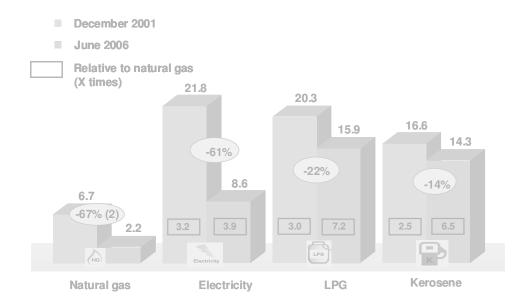
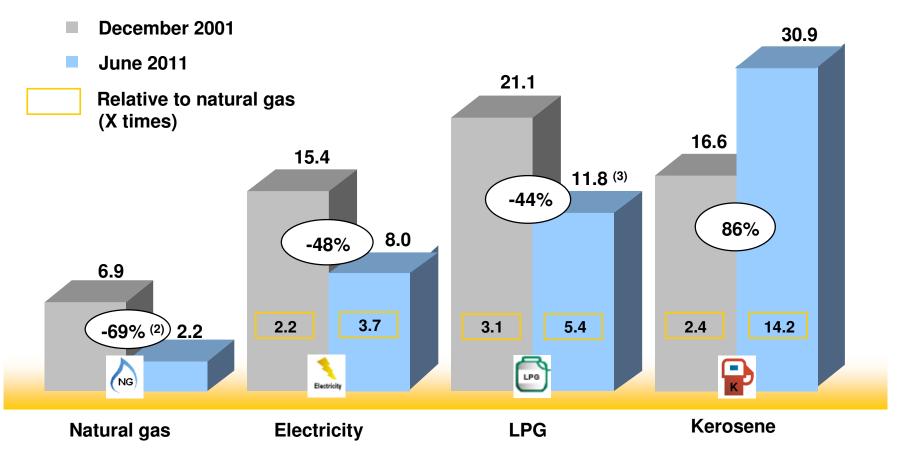


# NATURAL GAS PRICES COMPARED TO LIQUID FUELS AND ELECTRIC ENERGY



## Weighted Residential Tariffs for MetroGAS area: Comparison with competitive energy sources<sup>(1)</sup> (US\$/MMBTU)





References: (1) End-user tariffs. Includes all applicable taxes. See page N°7 to see Tariffs in U\$S/m3.

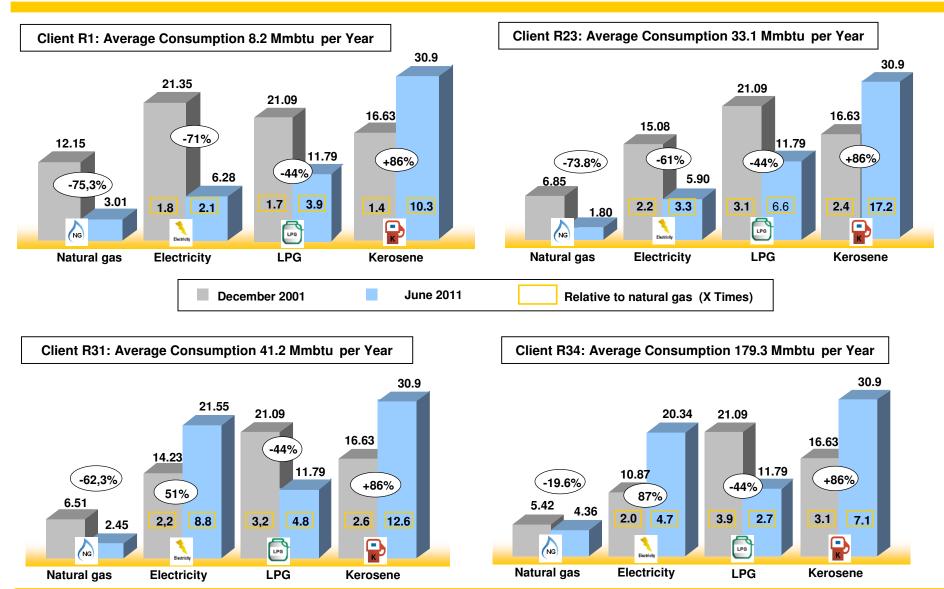
- (2) Weighted tariff in accordance with the number of users by segment estimated for 2009 as established in resolution I/409.
- (3) Tariff according to the social price for the 10 kg LPG cylinder for Residential use.

Source: Department of Energy, ENARGAS, ENRE, CAMMESA and private sources. Exchange Rate: \$4.12 US\$.

## Residential Natural Gas Tariffs in Argentina (City of Buenos Aires): Comparison with competitive energy sources<sup>(1)</sup> – (Cont.)



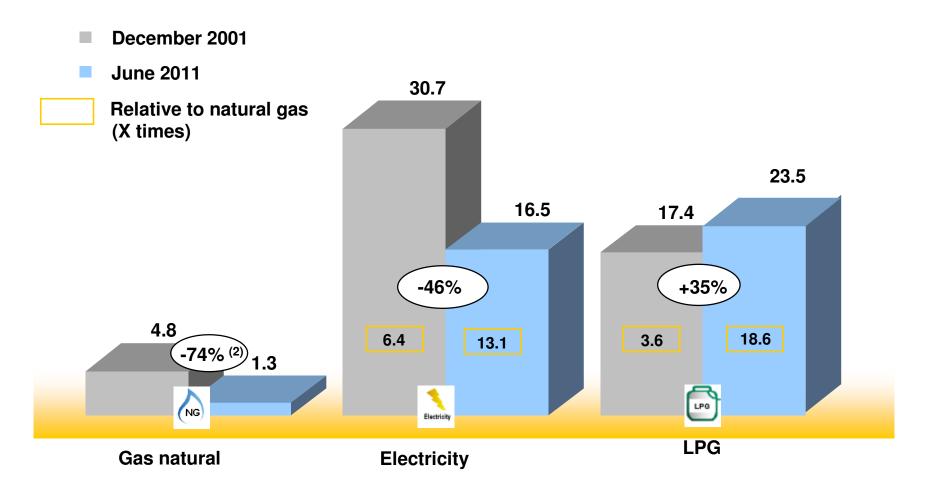
(US\$/(US\$/MMBTU)



## Small Business Natural Gas Tariffs in Argentina (City of Buenos Aires): Comparison with competitive energy sources<sup>(1)</sup>

Metrogas

(US\$/ US\$/MMBTU)



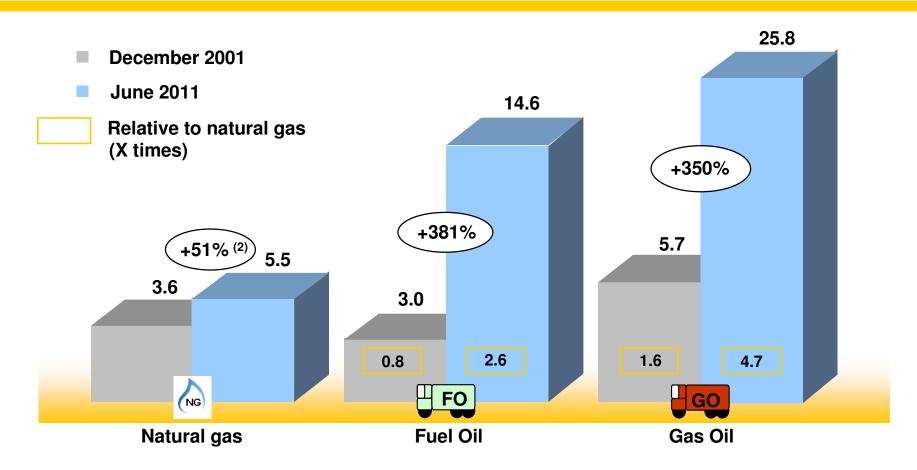
References: (1) Includes all applicable taxes, except VAT. See page N°7 to see Tariffs in U\$S/m3.

(2) Annual consumption: 76.57 MMBTU (2075 m<sup>3</sup>).

Source: Department of Energy, ENARGAS, ENRE, CAMMESA and private sources. Exchange Rate: \$4.12 US\$.

# Industrial Natural Gas Tariffs in Argentina (Greater Buenos Aires): Comparison with competitive energy sources (1) (US\$/US\$/MMBTU)





References: (1) See page N°7 to see Tariffs in U\$S/m3.

(2) End-user tariffs for small businesses. Includes al applicable taxes, except VAT. Annual consumption:

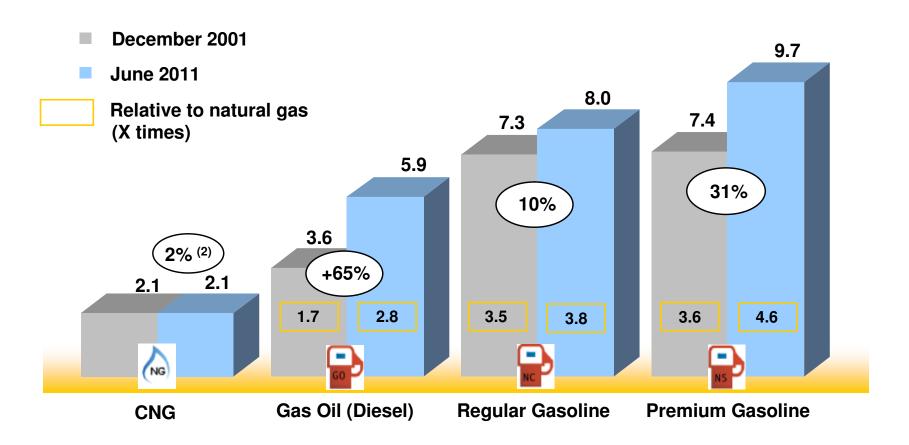
11,654 MMBTU (315.800 m<sup>3</sup>). Includes increases on non-regulated components, taxes and average gas price for brokers' Clients. It also includes the charge for gas fund 1 and 2 and fiduciary fund for import of natural gas.

Source: ENARGAS, CAMMESA and private sources. Exchange Rate: \$4.12 US\$.

## Compressed Natural Gas Prices in Argentina (City of Buenos Aires): Comparison with competitive energy sources<sup>(1)</sup>

Metrogas

(US\$/100 km)



References: (1) For light cars' average consumption in urban areas. See page N°7 to see Tariffs in U\$S/m3.

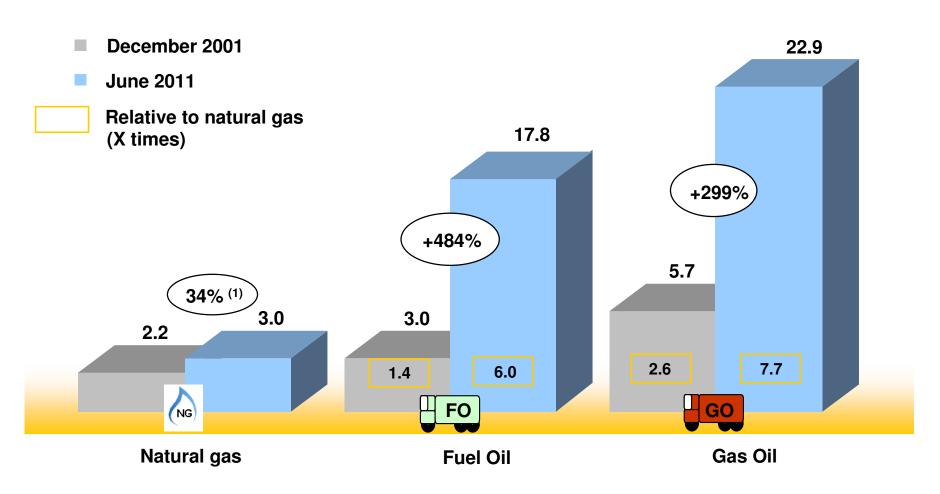
(2) CNG price regulated components (transportation and distribution) haven't changed since December 2001. The increase in final CNG prices reflects the gas commodity price increase and variations on taxes, specific funds and service station margins.

Source: Department of Energy and service stations. Exchange Rate: \$4.12 US\$.

## City of Buenos Aires: Comparison of power-plant use natural gas, fuel oil and gas oil prices (1)

Metrogas

(US\$/US\$/MMBTU)



References: (1) See page N°7 to see Tariffs in U\$S/m3.

Source: ENARGAS and CAMMESA. Exchange Rate: \$4.12 US\$.

### **Energy prices: Comparative analysis – June 2011**

A) (u\$s/m<sup>3</sup>)



		Energy	prices: Co	mparative	analysis - Ju	ne 2011			Prices in (\$/m³)
	m <sup>3</sup> /	Price (	06/11 (with	taxes)		Variation		Natural	Comparison by segments (u\$s/m³) -
Segment / Energy type	Commercial Unit	Commerc	ial Unit	u\$s/m³	Previous month	YTD	Last 12 months	Gas Based Index	(Transport in u\$s/100 km)
Residential									
Natural Gas	1,00	u\$s/m3	0,080	0,080	0,4%	0,6%	0,6%	1,0	080,0
LPG	0,78	u\$s/kg	0,56	0,435	15,0%	15,0%	15,0%	5,4	0.435
Kerosene	1,01	u\$s/liter	1,13	1,140	14,2%	44,7%	44,7%	14,2	1,140
Electricity	0,01	u\$s/MWh	30,04	0,293	·	19,9%	19,9%	3,7	0,293
Commercial (excluding VAT)	ı								
Natural Gas	1,00	u\$s/m3	0,05	0,047	0,5%	0.7%	0,7%	1,0	0,047
LPG	0,78	u\$s/kg	1,12	0,868	8,7%	31,6%	31,6%	18,6	0,868
Electricity	0,01	u\$s/MWh	56,47	0,611	·	·	•	13,1	0,611
Industrial Use (excluding VAT	ገጦ								
Natural Gas	1,00	u\$s/m3	0,20	0,204	14,7%	27,9%	27,9%	1,0	0,204
Fuel oil	0,00	u\$s/t	609,55	0,540	24,5%	35,4%	35,4%	2,6	0,540
Gas oil	00,00	u\$s/m3	944,61	0,954	52,8%	75,7%	75,7%	4,7	0,954
Transport (u\$s/100 km)									
CNG	6,49	u\$s/m3	0,33	2,116	11,0%	25,8%	25,8%	1,0	2,116
Regular unleaded	7,33	u\$s/liter	1,10	8,047	17,3%	41,3%	41,3%	3,8	8,0
Premium unleaded	7,33	u\$s/liter	1,32	9,708	64,3%	115,6%	115,6%	4,6	9,7
Gas oil	6,30	u\$s/liter	0,94	5,922	15,0%	38,0%	38,0%	2,8	5,9
Power plants (excluding VAT	)								
Generation fuels	•								
Natural Gas	0,00	u\$s/dam3	109,92	0,110	2,8%	7,0%	7,0%	1,0	0,110
Gas oil	0,00	u\$s/m3	838,43	0,847	35,6%	55,9%	55,9%	7,7	0,847
Fuel oil	0,00	u\$s/t	740,42	0,656	51,3%	64,5%	64,5%	6,0	0,656
Generation cost - WEM	0,00	04011	1 -10 -172	0,000	0.,070	C-1,570	04,070	0,0	· ·
Natural Gas (CC/GO)	0,01	u\$s/MWh	19,24	0,208	2,8%	7,0%	7,0%	1,0	0,208
Natural Gas (TV/FO)	0,01	u\$s/MWh	28,58	0,309	2,8%	7,0%	7,0%	1,0	0,309
14010101 000 (1 471 0)	0,01	αφονινιννιι	20,00	3,303	2,070	7,070		-,0	

35,6%

51,3%

153,3%

55,9%

64,5%

207,9%

2,7%

55,9%

64,5%

207,9%

4,7%

7,4

5,8

5,3

1,546

1,784

1,095

143,00

165,01

101,30

4,12

1,546

1,784

1,095

0,01

0,01

0,01

u\$s/MWh

u\$s/MWh

u\$s/MWh

\$/US\$

Exchange rate

Electricity-GBA Node

Gas oil

Fuel oil

<sup>(\*)</sup> It includes price of the gas for brokers' clients (June) also includes charge for trust gas 1 and 2 and fiduciary fund for import of natural gas

### **Energy prices: Comparative analysis – June 2011 (Cont.)**

MMBTU/

Commercia

6,49

7,33

7,33

6,30

\$/m<sup>3</sup>

\$/liter

\$/liter

\$/liter

\$/US\$

Energy prices: Comparative analysis - June 2011

Price 06/11 (with taxes)

Commercial Unit US\$/MMBTU

B) (US\$/ US\$/MMBTU)

Segment / Energy type

Transport (US\$/100 km)

Regular unleaded

Premium unleaded

Power plants (excluding VAT)

CNG

Gas oil



Prices in (US\$/MMBTU) - HHV

Comparison by segments in

US\$/MMBTU (HHV) (Transport in

Natural

Gas Based

1,0

3,8

4,6

2,8

2,1

8,0

9,7

= 5,9

3,0

5,6

8,4

22,9

17,8

	I Unit			- HHV	month		months	Index	US\$/100 km)
Residential									
Natural Gas	0,027	\$/dam³	329,51	2,17	-0,5%	-2,1%	-4,4%	1,0	2,2
LPG	21,09	\$/kg	2,30	11,79	4,0%	11,9%	9,8%	5,4	11,8
Kerosene	27,35	\$/liter	4,65	30,89	2,1%	11,1%	8,8%	14,2	30,9
Electricity	0,265	\$/MVVh	123,63	7,95	-0,5%	-2,7%	14,5%	3,7	8,0
Commercial (excluding VAT)									
Natural Gas	0,027	\$/dam³	192,38	1,27	-0,5%	-2,0%	-4,4%	1,0	1,3
LPG	21,09	\$/kg	4,59	23,53	-0,5%	-2,7%	20,6%	18,6	23,5
Electricity	0,293	\$/MWh	232,38	16,55	-0,5%	-2,7%	-4,5%	13,1	16,5
Industrial Use (excluding VAT)(*)									
Natural Gas	0,027	\$/dam³	838,58	5,52	10,4%	8,4%	7,3%	1,0	5,5
Fuel oil	0,024	\$/t	2508,30	14,63	2,7%	41,3%	50,3%	2,6	14,6
Gas oil	0,027	\$/m <sup>3</sup>	3887,09	25,84	-1,0%	19,4%	46,0%	4,7	25,8

2,12

8,05

9,71

5,92

Previous

1,4%

0,8%

0,7%

2,7%

5,9%

9,3%

9,8%

6,3%

2.7%

11,2%

13,6%

55,9%

10,4%

4.7%

Variation

Last 12

YTD

Generation fuels 452,32 -0.5% Natural Gas 0.027 \$/dam3 2,98 -0.4% -1,0% 1,0 0.027 \$/m<sup>3</sup> 3450.14 22,94 -1.0% 46.0% 7,7 Gas oil 19,4% Fuel oil 0,024 \$/t 3046,84 17,77 2,7% 41,3% 50,3% 6,0 Generation cost - WEM 0,293 -0,5% -0,4% -1.0% Natural Gas (CC/GO) \$/MW/h 79.16 5,64 1,0 Natural Gas (TV/FO) 0,293 \$/MW/h 117,60 8,37 -0,5% -0,4% -1,0% 1,0 0,293 \$/MW/h 588,43 41,90 -1,0% 19,4% 46,0% 7,4 Gas oil Fuel oil 0,293 \$/MVVh 679,01 48,35 2,7% 41,3% 50.3% 5,8 Electricity-GBA Node 0,293 \$/MW/h 416,84 29,68 19,0% 118,6% 32,1% 5,3

1,34

4,52

5,45

3,87

4.12 It includes price of the gas for brokers' clients (June) also includes charge for trust gas 1 and 2 and fiduciary fund for import of natural gas

Exchange rate

41,9

48,4

## Methodology





### ENERGY PRICES: METHODOLOGY - June 2011 (1)

#### Residential Sector

	* Weighted average MetroGAS Tariff taking into account the number of users estimated for 2009 divided by segment and Subzones (Capital Federal and Buenos Aires Province)					
	* MetroGAS Tariff R1, Capital Federal subzone; Typical consumption: 8.2 Mmbtu per year.					
	* MetroGAS Tariif R23, Capital Federal subzone; Typical consumption: 33.1 Mmbtu per year.					
	* MetroGAS Tariff R31, Capital Federal subzone; Typical consumption: 41.2 Mmbtu per year.					
	* MetroGAS Tariff R34, Capital Federal subzone; Typical consumption: 179.3 Mmbtu per year.					
	* Includes Sales tax, Patagonic Fund and Value Added Taxes.					
	* 1 MMBTU (251.996 kcal) = 27,096 m3 of 9300 kcal (High Heating Value)					
LPG	* End user price of 10 kg cylinder home delivered within Capital Federal. Source:New-Gas (Exclusive distributor for Repsol in Capital Federal).					
	* Conversion to MMBTU: LPG price was adjusted to its natural gas equivalent per cubic meter, based on its High Heating Value					
	(11.951 kcal/kg) and translated to its equivalent per MMBTU multiplying by High Heating Value of natural gas (9.300 kcal/m3).					
Kerosene	* End user price per liter in Buenos Aires City. Source: Energy Secretariat (website)					
Electricity	* Customer in Buenos Aires City, supplied by Edenor, consumption 450 kWh / month constant. Weighted average based on official sources.					
	* Tarifa 1 - R2 for equivalent segments in the gas industry (R1, R23, R31 y R34). The equivalent segments selected on the electric sector where: 301-650;					
	901-1000; 1001-1200 and more than 2800 khh/bimonthly.					
	* Includes taxes (VAT, Santa Cruz Province Fund, Municipal contribution)					
	* Conversion to MMBTU: Electric energy valued at "heat content" (860 kcal./kWh).					

#### **Commercial Sector**

Commicia	1 30001					
Natural Gas	MetroGAS SGP1 Tariff for customers in Buenos Aires City; Typical consumption: 2075 m³/year with bimonthly billing					
	* Includes Sales tax, Patagonic Fund, excludes VAT					
LPG	* End user price (excludes VAT) for cylinder of 45 kg home delivered in city of Buenos Aires. Source: New-Gas (Exclusive distributor for Repsol in					
	City of Buenos Aires).					
Electricity	* Customer in Buenos Aires City, supplied by Edenor, consumption 1870 kWh / month constant.					
	* Tariff 1 - G1, with taxes (Santa Cruz Province Fund, Municipal contribution) excluding VAT					

#### **Industrial Sector**

Natural Gas	* MetroGAS tariff to SGP3 customers in Province of Buenos Aires area.; Typical consumption: 315.800 m³/year of customers with monthly billing
	* Includes Sales tax, Patagonic Fund; Charge for Trust Gas fund I and II and average gas price for Brokers' Clients, excludes VAT.
Fuel Oil	* According to fuel prices published by CAMMESA.
Gas Oil	* According to fuel prices published by CAMMESA.

## **Methodology (Cont.)**





### ENERGY PRICES: METHODOLOGY - June 2011<sup>(1)</sup> (Cont.)

Transportation Sector

rransportati						
_	* Average price to end users, Buenos Aires City service stations. Consuptiom: average - light cars in urban					
CNG	areas. Source: MG's large customer and CNG sales area.					
Premium	* Price to end users - Energy Secretariat - Buenos Aires City. Consuptiom: average - light cars in urban					
Unleaded	areas.					
Regular	* Price to end users - Energy Secretariat - Buenos Aires City. Consuptiom: average - light cars in urban					
Unleaded	areas.					
	* Price to end users - Energy Secretariat - Buenos Aires City. Consuptiom: average - light cars in urban					
Gas Oil	areas.					

#### Power Plant Sector

Prices of fuels to power plants and its generation costs (of a MVVh of electric energy)

Prices of fuels for generation

Natural Gas	* Estimated price, based on power plant reports on generation costs to CAMMESA.
Gas Oil	* Estimated price, based on power plant reports on generation costs to CAMMESA.
Fuel Oil	* Estimated price, based on power plant reports on generation costs to CAMMESA.

Generation costs - WEM

Natural Gas	* Estimated generation costs, based on reports to CAMMESA.
Gas Oil	* Estimated generation costs, based on reports to CAMMESA.
Fuel Oil	* Estimated generation costs, based on reports to CAMMESA.

GBA Node \* Monomic price at Ezeiza (Buenos Aires) node. Source: CAMMESA.

### References:

(1) Final price to end users with taxes. VAT not included where deductible to these customers.

BTU	British Thermal Units	LH∨	Low Heating Value
GBA	Greater Buenos Aires	HH∨	High Heating ∀alue
CNG	Compressed Natural Gas	R	Residential
VAT	Value Added Tax	SGP	"Small General Service"
WEM	Wholesale Electric Market		