



## TECHNICAL NOTE

**Subject:** Sabesp's 2023 Annual Tariff Adjustment

### 1. INTRODUCTION

Federal Law 11,445/2007<sup>1</sup> establishes the principles, guidelines, and rules that must guide the review and adjustment processes of the tariffs charged for basic sanitation services.

Articles 23 and 37 establish that:

- a) *The regulatory entity will edit regulations related to the regime, structure, tariff levels, and subsidies, as well as the procedures and terms to define, adjust, and review them (article 23, item IV).*
- b) *The tariffs charged for basic sanitation services will be adjusted based on the minimum interval of 12 (twelve) months, according to legal, regulatory, and contractual rules (article 37).*

Within the São Paulo State, Supplementary Law 1,025/2007, regulated by Decree 52,455/2007<sup>2</sup>, establishes Arsesp's jurisdiction to regulate, control, and inspect piped gas and basic sanitation services in the State.

Article 6 of such law establishes that:

*It is ARSESP's responsibility, under the terms and limits of this Supplementary Law, to regulate, control, and inspect, in the State, piped gas and basic sanitation services that are the responsibility of the State, preserving municipal jurisdictions and prerogatives.*

*Paragraph 1 - ARSESP can, preserving municipal jurisdictions and prerogatives:*

1. *fully or partially exercise, observing the technical feasibility, the regulation, control, and inspection functions delegated to it by the other entities of the Federation, especially regarding public basic sanitation services that are the responsibility of the municipality, and any power services and activities that are the responsibility of the federal government;*
2. *enter into agreements or equivalent instruments, as well as other contracts and adjustments with the bodies or entities of the Municipalities of Federal Government,*

<sup>11</sup> [https://www.planalto.gov.br/ccivil\\_03/\\_ato2007-2010/2007/lei/L11445compilado.htm](https://www.planalto.gov.br/ccivil_03/_ato2007-2010/2007/lei/L11445compilado.htm)<https://www.al.sp.gov.br/repositorio/legislacao/lei.complementar/2007/lei.complementar-1025-07.12.2007.html>

<sup>2</sup> <https://www.al.sp.gov.br/repositorio/legislacao/decreto/2007/decreto-52455-07.12.2007.html>



*referring to the regulation, control, and inspection of services; and*

3. *establish cooperation with the bodies or entities of the States or Federal District for the proper exercise of their jurisdiction.*

*Paragraph 2 - When requested by law, the delegation instruments will be preceded by the execution, by the State, of cooperation agreements or public consortium contracts.*

The tariff remuneration model for water supply and sewage services for Companhia de Saneamento Básico do Estado de São Paulo - SABESP was established through technical note NT.F-0043-2020, at the time of the third ordinary tariff review performed by ArseSP for the 2021-2024 cycle.

In general terms, the methodology defined a ceiling price mechanism based on efficient costs projected for the tariff cycle, an incentive system to improve the quality of services, and annual tariff adjustments to adjust tariffs based on efficiency, according to monetary adjustments based on a price index and the quality regime.

Accordingly, the regulatory regime for Sabesp is marked by the following basic items:

- A maximum tariff during the tariff cycle;
- A periodic review of the tariff with a fixed term established in advance;
- Definition of an efficiency factor that transfers part of productivity gains to users;
- An incentive system to improve the quality of services;
- An annual adjustment mechanism that includes monetary adjustment per price index, adjustment per efficiency factor, and adjustment per quality level observed;
- Extraordinary review system.

Specifically regarding the tariff adjustment, the maximum tariff defined for the tariff cycle is annually adjusted by the Extended National Consumer Price Index (IPCA), less an efficiency factor (X Factor), plus a quality item (GQI or Q Factor), which can be positive or negative.

The purpose of the quality item is to prevent cost-reduction incentives from compromising the quality of services rendered.

According to Resolution 1,150/2021, a revenue range of 2.5% above or below the required revenue defined in the 3rd OTR was specifically adopted for this tariff cycle (2021- 2024). If Sabesp earned revenue above 2.5%, the amount would be refunded to users in the tariff for the following year. The same would happen if



Sabesp earned revenue below 2.5%, i.e. in this case, the tariff for the following year would be increased so that this differential would be covered. Accordingly, in addition to the aforementioned items, if it is necessary to apply such an adjustment, it will be considered in the annual tariff adjustment.

## 2. ANNUAL TARIFF ADJUSTMENT

Considering the items explained above, the formula for the annual adjustment is as follows:

$$Pt = Pt-1 * (1 + IPCA - X \pm Q)$$

Where:

**Pt** = Maximum Average Tariff (Maximum Price) to be applied over the tariff year.

**IPCA** = Percentage variation of IBGE's Extended National Consumer Price Index in the 12 months before the base date.

**X** = X Factor established for the tariff cycle, in percentage.

**Q** = Q Factor established for the year.

- 1) Inflation observed in the previous period

Annual indexing is done by IPCA, based on the inflation of the previous tariff year. IPCA is obtained from IBGE's historical series for the 12-month period before the adjustment month (it is easy for anyone to obtain and understand it).

- 2) Required efficiency (X Factor)

The productivity gain is obtained by using the Malmquist index, as presented in Technical Note NT-F-0016-2021.

The purpose of the X Factor is to share with consumers the productivity gains obtained by the service provider. The X Factor generally works as a reducer in the calculation of the Annual Tariff Adjustment.

Although from the economic point of view it is possible to establish a P0 that incorporates the established efficiency goals from the beginning, Arsesp understands that the advantage of using the X Factor for this purpose is financial since it provides the company with time to achieve the goals as it gradually adjusts the tariffs, reflecting the time required for adaptation. Furthermore, this alternative improves allocative efficiency by maintaining the alignment of tariffs and costs over time and informs the reducer applied.

- 3) Quality parameter (GQI)



The conceptualization of the quality parameter was established in the scope of Sabesp's 2nd OTR through Technical Note NT-F-0003-2018, which considered that the Program Contracts executed between Sabesp and the municipalities have "Goal Plans" that establish several goals that the service provider is required to achieve throughout the validity of the contract. The performance indicators considered may be grouped based on (i) technical quality, (ii) service quality, and (iii) commercial quality.

The core concept of the quality parameter is that ceiling price regulation regimes, similar to the one proposed, require the inclusion of a service quality control mechanism. Since the company has incentives to reduce costs, it should avoid that such reduction occurs by providing worse services to users.

Arsesp published Resolution 1,123/2021, which established the methodology to calculate the application of the General Quality Index (GQI) for Companhia de Saneamento Básico do Estado de São Paulo – SABESP in the tariff adjustments and reviews of the 3rd OTR.

Among other theoretical aspects, this resolution defined the quality indicators to be monitored by Arsesp, as well as the criteria for choosing a central goal and its variation, to be defined by Sabesp.

For this adjustment, the GQI of -0.1280% will be used, according to Technical Report PARECER.TEC-0006-2023.

## 2.1 ADJUSTMENT CALCULATION

After the conceptual and introductory presentation of the adjustment items, the calculation, after obtaining the inflation index, X Factor, and GQI is made by obtaining the percentage value of the tariff adjustment.

The values used in the equation were:

- 1) IPCA Feb/22 to Feb/23 = 5.5964%
- 2) X Factor = -0.2142%
- 3) GQI = -0.1280%

On these values, the adjustment approved in the Extraordinary Tariff Review, of 5.5532%, according to NT.F-0012-2023, as well as the removal of the compensatory adjustment for 2021, of 1.4040%, according to calculation presented in NT.F-0010-2022, also apply.

It is worth noting that the percentage included in the tariff, of 5.5532%, according to NT.F-0012-2023, is broken down according to the table below:

*Chart 1 - Result of Sabesp's 2022 Extraordinary Tariff Review*

1) Compensatory adjustment referring to the annual tariff adjustment of Apr/22	1.0635%
2) Compensatory adjustment forecasted (2022 Revenue)	1,8817%
3) P0 recomposition to current market conditions	2.5135%
<b>Total</b>	<b>5.5532</b>

Source: NT.F-0012-2023. Prepared by Arsesp.



From the chart above, items 1 and 2 will be subject to compensation in the tariff only in 2023, while item 3 will be included in the tariff until the end of the cycle. It is worth noting that item 2, referring to the compensatory adjustment for achieving the ceiling revenue earned in 2022, was broken down as follows:

Table 1 – Compensatory adjustment for not achieving the ceiling revenue in 2022

**2023 COMPENSATORY ADJUSTMENT - Referring to the 2022 calendar year**

<b>Item</b>	<b>2023 Adjustment</b>
Revenue Obtained	20,023,392,407
(-) PIS/COFINS	1,382,214,778
<b>Actual Revenue</b>	<b>18,641,177,630</b>
Required Revenue 3rd OTR	19,793,623,255
Adjusted P0	5.6514
97.5% Required Revenue	19,298,782,673
Difference (R\$)	657,605,044
WACC Capitalization	53,266,009
<b>Compensatory Adjustment (R\$)</b>	<b>710,871,052</b>
<b>AJC (%)</b>	<b>3.81%</b>
(-) 2023 Commercial Programs	-120,000,000
(-) 2022 K Factor (capitalized)	-210,407,942
<b>Total</b>	<b>380,463,110</b>
<b>Total AJC %</b>	<b>1.8817%</b>

With these values, the tariff adjustment index to be applied in Sabesp's current tariff tables is obtained, according to ARSESP Resolution 1,278/2022, as follows:

Table 7 - Calculation of the tariff adjustment index

<b>2023 Adjustment</b>	
IPCA Feb/22 to Feb/23	5.5964%
X Factor	-0.2142%
GQI 2023 (ref. 2022)	-0.1280%
Sabesp's ETR	5.5532%
<b>Adjustment</b>	<b>11.0991%</b>
Ceiling revenue adjustment	1.4040%
<b>TRI</b>	<b>9.5609%</b>

With the application of the index resulting from the Extraordinary Tariff Review, the economic-financial balance of the service provision is re-established. Therefore, there is no need to apply the tariff adjustments, as highlighted in NT.F-0017-2021 (3.0% in 2023 and 4.6% in 2024), so that any failure to achieve the ceiling



revenue will be subject to compensatory adjustment, as provided for in ARSESP Resolution 1,150/2021.

### **3. CONCLUSION**

The value of the annual adjustment to be applied to Sabesp's tariffs is 9.5609% (nine point five six zero nine percent), obtained through the methodology established by ArseSP, as described in this technical note.



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