



## DELIBERATION NO 2020-011

Deliberation by the French Energy Regulatory Commission of 23 January 2020 deciding on the tariffs for the use of the underground natural gas storage infrastructure of Storengy, Teréga and Géométhane

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

**Present: Jean-François CARENCO, Chairman, Christine CHAUVET, Catherine EDWIGE and Ivan FAUCHEUX, commissioners.**

Law No. 2017-1839 of 30 December 2017 putting an end to exploration and exploitation of hydrocarbons, and introducing various provisions energy and environmental measures, modified the regime governing third parties' access to storage facilities, which has been regulated since 1 January 2018.

Article L. 421-3-1 of the energy code states that "*underground natural gas storage infrastructure which guarantee the territory's security of supply in the medium and long terms and compliance with bilateral agreements concerning security of supply of natural gas [...] are specified by the multi-annual energy programme mentioned in Article L. 141-1. These infrastructure are maintained in operation by operators*".

Articles L.452-1, L. 452-2 and L.452-3 of the French Energy Code provide a framework for CRE's powers in terms of tariffs.

The current tariffs for the use of Storengy's, Teréga's and Géométhane's underground natural gas storage infrastructure, called "ATS1" tariff, entered into effect in 2018, in accordance with CRE's deliberation of 22 March 2018<sup>1</sup>.

As from the entry within the scope of regulation, decree No 2016-1442 of 27 October 2016<sup>2</sup> relating to the multi-annual energy programme took into account within this scope all active sites and sites under limited operation. Later on, the decree of 26 December 2018<sup>3</sup> withdrew from the list of infrastructure specified by the multi-annual energy programme (PPE), Storengy's three sites under limited operation (Trois-Fontaines, Saint-Clair-sur-Epte and Soings-en-Sologne), which have never been used within the framework of regulated access to gas storage. The infrastructure in question continue to be regulated until the expiration of the two-year deadline defined by order<sup>4</sup>, i.e. until 31 December 2020.

In return, and within the limits of the obligation to maintain the operation of the storage sites specified by the PPE, the storage operators are guaranteed to have their costs covered, as long as these costs are those of an efficient operator. Article L. 452-1 of the energy code provides that the difference between storage operators' allowed revenue and the income they receive directly, particularly through the auctioning of their capacity, is offset through the ATRT tariff, by a specific storage tariff charge.

<sup>1</sup> [Deliberation of 22 March 2018 deciding on the tariff for the use of Storengy's, TIGF's and Géométhane's underground natural gas storage infrastructure](#)

<sup>2</sup> [Decree No 2016-1442 of 27 October 2016 on the multi-annual energy programme](#)

<sup>3</sup> [Decree No 2018-1248 of 26 December 2018 on the gas storage infrastructure necessary for security of supply](#)

<sup>4</sup> [Order of February 2019 on the notice period specified in Article L. 421-3-1 of the energy code](#)

After an initial tariff limited to two years because of the context under which natural gas storage came within the scope of regulation, CRE harmonised the regulatory framework for storage operators with that of other infrastructure tariffs; the following storage tariff, called “ATS2”, will apply as from 2020 for a period of roughly four years.

Given the need to provide visibility to market participants and the complexity of the issues to be addressed, CRE ran three public consultations:

- the first, launched on 14 February 2019, concerned the regulatory framework applicable to regulated infrastructure operators for the next generation of tariffs. 41 answers were received;
- the second, launched on 27 March 2019, aimed to collect interested parties’ opinions on CRE’s initial guidelines concerning the structure of the ATRT7 tariff and on the storage tariff charge. 66 answers were received;
- the third, launched on 23 July 2019, aimed to collect interested parties’ opinions on all of the guidelines concerning the ATS2 tariff. 30 answers were received.

The non-confidential responses to these three public consultations are published on CRE’s website together with the present decision.

The present decision is based, in particular, on the tariff proposals of storage operators as well as on the numerous exchanges with the latter, on internal analyses, on external auditors’ reports<sup>5</sup> and on feedback by market participants in the different public consultations. CRE also held discussions with system operators, their shareholders, and organised on 7 November 2019, a round table with the main shippers and consumers that took part in the public consultation.

### **Main issues**

In addition to simplicity, foreseeability and continuity objectives, the ATS2 tariff provides answers to the issues below:

- 1- Extend to storage infrastructure the incentive regulation principles implemented in order to ensure efficiency of all regulated infrastructure operators

Implementation of the gas storage reform enabled marketing and filling of storage at the levels necessary to ensure security of supply. In addition, it reinforced transparency of marketing arrangements and of operators’ costs. Carried out with tight deadlines in cooperation with storage operators and market participants, the gas storage reform enhanced security of supply in France at a controlled cost for the community.

During the preparation of the ATS1 tariff, the short deadlines for implementing the storage reform did not enable CRE to propose a net operating expenses trajectory that was sufficiently relevant to be subject to an effective incentive regulation. Therefore, for the ATS1 tariff period, which was limited to two years, CRE adopted a specific regulatory framework, in which the differences between actual and target figures for all expenses and income are settled *ex post*. The ATS2 tariff implements the incentive regulation principles applied to the other regulated infrastructure, with, in particular, a tariff period of roughly four years, and incentives for cost-control and the quality of service provided to storage users.

- 2- Control of the evolution of operators’ costs against a downward trend in gas consumption

Stagnating gas consumption over the last ten years and its foreseeable evolution for 2030, particularly within the framework of energy transition objectives, make the control of all gas operators’ costs a major challenge. The ATS2 tariff, which sets, in particular operators’ OPEX trajectories based on their performance in 2018, responds to this challenge, while giving operators the means of maintaining a high level of security for their infrastructure, concerning, for example cybersecurity or consideration of the need to renovate certain infrastructure.

Furthermore, CRE will be particularly vigilant in its examination of any new investment project submitted to it by storage operators. The offering proposed and the investments envisaged by operators must strictly target the following two purposes: compliance with the objectives set by the PPE to ensure security of supply in France and the response to industrial safety issues.

<sup>5</sup>An audit of Storengy’s, Teréga’s and Géométhane’s proposal concerning operating expenses for the 2020-2023 period and an audit of Storengy’s, Teréga’s and Géométhane’s proposal regarding the remuneration rate for natural gas storage operators’ regulated assets, both of which are published on CRE’s website.

**Tariff level**

The natural gas storage operators Storengy, Teréga and Géométhane, each drafted a tariff proposal presenting their forecast costs for the 2020-2023 period and their requests regarding the regulatory framework.

Taking into account the elements in the tariff proposals addressed to CRE by Storengy, Teréga and Géométhane would have led to a significant increase in allowed revenue of an average +5.9% per year for Storengy, an average +6.6% per year for Teréga and an average +8.7% per year for Géométhane.

These proposals present major increases in net operating expenses and in the return on capital invested, whereas gas consumption does not increase. CRE considers that these requests are too high.

To make its decision, in addition to its own analyses, broad consultation of participants and exchanges with operators, CRE drew on external auditors' assessments. These assessments covered the following topics:

- an audit of Storengy's, Teréga's and Géométhane's proposal concerning operating expenses for the 2020-2023 period;
- an audit of Storengy's, Teréga's and Géométhane's proposal concerning the rate of remuneration of natural gas storage operators' regulated assets. Storengy and Géométhane request an average weighted cost of capital of 6.5% (real, before tax); Teréga's request stands at 7.5% compared to 5.75% for all operators in the ATS1 tariff, whereas a drop in corporate tax has been scheduled by the government.

At the end of its analyses, CRE considers that an increase in Storengy's and Teréga's operating expenses is justified to take into account the level of activity of underground gas storage since the entry into effect of the regulation. However, the adopted increase in storage operators' net operating expenses is lower than their proposal.

For Storengy, CRE adopted, in particular:

- additional resources enabling Storengy to respond to operational requirements related to the increase in storage activity since coming within the scope of regulation;
- an increase in resources to meet cybersecurity challenges;
- reinforcement of R&D, in particular to study the consequences of the accommodation of new gas on storage and the properties of the subsoil.

For Teréga, CRE adopted, in particular:

- additional resources for the successful transformation of the company by adapting information systems in particular, and taking into account recruitments already made in 2019;
- a wage policy equivalent to that of all other operators;
- a maintenance programme as requested by Teréga;
- reinforcement of R&D, in particular concerning the accommodation of new gas in the networks.

For Géométhane, CRE globally adopted the trajectory of net operating expenses proposed.

The trajectory of net operating expenses set by CRE corresponds to an overall envelope. Therefore, the storage operators have the freedom to distribute this envelope among the different types of expenses as they choose.

**Moreover, as a reminder, storage operators' investments are covered by the tariff based on completed work (covered fully through the expenses and revenues clawback account (CRCP)), and operators are protected against the evolution in inflation by the tariff.**

CRE adopts a change in the weighted average cost of capital (WACC), which stands at 4.75% (real, before tax). The method used to establish this is the same as that used for the ATS1 tariff. It is based on a standard-structure WACC and guarantees reasonable remuneration of capital invested, maintaining the attractiveness of energy infrastructure in France with regard to other European countries. This level corresponds to the level adopted for the ATRT7 tariff (4.25%) to which is added a premium relating to the specific risk of the activity of gas storage in underground cavities, set, as in ATS1, at 50 basis points.

This level, down 1 point compared to the ATS1 tariff, takes into account, with the same method as for the previous tariffs:

- the downward change in financing costs against a very significant and sustainable drop in interest rates in the markets;
- the planned decrease in corporate tax, which will drop from an average 34.43% to an average 28% over the tariff period;

- an increase in the asset *bêta* to reflect the consideration of the financial risk, particularly stranded costs, which places the burden of the energy transition on gas infrastructure shareholders.

The average level of storage operators' costs to be covered over the ATS2 period will total:

- €518 million/year for Storengy, i.e. an average increase in costs to be covered of 1.4% per year between 2018 and 2023 resulting from a +2.7% increase in operating costs per year and a +0.7% increase in capital expenses per year;
- €153 million/year for Teréga, i.e. an average increase in costs to be covered of 1.3% per year between 2018 and 2023 resulting from a +5.0% increase in operating costs per year and a small -0.1% drop in capital expenses per year;
- €45 million/year for Géométhane, i.e. an average increase in costs to be covered of 4.7% per year between 2018 and 2023 resulting from a +3.8% increase in operating costs per year and a +5.3% increase in capital expenses per year.

### **Tariff regulatory framework**

For the ATS2 tariff, CRE is implementing the main incentive regulation mechanisms in effect in the gas transmission tariff: incentive regulation for the control of operating and investment expenses, incentive regulation for service quality, and *ex post* coverage of certain differences through the CRCP account.

In addition, for Teréga, CRE is implementing a TOTEX incentive regulation experiment for its information systems, as proposed by Teréga itself.

The first two storage capacity auction campaigns for winter 2018-2019 then 2019-2020 were successful. In particular, the reserve price set at zero ensured that demand was far greater than capacity supply. Therefore, CRE has modified the incentive regulation for the marketing of storage capacity: while retaining an incentive, though reduced, for filling storage, CRE has introduced an incentive to better take into account the performance of storage operators' offering. A bonus will be paid once the capacities guaranteeing France's security of supply in winter are sold. This bonus will be equal to the sum of the following two components:

- 0.5% of auction revenue;
- 5% of auction premiums, i.e. the difference between (i) the sale price of storage capacity and (ii) the winter-summer spread adjusted for storage costs.

Therefore, operators continue to have an incentive to sell capacity ensuring security of supply, but the financial incentive is based more heavily on storage performance.

Lastly, the ATS2 tariff will not cover the costs for decommissioning Storengy's three sites under limited operation, which will exit the scope of regulation after only three years of being regulated and without any period of active operation within the regulated framework. However, for the other sites, in the event that operators are required to set aside provisions for decommissioning, CRE has introduced coverage by the tariff of these costs, in proportion to the duration of these assets' presence in the regulation.

The Conseil supérieur de l'énergie, consulted by CRE on the draft decision, delivered its opinion on 14 January 2020.

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## **1. CRE'S POWERS AND THE TARIFF ELABORATION PROCESS**

### **1.1 CRE's powers**

Article L. 421-3-1 of the energy code states that *“underground natural gas storage infrastructure which guarantee the territory's security of supply in the medium and long terms and compliance with bilateral agreements concerning security of supply of natural gas signed by France with a European Union Member State or a European Free Trade Association Member are specified by the multi-annual energy programme mentioned in Article L. 141-1. These infrastructure are maintained in operation by operators [...]”*.

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

Articles L.452-1, L. 452-2 and L.452-3 of the French Energy Code provide a framework for CRE's powers in terms of tariffs.

Article L. 452-1 of the energy code states that *“tariffs for using the transmission network, the commercial terms under which these networks are used, and the tariffs charged for non-transmission services provided by the operators of these networks or by the operators of the storage infrastructure referenced in Article L. 421-3-1, are established in a transparent and non-discriminatory manner in order to cover all of the costs borne by the transmission system operators and the operators of the storage infrastructure mentioned in the same Article L. 421-3-1, as long as these costs reflect those of an efficient operator. These costs take into account the characteristics of the service rendered and the costs related to this service, and include the obligations established by law and regulations as well as those costs resulting from the execution of public service missions and contracts mentioned in I of Article L. 121-46”*.

It specifies that *“[c]osts borne by operators of storage infrastructure mentioned in Article L. 421-3-1 include, in particular, normal remuneration of capital invested, the costs mentioned in the last paragraph of Article L. 421-6, the research and development costs necessary for the security of these infrastructure and the costs borne by these operators for modifying the type or properties of gas shipped in the natural gas networks”*.

In addition, Article L. 452-2 of the energy code states that *“[t]he methods used to establish the tariffs for the use of the natural gas transmission networks, [...] are set by the Energy regulatory commission”* and specifies that *“operators of the storage facilities mentioned in Article L. 421-3-1 shall send to the Energy regulatory commission, at its request, the necessary elements, in particular, of an accounting and financial nature, enabling it to decide on the updates to the tariffs for the use of the natural gas networks”*.

In addition, Article L.452-3 of the energy code specifies that *“[t]he Energy regulatory commission shall debate and decide on tariff updates as well as updates of non-transmission services carried out exclusively by the operators of these networks or installations with, as needs be, modifications to the tariff level and structure which it deems justified in view of, in particular, an analysis of the operators' accounts and any expected changes in operating or investment costs”* and adds that *“[t]hese deliberations, which can take place at the request [...] of the operators of storage infrastructure mentioned in Article L. 421-3-1, can specify a multi-annual framework for the update of tariffs as well as appropriate short- or long-term incentive measures to encourage operators to improve their performance [...]”*.

Lastly, Article L. 452-3 specifies that CRE shall *“consult energy market participants, based on the modalities that it determines”*.

In the present deliberation, CRE defines the allowed revenue and the regulatory framework of the natural gas storage operators Storengy, Teréga and Géométhane for the ATS2 period from 2020 to 2023 inclusive.

### **1.2 Tariff elaboration process**

#### **1.2.1 Consultation of stakeholders**

Given stakeholders' need for visibility and the complexity of subjects, CRE carried out three public consultations prior to taking the present decision:

- the first, launched on 14 February 2019, concerned the regulatory framework applicable to regulated infrastructure operators for the next generation of tariffs. 41 answers were received;
- the second, launched on 27 March 2019, aimed to collect interested parties' opinions on CRE's initial guidelines concerning the structure of the ATRT7 tariff and on the storage tariff charge. 66 answers were received;



- the third and last consultation, launched on 23 July 2019, questioned stakeholders about CRE's initial guidelines concerning the level of expenses to be covered. It also aimed to present, based on CRE's analyses and market participants' feedback, the guidelines envisaged concerning the proposals presented in the public consultations of 14 February and of 27 March 2019. 30 answers were received.

The non-confidential responses to these three public consultations are published on CRE's website.

After the first public consultation, CRE held discussions with storage operators. After the second public consultation, CRE held a round-table on 7 November 2019 with the shippers and consumers that took part in the consultation. It also had new discussions with Storengy, Teréga and Géométhane and their respective shareholders.

### 1.2.2 Transparency

For the purposes of transparency, CRE published the external assessments conducted within the framework of the elaboration of the ATS2 tariff. These assessments cover the following topics:

- an audit of Storengy's, Teréga's and Géométhane's proposal concerning operating expenses for the period<sup>6</sup>;
- an audit of Storengy's, Teréga's and Géométhane's proposal concerning the rate of remuneration of natural gas storage operators' regulated assets<sup>7</sup>.

## 2. TARIFF REGULATORY FRAMEWORK

### 2.1 Main tariff principles

The elaboration of the ATS2 tariff is based on the definition, for the upcoming tariff period, of an allowed revenue for each storage operator (Storengy, Teréga and Géométhane).

The ATS2 tariff also defines a regulatory framework aimed, on the one hand, at limiting storage operators' and/or users' financial risk for certain predefined expense items or income, through an expenses and revenues clawback account (CRCP), and on the other hand, at encouraging the storage operators to improve their performance thanks to incentive mechanisms.

All of these elements are used to establish the tariff applicable for 2020, and the modalities for their yearly update.

#### 2.1.1 Scope of regulation

In accordance with Articles L. 421-3-1, L. 421-10 and L. 452-1 of the energy code, storage operators' costs and their income are considered within the scope of storage infrastructure specified by the multi-annual energy programme (PPE). They are taken into account as long as they correspond to those of an efficient operator.

As from the entry of storage within the scope of regulation, decree No 2016-1442 of 27 October 2016<sup>8</sup> relating to the multi-annual energy programme took into account within this scope all active sites and sites under limited operation.

Later on, the decree of 26 December 2018<sup>9</sup> updated this scope based on the following provisions:

*“During the second period of the multi-annual energy programme, the underground natural gas storage infrastructure necessary for ensuring security of supply in the medium and long terms are those listed below, representing a working volume of 138.5 TWh and a withdrawal capacity of 2,376 GWh/d for a fill rate equating to 45% of working volume:*

<sup>6</sup> Audit of Storengy's, Teréga's and Géométhane's proposal concerning operating expenses for the 2020-2023 period

<sup>7</sup> Audit of Storengy's, Teréga's and Géométhane's proposal concerning the rate of remuneration of natural gas storage operators' regulated assets.

<sup>8</sup> Decree No 2016-1442 of 27 October 2016 on the multi-annual energy programme

<sup>9</sup> Decree No 2018-1248 of 26 December 2018 on the gas storage infrastructure necessary for security of supply

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

“ Storengy's three sites under limited operation (Soings-en-Sologne, Saint-Clair-sur-Epte and Trois-Fontaines) as well as the Lussagnet phase 1 project (Teréga) and Manosque 2 project (Géométhane) were withdrawn from the scope of infrastructure considered necessary for security of supply. Therefore, they will exit the scope of regulated sites at the end of the two-year notice set by the order of 19 February 2019<sup>10</sup>, i.e. at the end of 2020.

### 2.1.2 Determination of allowed revenue

In the present deliberation, based on the tariff proposal forwarded by operators and its own analyses, CRE sets the target allowed revenue of each storage operator for the 2020-2023 period. Allowed revenue covers the operators' costs on a calendar basis as long as those costs correspond to those of an efficient operator.

This target allowed revenue comprises target net operating expenses (CNE), target normative capital expenses (CCN), and reconciliation of the balance of the expenses and revenues clawback account (CRCP):

$$RA = CNE + CCN + CRCP$$

Where:

- RA: target allowed revenue for the period;
- CNE: target net operating expenses for the period;
- CCN: target normative capital expenses for the period;
- CRCP: reconciliation of the CRCP balance.

The tariff framework guarantees that operators receive their allowed revenue.

<sup>10</sup> Order of 19 February 2019 on the notice period specified in Article L. 421-3-1 of the energy code



**2.1.2.1 Net operating expenses**

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

Gross operating expenses are mostly composed of energy costs, external consumption, staff expenses and taxes.

The level of net operating expenses adopted is determined based on all of the costs necessary for the storage operators' business, as long as, pursuant to Article L. 452-1 of the French energy code, these costs correspond to those of an efficient system operator.

**2.1.2.2 Normative capital expenses**

Normative capital expenses (CCN) consist of the return on and depreciation of fixed capital. These two components are calculated from the valuation and development of assets exploited by Storengy, Teréga and Géométhane - the regulated asset base (RAB) - and of fixed assets under construction (AuC), i.e. investments made that have not yet led to the commissioning of assets.

The CCN equates to the sum of the depreciation of assets from the RAB and the return from the fixed capital. This corresponds to the product of the value of the RAB and the weighted average capital cost (WACC) plus the product of the value of the AuC and the cost of debt.

$$\text{CCN} = \text{Annual depreciation of the RAB} + \text{RAB} \times \text{WACC} + \text{AuC} \times \text{cost of debt}$$

**2.1.3 Return on assets and coverage of investments**

**2.1.3.1 Method for the calculation of the rate of return**

As it did within the framework of the ATS1 tariff, in the absence of regulated operators of natural gas storage sites listed on the stock exchange, CRE uses an indirect approach to define the rate of return on the storage activity, building on the method applied in the regulated tariff for access to LNG terminals (called ATTM tariff).

For that purpose, CRE used the rate of return on the activity of natural gas transmission system operator. This activity is conducted by stock-listed companies and presents an economic nature close to that of natural gas storage and LNG terminal operator.

The method adopted to set the rate of return of gas transmission system operators' assets is in fact based on the WACC with a normative financial structure. The operator's return must enable it to finance its debt interest and provide it with a return on equity that is comparable to that which it could obtain for investments with similar risk levels. This cost of equity is estimated based on the capital asset pricing model (CAPM).

CRE then adjusts the WACC of the activity of natural gas transmission system operators based on economic and financial considerations and applies to this rate a special premium related to the specific risks of the activity of operator of regulated storage sites.

CRE has also observed that other European regulators differentiate between the rates of return on the activity of natural gas transmission system operator and that of natural gas storage operator<sup>11</sup>.

The level of the rate of return on the RAB adopted within the framework of the present deliberation is specified in section 2.3.2 of the present deliberation.

**2.1.3.2 Method for the calculation of the regulated asset base (RAB)**

For the ATS2 tariff period, CRE is readopting the RAB calculation method in effect for the ATS1 tariff. To define the initial level of storage operators' RAB, CRE revalued the gross book value of operators' assets based on a "current economic costs" method whose main principles were defined by the special institution established under Article 81 of the amending finance law of 28 December 2001 (Commission Hourri) tasked with setting the price of disposal, by the State of its natural gas transmission networks.

The agreed date for incorporating assets into the RAB is set at 1 January of the year following their commissioning. The gross values of assets are adjusted for revaluation differences authorised in 1976 and subsidies received in respect of carrying out these investments.

Once logged in the RAB, assets are revalued as at 1 January each year for July to July inflation. For this reason, CRE adopts a real WACC that does not include inflation. The revaluation index used is the index 1763852 for consumer prices, excluding tobacco, for all households residing in France.

<sup>11</sup> <https://www.autorita.energia.it/allegati/docs/15/583-15all.pdf> et <http://www.creg.be/sites/default/files/assets/Publications/Other/21110-7FR.pdf>



Assets are depreciated using the straight-line method on the basis of their economic lifetime. Land is recorded at its revalued undepreciated historical value.

The lifetimes adopted by CRE for the main categories of assets are:

<b>Asset category</b>	<b>Normative lifetime</b>
Cushion gas	75 years
Wells, caverns and collections	50 years
Treatment, compression, delivery and metering facilities	20 to 30 years
Land and buildings	30 years
Miscellaneous equipment	10 to 15 years
Software, small equipment	5 years

**2.1.3.3 Return on fixed assets under construction**

CRE is readopting the principle of remunerating assets under construction (AuC) at the nominal cost of debt before tax, in line with the methodology generally used for interest during construction.

Within the framework of its public consultations of 14 February and 23 July 2019, CRE contemplated possibly restricting the AuC base to be remunerated, to stocks of assets corresponding to long-cycle investments (over one year).

CRE notes that, for gas storage operators, almost all investments are long-cycle investments. The value of this is therefore limited given the complexity involved in following investments of a maturity of less than one year which could not be processed massively and would require treatment outside official accounting. Therefore, CRE has not adopted this possibility of changing the remuneration of assets under construction for the ATS2 tariff.

The amount of these AuC is equal to the average, for each year the tariff is applied, between their level estimated on 1 January and that at 31 December, taking into account the investment expenses incurred and the amount of assets commissioned during the year.

**2.1.3.4 Treatment of assets removed from inventory**

**2.1.3.4.1 Treatment of stranded costs**

By “stranded costs”, CRE refers to the residual book value of assets withdrawn from inventory before the end of their lifetime, as well as costs relating to technical studies and upstream processes that could not be immobilised if the projects concerned were not carried out.

Stranded costs are treated as follows:

- the cost of studies relating to large abandoned projects previously approved by CRE are covered by the tariff through the CRCP ;
- coverage of other stranded costs will be examined by CRE on a case-by-case basis, based on substantiated requests submitted by the storage operators.

The costs to be covered, where applicable, by the tariffs, are taken into account at their book value minus any disposal proceeds.

**2.1.3.4.2 Treatment of disposed assets**

When an asset is disposed of by an operator, it exits the RAB and therefore ceases to generate capital expenses (depreciation and remuneration). This disposal may generate a profit for the operator, equal to the difference between the proceeds from the disposal and the book value of the asset.

In its public consultation of 23 July 2019, CRE questioned market participants about the treatment to be applied to disposed assets. Most participants are in favour of a portion of the profit being taken into account in the tariff, considering that the tariff contributed to financing the assets sold.

For the ATS2 tariff, in the case of a disposal of land or buildings:

- if the disposal gives rise to an accounting gain, the disposal proceeds net of the sold asset's net book value are included at 80% in the CRCP so that network users can benefit from the greater part of the gains drawn from the disposal of these assets, given that these users bore the acquisition costs (operators' allowed revenue covering annual depreciation and remuneration of assets in the RAB), while maintaining an incentive for the system operator to maximise this gain. The operator keeps the remaining 20% of the gains;
- a disposal giving rise to an accounting loss will be examined by CRE, based on a substantiated file submitted by the storage operator.

#### **2.1.3.4.3 Treatment of decommissioning costs**

In its tariff proposal, Storengy requested the coverage in the ATS2 tariff of the costs for decommissioning the Saint-Clair-sur-Epte, Soings-en-Sologne and Trois-Fontaines sites which it estimates preliminarily at about €220 million<sup>12</sup>. Storengy requests the coverage of €24 million per year over the ATS2 period for decommissioning these sites. In addition, Storengy plans to put the Trois-Fontaines site back into service to withdraw and sell the base gas, which would reduce the remaining amount to be covered by the operator.

Following the adoption of decree No 2018-1248, which withdraws the three sites under limited operation by Storengy (Soings-en-Sologne, Saint-Clair-sur-Epte and Trois-Fontaines) from the scope of infrastructure necessary for security of supply, these three sites will exit the scope of regulated sites at the end of the two-year notice set by order of 19 February 2019, i.e. at the end of 2020.

CRE reiterates that the withdrawal of infrastructure from the list of sites necessary for the security of supply does not impose the decommissioning of these sites, with such a decision being left to the operator. While inclusion within the scope of regulation requires, under Article L. 421-3-1 of the energy code, the operator to keep the site in operation, there is however no obligation if the site is not included within the scope of the PPE.

Moreover, the three storage sites concerned started limited operation before the entry into effect of the reform concerning third-party access to storage infrastructure. Therefore, the costs for keeping these sites under limited operation were covered by the tariff, even though in practice, they did not contribute to France's security of supply. The reform therefore did not lead to any costs for Storengy for these sites.

In the light of these elements, CRE considers that the costs for decommissioning the sites under limited operation cannot be covered by the tariff.

However, CRE considers that the case of these three sites is specific and that a different treatment should be adopted if other sites had to exit the regulated scope in the future. In compliance with Article L. 421-3-1 of the energy code, decommissioning costs cannot be covered once the sites have exited the scope of regulation. However, these sites will have contributed to security of supply when they were included in the scope of regulation. Therefore, in the event that storage operators are required, over the ATS2 period, to set aside decommissioning provisions in their accounts, the ATS2 tariff will cover a portion, in proportion to the duration of presence of the assets concerned within the scope of regulation. These provisions will be fully covered in the CRCP. In its tariff proposal, Teréga had made a similar proposal, without differentiating between "regulated" and "non-regulated" periods in the asset's lifetime.

Most participants sharing their views on this proposal, presented in CRE's public consultation of 23 July 2019, are in favour.

#### **2.1.4 Principle of the CRCP**

The ATS tariff is defined by CRE based on assumptions about the level of income and expenses. An *ex post* adjustment mechanism, the expenses and revenues clawback account (CRCP), was introduced in order to take into account the differences between actual expenses and income, and target expenses and income for predefined items (see section 2.3.3). The CRCP therefore protects operators against the variation in certain cost and expense items. The CRCP is also used for payments of financial incentives resulting from the application of incentive regulation mechanisms, as well as to take into account any capital gain on asset disposal or stranded costs once they are validated by CRE.

In the ATS1 tariff, the CRCP balance was calculated as at 31 December each year. Reconciliation of the balance of this account is performed Y+1, during the annual tariff update, by reducing or increasing the allowed revenue, within the limit of a +/-5% variation in the target allowed revenue of each operator. If this limit is reached, the CRCP balance not reconciled during the year in question is carried over to the following year.

<sup>12</sup> Storengy plans to put the Trois-Fontaines site back in operation to withdraw and sell the gas contained in the storage. Any sale proceeds will be deducted from this amount.

The +/-5% limit was defined within the framework of the first storage tariff exercise, with an *ad hoc* regulatory framework in which all of the differences between the actual expenses and target expenses were covered in the CRCP.

In addition, the entire CRCP balance remaining at the end of ATS1 tariff period is taken into account to establish the allowed revenue of the following period. The CRCP balance is therefore reset to zero at the start of each tariff period.

In its public consultations of 14 February 2019 and 23 July 2019, CRE proposed to harmonise the CRCP reconciliation terms of all the electricity networks and gas infrastructure tariffs, by aligning the functioning of the CRCPs of upstream gas infrastructure tariffs (ATRT, ATS, ATTM) with that of other network tariffs (TURPE, ATRD). In particular, CRE proposed to also apply an annual reconciliation limit of +/-2% to the storage tariff. While the majority of participants were in favour of this proposal, storage operators stated that this limit risked being reached more rapidly than for the other tariffs, it being a matter of a change in allowed revenue.

CRE considers, like the storage operators, that the level of 2% of allowed revenue could rapidly be reached, unlike with the coefficient *k* adopted in the other tariffs, which, being applied to tariffs, is cumulative over the period. At the end of the ATS period, the balance remaining to be carried over to the following period could therefore be high, to the detriment of tariff continuity.

Therefore, for the ATS2 tariff, the CRCP will therefore be calculated as at 31 December of each year, and reconciled over a period of one year, within the limit of a +/-5% change in allowed revenue related to this reconciliation, corresponding to the coefficient *k* described in section 2.2.2 of the present deliberation. If the limit is reached, the balance not reconciled will be carried over the following year.

In order to ensure financial neutrality of the system, an interest rate equal to the risk-free rate taken into account in the calculation of the WACC applies to the CRCP balance (1.7%).

Lastly, the entire CRCP balance remaining at the end of the tariff period will be taken into account to establish the allowed revenue of the following period. This will be the case for the CRCP balance at the end of the ATS2 period.

### 2.1.5 Constitution of gas stocks by operators

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

- constitution of the gas stocks necessary to operate and maintain the performance of the storage site (referred to as “performance gas”);
- constitution of additional gas stocks to meet regulatory stock obligations such as those set out in Article L. 421-6 of the energy code.

For these operations, the losses or gains generated by the purchases-sales of gas are included in the net operating expenses as at the date of resale of the gas. Gas stocked is remunerated at the same rate as assets under construction (nominal cost of debt, before tax). The level of this rate is specified in section 3.3.1 of the present deliberation.

Constitution of additional gas stocks to meet regulatory stock obligations such as those set out in Article L. 421-6 of the energy code is covered in the CRCP.

### 2.1.6 Collection of allowed revenue

For each calendar year, Storengy, Teréga and Géométhane receive allowed revenue in the following manner:

- on the one hand, in the form of revenues they obtain directly from their clients, mainly from the sale of underground natural gas storage capacity, the terms of which are defined by CRE in its deliberation of 27 September 2018<sup>13</sup>;
- on the other hand, in the event that the income they receive directly is lower than their allowed revenue, through compensation collected by the transmission system operators (TSOs) from their clients and transferred to the storage operators. The terms for collecting and transferring this compensation are specified in the deliberation of 23 January 2020 on a decision concerning the gas transmission tariff<sup>14</sup>.

## 2.2 Tariff calendar

### 2.2.1 A tariff period of about four years

<sup>13</sup> CRE's deliberation of 27 September 2018 deciding on the terms for the marketing of natural gas storage capacity as from October 2018

<sup>14</sup> Deliberation by the French Energy Regulatory Commission of 23 January 2020 deciding on the tariffs for the use of GRTgaz's and Teréga's natural gas transmission networks



The duration of tariff periods applicable to regulated infrastructure is harmonised at roughly four years. The only exception to this principle was the duration of the first ATS1 storage tariff, which had been set at two years because of the natural gas storage reform, which led CRE to define a simplified framework.

In its consultation of 14 February 2019 relating to the tariff regulatory framework, CRE proposed to harmonise the duration of the storage tariff with that of the other regulated infrastructure. Market participants were in favour of this duration of roughly four years, considering, like CRE, that it offers visibility to the market concerning the change in infrastructure tariffs and that it gives operators the necessary time for making productivity efforts.

The ATS2 tariff will apply for a period of roughly four year, as from 2020. It aims to cover the expenses of the calendar years from 2020 to 2023. It will change annually, based on the terms described in section 2.2.2 of the present deliberation.

In addition, the ATS2 tariff provides for, as is the case in the other regulated infrastructure tariffs, a *rendez-vous* clause, which can be activated by the storage operator at the end of two years. Therefore, any consequences of new legal or regulatory provisions or a jurisdictional or quasi-jurisdictional decision may lead to a re-examination of the tariff trajectory for the last two years of the tariff period (2022 and 2023) if the level of net operating expenses adopted in the ATS2 tariff is modified by at least 1%.

### 2.2.2 Principles of the annual tariff update

The ATS2 tariff will be updated annually, as from 2021, according to the following principles:

The annual allowed revenue will be updated each year compared to the initial trajectory defined by the present deliberation, in the following manner:

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

Where:

- $RA_N$  is the updated allowed revenue for year Y set during the annual update;
- $RA_{IN}$  is the allowed revenue set by CRE for the year Y in the present ATS2 deliberation adjusted for inflation;
- $k$  is the change in allowed revenue, expressed as a percentage, resulting in particular from the reconciliation of the balance of the CRCP account;  $k$  ranges between +5% and -5%.

In addition, CRE could take into account, during annual updates of the ATS2 tariff, changes related to incentive regulation mechanisms for marketing and quality of service in particular.

### 2.2.3 Calculation of the CRCP balance as at 1 January of year Y

The overall CRCP balance is calculated before the definitive closure of annual accounts. It is therefore equal to the amount to be paid into or deducted from the CRCP (i) for the year passed, based on the best estimate of annual expenses and income (termed “estimated CRCP”), and (ii) for the previous year, by comparison between the actual expenses and income and the estimate made one year earlier (termed “final CRCP”), to which is added the CRCP balance not reconciled for former years.

The projected CRCP balance as at 31 December 2019 of each operator is taken into account to define the target revenue of the ATS2 tariff, and is reconciled over the four-year tariff period. It is therefore reset at 0 as at 1 January 2020.

The definitive differences to be paid into the CRCP for the year 2019 will be taken into account with the annual tariff update of 2021. The reference amounts and the coverage rates used to calculate this definitive balance are defined in the ATS1 deliberation of 22 March 2018<sup>15</sup>.

The amount to be paid into or deducted from the CRCP is calculated by CRE, for each year passed, based on the difference, for each item concerned, between the actual amounts and reference amounts defined in Annex 2. All or part of the difference is paid into the CRCP; the portion is determined based on the coverage rate specified by the present deliberation.

The expenses and income fully or partially covered through the CRCP for the ATS2 period are defined in Annex 2 of the present deliberation.

### 2.2.4 Calculation of the $k$ coefficient in view in particular of the reconciliation of the CRCP balance

<sup>15</sup> CRE's deliberation of 22 March 2018 deciding on the tariff for the use of Storengy's, TIGF's and Géométhane's underground natural gas storage infrastructure as from 2018



The update of the allowed income to be covered takes into account a coefficient  $k$  which aims in particular to reconcile, by 31 December of year  $Y$ , the balance of the CRCP of 31 December of year  $Y-1$ . The coefficient  $k$  is capped at  $\pm 5\%$ .

The coefficient  $k$  is determined so as to enable the revenue to be covered to level out, the following within the limit of the cap on the coefficient  $k$ :

- the target allowed revenue adjusted for inflation (see annex 2);
- the CRCP balance.

## **2.3 Incentive regulation for controlling costs**

### **2.3.1 Incentive regulation for operating expenses**

The deadlines for implementing the ATS1 tariff and the lack of feedback did not enable CRE to propose a trajectory of net operating expenses that was sufficiently relevant to have an effective incentive regulation: if it was set too high, the trajectory would have generated undue income for operators. However, if it was set too low, it would not have covered operators' costs.

In its consultations of 14 February and 27 July 2019, CRE proposed to apply for all infrastructure tariffs, including storage, the principles of incentive regulation for net operating expenses currently in effect for the other infrastructure tariffs: the net OPEX with the exception of certain predefined items are subject to a 100% incentive.

Most contributors were in favour of this principle, considering that it was necessary for storage operators to be encouraged to control their costs.

Therefore, with the exception of the types of expenses and income fully or partially covered through the CRCP, presented in section 2.3.3 of the present deliberation, the operator will bear or benefit from any difference compared to the trajectory of operating expenses set for the ATS2 period.

### **2.3.2 Incentive regulation for investments**

#### **2.3.2.1 Incentive for controlling costs for investments with a budget of over €20 million**

Gas and electricity network infrastructure tariffs provide for an incentive mechanism for investment projects with a significant budget (for example, €20 million in ATRT6). In its public consultation of 14 February 2019 concerning the regulatory framework, CRE indicated that it wished to maintain this mechanism. It specified that all projects with a budget exceeding a certain threshold were to be subject to an audit allowing a target budget to be set, with a bonus or penalty allocated to the operator depending on the difference between that target budget and the actual expenses, with a neutrality range of  $\pm 10\%$  around the target budget.

In its public consultation of 23 July 2019, CRE proposed to extend this mechanism to investments made by storage operators while limiting, as for investments made by transmission system operators, the neutrality range at  $\pm 5\%$  of the target budget. Almost all of the participants are in favour of the mechanism proposed by CRE.

Therefore, for investment projects greenlighted as from CRE's deliberation approving the investment programme for 2020 and for which the estimated budget is higher than or equal to €20 million:

- CRE will audit the budget presented by the storage operator and will set a target budget;
- regardless of the investment expenses made by the storage operator, the asset will be logged in the regulated asset base at its real value when it is commissioned (minus any subsidies);
- if the investment expenses incurred by the storage operator for this project are between 95% and 105% of the target budget, no bonus or penalty will be applied;
- if the investment expenses incurred are less than 95% of the target budget, the storage operator will receive a bonus corresponding to 20% of the difference between 95% of the target budget and the actual investment expenses;
- if the investment expenses incurred are higher than 105% of the target budget, the storage operator will have a penalty of 20% of the difference between the actual investment expenses and 105% of the target budget.

At this stage, the envelope for the relevant projects for Storengy during the ATS2 tariff is estimated at roughly €227 million. The envelope for Teréga's projects is estimated at €50 million for the ATS2 period. Lastly, the envelope for Géométhane's projects is estimated at €65 million for this same period.

For Storengy, the new projects concerned by this mechanism are, in particular:

- the Chémery renovation project for a budget estimated at €200 million by Storengy, including €91 million over the ATS2 period;
- the Gournay renovation project for a budget estimated at €58 million by Storengy, including €49 million over the ATS2 period;
- the salt cavern compression project for a budget estimated at €80 million by Storengy, including €79 million over the ATS2 period;
- the DH5 dehydration treatment renovation project at Etrez for a budget estimated at €28 million by Storengy, including €8 million over the ATS2 period.

For Teréga, the new projects concerned by this mechanism are:

- the project to upgrade the last five compressors of the Lussagnet site for a budget estimated at €100 million, including €19 million over the ATS2 period;
- the SecurLug project which aims to “secure Lussagnet and Izaute injection and withdrawal rates” for a budget estimated at €83 million by Teréga, including €31 million over the ATS2 period.

For Géométhane, the programme for new surface installations for a budget estimated at €69 million by Géométhane, including €65 million over the ATS2 period.

These lists are not exhaustive, since new projects may emerge over the period covered by the ATS2 tariff.

### **2.3.2.2 Incentive for controlling costs of projects with a budget lower than €20 million**

The incentive system for controlling costs of projects of an amount greater than or equal to €20 million described in section 2.3.2.1 of the present deliberation concerns a limited number of projects.

The present deliberation introduces an incentive mechanism based on CRE's selection, without any predefined criteria, of a few projects or categories of projects whose budget is below €20 million, in order to audit them and apply an incentive regulation comparable to that applicable to investment projects with a budget greater than or equal to €20 million.

This mechanism was proposed in the public consultations of 14 February and 23 July 2019. Almost all contributors to the public consultation of 23 July 2019 that gave their opinion on this topic are in favour of the mechanism proposed by CRE.

### **2.3.2.3 Incentive for controlling costs of "excluding infrastructure" investments**

In the ATRT6 tariff, CRE introduced a mechanism encouraging transmission operators to control their capital expenditure in the same way as their operating expenses within a scope of investments “excluding infrastructure” comprising assets such as real estate, vehicles and information systems (IS).

By nature, these expense items are in fact likely to give rise to trade-offs between investments and operating expenses. Therefore, this mechanism encourages operators to globally optimise all of their expenses. It consists in defining, for the tariff period, a trajectory of the estimated capital costs for this type of investments, which would then be excluded from the scope of the CRCP. The gains or losses made are therefore kept fully by the operators during the tariff period, both for operating expenses and for investments. At the end of the tariff period, the effective value of assets will be taken into account in the RAB, which, for the following tariff periods, allows the sharing of gains or extra costs with users.

In its public consultations of 14 February and 23 July 2019, CRE proposed extending this mechanism to the ATS2 tariff. Most contributors were in favour of CRE's proposal.

Therefore, for the ATS2 tariff, CRE is adopting the incentive mechanism for controlling investment costs excluding infrastructure described above. During the ATS2 tariff, the capital expenses for these categories of assets will be calculated using the projected values defined in the present deliberation.

At the end of the tariff period, CRE will analyse the commissioning trajectories of the different investments concerned in order to ensure that any gains made during the tariff period do not result in an increase in expenses for the following tariff periods, because of certain project delays for example.

The estimated amount of investments subject to this incentive regulation is an average €11 million per year for Storengy, €5.8 million per year for Teréga (vehicles and real estate) and an average €1 million per year for Géométhane.

In addition, Teréga proposed experimenting, for its IS expenses, a TOTEX (common OPEX and CAPEX trajectory) incentive mechanism, in which the assets would enter the operator's RAB at an amount fixed *ex ante* in the TOTEX trajectory, and not on the basis of the actual expenses incurred. Teréga considers that this experiment would serve

to assess the feasibility of a solution in which only the core business solutions would be maintained wholly by the operator (which results in a substitution of CAPEX towards more OPEX). CRE considers that this experiment can meet the flexibility needs identified within the framework of the digital transformation of information systems. CRE considers it relevant to experiment on this system with Teréga within the scope of its information systems (operating expenses and investments) for the ATS2 tariff period. In addition, it set the 50% sharing rate of the operator's gains and losses in the overall trajectory, covered in the CRCP. The trajectory subject to the incentive is defined in section 3.1.3.3.2 of the deliberation.

For Teréga, the total amount of investments concerned is an average €9.6 million per year, i.e. roughly 17% of the total investments planned in the operator's trajectory for the ATS2 tariff.

At the end of the tariff period, CRE will also conduct a comparative analysis of the classic "excluding infrastructure" expense mechanism and the pilot proposed by Teréga to assess its relevance regarding the costs and quality of the service provided.

### 2.3.3 Coverage of certain items in the CRCP

For the ATS1 tariff, the first regulated storage exercise, CRE adopted a tariff framework in which the differences between actual and projected expenses and income are settled *ex post*. The tariff was therefore "100% CRCP" and there was no incentive for any expense or income item.

For the ATS2 tariff, CRE applies a CRCP scope in compliance with the general framework of all electricity network and gas infrastructure tariffs, the principles of which are specified in the public consultation of 14 February 2019. Therefore, including an item in the CRCP is based on the following two factors:

- 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 the revenues perceived 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 expenditure/income during a year, or has a power or influence with regard to its level, if it results from a third party.

The contributors to the public consultation widely shared these principles.

On this basis, CRE consulted about the scope of the CRCP to adopt for the ATS2 tariff in its public consultation of 23 July 2019. Participants are globally in favour of the scope proposed, with alternative proposals for certain items to be included in or withdrawn from the CRCP. In particular, CRE has not included the following items in the CRCP:

- some suppliers and infrastructure operators request coverage in the CRCP of taxes, which, in their opinion, cannot be sufficiently foreseen or controlled by operators. As stated in the public consultation of 14 February 2019, CRE considers that it is a relatively foreseeable item;
- the expenses and income related to the purchases/sales of performance gas, whose coverage is requested by storage operators. These operations are conducted to ensure the performance of storage facilities. Last winter, purchases/sales were made to address technical failures as best as possible and thus meet clients' withdrawal demands. These specific operations essentially limit capacity reductions, and therefore penalties paid to clients. This item is in the hand of the operator so that it optimises the management of its storage facilities. CRE therefore considers that the storage operator must have an incentive for this item, as for the other operating expenses.

The items included within the scope of the CRCP in the ATS2 tariff are as follows:

- the income from the compensation tariff returned by the TSOs, fully taken into account in the CRCP. The reference trajectory is updated annually;
- capital expenses, fully taken into account, with the exception of those that are the subject of the incentive regulation mechanism for "non-infrastructure" capital expenses and for which only the difference between projected and actual inflation is taken into account (see section 2.3.2.3);
- energy costs (gas and electricity) and the purchases and sales of CO<sub>2</sub> quotas, as well as consumables and costs for treating effluents specific to storage, 80% covered in the CRCP. The reference trajectory is updated annually. The difference between the updated trajectory and the initial trajectory is fully covered by the CRCP;
- the difference between the projected inflation taken into account by CRE for operating expenses and actual inflation, fully covered by the CRCP;
- the expenses and income associated with contracts with other regulated operators, in particular, transmission system operators, fully covered in the CRCP. This tariff treatment is globally neutral for regulated infrastructure users;

- the penalties paid to clients in the event of a breach of contract obligations, i.e. when the operator is unable to deliver the injection/withdrawal performance sold, fully covered in the CRCP above an annual cap of €10 million for Storengy and €3 million for Teréga. Therefore, operators have an incentive for this item up to this cost limit, above which the financial impact is neutralised, so that they are not exposed to too great a financial risk in the case of an exceptional situation (see section 2.6 of the present deliberation);
- any provisions for the decommissioning of storage site which might be set aside by the storage operator during the tariff period, in proportion to the asset's lifetime within the scope of regulation, fully covered in the CRCP;
- the capital gain made on the disposal of real estate asset, 80% covered in the CRCP;
- the costs of studies for large abandoned projects previously approved by CRE or other stranded costs addressed on a case-by-case basis for which CRE approved coverage, fully covered in the CRCP;
- differences with the reference trajectory of Teréga's TOTEX experiment, 50% covered in the CRCP, calculated at the end of the ATS2 period;
- purchases-sales relating to the constitution of additional gas stocks to meet regulatory stock obligations such as those set out in Article L. 421-6 of the energy code, fully covered in the CRCP;
- R&D operating expenses, with special treatment (see section 2.7): at the end of the tariff period, an assessment of the amounts actually spent by each storage operator is carried out taking into account actual inflation. If the storage operator has spent less than the target trajectory, the difference is returned fully to users via the CRCP. If the storage operator has spent more than the target trajectory, the difference remains the responsibility of the operator<sup>16</sup>.

In addition, the bonuses and penalties resulting from the different incentive regulation mechanisms (see section 2.3, 2.4 and 2.5 of the deliberation) are allocated to the operators through the CRCP.

## **2.4 Incentive regulation for quality of service**

In the ATS1 tariff, no incentive regulation mechanism for storage operators' quality of service was specified.

The incentive regulation for operators' quality of service aims to improve the quality of the service provided to infrastructure users in the fields deemed important for the proper functioning of the gas market.

Contributors to the public consultation of 23 July 2019 were in favour of CRE's proposal to extend the incentive regulation mechanism for service quality to storage operators, with conditions similar to those applied to system operators.

Therefore, for the ATS2 tariff, CRE introduce an incentive regulation mechanism for the quality of storage operators' service.

The results of indicators will be published on the operators' websites each month and they will draw up a qualitative analysis report of their yearly performance which they will also publish on their website.

These indicators will not be subject to a financial incentive upon the entry into effect of the ATS2 tariff, but may become so at the annual tariff update.

The service quality indicators as well as the objectives set and the associated financial incentives are described in detail in Annex 1.

### **2.4.1 Indicators relating to availability of storage capacity**

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

- **an indicator of compliance with storage operators' maintenance programmes**, calculated based on the difference (in percentage) in the capacity made available between the forecast maintenance programme published and the actual maintenance programme followed. This indicator is calculated yearly and aggregated for each storage group;
- **an indicator for following the provision of information in the event of an incident** that might lead to a restriction on the withdrawal and injection rights of storage users.

<sup>16</sup> In the case of a request for a mid-period update of R&D operating expenses, the additional amount approved by CRE shall be added to the forecast trajectory.

### 2.4.2 Environmental indicators

During the public consultations of 14 February and 23 July 2019, market participants agreed with CRE’s proposal to improve environmental indicators in the regulated infrastructure tariffs.

Therefore, CRE has introduced the following indicators in the ATS2 tariff:

- **monthly greenhouse gas emissions in relation to the volume of gas injected and/or withdrawn;**
- **methane leaks** (including diffuse losses, venting and accidents/incidents) **in relation to the volume of gas withdrawn and injected.**

### 2.5 Incentive regulation for the marketing of storage capacity

CRE reiterates that the goal of selling capacity is firstly to maximise storage capacity subscriptions to ensure the country’s security of supply in winter. The second goal is to maximise the income from auctions.

In order to give incentive to storage operators for these two goals, in the ATS1 tariff, CRE defined a mechanism attributing a bonus to operators equivalent to a proportion of the income from storage capacity auctions, which increased with the rate of capacity subscriptions. This bonus was attributed as from 75% of marketed capacity sold, with a maximum equal to 5% of auction income, if all marketed capacity was sold.

Operators therefore received €10.5 million in bonuses as part of marketing of capacities for the year 2019, which were entirely sold (income of €210 million, including the additional marketing by Storengy of 1 TWh of capacity available in the end in September).

In its public consultation of 23 July 2019, CRE proposed updating this mechanism, particularly to reduce the level that had been set initially against uncertainty about the effective storage subscription and stocks at the time of the storage access reform. CRE wishes for this incentive to better reflect the commercial performance of storage operators.

It therefore proposed the introduction of a bonus/penalty in the ATS2 tariff set at 1% of the premium of each auction, i.e. the difference between the auction price and the seasonal value of the storage (which corresponds to the formula winter-summer spread – storage costs). This “over-value” is linked in particular to the possibility of modulating injections and withdrawals from one day to another, and therefore depends on storage performance. It is also the result of the level of competition during auctions, which is favoured by operators’ commercial actions.

The bonus also depends on the level of capacity sold compared to the level of the “safety net” published<sup>17</sup> (the withdrawal rate level and volume guaranteeing security of supply in winter).

Participants are generally in favour of CRE’s proposal. However, one shipper considered that the priority objective of maximising capacity subscription should be maintained. Some industrial participants are against the attribution of a bonus if the amount of the storage compensation to cover the allowed revenue exceeds the auctions revenue. Other participants are against all bonuses, and consider that only a penalty should be applied if operators do not correctly communicate marketing data to the market.

Lastly, Storengy considers that an incentive only on the premium could create a disincentive for storage operators to sell additional capacity finally available at the end of the initial marketing phase. These sales can provide additional income, without the “premium” necessarily being positive.

While feedback from the first storage capacity marketing campaigns highlights the proper functioning of auctions, CRE considers that an auction income incentive, at a lower level compared to the ATS1 period, must be maintained to encourage operators to market available capacity. In addition, and as stated in the public consultation of 23 July, CRE wishes to introduce a greater incentive on auction premiums in order to better take into account storage performance.

Therefore, CRE has updated its proposal compared to that envisaged in the public consultation. Within the framework of the ATS2 tariff, operators will receive a bonus for all capacity marketed at auctions, including capacity marketed at subsequent sales of additional “short-term” products. This bonus is calculated for each storage operator as follows:

$$\text{Bonus} = 0.5\% \times \text{Auction income} + 5\% \times \text{Auction premium}$$

Where:

- Auction income: income received by storage operators for capacity of year Y within the framework of their auction campaigns;

<sup>17</sup> Order of 13 March 2018 relating to the minimum natural gas stocks for guaranteeing security of natural gas supply during the period between 1 November 2018 and 31 March 2019



- Auction premium: positive or negative, it is calculated by multiplying the capacity sold at an auction by a price term, corresponding to the difference between the sale price and the winter-summer spread reduced by the amount of the storage cost (“spread – costs” term):
  - for capacity auctions of year Y taking place before November Y-1, in line with the references for calculating the reserve price set in CRE’s deliberation of 27 September 2018: the “spread - costs” term corresponds to the difference between the Winter bid price (N)<sub>j</sub> and the Summer ask price (N)<sub>j</sub><sup>18</sup> at the TTF, published by ICIS, reduced by €0.75/MWh;
  - for the L gas storage capacity auction, in line with the references for calculating the reserve price set in CRE’s deliberation of 27 September 2018: the “spread - costs” term corresponds to the difference between the Winter settlement price (N)<sub>j</sub> and the Summer settlement price (N)<sub>j</sub><sup>17</sup> at the PEG published by Powernext, after deduction of the *bid-ask* spread and reduced by €0.70/MWh;
  - for capacity auctions of year Y taking place in November Y-1, January and February Y, the “spread – costs” term corresponds to the difference in the settlement prices of winter Y and summer Y at the PEG, as published by Powernext, on the last day of quotation preceding the closure of the auction (D-1 for D), reduced by €0.75/MWh.

This bonus is attributed if the capacity of year Y sold is equal to or higher than the level of the last safety net published following the initial auctioning phase (i.e. after the February Y window for storage capacity injected as from April Y). It is included in the CRCP balance of year Y.

## **2.6 Penalties in the case of restrictions on clients’ underground storage rights**

When capacity sold turns out to be unavailable, particularly due to technical failures, the storage operator publishes restrictions on clients’ injection or withdrawal rights. In this case, the storage access contract may provide for penalties that the operator must pay the client.

In its public consultation of 23 July 2019, CRE proposed to define in the tariff the amount of penalties a storage operator should pay to a client when the capacity bought by that client is not available. The penalty would be valued at the purchase price of the capacity, and proportional to the capacity not available.

Almost all contributors to the public consultation are in favour of the inclusion of penalties in the ATS2 tariff. Certain participants however consider that the penalties should be higher than a simple ratio proportional to availability, and should at least be those applied in Storengy’s contract in 2019-2020.

CRE considers that it must certainly be taken into account that injection and withdrawal restrictions can affect storage clients throughout the year, albeit with different impacts according to whether the site is in an injection or withdrawal period. Restrictions of withdrawal rights in winter can force storage users to find other potentially expensive means of supplying gas to their clients. In addition withdrawals globally presents an additional value compared to injection.

Since operators have already published their commercial terms for the current campaign, CRE considers it relevant to adopt, for the marketing year in progress, principles building on those published by the operators.

Therefore, in the ATS2 tariff, in the case of restrictions on the injection or withdrawal capacities booked by a client, giving rise to a penalty to be paid by the operator, this penalty will be calculated based on the amount due by the client for the duration of the restriction and the rate of restriction:

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

For example, in the case of a 20% restriction of withdrawal capacity during an entire month of the winter gas period, the penalty will be  $20\% * 1 * 1/12 * \text{total cost of the capacity bought by the client}$ .

## **2.7 Incentive regulation for research, development and innovation (R&D&I)**

Against a rapidly changing energy landscape, CRE attaches particular importance to the development of smart networks and the adaptation of networks to the energy transition. Storage infrastructure operators must have the necessary resources to successfully carry out their research and development (R&D) and innovation projects, which are essential for providing an efficient and high-quality service to users and developing their network operations tools. In return, they must use these resources effectively and in a transparent manner.

<sup>18</sup> Average of the last ten trading days

In its public consultations of 14 February and 23 July 2019, CRE proposed extending the mechanism applicable to transmission system operators to storage operators. This framework aims to encourage operators to effectively incur the R&D expenses up to the amount in the trajectory set out by the tariff. It also ensures the transparency necessary concerning the projects and the associated expenses. Most participants that answered the public consultation were in favour of CRE's proposals. Several participants stated that the activities financed by the regulated infrastructure tariffs should be limited to of storage operators' missions only.

For the ATS2 tariff period, CRE has set up incentive regulation based on the following principles:

- the incentive for controlling costs relating to operators' R&D&I expenses is introduced, with the possibility for the operators to revise this trajectory halfway into the tariff period so that they may have more flexibility to adapt their programme. At the end of the ATS2 period, the operators will present to CRE a financial report on R&D&I, and the amounts not spent during the period will be returned to customers (through the CRCP), while the operator bears the costs of exceeding the trajectory;
- transparency and verification of the efficiency of R&D&I spending are reinforced through two exercises, with the format to be determined conjunctively between CRE and the operators:
  - o annual transmission to CRE of technical and financial information for all ongoing and completed projects, instead of the current report to CRE;
  - o bi-annual publication by the operators of a report for the public, in line with the mechanism currently in place. The reports will need to be harmonised between the operators, in particular thanks to standardised indicators, and enhanced with concrete elements concerning the benefits of projects for network users, as well as systematic feedback on the demonstrator projects financed by the tariff;
- the smart grid counter is extended to storage operators: provided that they present a favourable cost/benefit analysis, and for projects greater than €1 million falling within the cope of smart grid deployment, Storengy, Teréga and Géométhane can therefore request, halfway into the tariff period, for any extra operating costs related to this type of projects to be integrated into their trajectory. Where necessary, elements of incentive regulation associated with these projects may be introduced;
- the operators will consult market participants before summer 2021 concerning the major research topics they intend to develop.

### **3. LEVEL OF COSTS TO BE COVERED FOR STORENGY, TERÉGA AND GÉOMÉTHANE**

#### **3.1 Operators' tariff proposal and main associated challenges**

##### **3.1.1 Storengy**

Storengy considers that its tariff proposal aims to meet the following challenges:

- marketing of storage offers at prices correlated with those of the market (seasonal spreads) resulted in the sale of all capacity and full storage stocks. Returning to high levels of storage use by clients put pressure on the industrial facilities and highlighted the need to strengthen their reliability and adapt the commercial offering;
- a separation between regulated activities in France (within the Storengy France company) and competing activities (by the parent company Storengy France) occurred as at 1 October 2018. This separation led to a drop in staff expenses, mainly due to the transfer of employees and increases in external expenses essentially related to the setting up of a service contract with Storengy SAS;
- the remuneration rate as defined by CRE for the ATS1 period aimed to cover only the risks specific to the storage activity, particularly economic, technical and geological risks; it did not consider any evolution in the scope of the regulation. Storengy considers that the assessment of risks specific to storage is insufficient and requests an increase in the risk premium in relation to the transmission activity at 100 basis points compared to 50 basis points in the ATS1 tariff;
- a change in the scope of regulation with the withdrawal of three sites under limited operation was decided by decree No 2018-1248. A notice period of two years before the exclusion of these sites from the scope of regulation was set by the order of 19 February 2019. The allowed revenue trajectory proposed by Storengy includes coverage of the costs for decommissioning the Saint-Clair-sur-Epte, Soings-en-Sologne and Trois-Fontaines sites which it estimates at 24 million euros per year over the ATS2 period. In the event



that CRE does not adopt the mechanism for covering costs associated with a change in the scope of regulation, Storengy requests an additional WACC premium between 220 and 390 basis points for the risk of a possible change in the scope of regulation, stranded costs and decommissioning costs.

Taking into account the abovementioned issues leads Storengy to request, in 2020, all allowed revenue of €612.8 million, up 17% compared to the allowed revenue for 2018.

### 3.1.2 Teréga

Teréga identified the following issues in its tariff proposal:

- the company restructuring project “Impacts 2025”, which involves a new human resource policy, restructuring of management, insourcing of key skills and a reinforcement of Teréga’s presence across France;
- a change in storage use conditions, with an increase in the use of storage to conduct arbitrage in the markets;
- an increase in the risk of gas storage operators’ activity with exposure to a withdrawal of assets from the scope of regulation with no definition of the conditions of withdrawal. This lack of visibility, concerning infrastructure in the process of being depreciated, constitutes a risk to which other regulated infrastructure are not exposed;
- Teréga requests that the specificities of the storage activity be taken into account through an increase in the WACC premium to 200 basis points (instead of 50) compared to natural gas transmission. Teréga also requests the introduction of a mechanism aimed at covering the cost of future decommissioning with the cost of provisions for decommissioning being taken into account.

Taking into account the abovementioned issues leads Teréga to request, in 2020, all allowed revenue of €188.0 million, up 23% compared to the allowed revenue for 2018.

### 3.1.3 Géométhane

Géométhane has identified the following issues in its tariff proposal:

- the remuneration rate as defined by CRE for the ATS1 period aimed to cover only the risks specific to the storage activity, particularly economic, technical and geological risks; it did not consider a possible reduction in the scope of the regulation. Géométhane considers that the assessment of risks specific to storage is insufficient and requests an increase in the risk premium in relation to the transmission activity at 100 basis points compared to 50 basis points in the ATS1 tariff. In addition it requests the coverage of the risk of a change in the future scope of regulation by an additional premium of 220 to 390 basis points;
- Géométhane intends to replace compression equipment with the commissioning of an electrical compressor in 2022.

Taking into account the abovementioned issues leads Géométhane to request, in 2020, all allowed revenue of €45.3 million, up 19% compared to the allowed revenue for 2018.

## 3.2 Operating expenses

### 3.2.1 Operators’ proposals

#### 3.2.1.1 Storengy

Storengy forwarded its operating expense projections for the next tariff period, separately identifying costs associated with the decommissioning of sites exiting the scope of regulation and the other operating expenses.

- **Decommissioning costs:**

Storengy considers it legitimate for the costs associated with decommissioning of sites exiting the scope of the PPE to be covered by the regulation, because those sites were considered necessary for the security of supply in the previous PPE published on 27 October 2016.

Storengy requests coverage of these costs at a fixed amount capped at €24 million per year over the four-year period (2020-2023). This request takes into account the recovery of a portion of the assets that will be decommissioned.

- **Net operating expenses:**

The forecast net operating expenses, excluding decommissioning costs presented by Storengy for the ATS2 period, are as follows:

In current €M	2018 Actual	2020	2021	2022	2023
Net operating expenses	175.3	196.4	196.9	200.5	207.0

Over the 2020-2023 period, Storengy proposes a net OPEX trajectory up significantly, with a major increase between the request for 2020 and the actual net OPEX for 2018 (+12.0%). Excluding energy, the increase between the actual figure for 2018 and the request for 2020 is +18.7%. Over the 2020-2023 period, net operating expenses increase by an average +1.8% per year (an average +1.2%/year excluding energy). This trajectory takes into account the withdrawal of three sites under limited operation from the scope of regulation at the end of 2020, which implies the termination of coverage in the allowed revenue of net OPEX for maintaining these sites in operation<sup>19</sup>.

The main items showing an evolution between 2018 and 2020 in Storengy's request are as follows:

- "maintenance", "operation" and "expertise": the increase is associated with greater use of storage and the setting up of a service contract with Storengy SAS;
- "staff expenses", the drop is related to the transfer of 174 employees to Storengy SAS;
- "operating income", the decline is mainly due to the drop in services performed for third parties and inter-operator income;
- "energy costs", the drop is associated with an extraordinary depreciation and a remedial tax in 2018 partially offset by an increase in energy consumption.

### 3.2.1.2 Teréga

The forecast net operating expenses presented by Teréga for the ATS2 period are as follows:

In current €M	2018 Actual	2020	2021	2022	2023
Net operating expenses	37.2	49.7	52.4	52.9	54.6

Over the 2020-2023 period, Teréga proposes a net OPEX trajectory up very significantly, with a major increase between the request for 2020 and the actual net OPEX for 2018 (+33.6%). Excluding energy, the increase between the actual figure for 2018 and the request for 2020 is +30.0%. Over the 2020-2023 period, net operating expenses increase by an average +3.2% per year (an average +3.9%/year excluding energy).

The main items showing an evolution between 2018 and 2020 in Teréga's request are as follows:

- "staff and shared resources": the increase is due to an increase in running costs following Teréga's restructuring;
- "operating income", the drop in income is mainly associated with a drop in the billing of storage-related costs to the transmission activity;
- "energy costs", the increase is due to the expiration of a favourable supply contract and a change in the distribution of expenses of the Lussagnet site between transmission and storage activities;
- "security and environment", this increase is related to the purchase, as from 2020, of voluntary carbon offsets within the framework of the *Be Positif* programme.

### 3.2.1.3 Géométhane

The forecast net operating expenses presented by Géométhane for the ATS2 period are as follows:

In current €M	2018	2020	2021	2022	2023
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<sup>19</sup> In addition, the trajectory below does not include the decommissioning costs for these sites, which are the subject of a separate request by Storengy (see previous paragraph)

	Actual				
Net operating expenses	16.5	17.1	17.7	19.4	20.1

Between the actual figure for 2018 and the request for 2020, net OPEX increase by €0.6 million (+3.8%). Excluding energy, the increase between the actual figure for 2018 and the request for 2020 is +4.9%.

The main items showing an evolution between 2018 and 2020 in Géométhane’s request are as follows:

- “taxes”: the €0.6 million increase is due to the increase in the site’s income and property tax base;
- “member services”: the €0.5 million increase results from an increase in the cost of contracts to ensure operation of the site.

Over the 2020-2023 period, Géométhane proposes a net OPEX trajectory up significantly, with a major increase in particular between 2021 and 2022 (+9.8%) associated with the commissioning of a new compressor leading to an increase in taxes and energy costs. Over the 2020-2023 period, net operating expenses increase by an average +5.5% per year (an average +5.4%/year excluding energy).

### 3.2.2 CRE’s analysis

#### 3.2.2.1 Challenges identified by CRE and the approach adopted

- **Evolution in the scope of regulation**

The legal and regulatory framework associated with regulation of natural gas storage requires storage operators to maintain in operation the storage sites identified as necessary for the security of supply in the PPE. In exchange for this obligation, operators are guaranteed to have their costs covered, through marketing income and compensation received through the tariff for the use of natural gas transmission networks. The energy code specifies that the costs covered, as long as they are the costs of an efficient operator, by the tariff are limited to those of sites listed in the PPE.

The decree of 26 December 2018 withdrew from the list of infrastructure specified by the PPE:

- the three Storengy sites cocooned (Trois-Fontaines, Saint-Clair-sur-Epte and Soings-en-Sologne);
- Teréga’s “Lussagnet phase 1” project;
- Géométhane’s “Manosque phase 2” project.

The infrastructure in question continue to be regulated until the expiration of the two-year deadline defined by the order of 19 February 2019, i.e. until end December 2020.

- **The energy transition affects gas infrastructure management and requires reinforced vigilance regarding future costs**

The energy transition, with the foreseeable evolution of gas consumption requires gas infrastructure operators to think differently.

In order to control the development of future tariffs, against a drop in consumption, operators must be encouraged to control future investments and limit the risks of stranded costs, particularly relating to the gas sector.

- **Approach adopted by CRE for the analysis of net operating expenses**

Incentive regulation for operating expenses is aimed, by leaving operators 100% of any difference between the actual trajectory and the tariff trajectory, at encouraging them to improve their efficiency over the tariff period.

The trajectory of net operating expenses set by CRE corresponds to an overall envelope. Therefore, the storage operators have the freedom to distribute this envelope among the different types of expenses as they choose.

CRE requested the operators to submit their tariff proposals in light of the latest actual figures, justifying any significant difference in relation to the actual 2018 figure, and by breaking down each item of the tariff matrix.

CRE appointed the Schwartz and Co consultancy firm to audit the operating expenses of natural gas storage infrastructure operators. Work was conducted between April and July 2019. The auditor’s report, based on the initial version of the operators’ requests, was published for each of the operators together with the public consultation document.

This audit enabled CRE to have a clear and complete picture of the operators’ operating expenses and revenues recorded during the ATS1 period and the estimated net operating expenses presented by the operators for the upcoming tariff period (2020-2023 period). The results of this audit have the following objectives:

- provide expertise on the relevance and justification of the operators' operating expenses trajectory for the next tariff period;
- assess the level of actual expenses (2018) and forecast expenses (2020-2023);
- formulate recommendations about the efficient level of operating expenses to be taken into account for the ATS2 tariff.

CRE also conducted its own analyses of specific items, in particular research and development (R&D) expenses, energy costs and decommissioning costs.

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

**3.2.2.2 Storengy**

At the end of its work, the auditor recommended the following trajectory for Storengy's operating expenses over the ATS2 period:

Net OPEX excluding energy (in current €M)	2020	2021	2022	2023
Storengy's proposal	166.5	166.2	167.8	172.4
Actual 2018 Inflated <i>pro forma</i> *	143.5	145.8	148.3	151.0
Auditor's trajectory (before productivity)	151.8	153.5	155.7	158.4
<b>Auditor's trajectory (after productivity)</b>	151.8	152.3	152.7	153.0
Impact on Storengy's request (after productivity)	-14.7	-13.9	-15.1	-19.4

*\*For the purposes of comparison, the actual 2018 figure was adjusted by the operator to obtain a 2018 pro forma representing the expenses for 2018 if the transfer had occurred as at 1 January 2018.*

The main adjustments recommended by the auditor cover the framework contract signed between Storengy France and Storengy SAS, staff expenses and consumables and maintenance costs. Following work conducted since the public consultation of 27 July 2019, CRE made a certain number of adjustments to this trajectory. The main adjustments it adopts compared to Storengy's proposal are presented below.

- **Analysis of the framework contract signed between Storengy France and Storengy SAS**

Following the split of Storengy into two entities as at 1 October 2018, a framework contract combining all of Storengy SAS's services for Storengy France (subsidiary of Storengy France which brings together regulated activities in France) was signed.

For Storengy France, the split generated:

- drops in internal operating expenses, mainly due to the transfer of associated employees;
- increases in external expenses related mainly to the implementation of the framework contract.

The auditor analysed the impact of the framework contract between Storengy France and Storengy SAS on the level of Storengy France's net OPEX. To evaluate this impact, the auditor calculated the amount of net OPEX for 2018 with and without the split, using data provided by Storengy.

- (i) The amount of 2018 expenses "without the split", i.e. if the change in Storengy's organisation had not taken place, was reconstructed by the auditor:
  - by deducting from the actual 2018 expenses a sum of €11.7 million billed by Storengy SAS to Storengy France for services provided, between 1 October and 31 December 2018, as well as a one-time billing of €1.2 million for software licence transfers;
  - by adding the operating expenses that would have been incurred directly by Storengy France if the activities and staff had not been transferred to Storengy SAS, based on costs actually observed in 2018 before the organisational change.

The amount of 2018 expenses "without the split" is €168.4 million.

- (ii) The amount of 2018 expenses "with the split, over the entire year", i.e. if the change in Storengy's organisation had occurred as at 1 January 2018, was reconstituted by the auditor:

- by deducting from the actual 2018 expenses the sum of €11.7 million for the framework contract between Storengy SAS and Storengy France for the fourth quarter of 2018, and the sum of €1.2 million for licence transfers;
- by deducting the operating expenses that would not have been borne by Storengy France for the first three quarters (€12.0 million in expenses associated with the staff transferred to Storengy SAS and €6.2 million associated with the other operating expenses transferred);
- by adding the annual amount that would have been billed to Storengy France by Storengy SAS for services provided over all of 2018, based on the annual amount projected for 2019 by the framework contract between Storengy France and Storengy France, adjusted for indexation.

The amount of 2018 expenses “with the split, over the entire year” is €174.0 million.

This comparison shows that the drop in operating expenses caused by the organisational change is less than the increase in external expenses. In 2018, if the reorganisation had been implemented as at 1 January 2018, Storengy France would have incurred €5.7 million in additional expenses within the framework of the new organisation.

Therefore, the auditor recommends adjusting Storengy’s net OPEX over the entire ATS2 period to correct this additional cost, adjusted for the indexation of the contract.

#### CRE’s analysis

Storengy decided on a legal separation between its regulated and non-regulated activities. CRE agrees with the auditor’s analysis and considers that an efficient organisational change should not lead to an increase in net OPEX covered by the tariff.

CRE therefore adopts the auditor’s proposal, of an adjustment of Storengy’s request by an average €6.3 million per year (corresponding to an adjustment of €5.7 million in 2018), adjusted for the indexation of the framework contract) over the 2020-2023 period, i.e. a 3.1% adjustment compared to Storengy’s request.

- **“Other operating expenses”**

This section covers several types of expenses: consumables (used in particular for dehydration and desulphurisation of gas withdrawn), maintenance expenses, taxes, information system costs, etc.

The trajectory proposed by Storengy presents significant increases for all items compared to actual 2018 figures. The auditor considered that some of these increases were not justified. In particular, the auditor discarded changes in expenses associated with Storengy’s projections of well and installation abandonment, Storengy not having presented any elements justifying different expenses compared to those incurred in 2018.

In addition, the auditor considered that the benefits expected of the changes envisaged by Storengy for information systems are not sufficiently substantiated to justify an increase in costs compared to 2018.

Moreover, Storengy presented cost increases associated with a new organisation of its stock management. The auditor considers that a change in internal processes should not generate extra costs, and therefore did not retain these extra costs.

#### CRE’s analysis

CRE partly adopts the adjustment proposed by the auditor.

CRE retains Storengy’s request concerning the sub-items for which the operator provided additional elements justifying the trajectories. In particular, Storengy provided the detail of its well abandonment programme, justifying the associated changes in expenses. In addition, Storengy demonstrated the economic value of reforming its stock management process.

Moreover, the trajectory relating to consumables proposed by the auditor was reviewed compared to the public consultation: Storengy’s proposal was in fact based on an assumption of full amplitude<sup>20</sup> of stock volumes during a gas year, which is higher than the amplitude seen these last few years. CRE retained the storage use assumptions in line with this record.

In the end, with regard to “other operating expenses”, the trajectories adopted by CRE lead to an average -€4.3 million per year over the 2020-2023 period, i.e. a -0.8% adjustment compared to Storengy’s request.

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<sup>20</sup> Amplitude observed during the year between the highest stock level (generally at the end of an injection campaign) and the lowest stock level (generally at the end of a withdrawal period).

- **Staff expenditure**

In its tariff proposal, Storengy stated that the increase in activity related to storage coming within the scope of regulation and their stock requirements as well as the increase in investments led to a need to strengthen operational teams in charge of maintenance and industrial security. Between 2018 and 2020, 38 recruitments are planned to strengthen staff at the sites.

The auditor considered that the majority of recruitments mentioned in the proposal were justified by real operational needs. However, it did not retain some of them (30 retained out of the 38 requested), in particular those aimed at preparing the re-commissioning of the Trois-Fontaines site, which will exit the scope of regulation at the end of 2021, and for which Storengy requested coverage of expenses.

The trajectory adopted by the auditor leads to a -€3.1 million per year over the 2020-2023 period (-1.0 % of Storengy’s proposal). This trajectory is still up compared to 2018, because of the additional staff.

CRE’s analysis

CRE adopts a recruitment trajectory slightly higher than that recommended by the auditor to take into account the cybersecurity challenges that Storengy must face during the next tariff period.

Moreover, CRE retains the operator’s request concerning basic national wage (SNB). It adopts harmonised assumptions for all gas operators, which correspond to Storengy’s proposal.

All in all, CRE adopts a staff expenditure trajectory that allows Storengy to significantly reinforce its operational teams to face the increase in activity observed since 2018.

- **Energy expenses**

Over the 2020-2023 period, Storengy proposes an energy cost trajectory up compared to the actual costs for 2018 (+25.9% between the forecast for 2020 and actual costs for 2018), with an average increase of +5.2% per year.

Storengy justifies the increase in energy expenses by a return to a high level of activity of storage facilities. Storengy therefore adopts a storage amplitude<sup>21</sup> of 100% of working volume.

<b>Storengy’s proposal</b>	<b>2018</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>Average 2020 2023</b>
Gas (€M)	7.1	8.1	8.3	8.6	9.1	8.5
Volumes (GWh)	451	391	392	393	392	392
Electricity (€M)	13.9	18.8	18.1	19.5	20.7	18.4
Volumes (GWh)	170	214	203	203	203	206
CO <sub>2</sub>	-	0.2	1.6	1.9	2.2	1.5
Other (tax, depreciation, etc.)	2.7*	2.7	2.7	2.7	2.7	2.7
<b>Total energy expenses</b>	<b>23.7*</b>	<b>29.8</b>	<b>30.7</b>	<b>32.7</b>	<b>34.7</b>	<b>31.0</b>

\*After adjustment particularly for one-time expenses associated with depreciation of a gas stock at Soings-en-Sologne

CRE has adopted several adjustments to this request:

- the assumption of 100% working volume at the start of winter seems reasonable. However, it does not appear relevant to adopt a low point as that observed during a special year (3% observed in 2018 characterised by storage coming under regulation against low stock levels at the start of winter and the end of a cold winter). CRE retains an amplitude of 85% (corresponding to full stock levels and an average low level observed over the 2012-2019 period). This assumption leads to a 15% adjustment of the energy volumes requested;
- the adjustment of volumes results in a correction of the trajectory for the purchase of CO<sub>2</sub> quotas accordingly;

<sup>21</sup> Amplitude observed during the year between the highest stock level (generally at the end of an injection campaign) and the lowest stock level (generally at the end of a withdrawal period)





- prices observed in the gas markets for the years 2020 to 2023 dropped more than 15% compared to the level of Storengy’s tariff proposal. CRE updated the gas prices based on the levels observed in the markets.

These adjustments lead to a trajectory of energy costs down 23% compared to that proposed by Storengy, i.e. an average €7.1 million per year over the period.

	2018	2020	2021	2022	2023	Average 2020 2023
Gas (€M)	7.1	6.0	6.1	5.9	5.9	6.0
Volumes (GWh)	451	333	333	333	333	333
Electricity (€M)	13.9	15.3	14.9	15.6	16.6	15.6
Volumes (GWh)	170	184	172	172	172	175
CO <sub>2</sub>	-	0.0	1.0	1.4	1.7	1.0
Other (tax, depreciation, etc.)	2.7*	2.3	2.3	2.3	2.3	2.3
<b>Total energy expenses</b>	<b>23.7*</b>	<b>23.7</b>	<b>24.3</b>	<b>25.2</b>	<b>26.4</b>	<b>24.9</b>

\*After adjustment particularly for one-time expenses associated with depreciation of a gas stock at Soings-en-Sologne

• **R&D**

R&D expenses conducted under the framework contract between Storengy SAS and Storengy France cover the following topics:

- security, health and environment: control the impact of industrial activity on the environment and strengthen security at sites;
- performance of storage subsoil: plan for the operational performance of storage over time and based on different operating scenarios. Projects cover, for example, development of tools for modelling subsoil characteristics (concentration of H<sub>2</sub>O, H<sub>2</sub>S, THT, etc.) and new treatment and verification techniques;
- performance of storage surface equipment: design, development, operation and maintenance of gas storage surface equipment.

Storengy’s request also includes participation of a hydrogen injection/withdrawal project at a site.

With regard to the service contract with Storengy SAS, CRE, in its public consultation, intended to adopt the actual 2018 expenses for expenses related to this contract. Since the public consultation, Storengy has provided additional elements justifying additional works which correspond to new works not started in 2018. CRE therefore adopts the trajectory requested by the operator corrected only for the adjustment concerning the framework contract, i.e. an average €4.8 million per year.

In addition, CRE is in favour of the operators studying over the next tariff period, the consequences of the injection of hydrogen into the gas networks on their storage facilities. It however notes that all gas infrastructure operators individually anticipate work concerning this topic. CRE will ensure the proper coordination of work between operators, to guarantee that the most efficient research costs are sought for the benefit of the community.

• **Evolution of overall productivity**

In addition to the item-by-item analysis, the auditor measured the change in Storengy’s overall productivity concerning its operating expenses, based on the evolution in the ratio of net operating expenses per TWh of working volume. It recommended an objective to improve productivity by an average €2.4 million per year.

CRE’s analysis

The productivity objective recommended by the auditor does not sufficiently take into account the need for Storengy to have the means enabling it to manage the resumption of its operational activity. The difference between Storengy’s net OPEX obtained following the item-by-item analysis and the actual net OPEX (inflated) for 2018 is mainly associated with this need.

CRE does not adopt an additional productivity objective for Storengy.



**Summary of the analysis**

The following tables present the trajectory of net operating expenses adopted by CRE for the ATS2 tariff:

Storengy, in current €M	Pro forma actual 2018	2020	2021	2022	2023
Storengy's proposal		196.4	196.9	200.5	207.0
Adjustment adopted by CRE		-18.3	-18.0	-20.1	-22.6
<b>Trajectory adopted by CRE</b>	<b>163.4*</b>	<b>178.1</b>	<b>178.9</b>	<b>180.4</b>	<b>184.4</b>

Storengy, in current €M – Excl. energy	Actual 2018 Pro forma	2020	2021	2022	2023
Storengy's proposal		166.5	166.2	167.8	172.4
Adjustments adopted by CRE		-12.1	-11.7	-12.6	-14.4
<b>Trajectory adopted by CRE</b>	<b>139.6 *</b>	<b>154.4</b>	<b>154.5</b>	<b>155.2</b>	<b>158.0</b>

*\*For the purposes of comparison, the actual 2018 figure was adjusted by the auditor to obtain a 2018 pro forma representing the expenses for 2018 if the transfer had occurred as at 1 January 2018 and adjusted for one-time expenses associated with the depreciation of a gas stock at Soings-en-Sologne and a tax remediation.*

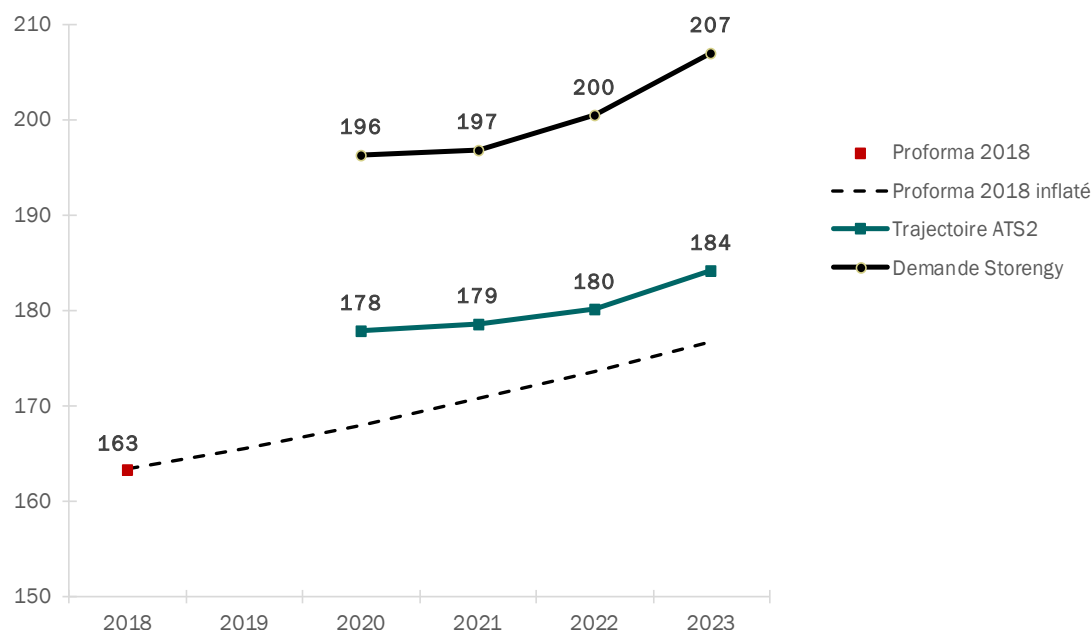
The trajectory adopted by CRE is up significantly compared to the actual costs for 2018. It enables Storengy:

- to manage the resumption of its operational activity, particularly thanks to recruitments reinforcing the teams at its sites: the operator's proposal was adopted fully by CRE with regard to this item;
- to address cybersecurity issues;
- to carry out its well and facility abandonment programmes as well as its stock optimisation programme;
- to reinforce its R&D work in order to study the consequences of the accommodation of new gas on storage and the properties of the subsoil to determine its offering.

CRE made sure that end consumers do not bear the costs associated with the organisational and contractual choices between Storengy France and Storengy SAS (extra costs associated with the contract between these two entities).

Therefore, the trajectory set by CRE projects a 8.9% increase in Storengy's net operating expenses between 2018 and 2020 (+10.6% excluding energy). The net operating expenses then increase by an average +1.2% per year over the 2020-2023 period (+0.8% per year, excluding energy).

Trajectoires des charges nettes d'exploitation de Storengy  
(en M€ courants)



\*For the purposes of comparison, the actual 2018 figure was adjusted by the auditor to obtain a 2018 pro forma representing the expenses for 2018 if the transfer had occurred as at 1 January 2018 and adjusted for one-time expenses associated with the depreciation of a gas stock at Soings-en-Sologne and a tax remediation.

Forecast inflation considered: +1.3% in 2019; +1.5% in 2020; +1.6% in 2021; +1.7% in 2022; +1.8% in 2023

### 3.2.2.3 Teréga

At the end of its work, the auditor recommended the following trajectory for Teréga’s operating expenses over the ATS2 period:

Net OPEX excluding energy (in current €M)	2020	2021	2022	2023
Teréga’s proposal	42.5	45.1	45.7	47.7
Actual costs (2018 inflated)	33.6	34.1	34.7	35.3
Auditor’s trajectory (before productivity)	38.8	40.0	41.3	41.8
<b>Auditor’s trajectory (after productivity)</b>	<b>38.8</b>	<b>38.3</b>	<b>38.4</b>	<b>38.4</b>
Impact on Teréga’s request (after productivity)	-3.7	-6.8	-7.3	-9.3

The main adjustments recommended by the auditor cover “personnel and shared resources”, “production costs” and “revisions and major repairs”. Following work conducted since the public consultation of 27 July 2019, CRE made a certain number of adjustments to this trajectory. The main adjustments it adopts compared to Teréga’s proposal are presented below.

Personnel costs and shared resources are largely determined at an overall level for Teréga (transmission and storage), and are then broken down into Transmission and Storage activities using a distribution key. The adjustments considered by CRE follow this methodology.

- **Personnel costs**

In terms of personnel costs, in its tariff proposal, Teréga requested a net increase of 40 staff members for the ATS2 period (based on a total staff of 561 FTE as at end 2018), including 19 employees to support the reorganisation of the operations division. The auditor considered that these 19 did not correspond to a long-term need and should therefore not be a motive for recruitment of inhouse personnel. Therefore, it considered that Teréga should plan for recruitments aimed at a stable headcount as from 2019, which involves coordinating recruitments and retirements. The auditor therefore adopted a net increase in personnel limited to the staff already recruited.

Furthermore, it recommended not retaining Teréga's proactive policy concerning employee benefits. It considers that the operator should strive to avoid the voluntary significant increase in these costs, especially against a considerable growth in the other operating expenses.

#### CRE's analysis

In terms of personnel expenses, CRE agrees with the auditor's analysis concerning the trajectory of Teréga's personnel and adopts its adjustment. It considers that the recruitments performed in 2019 (within the company) enable Teréga to carry out the company transformation undertaken since 2018.

CRE also adopts the auditor's adjustment regarding Teréga's wage policy to harmonise it with that of other gas infrastructure.

With regard to "personnel costs", the trajectories adopted by CRE lead to an adjustment compared to Teréga's proposal of -€1.0 million per year over the 2020-2023 period, i.e. -4.6% of Teréga's request.

- **Shared resources**

Most of the difference between the auditor's trajectory and that requested by Teréga concerns Telecommunications/IT. Teréga proposes a considerably high increase in the IS cost trajectory which it justifies by the need to adapt the IS tool (digitalisation and reinforcement of cybersecurity).

The auditor considered that the IS projects presented by Teréga to justify the significant increase in expenses fall within a recurring need to adapt the IS tools rather than an extensive transformation project, and that with a view to cost efficiency, such projects should be carried out with a constant budget.

Therefore, the auditor proposed an IS cost trajectory lower than that of Teréga, on the basis of a total cost approach and aimed at, at the end of the tariff period, a return to the 2017 envelope for expenses.

Therefore, the auditor proposed an adjustment of an average -€5.6 million per year within the scope of the company (i.e. -€22.3 million cumulated over the ATS2 period compared to Teréga's updated request) for shared resources.

In addition, CRE adopts, as indicated in section 2.3.2.3 of the deliberation, Teréga's proposal to experiment, for its IS expenses, a TOTEX (common OPEX and CAPEX trajectory) incentive mechanism, in which the assets would enter the operator's RAB at an amount fixed *ex ante* in the TOTEX trajectory, and not on the basis of the actual expenses incurred.

#### CRE's analysis

CRE partly adopts the adjustment proposed by the auditor.

CRE agrees with the total cost approach applied by the auditor to determine the envelope of expenses at the end of the ATS2 period. However, it adopts a productivity objective in 2023 based on a longer period of observation: the 2015-2018 average instead of only the year 2017, since the latter represents a "low point" in Teréga's IS expenses.

In addition, CRE adopted stable communication costs for Teréga compared to historical levels, and included in this trajectory certain expenses for institutional relations and crisis management and on-call duty, for which Teréga justified the need.

With regard to "shared costs", the trajectories adopted by CRE lead to an adjustment compared to Teréga's proposal of -€1.0 million per year over the 2020-2023 period, i.e. a -7.9% of Teréga's request.

- **Production costs**

This item covers current technical costs (consumption and raw materials, production, maintenance and repairs, industrial IT and technical studies) and security/environment expenses (management of integrity, inspection, surveillance of gas fields, HSEQ).

The trajectory proposed by Teréga is up significantly compared to 2018 (+10%). The auditor requested Teréga to justify this increase. At the end of its analysis:

- the auditor considers that the justification of current technical costs is insufficient. Therefore, it adopts a trajectory based on the 2016-18 average of actual costs, indexed to inflation;
- in the security-environment section, the auditor discards the extra costs related to Teréga's purchase of voluntary carbon offsets, which are not to be covered by the tariff.

#### CRE's analysis

CRE retains Teréga's proposal concerning the "production costs" item, for which the operator provided additional elements justifying the trajectories of sub-items. In particular, Teréga justified:

- the increase in compensation made to users of the water table interfaced with the aquifer of the Lussagnet storage following the low levels of gas stocks reached in 2018;
- the record of the waste management sub-item, leading to the year 2018 to not be taken into account, since waste management was allocated to transmission and not to storage.

CRE agrees with the auditor’s analysis concerning the costs associated with voluntary carbon offsets (-€0.4 million per year).

With regard to “production costs”, the trajectories adopted by CRE lead to an adjustment compared to Teréga’s proposal of -€1.0 million per year over the 2020-2023 period, i.e. -13.0% of Teréga’s request.

- **Revisions and major repairs**

The trajectory proposed by Teréga is up significantly compared to 2018. The auditor considered that Teréga did not justify the biannual increases in major repair expenses specified in its proposal, higher than the level observed over the 2016-2018 period. Therefore, the auditor did not adopt the increases in question and proposed a trajectory based on the average 2016-2018 record of expenses.

CRE’s analysis

As part of additional work conducted by CRE with Teréga since the public consultation of July 2019, Teréga provided a detailed schedule of maintenance work justifying the change in the trajectory of the major maintenance sub-item. CRE adopted Teréga’s proposal concerning this sub-item.

With regard to production costs, the trajectories adopted by CRE lead to a limited adjustment compared to Teréga’s proposal of -€0.1 million per year over the 2020-2023 period, i.e. -2.4% of Teréga’s request.

- **Energy expenses**

In its tariff proposal, Teréga requests the following trajectory of energy expenses:

<b>Teréga’s initial request</b>	<b>2018</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>Average 2020-23</b>
<b>Total energy expenses</b>	<b>4.5</b>	<b>7.2</b>	<b>7.2</b>	<b>7.2</b>	<b>7.0</b>	<b>7.2</b>

Teréga justifies the increase in energy expenses by:

- the expiration of an electricity contract whose conditions were more favourable than the current market conditions;
- an increase in electricity consumption associated both with the elimination of accounting allocation rules (between transmission and storage) for the consumption of the existing electrical compressors<sup>22</sup> at the Lussagnet site, and the commissioning of an electrical compressor to replace the gas-powered compressor used for transmission.

Teréga wished to update its proposal in September 2019. It considers that the major anticipated switch from gas consumption to electricity consumption might not occur. According to Teréga, this situation is due to the significant increase in quantities transported in its network since the merging of zones. Teréga in fact expected a more marked reduction in quantities transported in summer after the merging of zones, which would have enabled it to use electrical compressors as planned at Barbaira and Lussagnet.

Therefore, the new storage trajectory no longer includes the increase in electricity consumption associated with the impact of the commissioning of an electrical compressor, with the expenses for gas energy consumed for compression needs continuing to be allocated to the transmission activity.

<b>Teréga’s revised request</b>	<b>2018</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>Average 2020-2023</b>

<sup>22</sup> As from 2020, Teréga is changing its rules for allocating energy expenses between its Transmission and Storage activities: before 2020, Teréga allocated gas consumptions to the quantities actually consumed by each activity (transmission and storage) and broke down its electricity consumption for both activities using an allocation accounting rule. As from 2020, Teréga will keep the same principle for gas, but will assign all electricity consumption to the Storage activity.



Gas (€M)	0.4	0.4	0.5	0.4	0.4	0.5
Volumes (GWh)	25	26	26	26	26	26
Electricity (€M)	4.1	5.3	5.2	5.2	4.2	4.9
Volumes (GWh)	65	65	65	65	53	62
CO <sub>2</sub>	-	-	-	-	-	-
Other (tax, depreciation, etc.)	0.0	0.1	0.1	0.1	0.1	0.1
<b>Total energy expenses</b>	<b>4.5</b>	<b>5.7</b>	<b>5.8</b>	<b>5.7</b>	<b>4.8</b>	<b>5.5</b>

### CRE's analysis

The gas and electricity consumption levels (excluding the change in allocation rules) are in line with a trajectory obtained based on the record of the consumption / amplitude ratio and an amplitude assumption of 85%.

Therefore, CRE adopts Teréga's consumption trajectories, adjusted for the impact of the Solus project (electricity self-consumption project), whose economic and legal feasibility have not been confirmed at this stage. In addition, it has adjusted gas prices, drawing on the levels observed in the markets.

These adjustments lead to a trajectory 19% lower compared to Teréga's initial request i.e. an adjustment of €1.3 million per year over the period. This trajectory is specified in the table below.

	2018	2020	2021	2022	2023	Average 2020 2023
Gas (€M)	0.4	0.5	0.5	0.5	0.5	0.5
Volumes (GWh)	25	26	26	26	26	26
Electricity (€M)	4.1	5.3	5.2	5.2	5.2	5.2
Volumes (GWh)	65	65	65	65	65	65
CO <sub>2</sub>	-	-	-	-	-	-
Other (tax, depreciation, etc.)	0.0	0.1	0.1	0.1	0.1	0.1
<b>Total energy expenses</b>	<b>4.5</b>	<b>5.8</b>	<b>5.8</b>	<b>5.8</b>	<b>5.8</b>	<b>5.8</b>

Energy costs are 80% covered in the CRCP. Furthermore, the reference trajectory is updated annually. The difference between the updated trajectory and the initial trajectory is fully covered by the CRCP.

- **R&D**

In its tariff proposal, Teréga projects R&I expenses of €700 k per year in OPEX (compared to €865 k in 2018). These expenses are associated with:

- the finalisation of projects in progress, approved during the ATS1 period, leading to a drop in work relating to the integrity and performance of underground storage;
- the expansion of projects related to the integration of new gases.

CRE adopts the R&D trajectory requested by Teréga.

- **Analysis of the operator's productivity**

In addition to the item-by-item analysis, the auditor measured the change in Teréga’s overall productivity concerning its operating expenses, based on the evolution in the ratio of net operating expenses per TWh of working volume.

It recommended the definition of an objective to improve productivity by an average €2.0 million per year.

CRE’s analysis

Following CRE’s item-for-item adjustments, Teréga’s net operating expenses remain significantly high, far above inflation. This increase is justified, according to Teréga, by the goal to transform the company, a large part of which was already undertaken in 2018 and 2019.

Nevertheless, Teréga did not quantify the gains brought by this transformation.

CRE therefore adopts a productivity goal for Teréga equivalent to a 2.1% drop in net OPEX over the period, which would ensure that end consumers can benefit, at the end of the company’s transformation, from the gains brought by the transformation.

**Summary of CRE’s analysis**

The following tables summarise the trajectory of net operating expenses adopted by CRE for the ATS2 tariff:

Teréga, in current €M	Actual 2018	2020	2021	2022	2023
Teréga’s proposal		49.7	52.4	52.9	54.6
Adjustment adopted by CRE		-5.3	-6.6	-6.8	-7.3
<b>Trajectory adopted by CRE</b>	<b>37.2*</b>	<b>44.4</b>	<b>45.9</b>	<b>46.2</b>	<b>47.4</b>

Teréga, in current €M – Excl. energy	Actual 2018	2020	2021	2022	2023
Teréga’s proposal		42.5	45.1	45.7	47.7
Adjustments adopted by CRE		-4.0	-5.0	-5.3	-6.2
<b>Trajectory adopted by CRE</b>	<b>32.7*</b>	<b>38.5</b>	<b>40.1</b>	<b>40.4</b>	<b>41.7</b>

*\*The increase between 2018 and 2020 is attributable to the downward re-evaluation in the amount of €3 million for services conducted by the storage activity for the transmission activity.*

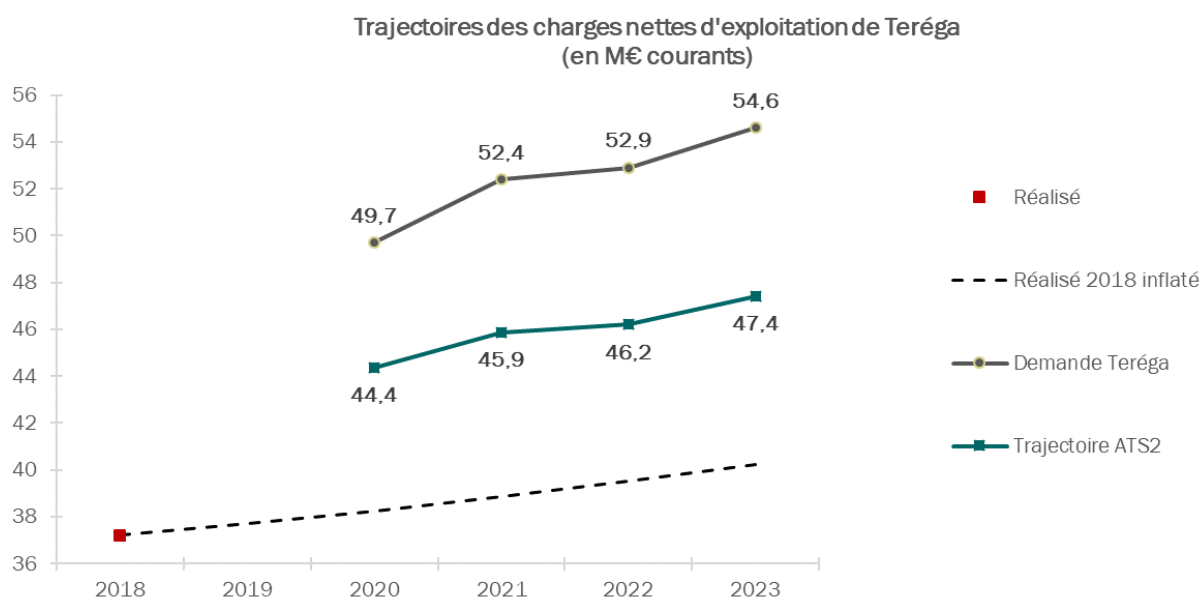
The trajectory adopted by CRE will enable Teréga to:

- successfully carry out the company transformation undertaken since 2018, through the adaptation of its information system, the recruitment of the skills necessary for the transformation and the capacity to participate in European groups and influential groups;
- implement the maintenance programme and therefore operate its network under optimal safety conditions;
- conduct R&D works, in particular concerning the accommodation of new gas in the transmission networks and the development of multi-energy systems;
- implement a TOTEX experiment for information systems as proposed by the operator.

In addition, CRE retains an additional productivity goal, which would ensure that end consumers benefit, at the end of the company’s transformation, from the gains brought by the transformation.

Therefore, the trajectory set by CRE projects a 19.2% increase in Teréga’s net operating expenses between 2018 and 2020 (+17.7% excluding energy). The net operating expenses then increase by an average +2.2% per year over the 2020-2023 period (+2.6% per year, excluding energy).





Forecast inflation considered: +1.3% in 2019; +1.5% in 2020; +1.6% in 2021; +1.7% in 2022; +1.8% in 2023

### 3.2.2.4 Géométhane

At the end of its work, the auditor recommended the following trajectory for Géométhane's operating expenses over the AT2S period:

Net OPEX excluding energy (in current €M)	2020	2021	2022	2023
Géométhane's proposal	16.3	16.8	18.5	19.1
Actual costs 2018 (inflated)	16.0	16.2	16.5	16.8
Auditor's trajectory (before productivity)	16.3	16.8	18.4	19.1
<b>Auditor's trajectory (after productivity)</b>	<b>16.3</b>	<b>16.8</b>	<b>18.4</b>	<b>19.1</b>
Impact on Storengy's request (after productivity)	-0.0	-0.1	-0.1	-0.0

The main adjustments recommended by the auditor cover property and research and development expenses. Following work conducted since the public consultation of 27 July 2019, CRE made a certain number of minor adjustments to this trajectory. The main adjustments compared to Géométhane's proposal are presented below.

- Energy expenses**

Over the 2020-2023 period, Géométhane proposes a trajectory of energy expenses presenting a 14.6% drop between the forecast 2020 expenses and actual 2018 expenses, then an average +6.0% increase per year over the 2020-2023 period. The trajectory presents a +14.8% step between the forecast 2023 expenses and forecast 2022 expenses related to the commissioning of a new electrical compressor leading to an increase in electricity expenses exceeding the drop in natural gas expenses.

Géométhane justifies the increase in energy expenses by a return to a high level of activity of storage facilities. Géométhane therefore adopts a storage amplitude of 100% of working volume.

Géométhane's proposal	2018	2020	2021	2022	2023	Average 2020-2023
Gas (€M)	0.64*	0.59	0.60	0.62	0.32	0.53

Volumes (GWh)	27.3	24.6	24.6	24.6	11.9	21.4
Electricity (€M)	0.14	0.15	0.16	0.16	0.64	0.28
Volumes (GWh)	1.5	1.5	1.5	1.5	5.9	2.6
CO <sub>2</sub>	-	-	-	-	-	-
Other (tax, depreciation, etc.)	0.09	0.11	0.11	0.11	0.04	0.09
<b>Total energy expenses</b>	<b>0.99</b>	<b>0.84</b>	<b>0.87</b>	<b>0.90</b>	<b>1.01</b>	<b>0.90</b>

Géométhane sent CRE a study to enable it to apprehend the relevance of the commissioning of an electrical compressor to maintain the performance defined in the PPE at the lowest cost. Pending an analysis by CRE of these elements and its decision relating to the approval of this investment, the changes in energy expenses associated with this commissioning are retained. However, if CRE does not approve this investment, since the energy trajectory is revised each year, the increase adopted between 2022 and 2023 will be corrected during the ATS2 period.

CRE has adopted several adjustments concerning this request:

- the assumption of 100% working volume at the start of winter seems reasonable. However, it does not appear relevant to adopt a low point as that observed during a special year (3% observed in 2018 characterised by storage coming under regulation against low stock levels at the start of winter and the end of a cold winter). CRE retains an amplitude of 85% (corresponding to full stock levels and an average low level observed over the 2012-2019 period). This assumption leads to a 15% adjustment of the energy volumes necessary;
- prices observed in the gas markets for the years 2020 to 2023 dropped more than 15% compared to the level of Géométhane's tariff proposal. CRE updated the gas prices drawing on the levels observed in the markets.

These adjustments lead to a trajectory 19% lower compared to Géométhane's request i.e. €0.2 million per year over the period. This trajectory is specified in the table below.

	2018	2020	2021	2022	2023	Average 2020 2023
Gas (€M)	0.64	0.44	0.45	0.43	0.21	0.38
Volumes (GWh)	27.3	20.9	20.9	20.9	10.1	18.2
Electricity (€M)	0.14	0.15	0.15	0.16	0.58	0.26
Volumes (GWh)	1.5	1.5	1.5	1.5	5.2	2.5
CO <sub>2</sub>	-	-	-	-	-	-
Other (tax, depreciation, etc.)	0.09	0.11	0.11	0.11	0.05	0.09
<b>Total energy expenses</b>	<b>0.99</b>	<b>0.69</b>	<b>0.71</b>	<b>0.70</b>	<b>0.84</b>	<b>0.73</b>

- R&D

In its tariff proposal, Géométhane projects R&D expenses (operating expenses part) of €800 k per year (€220 k in 2018). These expenses are associated with the maintenance of programmes relating to subsoil and surface equipment. Géométhane's participation in the HyGreen project leads to an increase in the renewable gas programme.

The HyGreen project relates to production and storage of hydrogen from photovoltaic electricity. Géométhane's participation in this project aims to assess the impact of hydrogen on well and surface equipment and the technical, economic and regulatory conditions necessary for hydrogen storage.

CRE's analysis

CRE is in favour of the operators studying the consequences of the injection of hydrogen into the gas networks on their storage facilities.

CRE adopts the R&D trajectory requested by the operator.

- **Evolution of overall productivity**

In addition to the item-by-item analysis, the auditor measured the change in Géométhane's overall productivity concerning its operating expenses.

Following this analysis, the auditor does not recommend any additional productivity goal.

CRE's analysis

CRE agrees with the auditor's analysis and does not adopt, given the overall evolution in Géométhane's expenses, an additional productivity goal.

**Summary of the analysis**

The following tables summarise the trajectory of net operating expenses adopted by CRE for the ATS2 tariff:

Géométhane, in current €M	Actual 2018	2020	2021	2022	2023
Géométhane's proposal		17.1	17.7	19.4	20.1
Adjustment adopted by CRE		-0.2	-0.2	-0.2	-0.2
<b>Trajectory adopted by CRE</b>	<b>16.5</b>	<b>16.9</b>	<b>17.5</b>	<b>19.2</b>	<b>19.9</b>

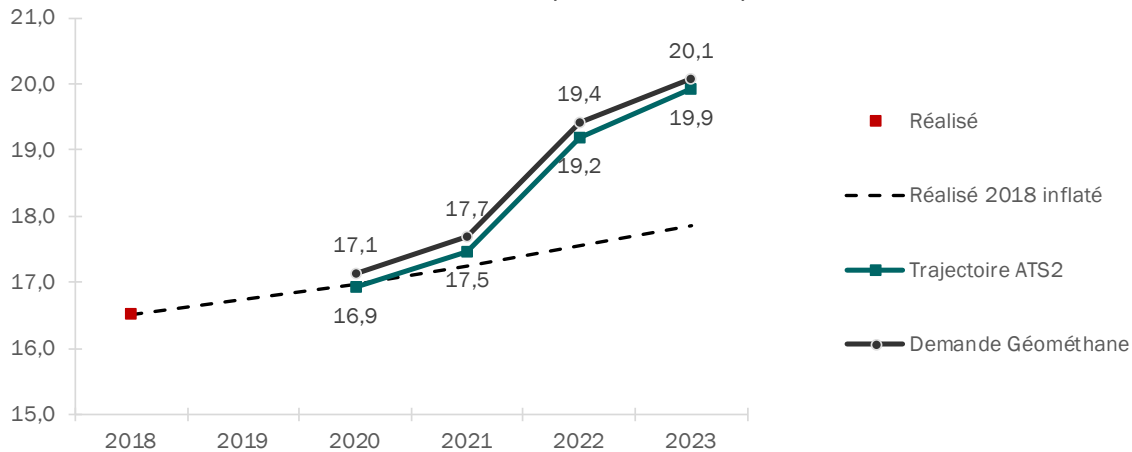
Géométhane, in current €M – Excl. energy	Actual 2018	2020	2021	2022	2023
Géométhane's proposal		16.3	16.8	18.5	19.1
Adjustments adopted by CRE		-0.1	-0.1	-0.0	-0.0
<b>Trajectory adopted by CRE</b>	<b>15.5</b>	<b>16.2</b>	<b>16.8</b>	<b>18.5</b>	<b>19.1</b>

The trajectory adopted by CRE will enable Géométhane to:

- take into account, if CRE approves the investment, the operating expenses related to the commissioning of a third compressor at the Manosque site. However, CRE requests Géométhane to present to it, at the end of the tariff period, a report on the investments actually made concerning this compressor as well as the associated expenses, comparing them with the programme presented by Géométhane in its tariff proposal. If applicable, the operating expenses associated with the implementation of a third compressor which have not been incurred, will be deducted from the net operating expenses to be covered by the next tariff;
- to successfully conduct its research and development policy, particularly with regard to the HyGreen project.

Therefore, the trajectory set by CRE projects a 2.4% increase in Géométhane's net operating expenses between 2018 and 2020 (+4.5% excluding energy). The net operating expenses then increase by an average +5.6% per year over the 2020-2023 period (+5.6% per year, excluding energy).

Trajectoires des charges nettes d'exploitation de Géométhane  
(en M€ courants)



Forecast inflation considered: +1.3% in 2019; +1.5% in 2020; +1.6% in 2021; +1.7% in 2022; +1.8% in 2023

### 3.3 Calculation of normative capital expenses

#### 3.3.1 Weighted average cost of capital

The principles for calculating capital expenses (in particular the methodology for determining the different parameters that are the basis for calculating the WACC in a CAPM methodology (see section 3.1.3.1) were readopted with no changes during the previous tariff periods. However, in the different tariffs, CRE modified its assessment of the weighted average cost of capital (WACC) for the natural gas transmission activity.

To elaborate the present decision, CRE based its work in particular on operators' proposal, as well as on its own analyses and the results of the external audit it ordered of the remuneration rate proposed by Storengy Teréga and Géométhane. Within the framework of its public consultation of July 2019, CRE presented its preliminary analysis.

- **Operators' proposals**

Storengy's and Géométhane's proposal was established using a weighted average cost of capital (WACC) for gas transmission of 5.5% (real, before tax), plus a special premium of 100 basis points for risks specific to the gas storage activity, i.e. an overall rate of 6.5% (real, before tax). This request is based on the conclusions of a study commissioned by gas operators from an external provider. In its tariff proposal, Storengy and Géométhane use the rate of 4.95% (nominal, before tax) for the remuneration of AuC. In the event that CRE does not adopt the mechanism for covering costs associated with a change in the scope of regulation, Storengy and Géométhane request an additional WACC premium between 220 and 390 basis points.

Teréga's proposal was established using a weighted average cost of capital (WACC) for gas transmission of 5.5% (real, before tax), plus a special premium of 200 basis points for risks specific to the gas storage activity, i.e. an overall rate of 7.5% (real, before tax). This request is based on the conclusions of a study commissioned by gas operators from an external provider and a study ordered by Teréga alone. In its tariff proposal, Teréga also requests that the AuC remuneration rate be set at the same level.

- **CRE's analysis**

CRE re-examined the various parameters used to calculate the WACC. In addition, it ordered an external consultant to audit GRTgaz's and Teréga's proposals concerning the return on capital. This study was published within the framework of the public consultation of July 2019 and of the present deliberation.

During the public consultation of July 2019, CRE published a WACC range of 4.1% - 4.9% (real, before tax), i.e. a special storage premium of +50 basis points compared to the WACC in effect in GRTgaz's and Teréga's ATRT7 tariff, identical to that set by CRE for the ATS1 period.

Among the contributors to this public consultation, certain stakeholders stated that a remuneration level included in this range is overvalued, particularly given the current market conditions and their estimate of the level of risk of the gas storage activity. However, operators and their shareholders consider that the current level and the level

envisaged by CRE for the special storage premium of +50 basis points is undervalued given the risk of the gas storage activity since the previous tariff period.

For the ATS2 tariff period, CRE adopts the value of 4.75% as the weighted average cost of capital (real, before tax) to remunerate the RAB of storage operators. This rate level reflects an increase in the weighted average cost of capital in the ATRT tariff, set at 4.25% (real before tax) for the ATRT7 tariff, of +50 basis points. The level of this increase, which remains the same as that adopted in the ATS1 tariff, is justified by the absence of a development of risks, particularly, economic, technical and geological risks, in the activity of natural gas storage site operator compared to the gas transmission activity.

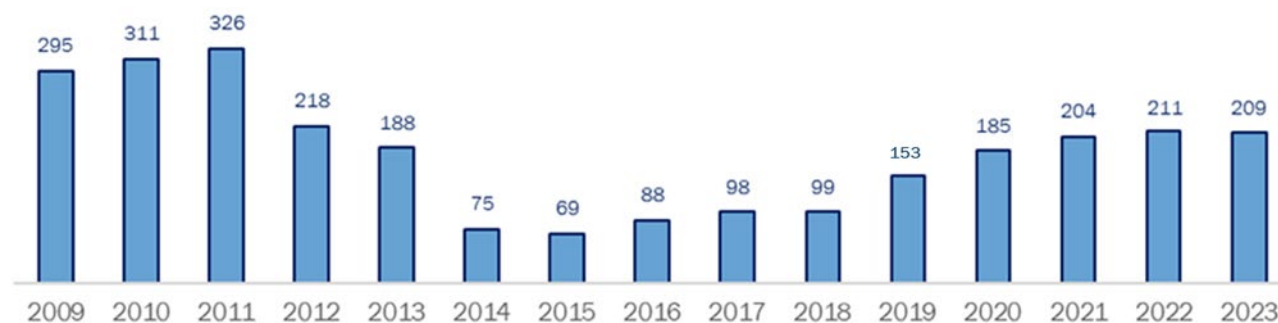
In compliance with what is described in section 2.1.3.3, assets under construction (AuC) continue to be remunerated at the cost of debt (nominal, before tax) in the ATRT (2.6% for the ATRT7 tariff) plus a special storage premium, i.e. 3.1%.

### 3.3.2 Investments

#### 3.3.2.1 Storengy

The trajectory of Storengy's investment expenses over the ATS2 period is marked by an increase in forecast investment expenditure, with average expenses of €202 million per year over the period, whereas they totalled €98.3 million in 2018 and a projected €152.5 million in 2019.

CRE observes that the trajectory proposed by Storengy corresponds to a major increase in investments compared to the period preceding the start of regulation of storage as at 1 January 2018. After a phase of under-investment between 2014 and 2018, Storengy has returned to a level of expenses close to that of the 2009-2013 period.



In its public consultation of 27 July 2019, CRE questioned certain needs identified by Storengy, particularly concerning the projects to renovate the Chémery and Gourmay sites, and compression of the Tersanne, Hauterives and Etrez salt caverns, which contribute to increasing the level of average expenses by more than €47 million per year over the ATS2 period, compared to the ATS1 period. These questions are shared by the majority of contributors, who request CRE to be particularly vigilant about the investment expenses of storage operators.

Moreover, Article L. 421-7-1 of the energy code provides for the approval of the annual investment budgets of the natural gas storage operators. The projects will be approved by CRE within the framework of the annual approval of storage operators' investments, and the differences with the forecast trajectory will be fully covered by the CRCP mechanism. Within this framework, CRE will examine in particular the main renovation projects envisaged by Storengy, on the basis of a cost/benefit analysis and counterfactual scenarios presented by the operator.

Therefore, CRE adopts the trajectory of investment expenses requested by Storengy pour for the ATS2 tariff period:

In current €M	2020	2021	2022	2023	Annual average ATS2	Annual average ATS1 (*)
Renovation	33.9	67.7	92.9	91.7	71.5	23.6
Safety - security	18.0	16.8	11.0	11.1	14.1	19.2
Integrity/obsolescence	72.0	79.0	74.7	80.1	75.9	41.6
Cushion gas	20.0				20.0	8.8
IS	10.8	11.0	10.6	10.2	10.6	10.1
General investments	30.7	30.2	23.9	19.0	25.8	25.8
One-time investments	-	-	-	-	-	2.1
Contingencies	-	-	-	-	-	-5.4
<b>TOTAL</b>	<b>185.5</b>	<b>204.7</b>	<b>213.1</b>	<b>212.0</b>	<b>218.0</b>	<b>125.8</b>

(\*) average of actual investment programmes for 2018 and those approved for 2019

### 3.3.2.2 Teréga

The trajectory of Teréga’s investment expenses over the ATS2 period is marked by a small increase in investment expenses, with average expenses of €55 million per year over the period, compared to roughly €52 million per year during the ATS1 period.

In its public consultation of 27 July 2019, CRE questioned this trajectory, particularly the significant increases in certain expense categories related to security and maintenance investments and property costs. These questions are shared by the majority of contributors, who request CRE to be particularly vigilant about the investment expenses of storage operators.

With regard to expenses concerning injection of cushion gas, CRE questions the volume and pace requested by Teréga and ordered an external audit of the geoscience study and the relevance of Teréga’s injection strategy. The conclusions of this audit led CRE to request Teréga to conduct additional work on the characteristics of its offer, and to present it to CRE before any new request for injection of cushion gas<sup>23</sup>.

Article L. 421-7-1 of the energy code provides for the approval of the annual investment budgets of the natural gas storage operators. The projects will be approved by CRE within the framework of the annual approval of storage operators’ investments, and the differences with the forecast trajectory will be fully covered by the CRCP mechanism.

Therefore, CRE adopts the trajectory of investment expenses requested by Teréga for the ATS2 tariff period:

In current €M	2020	2021	2022	2023	Annual average ATS2	Annual average ATS1 (*)
Developments	0.5	0.5	0.6	0.5	0.5	11.0
Security and maintenance	26.5	25.9	33.5	49.5	33.8	23.6
Cushion gas	12.4	12.6	12.8	6.5	11.1	9.6
IS	5.4	4.1	3.3	3.2	4.0	6.5
General investments	6.7	12.0	2.4	0.9	5.5	2.0
<b>TOTAL</b>	<b>51.4</b>	<b>55.1</b>	<b>52.5</b>	<b>60.7</b>	<b>54.9</b>	<b>52.5</b>

(\*) average of actual investment programmes for 2018 and those approved for 2019

### 3.3.2.3 Géométhane

The trajectory of Géométhane’s investment expenses over the ATS2 period is marked by an increase in investment expenses, with average expenses of €31 million per year over the period, compared to roughly €16 million per year during the ATS1 period.

<sup>23</sup> CRE’s deliberation of 19 July 2018 approving Teréga’s investment programme for the year 2018



The increase in expenses requested by Géométhane essentially concerns the renovation programmes for the Manosque site (Géométhane projects €65 million over the period to carry out the “new surface equipment” programme).

Article L. 421-7-1 of the energy code provides for the approval of the annual investment budgets of natural gas storage operators. This project will be approved by CRE within the framework of the annual approval of storage operators’ investments, and the differences with the forecast trajectory will be fully covered by the CRCP mechanism.

Therefore, CRE adopts the trajectory of investment expenses requested by Géométhane for the ATS2 tariff period:

In current €M	2020	2021	2022	2023	Annual average ATS2	Annual average ATS1 (*)
Verification of the two caverns	0.9	0.9	1.0	1.0	0.9	1.4
Renovation programmes	45.7	38.7	22.8	10.9	29.5	7.9
Upgrading existing facilities	-	-	-	-	-	4.9
Studies budget	-	-	-	-	-	1.2
Current investments (vehicles, material purchases)	0.7	0.7	0.7	0.8	0.7	0.6
<b>TOTAL</b>	<b>47.3</b>	<b>40.3</b>	<b>24.5</b>	<b>12.7</b>	<b>31.2</b>	<b>16.1</b>

(\*) average of actual investment programmes for 2018 and those approved for 2019

### 3.3.3 Normative capital expenses

#### 3.3.3.1 Storengy

- Trajectory of normative capital expenses

The table below presents the forecast trajectory of Storengy’s RAB and assets under construction (AuC) for 2020 to 2023:

Regulated asset base (RAB) and assets under construction (AuC)						
Storengy, in current €M	Average 18-19	2020	2021	2022	2023	Average 20-23
RAB as at 01/01/Y	3,537.1	3,701.3	3,793.1	3,909.8	3,958.1	3,840.6
Commissioned*		177.1	199.9	135.8	185.5	174.6
Depreciation		-134.9	-138.1	-146.9	-152.6	-143.1
Revaluation		49.5	54.9	59.4	60.9	56.2
RAB as at 31/12/Y		3,793.1	3,909.8	3,958.1	4,051.9	3,928.2
Assets under construction (AuC)	397.5	328.9	352.3	368.6	454.2	376.0

\*Investments entering the RAB

The table below outlines the forecast trajectory of Storengy’s normative capital expenses for 2020-2023:

Storengy, in current €M	Average 18-19	2020	2021	2022	2023	Average 20-23
Depreciation of assets in service	125.0	134.9	138.1	146.9	152.6	143.1
Return on assets in service	203.4	175.8	180.2	185.7	188.0	182.4
Return on AuC	16.7	10.2	10.9	11.4	14.1	11.7
<b>Total normative capital expenses</b> <i>of which normative CAPEX “excluding infrastructure”</i>	<b>345.1</b>	<b>320.9</b> 11.8	<b>329.2</b> 12.2	<b>344.0</b> 14.7	<b>354.7</b> 16.4	<b>337.2</b> 13.8

- **Trajectory of capital expenses “excluding infrastructure”**

The table below outlines the specific trajectory of the RAB, AuC and normative CAPEX of Storengy’s assets “excluding infrastructure” for 2020 to 2023, which are subject to a specific regulation defined in section 2.2.3.4 of the deliberation.

Storengy, in current €M	2020	2021	2022	2023	Average 20-23
RAB as at 01/01/Y	36.4	38.3	40.3	39.8	38.7
Depreciation of assets in service	9.8	10.2	12.5	14.3	11.7
Return on assets in service	1.7	1.8	1.9	1.9	1.8
Assets under construction (AuC)	7.7	7.9	7.9	7.8	7.8
Return on AuC	0.2	0.2	0.2	0.2	0.2
Total normative CAPEX “excluding infrastructure”	<b>11.8</b>	<b>12.2</b>	<b>14.7</b>	<b>16.4</b>	<b>13.8</b>

### 3.3.3.2 Teréga

- **Trajectory of normative capital expenses**

The table below presents the forecast trajectory of Teréga’s RAB and assets under construction (AuC) for 2020 to 2023:

Regulated asset base (RAB) and assets under construction (AuC)						
Teréga, in current €M	Average 18-19	2020	2021	2022	2023	Average 20-23
RAB as at 01/01/Y	1,189.9	1,244.6	1,270.1	1,298.7	1,320.3	1,283.4
Commissioned*		47.9	49.5	41.8	27.7	41.7
Depreciation		-43.5	-44.6	-46.0	-47.1	-45.3
Revaluation		21.2	23.7	25.8	-4.8	16.5
RAB as at 31/12/Y		1,270.1	1,298.7	1,320.3	1,296.1	1,296.3
Assets under construction (AuC)	44.7	28.6	32.8	35.1	47.5	36.0

\*Investments entering the RAB

The table below outlines the forecast trajectory of Teréga's normative capital expenses for 2020-2023:

Teréga, in current €M	Average 18-19	2020	2021	2022	2023	Average 20-23
Depreciation of assets in service	42.6	43.5	44.6	46.0	47.1	45.3
Return on assets in service	68.4	59.1	60.3	61.7	62.7	61.0
Return on AuC	1.9	0.9	1.0	1.1	1.5	1.1
<b>Total normative capital expenses</b>	<b>112.9</b>	<b>103.5</b>	<b>105.9</b>	<b>108.8</b>	<b>111.3</b>	<b>107.4</b>
<i>of which normative CAPEX “excluding property infrastructure and vehicles”</i>		2.0	2.8	4.3	4.4	3.4
<i>of which normative CAPEX “excluding IS infrastructure” (experimental TOTEX)</i>		6.6	6.8	6.9	6.9	6.8

- **Trajectory of capital expenses “excluding infrastructure”**

The table below outlines the specific trajectory of the RAB, AuC and normative CAPEX of Teréga’s “excluding infrastructure – property and vehicles” assets for 2020 to 2023, which are subject to a specific regulation defined in section 2.2.3.4 of the deliberation.

Teréga, in current €M	2020	2021	2022	2023	Average 20-23
RAB as at 01/01/Y	11.7	16.0	26.7	26.4	20.2
Depreciation of assets in service	1.4	1.9	3.0	3.1	2.3
Return on assets in service	0.6	0.8	1.3	1.3	1.0
Assets under construction (AuC)	2.9	6.2	1.1	0.3	2.6
Return on AuC	0.1	0.2	0.0	0.0	0.1
<b>Total normative CAPEX “excluding infrastructure - property and vehicles”</b>	<b>2.0</b>	<b>2.8</b>	<b>4.3</b>	<b>4.4</b>	<b>3.4</b>

- **Trajectory of IS TOTEX**

The table below outlines the specific trajectory of Teréga’s commissioning of assets, its normative CAPEX, and TOTEX under “excluding infrastructure – information systems” assets for 2020 to 2023, which are subject to a specific experimental TOTEX regulation defined in section 2.2.3.4 of the deliberation.

Teréga, in current €M	2020	2021	2022	2023	Average 20-23
RAB as at 01/01/Y	19.0	19.4	18.2	16.0	18.1
Depreciation of assets in service	5.6	5.8	6.0	6.1	5.9
Return on assets in service	0.9	0.9	0.9	0.8	0.9
Assets under construction (AuC)	2.7	2.0	1.6	1.6	2.0
Return on AuC	0.1	0.1	0.0	0.0	0.1
<b>Total normative CAPEX “excluding infrastructure - IS”</b>	<b>6.6</b>	<b>6.8</b>	<b>6.9</b>	<b>6.9</b>	<b>6.8</b>

Teréga, in current €M	2020	2021	2022	2023	Average 20-23
IS commissioned	5.7	4.3	3.5	3.4	4.2
IS OPEX	5.4	5.7	6.4	6.3	5.9
<b>IS TOTEX</b>	<b>11.1</b>	<b>10.0</b>	<b>9.9</b>	<b>9.7</b>	<b>10.1</b>

### 3.3.3.3 Géométhane

The table below presents the forecast trajectory of Géométhane’s RAB and assets under construction (AuC) for 2020 to 2023:

Regulated asset base (RAB) and assets under construction (AuC)						
Géométhane, in current €M	Average 18-19	2020	2021	2022	2023	Average 20-23
RAB as at 01/01/Y	197.2	205.6	235.2	240.2	331.5	253.1
Commissioned*		35.9	11.8	96.6	11.7	39.0
Depreciation		-9.8	-10.7	-11.4	-15.3	-11.8
Revaluation		3.5	3.9	6.1	5.9	4.8
RAB as at 31/12/Y		235.2	240.2	331.5	333.7	285.2
Assets under construction (AuC)	76.4	103.2	65.2	84.8	5.8	64.7

\*Investments entering the RAB

The table below outlines the forecast trajectory of Géométhane’s normative capital expenses for 2020-2023:

Géométhane, in current €M	Average 18-19	2020	2021	2022	2023	Average 20-23
Depreciation of assets in service	8.9	9.8	10.7	11.4	15.3	11.8
Return on assets in service	1.,3	9.8	11.2	11.4	15.7	12.0
Return on AuC	3.2	3.2	2.0	2.6	0.2	2.0
HyGreen Provence project		0.0	1.4	1.5	1.5	1.1
<b>Total normative capital expenses</b>	<b>23.4</b>	<b>22.7</b>	<b>25.4</b>	<b>26.9</b>	<b>32.7</b>	<b>26.9</b>
<i>of which normative CAPEX “excluding infrastructure”</i>		1.6	1.6	1.6	1.6	1.6

- **Trajectory of capital expenses “excluding infrastructure”**

The table below outlines the specific trajectory of the RAB, AuC and normative CAPEX of Géométhane’s assets “excluding infrastructure” for 2020 to 2023, which are subject to a specific regulation defined in section 2.2.3.4 of the deliberation.

Géométhane, in current €M	2020	2021	2022	2023	Average 20-23
RAB as at 01/01/Y	18.6	18.3	17.9	17.6	18.1
Depreciation of assets in service	0.7	0.7	0.7	0.7	0.7
Return on assets in service	0.9	0.9	0.9	0.8	0.9
Assets under construction (AuC)	0.0	0.0	0.0	0.0	0.0
Return on AuC	0.0	0.0	0.0	0.0	0.0
Total normative CAPEX “excluding infrastructure”	<b>1.6</b>	<b>1.6</b>	<b>1.6</b>	<b>1.6</b>	<b>1.6</b>

### **3.4 CRCP as at 31 December 2019**

#### **3.4.1 Storengy**

Storengy estimated the CRCP balance as at 31 December 2019 at +€11.6 million to be returned to the operator. This balance is the result of the main points below:

- net OPEX and normative CAPEX lower than the ATS1 trajectory;
- income from purchases/sales of performance gas;
- a bonus attributed for marketing in 2019;
- coverage by the tariff (through their deduction from marketing income) of penalties paid to clients for failures occurring in winter 2018-2019;
- the difference between the actual 2018 CRCP compared to the estimated CRCP.

The balance as at 31 December 2019 adopted by CRE totals -€12.8 million to be returned to users. CRE adopted several adjustments compared to Storengy's request:

- the difference between the estimated and actual CRCP was adjusted, by not retaining, compared to Storengy's request, coverage of the following expenses:
  - o depreciation of the Soings-en-Sologne gas (€8.7 million) which results from a situation prior to storage coming under regulation;
  - o penalties paid in 2018 (€1.1 million) to Storengy's clients following operational failures of its storage facilities are not included in the expenses to be covered by the tariff: CRE does not consider it acceptable that users that have received these penalties bear the cost subsequently in the tariff;
  - o a portion of the amount billed by Storengy SAS to Storengy France, in line with the adjustment adopted for the ATS2 period, described in section 3.1.2.2.2 (€2.2 million);
- deduction of penalties from 2019 marketing income is not adopted (€8.9 million), for the same reasons as for the penalties paid in 2018;
- the 2019 regulation bonus is revised downwards (-€3.2 million): CRE considers that it must be calculated for 2019-2020 capacity auction income (whereas it is calculated by Storengy based on all auction income including that resulting from multi-annual sales).



<b>Storengy – CRCP as at 31 December 2019 in €M</b>	<b>Operator's request</b>	<b>Amount adopted by CRE</b>
Remainder from previous CRCPs	0	0
Difference between the CRCP estimated for end 2018 and the final CRCP for 2018	2.6	-9.6
<b>Estimated differences between expenses and income for 2019</b>	<b>9.0</b>	<b>-3.2</b>
Of which marketing income	7.5	-1.4
Of which transmission operator repayment	1.2	1.2
Of which net operating expenses	-4.6	-4.6
Of which normative capital expenses	-4.1	-4 ;2
Of which gains or losses related to purchases-sales of performance gas	-3.5	-3.5
Of which remuneration of performance gas	1.1	1.1
Of which incentive regulation bonus for marketing	11.4	8.2
<b>CRCP balance as at 31 December 2019 updated</b>	<b>+11.6</b>	<b>-12.8*</b>

\*The CRCP balance as at 31 December 2019 therefore corresponds to the return of a sum of -€12.8 million to storage users.

The amount of the CRCP balance as at 31 December 2019 will be smoothed and integrated in the allowed revenue over the ATS2 period. Since the amount for differences for the year 2019 are provisional, the final value will be included in the CRCP balance as at 31 December 2020.

### 3.4.2 Teréga

Teréga estimated the CRCP balance as at 31 December 2019 at -€4.8 million to be returned to users. This balance is related to the following points:

- net OPEX and normative CAPEX lower than the ATS1 trajectory;
- a bonus attributed for marketing in 2019.

The CRCP balance as at 31 December adopted by CRE totals -€4.7 million.

<b>Teréga – CRCP as at 31 December 2019 in €M</b>	<b>Operator's request</b>	<b>Amount adopted by CRE</b>
Remainder from previous CRCPs	0	0
Difference between the CRCP estimated for end 2018 and the final CRCP for 2018	-0.5	-0.5
<b>Estimated differences between expenses and income for 2019</b>	<b>-4.3</b>	<b>-4.2</b>
Of which marketing income	0.0	0.0
Of which transmission operator repayment	0.1	0.1
Of which net operating expenses	-1.6	-1.6
Of which normative capital expenses	-5.9	-5.8
Of which gains or losses related to purchases-sales of performance gas	0.0	0.0
Of which incentive regulation bonus for marketing	3.1	3.1
<b>CRCP balance as at 31 December 2019 updated</b>	<b>-4.8</b>	<b>-4.7*</b>

\*The CRCP balance as at 31 December 2019 therefore corresponds to the return of a sum of -€4.7 million to storage users.

The amount of the CRCP balance as at 31 December 2019 will be smoothed and integrated in the allowed revenue over the ATS2 period. Since the amount for differences for the year 2019 are provisional, the final value will be included in the CRCP balance as at 31 December 2020.

### 3.4.3 Géométhane

Géométhane estimated the CRCP balance as at 31 December 2018 at €1.2 million to be returned to the operator. This balance is related to the following points:

- normative CAPEX lower than the ATS1 trajectory and to a lesser extent, net OPEX higher than the ATS1 trajectory;
- the bonus attributed for marketing in 2018.

The CRCP balance as at 31 December adopted by CRE totals €1.2 million. The difference compared to Géométhane's request comes from a marketing bonus calculated by Géométhane based on all auction income (including that from multi-annual sales) whereas the 2019 bonus must be calculated for 2019-2020 capacity auction income.

<b>Géométhane – CRCP as at 31 December 2019</b> <b>In €M</b>	<b>Operator's request</b>	<b>Amount adopted by CRE</b>
Remainder from previous CRCPs	0	0
Difference between the CRCP estimated for end 2018 and the final CRCP for 2018	0.8	0.8
Estimated differences between expenses and income for 2019	0.5	0.4
Of which marketing income	0.0	0.0
Of which transmission operator repayment	0.2	0.2
Of which net operating expenses	1.0	1.0
Of which normative capital expenses	-1.2	-1.2
Of which gains or losses related to purchases-sales of performance gas	0.0	0.0
Of which incentive regulation bonus for marketing	0.5	0.4
<b>CRCP balance as at 31 December 2019 updated</b>	<b>1.2</b>	<b>1.2*</b>

\*The CRCP balance as at 31 December 2019 therefore corresponds to the return of a sum of €1.2 million to the operator.

The amount of the CRCP balance as at 31 December 2019 will be smoothed and integrated in the allowed revenue over the ATS2 period. Since the amount for differences for the year 2019 are provisional, the final value will be included in the CRCP balance as at 31 December 2020.

### **3.5 Allowed revenue for the 2020-2023 period**

#### **3.5.1 Storengy**

Storengy's allowed revenue for the 2020-2023 period is as follows:

<b>Storengy, in current €M</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>Average 20-23</b>
Net operating expenses	178.1	178.9	180.4	184.4	<b>180</b>
Normative capital expenses	320.9	329.2	344.0	354.7	<b>337</b>
Reconciliation of the CRCP balance (remainder from previous CRCPs + 2018 balance + 2019 estimate)	-3.3	-3.3	-3.3	-3.3	<b>-3.3</b>
Allowed revenue	<b>495.7</b>	<b>504.8</b>	<b>521.0</b>	<b>535.8</b>	<b>514.3</b>

Storengy's allowed revenue for the ATS2 period will total an average €514 million per year, i.e. a -1.3% evolution between 2018 and 2020 (mainly related to the drop in the remuneration rate), then an average change of +2.6% per year between 2020 and 2023.

#### **3.5.2 Teréga**

Teréga’s allowed revenue for the 2020-2023 period is as follows:

Teréga, in current €M	2020	2021	2022	2023	Average 20-23
Net operating expenses	44.4	45.9	46.2	47.4	<b>46.0</b>
Normative capital expenses	103.5	105.9	108.8	111.3	<b>107.4</b>
Reconciliation of the CRCP balance (remainder from previous CRCPs + 2018 balance + 2019 estimate)	-1.2	-1.2	-1.2	-1.2	<b>-1.2</b>
Allowed revenue	<b>146.6</b>	<b>150.6</b>	<b>153.8</b>	<b>157.5</b>	<b>152.1</b>

Teréga’s allowed revenue for the ATS2 period will total an average €152 million per year, i.e. a -1.6% evolution between 2018 and 2020 (mainly related to the drop in the remuneration rate), then an average change of +2.4% per year between 2020 and 2023.

### 3.5.3 Géométhane

Géométhane’s allowed revenue for the 2020-2023 period is as follows:

Géométhane, in current €M	2020	2021	2022	2023	Average 20-23
Net operating expenses	16.9	17.5	19.2	19.9	<b>18.4</b>
Normative capital expenses	22.7	25.4	26.9	32.7	<b>26.9</b>
Reconciliation of the CRCP balance (remainder from previous CRCPs + 2018 balance + 2019 estimate)	0.3	0.3	0.3	0.3	<b>0.3</b>
Allowed revenue	<b>40.0</b>	<b>43.2</b>	<b>46.4</b>	<b>53.0</b>	<b>45.6</b>

Géométhane’s allowed revenue for the ATS2 period will total an average €46 million per year, i.e. a -4.5% evolution between 2018 and 2020 (mainly related to the drop in the remuneration rate), then an average change of +9.8% per year between 2020 and 2023.

## 4. TARIFF FOR THE USE OF THE UNDERGROUND NATURAL GAS STORAGE INFRASTRUCTURE OF STORENGY, TERÉGA AND GÉOMÉTHANE

### 4.1 Collection of allowed revenue

#### 4.1.1 Sale of storage capacity

Storage capacities which are not already contracted are sold at auctions according to terms defined by CRE.

Income from the sale of storage capacity and ancillary products, received by storage operators from their clients, cover operators’ allowed revenue.

#### 4.1.2 Compensation of revenue shortfalls by transmission system operators

If income received directly by storage operators is lower than their allowed revenue, transmission system operators collect compensation from their clients and transfer it to the storage operators. The terms for collecting and transferring this compensation are specified in the deliberation of 23 January 2020 on a decision concerning the tariff for the use of the natural gas transmission network of GTRgaz and Teréga .

If auction income is higher than the storage operators’ allowed revenue, the storage tariff charge is negative and results in a repayment to shippers.

## **4.2 Penalties**

When capacity sold turns out to be unavailable, particularly due to technical failures, the storage operator publishes restrictions on clients' injection or withdrawal rights.

Therefore, in the ATS2 tariff, in the case of restrictions on the injection or withdrawal capacities booked by a client, giving rise to a penalty to be paid by the operator, this penalty will be calculated based on the amount due by the client for the duration of the restriction and the rate of restriction:

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

Penalties are fully covered by the CRCP above an annual cap of €10 million for Storengy and €3 million for Teréga. Therefore, operators have an incentive for this item up to this cost limit, above which the financial impact is neutralised, so that they are not exposed to too great a financial risk in the case of an exceptional situation (see section 2.3.3 of the present deliberation).

## **DECISION**

CRE defines the tariff for the use of the underground natural gas storage infrastructure of Storengy, Teréga and Géométhane as from 2020, based on the methodology and parameters described in the present deliberation.

CRE defines, in particular:

- the tariff regulatory framework and the incentive regulation parameters applicable to Storengy, Teréga and Géométhane for a period of roughly four years (part 2);
- the trajectory of operating expenses, the WACC and the forecast change in the tariff (part 3);
- the tariff applicable as from 2020 (part 4).

The present deliberation will be published on CRE's website and forwarded to the minister of the ecological and inclusive transition, and the minister of economy and finance, and published in the Official Journal of the French Republic.

**Paris, 23 January 2020**

**For the Energy Regulatory Commission,**

**The Chairman,**

**Jean-François CARENCO**



**ANNEX 1: INDICATORS FOR MONITORING QUALITY OF SERVICE**

In accordance with the principles defined in the “Regulatory framework” part of the present tariff decision, a mechanism for following quality of service has been set up in the ATS2 tariff for the three natural gas storage operators, on the points considered a priority for the proper functioning of the gas market. This monitoring consists of indicators sent by the operators to CRE and published on their websites.

The following indicators are monitored without being subject to a financial incentive in 2020:

- compliance with the maintenance programmes of storage operators;
- provision of information in the event of an incident that might lead to a restriction on the withdrawal and injection rights of storage users;
- greenhouse gas emissions in relation to the volume of gas withdrawn and injected;
- methane leaks (including diffuse losses, venting and accidents/incidents) in relation to the volume of gas withdrawn and injected.

The service quality regulation mechanism may change during the ATS2 tariff period. It may be subject to any audit deemed useful by CRE.

Storage operators are authorised to write off one day per year to calculate the indicators, during the commissioning of a major version of an application contributing to the production of said indicators. They are required to communicate to market participants the tentative date for commissioning at least one month in advance, and then to confirm one week before the actual date of this commissioning.

**1. Indicator for following compliance with the maintenance programmes of storage operators**

<b>Indicator name</b>	<b>Indicator calculation</b>	<b>Frequency of reporting to CRE and publication</b>	<b>Implementation date</b>
Operators' compliance with the annual maintenance programme	Variation (in percentage) between the capacity proposed in the forecast maintenance programme and the actual capacity made available at the end of the year (one aggregated value per storage group <sup>(1)</sup> )	Annual	1 January 2020

(1): 6 storage groups:

- Sediane B;
- Sediane Nord;
- Serene Nord;
- Serene Atlantique;
- Saline;
- Sud-Ouest.

2. Indicator for following the provision of information in the event of capacity restrictions

Information	Frequency of publication	Indicator calculation	Frequency of reporting to CRE and publication
<b>Information<sup>(1)</sup> in the event of incidents that may lead to a restriction on users' rights</b>	As from the appearance of an incident leading to a capacity restriction	Number of days with capacity restrictions for which information was provided compared to the number of total days with capacity restrictions	Annual
<b>Monitoring of the average notice period</b>	As from the appearance of an incident leading to a capacity restriction	Average number of days between the announcement of the notice and the start of the capacity restriction period	Annual
<b>Implementation date:</b>	1 January 2020		

(1): the information to be published is:

- events leading to the failures;
- the storage groups concerned;
- the period of restriction for each group;
- the rate of restriction for each group.

3. Environmental indicators

Indicator name	Indicator calculation	Frequency of reporting to CRE and publication	Implementation date
Greenhouse gas emissions in proportion to the volume of gas withdrawn and injected	<b>Monthly greenhouse gas emissions / Monthly volume of gas injected and/or withdrawn</b>  (one value followed per operator)	Annual	1 January 2020
Methane emissions in relation to the volume of gas withdrawn and injected	<b>Monthly methane emissions / Monthly volume of gas injected and/or withdrawn</b>  (one value followed per operator)		1 January 2020

## ANNEX 2: REFERENCES FOR THE ANNUAL UPDATE OF THE TARIFF FOR THE USE OF THE UNDERGROUND NATURAL GAS STORAGE INFRASTRUCTURE OF STORENGY, TERÉGA AND GÉOMÉTHANE

### 4.2.1.1 Capital expenses

For the years 2020 to 2023, the capital expenses taken into account for the annual updating of the allowed revenue are those defined in the following table:

Target normative CAPEX, in current €M	2020	2021	2022	2023
Storengy	320.9	329.2	344.0	354.7
Teréga	103.5	105.9	108.8	111.3
Géométhane	22.7	25.4	26.9	32.7

### 4.2.1.2 Net operating expenses

For the years 2020 to 2023, the reference net operating expenses taken into account for the annual updating of the allowed revenue are those defined in the following table:

Target net OPEX, in current €M	2020	2021	2022	2023
Storengy	178.1	178.9	180.4	184.4
Teréga	44.4	45.9	46.2	47.4
Géométhane	16.9	17.5	19.2	19.9

For the years 2021 to 2023, the amount taken into account for updating the allowed revenue for year Y is equal to the reference value for year Y:

- divided by forecast inflation between year 2019 and year Y;

	2020	2021	2022	2023
Forecast inflation between year 2019 and year Y	1,5 %	3,12 %	4,88 %	6,76 %

- multiplied, for the years 2022 and 2023, by the inflation realized between the year 2019 and the year Y-2. Actual inflation is defined as the change in the average value of the consumer price index excluding tobacco, as calculated by INSEE for all households throughout France (INSEE reference 1763852), recorded in year Y-2, compared to the average value of the same index recorded in calendar year 2019;
- multiplied by the inflation realized between year Y-2 and year Y-1, or if not available, its best estimate, defined as the change in the average value of the consumer price index excluding tobacco, as calculated by INSEE for all households in France (INSEE reference number 1763852);
- multiplied by the forecast inflation for year Y taken into account in the budget bill for year Y.

4.2.1.3 Calculation and reconciliation of the CRCP balance

Storengy, in current €M	Rate	2020	2021	2022	2023
Income from the compensation tariff charge	100%	The amount of compensation is calculated annually at the end of the auction campaign (month of March of year Y)			
Normative "infrastructure" CAPEX	100%	309.1	317.0	329.3	338.4
Energy expenses and purchases and sales of CO <sub>2</sub> quotas	100%	-	24.3	25.2	26.4
	80%	23.7	Updated each year		
Consumables expenses	100%	-	2.7	2.8	2.8
	80%	2.7	Updated each year		
Effluent treatment expenses	100%	-	3.6	3.6	3.7
	80%	3.5	Updated each year		
Reference for the calculation of differences in Normative capital expenses "non-networks" due to inflation.	100%	11.8	12.2	14.7	16.4
Expenses and income associated with contracts with other regulated operators (income)	100%	46.7	41.8	42.3	42.8
Penalties paid to clients	100% above the threshold of €10 million	0	0	0	0
Portion of provisions for decommissioning set aside by the operator	100%	0	0	0	0
Bonuses and penalties resulting from the different incentive regulation mechanisms	100%	0	0	0	0
capital gain on assets disposal (building or land)	80%	0	0	0	0
Study costs for projects not greenlit and stranded costs for which CRE approved coverage	100%	0	0	0	0
Constitution of additional gas stocks to meet regulatory stock obligations such as those set out in Article L. 421-6 of the energy code	100%	0	0	0	0
R&D expenses	100% of costs not used at the end of the period	4.2	4.8	5.0	5.1

In addition, with regard to net operating expenses, for the years 2020 to 2023, the amount taken into account in the calculation of the CRCP balance takes into account the difference between forecast and actual inflation.

This amount is equal to the reference value for year Y:

- divided by the forecast inflation between the year 2019 and the year Y;

	2020	2021	2022	2023
Forecast inflation between year 2019 and year Y	1,5 %	3,12 %	4,88 %	6,76 %

- multiplied by the actual inflation recorded between the year 2019 and the year Y. Actual inflation is defined as the change in the average value of the consumer price index excluding tobacco, as calculated by the French national statistics office INSEE, for all households in the whole of France (INSEE reference 1763852), recorded for calendar year Y, compared to the average value of the same index recorded in calendar year 2019.

Teréga, in current €M	Rate	2020	2021	2022	2023
Income from the compensation tariff charge	100%	The amount of compensation is calculated annually at the end of the auction campaign (month of March of year Y)			
Normative "infrastructure" CAPEX	100%	94.9	96.3	97.6	100.0
Energy expenses and purchases and sales of CO <sub>2</sub> quotas	100%		5.8	5.8	5.8
	80%	5.8	Updated each year		
Consumables expenses	100%		0.1	0.1	0.1
	80%	0.1	Updated each year		
Effluent treatment expenses	100%		0.4	0.4	0.4
	80%	0.4	Updated each year		
Reference for the calculation of differences in Normative capital expenses "non-networks" due to inflation.	100%	8.6	9.6	11.2	11.3
Expenses and income associated with contracts with other regulated operators (income)	100%	6.7	6.8	6.9	7.1
Penalties paid to clients	100% above the threshold of €3 million	0	0	0	0
Portion of provisions for decommissioning set aside by the operator	100%	0	0	0	0
Bonuses and penalties resulting from the different incentive regulation mechanisms	100%	0	0	0	0
Capital gain on assets disposal (building or land)	80%	0	0	0	0
Study costs for projects not greenlit and stranded costs for which CRE approved coverage	100%	0	0	0	0
Reference trajectory of Teréga's TOTEX experiment	50%	<b>11.1</b>	<b>10.0</b>	<b>9.9</b>	<b>9.7</b>
Constitution of additional gas stocks to meet regulatory stock obligations such as those set out in Article L. 421-6 of the energy code	100%	0	0	0	0
R&D expenses	100% of costs not used at the end of the period	0.47	0.47	0.47	0.49

In addition, with regard to net operating expenses, for the years 2020 to 2023, the amount taken into account in the calculation of the CRCP balance takes into account the difference between forecast and actual inflation.

This amount is equal to the reference value for year Y:

- divided by the forecast inflation between the year 2019 and the year Y;

	2020	2021	2022	2023
Forecast inflation between year 2019 and year Y	1,5 %	3,12 %	4,88 %	6,76 %

- multiplied by the actual inflation recorded between the year 2019 and the year Y. Actual inflation is defined as the change in the average value of the consumer price index excluding tobacco, as calculated by the French national statistics office INSEE, for all households in the whole of France (INSEE reference 1763852), recorded for calendar year Y, compared to the average value of the same index recorded in calendar year 2019.



<b>Géométhane, in current €M</b>	<b>Rate</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Income from the compensation tariff charge	100%	The amount of compensation is calculated annually at the end of the auction campaign (month of March of year Y)			
Normative "infrastructure" CAPEX	100%	21.1	23.8	25.3	31.1
Energy expenses and purchases and sales of CO <sub>2</sub> quotas	100%	-	0.71	0.70	0.84
	80%	0.70	Updated each year		
Consumables expenses	100%	-	0.11	0.12	0.12
	80%	0.11	Updated each year		
Effluent treatment expenses	100%	-	0.07	0.07	0.07
	80%	0.07	Updated each year		
Reference for the calculation of differences in Normative capital expenses "non-networks" due to inflation.	100%	1.6	1.6	1.6	1.6
Expenses and income associated with contracts with other regulated operators (expenses)	100%	5.5	5.6	6.3	6.3
Portion of provisions for decommissioning set aside by the operator	100%	0	0	0	0
Bonuses and penalties resulting from the different incentive regulation mechanisms	100%	0	0	0	0
Capital gain on assets disposal (building or land)	80%	0	0	0	0
Study costs for projects not greenlit and stranded costs for which CRE approved coverage	100%	0	0	0	0
Constitution of additional gas stocks to meet regulatory stock obligations such as those set out in Article L. 421-6 of the energy code	100%	0	0	0	0
R&D expenses	100% of costs not used at the end of the period	0.70	0.75	0.80	0.85

In addition, with regard to net operating expenses, for the years 2020 to 2023, the amount taken into account in the calculation of the CRCP balance takes into account the difference between forecast and actual inflation.

This amount is equal to the reference value for year Y:

- divided by the forecast inflation between the year 2019 and the year Y;

	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Forecast inflation between year 2019 and year Y	1,5 %	3,12 %	4,88 %	6,76 %

- multiplied by the actual inflation recorded between the year 2019 and the year Y. Actual inflation is defined as the change in the average value of the consumer price index excluding tobacco, as calculated by the French national statistics office INSEE, for all households in the whole of France (INSEE reference 1763852), recorded for calendar year Y, compared to the average value of the same index recorded in calendar year 2019.