

## **TERM OF REFERENCE FOR NATURAL GAS SUPPLY PROPOSALS**

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### **TERM OF REFERENCE OF THE PUBLIC CALL FOR COMPANIES INTERESTED IN SUBMITTING PROPOSALS FOR THE SUPPLY OF NATURAL GAS TO COMPAGAS, AS DESCRIBED BELOW:**

#### **1. OBJECT**

Submission of proposals for the supply of **NATURAL GAS**, regardless of its origin, to be made available at the existing **POINTS OF DELIVERY**, or those to be built, in the State of Paraná, according to supply requirements and conditions stipulated in this **TERM OF REFERENCE**.

#### **2. DEFINITIONS AND INTERPRETATIONS OF TERMS**

2.1. Whenever terms are written in capital letters, in both singular and plural, they will have the following definitions:

2.1.1. **YEAR:** it is the period from the first day of the **NATURAL GAS** supply until the last day of the twelfth month from the start of the **NATURAL GAS** supply.

2.1.2. **ANP:** The Brazilian National Agency of Petroleum, Natural Gas and Biofuels, which is the regulatory agency of the oil & gas industry in Brazil, created by Law nº 9.478/97, or any other entity that replaces it in the future.

2.1.3. **BTU:** is the acronym for British Thermal Unit which, is used to measure the amount of energy needed to raise the temperature of one pound of water from 59,5°F to 60,5°F, at a constant pressure of 1 atm (sea level). One million BTU's (MMBTU or MMBtu) is the equivalent to 26,8081 cubic meters of natural gas in **REFERENCE CONDITIONS**.

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- 2.1.4. **DELIVERY CONDITIONS:** means the conditions in which the **NATURAL GAS** shall be delivered by **PROPONENT** to COMPAGAS, according to requirements in this **TERM OF REFERENCE**.
- 2.1.5. **REFERENCE CONDITIONS:** means the temperature of 20°C (twenty degrees Celsius), absolute pressure of 101.325 Pa (one hundred one thousand three hundred twenty-five Pascals) and **GROSS CALORIFIC VALUE (GCV)**, on a dry basis, for **NATURAL GAS** equal to the **REFERENCE CALORIFIC VALUE (RCV)**.
- 2.1.6. **FINAL SUPPLY CONDITIONS:** the final terms of supply that **COMPAGAS** may, in its sole discretion, establish at the end of the analysis of the **FIRST PHASE** of this **PUBLIC CALL**.
- 2.1.7. **DAY:** A period of 24 (twenty-four) consecutive hours, starting at 6:00 AM (six o'clock in the morning) of a day, finishing at 5:59 AM (five fifty-nine in the morning) of the next day.
- 2.1.8. **PHASES:** means the three phases of the **PUBLIC CALL**. The first phase refers to the initial receipt of proposal(s), which will be the basis for further analysis. The second phase is intended to allow for adjustments, if applicable, of the selected initial proposal(s), based in the **FINAL SUPPLY CONDITIONS**, to be defined by COMPAGAS, and for the submission of complementary documents. The third phase is intended to allow the selected proposals to enter the negotiation phase.
- 2.1.9. **PROPONENT:** Company that presents a **PROPOSAL** for the supply of **NATURAL GAS**, according to this **PUBLIC CALL** and its annexes;
- 2.1.10. **NATURAL GAS:** it is the natural gas object of this **TERM OF REFERENCE**, composed of a mixture of hydrocarbons essentially made up of methane, other hydrocarbons and non-combustible gases, which is extracted from natural reservoirs and remains in a gaseous state in **REFERENCE CONDITIONS**, with national or imported origin, which, after being processed, meets the specification of the technical regulation which is an integral part of the ANP Resolution N° 16 of 17th June 2008, or its replacement.
- 2.1.11. **START OF SUPPLY:** means the date fixed for starting the **NATURAL GAS** supply.
- 2.1.12. **MONTH:** means, for the first month, the period between the **DAY** of the **START OF SUPPLY** and 11:59 PM (eleven fifty-nine PM) of the last **DAY** of the same month. For the last month, it

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means the period between the first **DAY** of the month and the last **DAY** of the supply's duration. For the other months, it is each calendar month of the supply's duration, starting at 12:00 AM (midnight) of the first **DAY** and finishing at 11:59 PM (eleven fifty-nine PM) of the last **DAY** of the corresponding month. The adverb "monthly" is interpreted in the same way.

2.1.13. **CUBIC METER or m<sup>3</sup>**: means the gas volume that occupies a volume of 1 (one) cubic meter of gas in **REFERENCE CONDITIONS**.

2.1.14. **TYPE OF CONTRACT**: refer to possible **NATURAL GAS** volume withdrawal profiles, according to the categories listed below:

- Firm-Basis or FB: type of contract with a high **NATURAL GAS** withdrawal guarantee, to meet COMPAGAS' **NATURAL GAS** demand.
- Seasonal or SZ: type of contract with a lower withdrawal guarantee than a FB contract, to meet the cyclical variations in COMPAGAS' **NATURAL GAS** demand.
- Ramp or RP: type of contract with a lower withdrawal guarantee than a FB contract, to meet the growth in demand (uncertainties) of **NATURAL GAS** in COMPAGAS' market (ex. **NATURAL GAS** demand associated to SCGAS pipeline expansion).
- Availability or DS: Type of contract with a lower withdrawal guarantee than a SZ contract, to meet COMPAGAS intermittent **NATURAL GAS** demand (ex. **NATURAL GAS** demand for thermal purposes).
- Customized or CT: A type of contract with conditions freely negotiated by the parties.

2.1.15. **CONTRACT PERIOD**: means the period between **START OF SUPPLY** and the final effective date defined in this **TERM OF REFERENCE**, period in which the gas supply occurs.

2.1.16. **REFERENCE CALORIFIC VALUE (RCV)**: means **GCV** of 9.400 kcal/m<sup>3</sup> (nine thousand four hundred kilocalories per cubic meters) in **REFERENCE CONDITIONS**.

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- 2.1.17. **GROSS CALORIFIC VALUE (GCV):** means the amount of energy released, as heat, by the complete combustion of a defined air-gas mixture, in constant pressure, and with all combustion products returning to the initial temperature of the reactants, with the water formed in the combustion being in liquid state. The **GCV** shall be determined based on the ISO 6976:1995 method or its subsequent revisions, on dry basis, with rounding to the first full digit. Its unit of measurement is kcal/m<sup>3</sup> (kilocalorie per cubic meters).
- 2.1.18. **POINT(S) OF DELIVERY:** or Custody Transfer Station, means the location and set of equipment and installations where the ownership of **NATURAL GAS** is transferred from **PROPONENT**, or an authorized third-party, to COMPAGAS.
- 2.1.19. **PRICE OF NATURAL GAS (PG):** means the unit price of **NATURAL GAS**, in R\$/m<sup>3</sup> (Reais per cubic meters), in **REFERENCE CONDITIONS**.
- 2.1.20. **INITIAL PROPOSAL:** proposal submitted by e-mail within the conditions defined in this **TERM OF REFERENCE**, which will be used for analysis and development throughout this **PUBLIC CALL**.
- 2.1.21. **REVISED PROPOSAL:** means a revised **INITIAL PROPOSAL**, according to the issues specified by **COMPAGAS**, if applicable, accompanied by the physical documentation required in this **PUBLIC CALL**.
- 2.1.22. **SUPPLY PRESSURE:** means the gauge pressure measured immediately downstream of the **POINT OF DELIVERY**.
- 2.1.23. **MAXIMUM SUPPLY PRESSURE:** means the maximum gauge operation pressure in each **POINT OF DELIVERY**, according to **DELIVERY CONDITIONS**.
- 2.1.24. **MINIMUM SUPPLY PRESSURE:** means the minimum gauge operation pressure in each **POINT OF DELIVERY**, according to **DELIVERY CONDITIONS**.

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2.2. **NATURAL GAS QUALITY:** means the set of parameters regarding the composition and the physical and chemical properties of natural gas, established in ANP Resolution N° 16, of 17th June 2008, or its replacement.

2.2.1. **VOLUME OF GAS:** means a certain volume of **NATURAL GÁS** in **CUBIC METERS** in **REFERENCE CONDITIONS**, rounded to the nearest integer.

2.2.2. **CONTRACT LOT:** a set of contract conditions defined in the **PUBLIC CALL NOTICE**, for which interested **PROPOSANTS** can present **NATURAL GAS** supply proposals, according to the **DELIVERY CONDITIONS**.

### **3. POINTS OF DELIVERY**

3.1. The **NATURAL GAS** to be made available by **PROPOSANT** should be delivered in the following **POINTS OF DELIVERY**, described in the box below:

<b>RECEIVING POINT(S)</b>	<b>Name</b>	<b>City</b>	<b>Observation</b>
1	Campo Largo	Campo Largo	Connected to Araucária/CIC by the COMPAGAS distribution network.
2	Araucária/CIC	Araucária	Connected to Campo Largo by the COMPAGAS distribution network.
3	Araucária/UTE	Araucária	Attendance to the Araucária Thermoelectric Power Plant

3.2. The **PROPOSANT** can suggest alternative **POINTS OF DELIVERY** other than the ones referred above, provided that they are within the concession area of COMPAGAS, which may conduct, in its sole discretion, technical and economic feasibility studies.

3.3. The rules for connecting with the distribution network shall be defined by COMPAGAS in a specific document and/or in the natural gas purchase agreement.

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### **4. DELIVERY CONDITIONS**

- 4.1. For this **PUBLIC CALL**, COMPAGAS intends to receive offers for the supply of **NATURAL GAS** for the **TYPE(S) OF CONTRACT(S)** and other conditions defined in the following **CONTRACT LOT(S)**:

<b>LOT 1 (FB): PR FB 950 A-4/4</b>				
<b>POINT(S) OF DELIVERY</b>	<b>TYPE OF CONTRACT</b>	<b>SUPPLY VOLUME</b>	<b>START OF SUPPLY</b>	<b>CONTRACT PERIOD</b>
Araucária/CIC e Campo Largo	Firm-Basis	950.000 m <sup>3</sup> /day	01st January 2022	4 years (31th December 2025)
Obs.: Firm-Basis type of contract, with a high NATURAL GAS withdrawal guarantee, to meet the demand of NATURAL GAS of COMPAGAS' market in the industrial, residential, commercial and vehicle segments.				

<b>LOT 2A (SZ): PR SZ 87 A-4/4</b>				
<b>POINT(S) OF DELIVERY</b>	<b>TYPE OF CONTRACT</b>	<b>SUPPLY VOLUME</b>	<b>START OF SUPPLY</b>	<b>CONTRACT PERIOD</b>
Araucária/CIC	Seasonal	87.000 m <sup>3</sup> /day	01st January 2022	4 years (31th December 2025)
Obs.: Seasonal type of contract with a lower withdrawal guarantee than a FB contract, to meet the cyclical variations of NATURAL GAS demand of the COMPAGAS' market in the industrial segment.				

<b>LOT 2B (CT): PR CT 87 A-4/4</b>				
<b>POINT(S) OF DELIVERY</b>	<b>TYPE OF CONTRACT</b>	<b>SUPPLY VOLUME</b>	<b>START OF SUPPLY</b>	<b>CONTRACT PERIOD</b>
Araucária/CIC	Customized	0 m <sup>3</sup> /day TO 87.000 m <sup>3</sup> /day	01st January 2022	4 years (31th December 2025)
Obs.: A type of contract with conditions freely negotiated by the parties, to meet the demand of NATURAL GAS of COMPAGAS' market in the industrial segment. Has variable supply volume				

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throughout the months of the year: January – 0 m<sup>3</sup>/day; February - 55.000 m<sup>3</sup>/day; March - 78.000 m<sup>3</sup>/day; April - 85.000 m<sup>3</sup>/day; May - 87.000 m<sup>3</sup>/day; June - 82.000 m<sup>3</sup>/day; July - 77.000 m<sup>3</sup>/day; August – 75.000 m<sup>3</sup>/day; September – 66.000 m<sup>3</sup>/day; October – 59.000 m<sup>3</sup>/day; November – 25.000 m<sup>3</sup>/day; December – 0 m<sup>3</sup>/day.

Note: Lots 2A and 2B aim to meet the same demand for NATURAL GAS, but with different and alternative supply conditions.

<b>LOT 3 (FB): PR FB 100 A-5/2</b>				
<b>POINT(S) OF DELIVERY</b>	<b>TYPE OF CONTRACT</b>	<b>SUPPLY VOLUME</b>	<b>START OF SUPPLY</b>	<b>CONTRACT PERIOD</b>
Araucária/CIC e Campo Largo	Firm-Basis	100.000 m <sup>3</sup> /day	01st October 2023	2 years (31th December 2025)
Obs.: Firm-Basis type of contract, with a high NATURAL GAS withdrawal guarantee, to meet the demand of NATURAL GAS of COMPAGAS' market in the industrial segment.				

<b>LOT 4 (FB): PR FB 380 A-2/6</b>				
<b>POINT(S) OF DELIVERY</b>	<b>TYPE OF CONTRACT</b>	<b>SUPPLY VOLUME</b>	<b>START OF SUPPLY</b>	<b>CONTRACT PERIOD</b>
Araucária/CIC	Firm-Basis	380.000 m <sup>3</sup> /day	01st January 2020	6 years (31th December 2025)
Obs.: Firm-Basis type of contract, with a high NATURAL GAS withdrawal guarantee, to meet the demand of NATURAL GAS of COMPAGAS' market in the large consumers segment.				

<b>LOT 5A (DS): PR DS 2190 A-2/2</b>				
<b>POINT(S) OF DELIVERY</b>	<b>TYPE OF CONTRACT</b>	<b>SUPPLY VOLUME</b>	<b>START OF SUPPLY</b>	<b>CONTRACT PERIOD</b>
Araucária/UTE	Availability	2.190.000 m <sup>3</sup> /day	01st January 2020	2 years (31th December 2021)
Obs.: Type of contract with a lower withdrawal guarantee than a SZ contract, to meet COMPAGAS intermittent NATURAL GAS demand (ex. NATURAL GAS demand for thermal purposes).				



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LOT 5B (FB): PR FB 2190 A-2/2				
POINT(S) OF DELIVERY	TYPE OF CONTRACT	SUPPLY VOLUME	START OF SUPPLY	CONTRACT PERIOD
Araucária/UTE	Firm-Basis	2.190.000 m <sup>3</sup> /day	01st January 2020	2 years (31th December 2021)
Obs.: Firm-Basis type of contract, with a high NATURAL GAS withdrawal guarantee, to meet the demand of NATURAL GAS of COMPAGAS' market in the thermoelectric segment.				

Note: Lots 5A and 5B aim to meet the same demand for NATURAL GAS, but with different and alternative supply conditions.

- 4.2. If the **PROPONENT** is interested in submitting one or more proposals with conditions other than the ones defined in the above-mentioned **CONTRACT LOT(S)**, it may do so freely, being in COMPAGAS discretion to analyze their feasibility.
- 4.3. The **PROPONENT** may also submit proposals for one or more **CONTRACT LOTS**.
- 4.4. The **DELIVERY CONDITIONS** at each **POINT(S) OF DELIVERY** that are currently in operation are presented in the following table, where the flows are expressed in **REFERENCE CONDITIONS**:

POINT OF DELIVERY	MINIMUM SUPPLY PRESSURE (kgf/cm <sup>2</sup> )	MAXIMUM SUPPLY PRESSURE (kgf/cm <sup>2</sup> )	Minimum Flow* (m <sup>3</sup> /h)	Maximum Flow* (m <sup>3</sup> /h)
Campo Largo	32,50	36,75	966	18.000
Araucária/CIC	32,50	36,75	4.000	75.000
Araucária/UTE	36,00	41,00	4.000	91.666

\*Values calculated in Reference Conditions with delivery pressure of 35 kgf/cm<sup>2</sup>.



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### **5. NATURAL GAS QUALITY**

- 5.1. The **NATURAL GAS** to be delivered by **PROPONENT** to COMPAGAS, in the **POINT(S) OF DELIVERY**, must meet the quality requirements established in ANP Resolution N° 16 on 17th June 2008, or its replacement.
- 5.2. The **NATURAL GAS** quality assessment should be presented by **PROPONENT** using appropriate instruments for this purpose, at the **POINT(S) OF DELIVERY**. The methodology for determining **NATURAL GAS QUALITY** shall be in accordance with ANP Resolution N° 16 on 17th June 2008, or its replacement. Daily **NATURAL GAS** quality conformity bulletins shall be issued and made available to COMPAGAS.

### **6. PRICES AND COMMERCIAL CONDITIONS**

- 6.1. The **PROPONENT** shall present an initial **PROPOSAL** for the **PRICE OF NATURAL GAS** in **REFERENCE CONDITIONS** (excluding taxes), delivered to one of the **POINTS OF DELIVERY** listed in item 4, or at a **POINT OF DELIVERY** to be eventually built, if necessary.
- 6.2. The **PRICE OF NATURAL GAS** in **REFERENCE CONDITIONS** should be expressed in Reais per cubic meter (R\$/m<sup>3</sup>) for each contract lot, or, if it is the case, for proposals with different conditions than those in item 4. In addition, the **PROPOSAL** shall also contemplate all formulas for readjustment of the various parcels that compose the said price.
- 6.3. In the **PROPOSAL**, it shall be detailed the cost of transporting **NATURAL GAS** in **REFERENCE CONDITIONS** in R\$/m<sup>3</sup>, which corresponds to all the costs incurred by the **PROPONENT** to move **NATURAL GAS** on Brazilian territory between the point of receipt to the **POINT(S) OF DELIVERY**.
- 6.4. The **PROPOSAL** shall contain the terms of payment term of the invoices, as well as the guarantees of supply and payment that must be offered by each of the parties for concluding the contract for the purchase of natural gas. The definitive questions regarding the price of **NATURAL GAS** and other supply conditions will be specified in the draft agreement for the purchase of natural gas.
- 6.5. If the **PROPOSAL** is based on the delivery of Compressed Natural Gas (CNG) or Liquefied Natural Gas (LNG), the **PROPONENT** shall be responsible for contracting all steps until the

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delivery of **NATURAL GAS** to COMPAGAS, and the price offered shall include all costs to deliver the gas at the **POINT(S) OF DELIVERY**.

- 6.6. The **PROPOSAL** shall contain any and all conditions associated with supply guarantees, such as, but not limited to: molecule withdrawal commitments and the use of transport capacity, among others, if any.
- 6.7. The **PROPOSAL** shall specify all the rules and parameters required in the scheduling of withdrawals, as well as any incidences of penalties.
- 6.8. The **PROPONENT** may, at its discretion, include in its **PROPOSAL** the template worksheet provided in Annex I of this **TERM OF REFERENCE**, independently of other documents related to the **PROPOSAL**.

### **7. OTHER CONDITIONS**

- 7.1. The conditions presented in this **TERM OF REFERENCE** may be adjusted by COMPAGAS at the stage of defining the **FINAL CONDITIONS OF SUPPLY**, when all documents contained in the **PROPOSAL** must be presented, as well as any necessary adjustments to the **INITIAL PROPOSAL** must be made.

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ANNEX 01:

PROPOSAL FORM TEMPLATE WORKSHEET

PROPOSANT: [Legal Name]											
PROPOSAL TO LOT: [XXX]											
DAILY CONTRACTED QUANTITY – DCQ (m <sup>3</sup> /day): [0000]											
BREAKDOWN	Initial price (R\$/m <sup>3</sup> ) "excluding taxes" (Reference conditions)	Transport tariff R\$/m <sup>3</sup>	Price readjustment formula (indicators, frequency)	Supply Conditions (1)	Supply Conditions (1)	Supply Conditions (1)	Supply Conditions (1)	Payment deadline (days)	Contract guarantee (R\$)		
Molecule portion											
Transportation portion											
Scheduling Conditions											
Withdrawal Penalties											
Scheduling Penalties											

(1) Supply Conditions: Bidder shall mention Supply Conditions such as, but not limited to: commitments (withdrawal of the molecule and the use of transport capacity), recovery of paid volumes which were not withdrawn. Including and excluding columns is optional.

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