by the forecast inflation between year 2022 and year *N*;

	2023	2024	2025	2026	2027
Forecast inflation between year 2022 and year *N*	4.8%	7.4%	9.6%	11.8%	13.8%

- multiplied by the real inflation between year 2022 and year N. Real inflation is defined as the change in the average value of the consumer price index excluding tobacco, as calculated by the INSEE for all households in France (referenced INSEE 1763852), observed over calendar year N, compared to the average value of the same index observed over calendar year 2022.

Teréga

Teréga, in M€$_{current}$	Rate	2024	2025	2026	2027
Revenue from the compensation tariff term	100 %	The amount of compensation is calculated annually at the end of the auction campaign (March of year N).			
Revenue from the commercialisation of storage capacities	100 %	The amount is set annually at the end of the auction campaign (March of year N).			
Normative capital charges "infrastructures"	100 %	104.3	108.3	111.5	115.1
Energy costs and purchases and sales of CO_2 quotas	100 %		12.9	14.9	13.8
	90 %[40]	14.2	Updated annually		
Charges for consumables and treatment of effluents	100 %		0.9	0.9	0.9
	80%	0.8	Updated annually		
Reference for the calculation of differences in capital charges "excluding infrastructure" due to inflation	100 %	9.7	9.0	9.0	9.2
Charges and revenue associated with contracts with other regulated operators (products)	100 %	5.4	5.4	5.6	5.6
Penalties paid to customers	100% above the 3 M€ threshold	0	0	0	0
Share of decommissioning provisions made by the operator	100 %	0	0	0	0
Bonuses and penalties resulting from different incentive regulation mechanisms	100 %	0	0	0	0
Gains on disposal of real estate or land assets	80%	0	0	0	0
Costs for abandoned studies and stranded costs for which CRE approves the coverage	100 %	0	0	0	0
Reference trajectory of the Teréga "TOTEX" experiment	50%	11.1	11.2	12.2	11.4
Constitution of additional gas stocks following implementation of regulatory obligations as specified in Article L. 421-6 of the Energy Code	100 %	0	0	0	0
R&D charges	100% of unused charges at the end of the period	1.0	1.0	0.8	0.8

Furthermore, with regard to net operating expenses, for the years 2024 to 2027, the amount taken into account for calculation of the CRCP balance takes into account the difference between projected inflation and actual inflation.

This amount is equal to the reference value for year *N*:

- divided by the forecast inflation between year 2022 and year *N*;

	2023	2024	2025	2026	2027
Forecast inflation between year 2022 and year *N*	4.8%	7.4%	9.6%	11.8%	13.8%

[40] The coverage is 90% for the fraction of the difference between the realised and the forecast trajectory less than or equal to 50% (in absolute value) of the forecast trajectory, and 100% beyond.

- multiplied by the real inflation between year 2022 and year N. Real inflation is defined as the change in the average value of the consumer price index excluding tobacco, as calculated by the INSEE for all households in France (referenced INSEE 1763852), observed over calendar year N, compared to the average value of the same index observed over calendar year 2022.

Géométhane

Géométhane, in M€$_{current}$	Rate	2024	2025	2026	2027
Revenue from the compensation tariff term	100 %	The amount of compensation is calculated annually at the end of the auction campaign (March of year N).			
Revenue from the commercialisation of storage capacities	100 %	The amount is set annually at the end of the auction campaign (March of year N).			
Normative capital charges "infrastructures"	100 %	26.8	35.0	36.5	38.3
Energy costs and purchases and sales of CO_2 quotas	100 %	-	1.5	1.9	1.9
	90 %[41]	1.7	Updated annually		
Charges for consumables and treatment of effluents	100 %	-	0.2	0.2	0.2
	80%	0.2	Updated annually		
Reference for the calculation of differences in capital charges "excluding infrastructure" due to inflation	100 %	1.9	1.8	1.8	1.8
Charges and revenue associated with contracts with other regulated operators (charges)	100 %	6.7	6.8	6.5	6.7
Share of decommissioning provisions made by the operator	100 %	0	0	0	0
Bonuses and penalties resulting from different incentive regulation mechanisms	100 %	0	0	0	0
Gains on disposal of real estate or land assets	80%	0	0	0	0
Costs for abandoned studies and stranded costs for which CRE approves the coverage	100 %	0	0	0	0
Constitution of additional gas stocks following implementation of regulatory obligations as specified in Article L. 421-6 of the Energy Code	100 %	0	0	0	0
R&D charges	100% of unused charges at the end of the period	1.0	0.2	0.2	0.2

Furthermore, with regard to net operating expenses, for the years 2024 to 2027, the amount taken into account for calculation of the CRCP balance takes into account the difference between projected inflation and actual inflation.

This amount is equal to the reference value for year *N*:

- divided by the forecast inflation between year 2022 and year *N*;

	2023	2024	2025	2026	2027
Forecast inflation between year 2022 and year *N*	4.8%	7.4%	9.6%	11.8%	13.8%

- multiplied by the real inflation between year 2022 and year N. Real inflation is defined as the change in the average value of the consumer price index excluding tobacco, as calculated by the INSEE for all households in France (referenced INSEE 1763852), observed over calendar year N, compared to the average value of the same index observed over calendar year 2022.

[41] The coverage is 90% for the fraction of the difference between the realised and the forecast trajectory less than or equal to 50% (in absolute value) of the forecast trajectory, and 100% beyond.

APPENDIX 3: Terms of Calculation of References for the update of Energy benefit charges

[confidential]