

# Bill components

December 1, 2018 Prices – Southern Zone

## Rate D<sub>3</sub> (Stable Service) – Monthly volume of 53,700 m<sup>3</sup>

Natural Gas Supply and Transportation Services from Énergir

<b>NATURAL GAS SUPPLY</b>	Natural gas supplied to the appliances at the service address
	53 700 m <sup>3</sup> X 15,762 ¢/m <sup>3</sup> = \$8 464
<b>TRANSPORTATION</b>	Transportation of natural gas up to Énergir's territory
	53 700 m <sup>3</sup> X 2,907 ¢/m <sup>3</sup> = \$1 561
<b>LOAD-BALANCING</b>	Management of variations between winter and summer loads
	53 700 m <sup>3</sup> X 1,340 ¢/m <sup>3</sup> = \$720
<b>INVENTORY-RELATED ADJUSTMENTS</b>	Price fluctuations and costs incurred to maintain inventories
	53 700 m <sup>3</sup> X 0,002 ¢/m <sup>3</sup> = \$1
<b>DISTRIBUTION</b>	Transportation of natural gas through Énergir's network up to the service address
	53 700 m <sup>3</sup> X 8,162 ¢/m <sup>3</sup> = \$4 383
<b>CAP-AND-TRADE EMISSION ALLOWANCE SYSTEM</b>	Emission allowance cost for natural gas combustion
	53 700 m <sup>3</sup> X 4,015 ¢/m <sup>3</sup> = \$2 156
<b>TOTAL</b>	53 700 m <sup>3</sup> X 32,188 ¢/m <sup>3</sup> = \$17 285

NOTE :

A customer who supplies his natural gas without transfer of ownership will not be billed the supply of natural gas.

# Rate D<sub>3</sub> (Stable Service) with Monthly Readings

Customers with Natural Gas Supply Service from Énergir

## CONSUMPTION HISTORY

PERIOD	WITHDRAWN VOLUMES		WINTER VOLUMES		
	Number of Days	Monthly Volumes (m <sup>3</sup> )	Number of Days	Monthly Volumes (m <sup>3</sup> )	Average Daily Volumes (m <sup>3</sup> /day)
OCT 2017	31	40 020			
NOV 2017	30	42 955	30	42 955	1 432
DEC 2017	31	50 027	31	50 027	1 614
JAN 2018	31	53 700	31	53 700	1 732
FEB 2018	28	46 956	28	46 956	1 677
MAR 2018	31	47 027	31	47 027	1 517
APR 2018	30	40 131			
MAY 2018	31	37 340			
JUN 2018	30	33 932			
JUL 2018	31	36 096			
AUG 2018	31	36 096			
SEP 2018	30	35 720			
<b>ANNUAL TOTAL</b>	<b>365</b>	<b>500 000</b>			
<b>WINTER TOTAL</b>			<b>151</b>	<b>240 666</b>	
<b>MAXIMUM AVERAGE DAILY VOLUME (ADV max)</b>					<b>1 732</b>

## CALCULATION OF PARAMETERS

**A** Annual Average Daily Load =  $\frac{500\,000 \text{ m}^3}{365 \text{ days}} = 1\,370 \text{ m}^3/\text{day}$

**W** Winter Average Daily Load =  $\frac{240\,666 \text{ m}^3}{151 \text{ days}} = 1\,594 \text{ m}^3/\text{day}$

**P** Daily Peak Load = ADV max x Multiplier

Multiplier =  $\frac{2,1 - (1,1 \times A / \text{ADV max})}{2,1 - (1,1 \times 1\,370 / 1\,732)} = 1,230$

Daily Peak Load =  $1\,732 \times 1,230 = 2\,130$

## CALCULATION OF THE LOAD-BALANCING PRICE, FROM OCTOBER 1, 2017 TO SEPTEMBER 30, 2018

$$\frac{419,0 \text{ ¢/m}^3 \times (P - W) + 1\,988,6 \text{ ¢/m}^3 \times (W - A)}{A \times \# \text{ days of 12 months}}$$

$$\frac{419,0 \text{ ¢/m}^3 \times (2\,130 - 1\,594) + 1\,988,6 \text{ ¢/m}^3 \times (1\,594 - 1\,370)}{1\,370 \times 365} = 1,340 \text{ ¢/m}^3$$

# Rate D<sub>3</sub> (Stable Service) with Monthly Readings

Customers with Natural Gas Supply Service from a Supplier Other than Énergir

## CONSUMPTION HISTORY

PERIOD	WITHDRAWN VOLUMES		DELIVERED VOLUMES		TRANSPosed VOLUMES	
	Number of Days	Monthly Volumes (m <sup>3</sup> )	DCV <sup>(1)</sup> (m <sup>3</sup> )	TUD <sup>(2)</sup> (m <sup>3</sup> )	Monthly Volumes (m <sup>3</sup> )	Average Daily Volumes (m <sup>3</sup> /day)
		①	②	③	① - ② + ③	
OCT 2017	31	40 020	42 500	42 466	39 986	
NOV 2017	30	42 955	41 600	41 096	42 451	1 415
DEC 2017	31	50 027	41 500	42 466	50 993	1 645
JAN 2018	31	53 700	41 600	42 466	54 566	1 760
FEB 2018	28	46 956	41 600	38 356	43 712	1 561
MAR 2018	31	47 027	41 600	42 466	47 893	1 545
APR 2018	30	40 131	42 500	41 096	38 727	
MAY 2018	31	37 340	42 400	42 466	37 406	
JUN 2018	30	33 932	41 500	41 096	33 528	
JUL 2018	31	36 096	41 100	42 465	37 461	
AUG 2018	31	36 096	41 100	42 465	37 461	
SEP 2018	30	35 720	41 000	41 095	35 815	
<b>ANNUAL TOTAL</b>	<b>365</b>	<b>500 000</b>	<b>500 000</b>	<b>499 999</b>	<b>499 999</b>	
<b>WINTER TOTAL</b>	<b>151</b>			<b>499 999</b>	<b>239 616</b>	
						<b>1 760</b>

(1) Daily Contract Volume  
 (2) Theoretical Uniform Delivery = Sum of DCVs / Number of days with DCVs X Number of days of the month

## CALCULATION OF PARAMETERS (according to transposed volumes)

<b>A</b> Annual Average Daily Load	=	$\frac{500\,000 \text{ m}^3}{365 \text{ days}}$	=	1 370 m <sup>3</sup> /day
<b>W</b> Winter Average Daily Load	=	$\frac{239\,616 \text{ m}^3}{151 \text{ days}}$	=	1 587 m <sup>3</sup> /day
<b>P</b> Daily Peak Load	=	ADV max x Multiplier		
Multiplier	=	$\frac{2,1 - (1,1 \times \frac{A}{ADV \text{ max}})}{2,1 - (1,1 \times \frac{1\,370}{1\,760})}$	=	1,244
Daily Peak Load	=	1 760 x 1,244	=	2 190

## CALCULATION OF THE LOAD-BALANCING PRICE, FROM OCTOBER 1, 2017 TO SEPTEMBER 30, 2018

$$\frac{419,0 \text{ ¢/m}^3 \times (P - W) + 1\,988,6 \text{ ¢/m}^3 \times (W - A)}{A \times \# \text{ days of 12 months}}$$

$$\frac{419,0 \text{ ¢/m}^3 \times (2\,190 - 1\,587) + 1\,988,6 \text{ ¢/m}^3 \times (1\,587 - 1\,370)}{1\,370 \times 365} = 1,368 \text{ ¢/m}^3$$

# Rate D<sub>3</sub> (Stable Service)

Natural Gas Supply and Transportation Services from Énergir

## CALCULATION HYPOTHESIS

### CUSTOMER'S DATA

#### WINTER VOLUME

240 666 m<sup>3</sup>

151 days

#### ANNUAL VOLUME

500 000 m<sup>3</sup>

365 days

### ÉNERGIR'S DATA

#### SUPPLIED GAS

TOTAL INVENTORY AMOUNT  
14 673 000 \$

TOTAL INVENTORY VOLUME  
473 608 072 m<sup>3</sup>

#### TRANSPORTATION

TOTAL INVENTORY AMOUNT  
21 582 000 \$

TOTAL INVENTORY VOLUME  
687 930 420 m<sup>3</sup>

## CALCULATION OF CUSTOMER'S INVENTORY VOLUME

$$\left( \frac{\text{Customer's winter volume}}{\text{Number of winter days}} - \frac{\text{Customer's annual volume}}{\text{Number of days in the year}} \right) \times \text{Number of winter days}$$

$$\left( \frac{240\,666 \text{ m}^3}{151 \text{ days}} - \frac{500\,000 \text{ m}^3}{365 \text{ days}} \right) \times 151 \text{ days} = 33\,816 \text{ m}^3$$

## CALCULATION OF INVENTORY-RELATED ADJUSTMENTS RATES

$$\frac{\text{Customer's inventory volume}}{\text{Customer's annual volume}} \times \frac{\text{Énergir's total inventory amount}}{\text{Énergir's total inventory volume}}$$

### SUPPLIED GAS INVENTORY

$$\frac{33\,816 \text{ m}^3}{500\,000 \text{ m}^3} \times \frac{14\,673\,000 \$}{473\,608\,072 \text{ m}^3} = (0,210) \text{ ¢/m}^3$$

### TRANSPORTATION INVENTORY

$$\frac{33\,816 \text{ m}^3}{500\,000 \text{ m}^3} \times \frac{21\,582\,000 \$}{687\,930\,420 \text{ m}^3} = 0,212 \text{ ¢/m}^3$$

### TOTAL OF THE INVENTORY-RELATED ADJUSTMENT RATES

0,002 ¢/m<sup>3</sup>

#### NOTE :

A customer who supplies his natural gas without transfer of ownership will not be billed the inventory price of supplied gas.

# Rate D<sub>3</sub> (Stable Service)

## CALCULATION HYPOTHESIS AND CONTRACTUAL PARAMETERS

### VOLUME WITHDRAWN IN DECEMBER 2018

53 700 m<sup>3</sup>

### NUMBER OF DAYS IN DECEMBER

31 days

### SUBSCRIBED VOLUME

1 150 m<sup>3</sup>/day

### CONTRACTUAL TERM

60 months

## VOLUME CALCULATION - Breakdown of November volume \*

### VOLUME WITHDRAWN UP TO 100% OF SUBSCRIBED VOLUME

Minimum of Volume withdrawn and (SV x Number of days of month)

$$\text{Min (590,000 , ( 1 150 \times 31 ) )} = 35 650 \text{ m}^3$$

### PEAK SHAVING (over 100% of SV x 31 days)

$$53 700 - ( 1 150 \times 31 \times 100\% ) = 18 050 \text{ m}^3$$

### UNAUTHORIZED WITHDRAWALS (over 150% of SV x 31 days)

$$53 700 - ( 1 150 \times 31 \times 150\% ) = 225 \text{ m}^3$$

\* A daily follow-up of consumption is required under Tarif D.

## CALCULATION OF REDUCTION

### CONTRACTUAL TERM

$$19,0\% \times \frac{60 \text{ months} - 12 \text{ months}}{48 \text{ months}} = 19,0\%$$

### TOTAL REDUCTION

19,0%

## STABLE SERVICE - D<sub>3</sub> CALCULATION

### MINIMUM DAILY OBLIGATION (MDO)

m <sup>3</sup> /day of SV	m <sup>3</sup> /day	¢/m <sup>3</sup> /day	\$
333 first	= 333 x	10,142	= 33,77
667 next	= 667 x	8,163	= 54,45
2 000 next	= 150 x	5,561	= 8,34
7 000 next	= 0 x	4,601	= 0,00
20 000 next	= 0 x	3,360	= 0,00
70 000 next	= 0 x	2,621	= 0,00
200 000 next	= 0 x	1,866	= 0,00
700 000 next	= 0 x	1,506	= 0,00
1 000 000 and over	= 0 x	1,019	= 0,00

MDO 1 150 96,56

MDO OF DECEMBER 31 days x 96,56 \$ = 2 993,36

### PRICE BY VOLUME WITHDRAWN

Volume withdrawn up to subscribed volume 35 650 m<sup>3</sup> x 0,350 ¢/m<sup>3</sup> = 124,78 \$

Subtotal 3 118,14

### REDUCTION

TERM 19,0% 592,45 CR

### SUBTOTAL BEFORE SUPPLEMENTS

53 700 m<sup>3</sup> x 4,703 ¢/m<sup>3</sup> = 2 525,69 \$

### SUPPLEMENTS

Peak shaving 18 050 x 9,459 = 1 707,42

### Unauthorized Withdrawals

Penalty 225 x 50,000 = 112,58

Natural Gas Supply 225 x 16,480 = 37,11

### TOTAL D<sub>3</sub> DISTRIBUTION PRICE

53 700 m<sup>3</sup> x 8,162 ¢/m<sup>3</sup> = 4 382,80 \$

(\*) The peak shaving price is determined according to the breakdown of the sum of the subscribed volume and the average monthly volume in excess of the subscribed volume among the prices levels of D<sub>1</sub> Tarif considering only the m<sup>3</sup> in excess of the subscribed volume.

Subscribed Volume	=	1 150	
Average Monthly Volume up to Subscribed Volume	=	<u>582</u>	(18 050 m <sup>3</sup> / 31 days)
		1 732	

# Rate D<sub>3</sub> (Stable Service)

Peak shaving average rate calculations

## VOLUME EXCEDING 100% OF SUBSCRIBED VOLUME

### PEAK SHAVING VOLUME

	Monthly	Daily
TOTAL VOLUME	53 700	1 732
SUBSCRIBED VOLUME	35 650	1 150
PEAK SHAVING VOLUME	18 050	582

### VOLUME EXCEDING 100% OF SUBSCRIBED VOLUME

m <sup>3</sup> /day of SV		m <sup>3</sup> /day		¢/m <sup>3</sup> /day		\$
333 first	=	0	x	16,251	=	0,00
667 next	=	0	x	12,310	=	0,00
2 000 next	=	582	x	9,110	=	53,04
7 000 next	=	0	x	6,402	=	0,00
20 000 next	=	0	x	5,150	=	0,00
70 000 next	=	0	x	4,270	=	0,00
200 000 next	=	0	x	3,537	=	0,00
700 000 next	=	0	x	3,537	=	0,00
1 000 000 and over	=	0	x	3,537	=	0,00

### EXCEDING DAILY VOLUME

582 53,04

### EXCEEDING VOLUME OF DECEMBER

31 days x 53,04 = 1 644,24

### PRICE BY VOLUME WITHDRAWN

	m <sup>3</sup>		¢/m <sup>3</sup>		\$
VOLUME WITHDRAWN EXCEDING 100% OF SUBSCRIBED VOLUME	18 050	x	0,350	=	63,18
Subtotal	18 050	x	9,459	=	1 707,42