

ANNEX 22

MECHANISMS OF EXCHANGE PROTECTION

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INTERNATIONAL BID No. 01/2019

INTERNATIONAL TENDER No [•]/[•] FOR THE CONCESSION TO RENDER PUBLIC SERVICES FOR OPERATING, MAINTAINING AND MAKING INVESTMENTS REQUIRED TO EXPLORE PIRACICABA-PANORAMA LOT

1.0 Conditions

The MECHANISM FOR EXCHANGE PROTECTION (“Mechanism”) shall apply for exchange risk sharing in financing documents in foreign currency and shall only apply to the financing installments in foreign currency related to investments made to REVERTIBLE ASSETS and/or FIXED GRANTING amount.

The Mechanism shall apply only to the principal amount of fundings in foreign currency and shall not include interests or any other values in the funding scope, which maximum amount of the principal, individual or aggregated, is USD 500,000,000.00 (five hundred million North-American dollars), or the equivalent in other currencies based on the PTAX bid conversion rate, published by the Central Bank of Brazil on the day of the signing of the respective funding instrument. Should the Mechanism be used for more than one financing instrument, the maximum value of the respective instrument must respect the previous limit.

The Mechanism shall apply to provide exchange protection for the principal amount of the funding instrument in foreign currency, observed under the following conditions: (i) amortization, (ii) trimester, semester, or annual periodicity expiration, and (iii) a grace period.

Within 12 (twelve) months after the date of signature of the INITIAL TRANSFER TERM, the CONCESSIONAIRE must inform the ARTESP of their interest in activating the Mechanism, through a notification to ARTESP. The non-timely notification exonerates ARTESP of approving option for future activation. The CONCESSIONAIRE must do the option through the Mechanism for Exchange Protection within 48 (forty eight) months after the date in which the ... was signed.

To activate the Mechanism, after the financing documents has been executed, within 5 (five) business days as of being hired, the concessionaire shall deliver to ARTESP copies of the agreements and/or documents that compose the financing operation duly executed, supported by translations into Portuguese as well as an executive summary, in Portuguese, that describes at least what follows:

- i) *Drafts of the Funding Contracts or other instruments for funding in foreign exchange; or whenever the fundraising occurs through the capital markets, the CONCESSIONAIRE must present the draft of the integrated documents of the respective operation (e.g., issuance deed, prospectus, related contracts, analysis reports/risk rating, etc), as applicable;*
- ii) *Detailed description of the final destination of the resources obtained through funding, observed in the current ANNEX*
- iii) *The currency of the financing document;*
- iv) *Date of the financing document in foreign currency;*
- v) *Nominal amount of the financing document in foreign currency;*
- vi) *Status of the debts, mentioning the amounts, possible grace periods, and dates of payment and expenses related to the financing, including the schedule for the regular repayment of the debt;*
- vii) *Nominal interest rate with spreads and other rates that are used in the calculation of the final interest rate of the document;*
- viii) *Description of insurance, guarantees, commissions and others;*
- ix) *Name of the analyst or creditor guarantor, if any;*
- x) *Amount of the swap rate used in the financing document, if any;*
- xi) *Corporate name of the borrower or party receiving the credit (that shall be the CONCESSIONAIRE); and*
- xii) *Summary of the reports by the agencies classifying risk, if any.*

Should be the case, the ARTESP can dismiss sworn translation of the documents mentioned above.

Any changes on the conditions of the funding instruments depend on the ARTESP's approval. The funding instrument must not include, not even indirectly, any provisions that determine changes in the amortization schedule linked to or associated with foreign exchange rates or any rates or indexes that reflect currency exposure. This prohibition includes acceleration hypothesis, pre-payment, suspension of enforceability or other with similar effects on the payment schedule of the principal amount, being them, however, accepted for other usual situations in funding contracts.

Once it has activated the exchange Mechanism, the CONCESSIONAIRE shall not cancel it with no prior approval by ARTESP.

When the funding is taken in any foreign currency other than the US dollar (USD), it will be used for the application of the maximum coverage limits of the mechanism, the corresponding in US dollar (U.S. \$) of the foreign currency adopted, on the date of internalization of resources by the concessionaire, using the same PTAX sale rate, disclosed by the Central Bank of Brazil, indicated for calculation in subsequent items. When the repayment of the funding is taken in foreign currency other than the U.S. dollar (US \$), the proportionality of the remaining balance of the original amount of the Debt will be used for the calculation of the maximum coverage limits of the mechanism.

Should applicability and interest by the CONCESSIONAIRE to adhere to the Mechanism made available by the ARTESP is evidenced, the conditions described below shall apply.

2.0 Calculation of the Amount Due

For purposes of this Mechanism, the following terms are defined as:

1. *Rate $PTAX_t$* : Based on the US dollar rate disclosed by the Central Bank of Brazil (SISBACEN) Information System through the PTAX Sale transaction, relative to the calculation performed by the Central Bank of Brazil, with four decimal places, based on data valid for 2 business days prior to a certain date, i.e., on the basis of the rate relating to $t - 2$, or equivalent index if it is extinct.
2. *Rate $PTAX_0$* : Based on the rate of the North-American dollar disclosed by the Central Bank of Brazil System (SISBACEN) through PTAX Sale Transaction related to the calculation by the Central Bank of Brazil with four decimals, based on data effective on two business days prior to the effective date or or disbursement of the financing document, or equivalent index, should this be extinct.
3. *$IPCA_t$* : last index related to the wide consumer price index disclosed prior to the calculation at time t , using the IPCA/IBGE index, or equivalent index, should this be extinct.
4. *$IPCA_0$* : last index related to the wide consumer price index disclosed prior to the effective date or or disbursement of the financing document, using the IPCA/IBGE index, or equivalent index, should this be extinct.
5. *A_t* : the amount of the repayment portion of the principal in North-American dollar at time t .
6. *PR_t* : the amount of remaining principal in North-American dollar immediately prior to time t

Portion in Reais

The Concessionaire may opt, only once at each activation of the mechanism, for one of the calculation systems of the amount due (Portions in Reais):

System 1

$$\text{Amounts} \in \text{Reais}_t = PTAX_0 \times \frac{IPCA_t}{IPCA_0} \times \left\{ A_t + PR_t \times \left[(1 + S)^{\frac{du}{252}} - 1 \right] \right\}$$

System 2

$$\text{Amounts} \in \text{Reais}_t = PTAX_0 \times \frac{IPCA_t}{IPCA_0} \times \left\{ A_t \times \left[(1 + S)^{\frac{du}{252}} \right] \right\}$$

Portion in Dollars

$$\text{Amounts} \in \text{Reais}_t = A_t * PTAX_t$$

Where:

(i) *du* means the number of business days between each amortization payment date of the principal of the financing; and,

(ii) *S* equals to:

2.25%, for financing with average term up to 5 years; or

0.75%, for financing with an average maturity of more than 5 years.

For the purposes of calculating the average term described in item (ii) above, the applicable formula shall be:

$$\text{Average term} = \sum_{i=1}^t \left(\frac{A_t}{P} t_i \right)$$

Where:

P means the total principal amount in US dollars;

A_t means the value of the repayment portion in US dollars of the financing at the instant *T*; And

T_i means the time elapsed in years from disbursement to payment in *T*

The outstanding balance amounts considering only the portions of repayment of principal – it does not include interest will be calculated based on the following rules:

Compensation Case 1:

If the Amounts ∈ Reais_t > Amount ∈ Dollar_t, the CONCESSIONAIRE has an obligation of compensation with ARTESP equivalent to the difference between (i) Portion in Reais_t and (ii) Portion in Dollar_t

Compensation Case 2:

If Amounts ∈ Reais_t < Amount ∈ Dollar_t, ARTESP has an obligation of compensation with the Concessionaire equivalent to the difference between the (i) amount ∈ Dollar_t and the (ii) amounts ∈ Reais_t

3.0 Compensation

The compensation of this Mechanism will occur strictly through the VARIABLE CONCESSION FEE allocated to it, i.e., through the addition of the percentage of the VARIABLE CONCESSION FEE, in accordance with this ANNEX, and the amounts redeemed from the ESCROW BANK ACCOUNT to the RESERVE CONCESSION FEE ACCOUNT 2, in accordance with appendices D, F and G, with compensations among the PARTIES (CONCESSIONAIRE and ARTESP).

The compensations in favor of the CONCESSIONAIRE will be the subject of the COMPENSATION NOTIFICATION in accordance with appendix G, as in the case of compensation.

For the purposes of calculation of compensation, the following is defined:

M_t : is the amount equivalent to the balance of the Concession Reserve Account exclusively arising from the payment of VARIABLE CONCESSION FEE, calculated at time t ,

$Z_t^{6\%}$: is the VARIABLE CONCESSION FEE allocated to the Mechanism of Exchange Protection, in reais, at time t , calculated as 4% of Gross Revenue, in accordance with the rules of the Agreement, due by the CONCESSIONAIRE to ARTESP.

$Z_t^{Efetiva}$: It is the VARIABLE CONCESSION FEE effectively retained, including any eventual refunds in reais, at time t , following the rules of this Mechanism, due by the CONCESSIONAIRE to ARTESP.

NTN_B (Treasury IPCA + 2050 with semiannual interest): Composed by the average of the of the quotations available in the last three months of the sales interest annual gross rate over the National Treasury Bonds – Series B (NTN-B) with Semester Interest, disclosed by the National Treasury, before deduction of the Income Tax, maturing on August 15, 2050, considering the last IPCA index retroactively available.

Accrued Outstanding Balance (Accrued Balance $_t^{accum}$)

For the 1st Calculation Date ($t=1$):

if ($Portion \in Dollars_1 - Portion \in Reais_1$) > 0,

(Accrued Balance $_1^{accum}$) = ($Portion \in Dollars_1 - Portion \in Reais_1$) - M_1

if ($Portion \in Dollars_1 - Portion \in Reais_1$) < 0,

(Accrued Balance $_1^{accum}$) = ($Portion \in Dollars_1 - Portion \in Reais_1$)

For the th -Calculation Date:

if ($Portion \in Dollars_t - Portion \in Reais_t$) + Accrued Balance $_m^t$ > 0,

(Accrued Balance $_t^{accum}$) = ($Portion \in Dollars_t - Portion \in Reais_t$) - M_t + Accrued Balance $_m^t$

if $(Portion \in Dollars_t - Portion \in Reais_t) + Accrued Balance_m^t < 0$,

$$(Accrued Balance_t^{accum}) = (Portion \in Dollars_t - Portion \in Reais_t) + Accrued Balance_m^t$$

Where,

Accrued Balance $_m^t$ refers to the remaining balance after the transfer to the CONCESSION FEE RESERVE ACCOUNT 2 of the last installment of Variable Concession that precedes the instant t , adjusted at time t .

If Accrued Outstanding Balance $(Accrued Balance_t^{accum}) > 0$ means a value due by the CONCESSIONAIRE at the time t , even after deduction of M_t ;

If Accrued Outstanding Balance $(Accrued Balance_t^{accum}) < 0$, means a value due by the CONCESSIONAIRE to ARTESP at the time t ;

1. Use two balances M_t of the CONCESSION RESERVE ACCOUNT

Whenever $(Portion \in Dollars_t - Portion \in Reais_t) + Balance_m^t > 0$, $Accrued Balance_t^{accum} < 0$, the ARTESP shall authorize the immediate transfer of the totality M_t , limited to the value of $(Portion \in Dollars_t - Portion \in Reais_t) + Balance_m^t$ up to the limit of the availability of the CONCESSION RESERVE ACCOUNT 2 to partially or fully compensate the CONCESSIONAIRE, through NOTIFICATION OF COMPENSATION.

2. Accrued Balance

Accrued Balance $_m$ Represents remaining balances, for compensation, according to the following formula:

$$Accrued Balance_m = Accrued Balance_{t-1}^{accum} + \sum_{t-1 < i \leq m} (Adjust_i - Compensated Balance_i),$$

Where,

m represents a certain time, between the Calculation Dates $t - 1$ e t , and immediately after compensation; and

Accrued Balance $_m^t$ is the balance remaining after the calculation of **Accrued Balance $_t^{accum}$** , adjusted to NTN-B, until the instant t , according to the Adjustment setting in the following C section.

3. Compensated Balance and Adjustment

The **Compensated Balance $_m$** represents compensations carried out at time m , upon compensation rule, according to compensation case, that sets:

- (i) When compensating for ARTESP: a distinct percentage of up to 8% in relation to the basic rule to the original percentage of 4% of the VARIABLE CONCESSION FEE, associated with the

Mechanism; or

- (ii) *When compensation for the CONCESSIONAIRE, partial or full restitution of the VARIABLE CONCESSION FEE reserved in the CONCESSION FEE RESERVE ACCOUNT 2, in accordance with appendix G.*

Adjustment_m represents the non-discharged compensation balance, corrected between the Calculation Dates $t - 1$ and t , according to the following formulas:

For the first month after the Calculation Date $t - 1$,

$$\text{Adjustment}_m = \left[(1 + \text{NTN_B})^{\frac{du_m}{252}} \times (-1) \right] \times \text{Accrued Balance}_{t-1}^{acum},$$

For other “m” times:

$$\text{Adjustment}_m = \left[(1 + \text{NTN_B})^{\frac{du_m}{252}} \times (-1) \right] \times \text{Accrued Balance}_{m-1},$$

Where:

du_m represents the number of BUSINESS DAYS among retention periods, considering the rules defined by the CONTRACT, or number of business days between the retention date of the VARIABLE CONCESSION FEE and the Calculation Date, whichever occurs first.

Compensation calculation:

The Calculation Dates of the Accumulated Balance shall coincide with the payment date of the principal of the debt in foreign currency, or as long as there is a balance to be compensated in favor of the GRANTING AUTHORITY or the CONCESSIONAIRE of which:

- For $\text{Accrued Balance}_{m-1}^{acum} + \text{Adjustment}_m > M_t$

$$Z_m^{\text{Effective}} = Z_m^{4\%}$$

$$\text{Compensated Balance}_m = M_t$$

- For $0 < \text{Accrued Balance}_{m-1} + \text{Adjustment}_m < M_t$

$$Z_m^{\text{Effective}} = Z_m^{4\%}$$

$$\text{Compensated Balance}_m = (\text{Accrued Balance}_{m-1} + \text{Adjustment}_m)$$

- For $\text{Accrued Balance}_{m-1} + \text{Adjustment}_m = 0$

$$Z_m^{\text{Effective}} = Z_m^{4\%}$$

$$\text{Compensated Balance}_m = 0$$

- For $Accrued\ Balance_{m-1} + Adjustment_m < (-)Z_m^{4\%}$
 $Z_m^{Effective} = 2 \times Z_m^{4\%}$

$$Compensated\ Balance_m = -Z_m^{4\%}$$

- For $(-)Z_m^{4\%} < Accrued\ Balance_{m-1} + Adjustment_m < 0$,
 $Z_m^{Effective} = Z_m^{4\%} - (Accrued\ Balance_{m-1} + Adjustment_m)$

$$Compensated\ Balance_m = (Accrued\ Balance_{m-1} + Adjustment_m)$$

Each party may, unilaterally

Choose to anticipate their respective obligation, through the adjustment in $Z_t^{Effective}$; That is, the CONCESSIONAIRE may choose to advance the value due to the ARTESP, and the ARTESP may choose to advance the value due to the CONCESSIONAIRE, if provided that it is observed in the DIRECT AGREEMENT, on the ACCOUNTS ADMINISTRATION AGREEMENT and any instruments, including fundings, that be affected by the variation in the availability of the concession revenue.

If $Accrued\ Balance_t^{cum} > 0$, the DEPOSITARY BANK shall, from receivment of the CLEARING NOTICE, transfer the amounts for compensation for the CONCESSIONAIRE from the RESERVE ACCOUNT 2 to the CONCESSIONAIRE, in accordance with appendix G, up to the limit of its availability or even full compensation. Thus, if the amounts deposited in the RESERVE ACCOUNT 2 are not sufficient to comply with the COMPENSATION NOTIFICATION, the DEPOSITARY BANK will be authorized to transfer the VARIABLE CONCESSION FEE amounts deposited in the CONCESSION FEE RESERVE ACCOUNT 2 until the total amount transferred is sufficient to comply with the terms of the COMPENSATION NOTIFICATION.

If $Accrued\ Balance_t^{cum} < 0$, the DEPOSITARY BANK shall observe the rules laid down from appendix D to ANNEX 04.

The CONCESSIONAIRE may anticipate its receivables originating from the mechanism described in this ANNEX at its discretion, at its own risk; that is, the CONCESSIONAIRE may anticipate a value due by the ARTESP to the CONCESSIONAIRE because of this Mechanism, as provided in the AGREEMENT.

After the full amortization of the debt, compensation may also be made to offset any remaining balance until the end of the CONCESSION, provided that the basic conditions of the Mechanism are respected. At the end of the CONCESSION, and/or the end of the collection of VARIABLE CONCESSION, under the contract terms, there will be no further compensation, meaning that, regardless of case, they are limited to the balances and flows provided for in the mechanism.

The mechanism shall be deemed to be active until all compensations arising from or with the advent of the contractual term are made, whichever occurs first.

4.0 Operationalization of the Mechanism

In order to activate the Mechanism, ARTESP and the CONCESSIONAIRE shall adopt, in addition to the procedures set forth in this ANNEX, any other requirements that may be required in the AGREEMENT FOR THE ADMINISTRATION OF ACCOUNTS, in the DIRECT AGREEMENT and, if expressly provided, in debt or equivalent instruments that may be affected by the variation on the availability of CONCESSION revenues.

Upon activation of the Mechanism, the RECEIVING BANK, AGENT and any other agents indicated in the ACCOUNT MANAGEMENT AGREEMENT or in the DIRECT AGREEMENT shall be notified in relation to the Financing Agreement(s), use of the Mechanism and any other necessary information for the implementation

of the Mechanism. The RECEIVING BANK shall adopt all measures to ensure the operation of the Mechanism, without prejudice to the other provisions of the AGREEMENT and its ANNEXES to which it is bound, such as:

- submit monthly reports to the PARTIES indicated starting from the activation of the mechanism;
- adjust the percentage of collection of the VARIABLE CONCESSION to the levels indicated in this ANNEX, as notified by ARTESP, provided that it is in strict agreement with the rules and notices applicable under this ANNEX, and appendices D, F and G;
- make the transfers from the VARIABLE RESERVE ACCOUNT 2, with respect to the rules of the mechanism, Appendix G, the FUNDING AGREEMENT and, as applicable, any additional guarantee instruments, assignment of receivables, among others that may integrate or complement the FUNDING AGREEMENT included in the Mechanism;
- notify the PARTIES of the cessation of compensation;
- other measures envisaged in the Mechanism and in instruments, contracts, agreements and adjustments associated with their implementation.

5.0 Alternative Mechanisms

The Concessionaire may opt for, upon deliberation of ARTESP, an alternative exchange protection mechanism that uses the same VARIABLE CONCESSION FEE Amount allocated to this Mechanism. The CONCESSIONAIRE shall evidence to ARTESP that the alternative proposal is neutral or advantageous to ARTESP if compared to the Mechanism described herein, especially when it comes to economic factors, assumption of risks by ARTESP and simple conditions to operate.