



# Regulated Prices

Information up to May 2016



Frequently Asked Questions Series



## **“Frequently Asked Questions” Series**

### **Central Bank of Brazil**

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2. Price Indices in Brazil
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## Regulated Prices<sup>1</sup>

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The Banco Central do Brasil (BCB) is producing this series as part of its ongoing efforts to enhance the transparency of the Brazilian economic policy and the effectiveness in communicating its actions.

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# Regulated Prices

## General View

### 1. What are the so-called “regulated prices” in Brazil?

In Brazil, the term “regulated and monitored prices” - henceforth “regulated prices” - refers to prices that are less sensitive to supply and demand conditions because they are established by contract or set by a public entity. As these contracts contain often adjustments according to past inflation, it can be said that this partial indexation to past inflation makes these prices effectively “dependent on the past” and less sensitive to the economic cycle.

The goods and services whose prices are regulated include, among others, taxes, utilities whose tariffs are managed or authorized by the government (such as electricity, health plans and toll) and oil derivatives<sup>2</sup>. It is important to note that not all regulated prices are collected by price indices. Notary prices, for example, are no longer perceived by the IPCA price index<sup>3</sup>.

The prices of oil products were deregulated in 2002, but they are still included in this set of prices because they are established by the government-owned oil company Petrobras, which has a quasi-monopoly on their domestic production and wholesale distribution.

*Different price indices measure regulated price changes. To know more on price indices, see [FAQ 2 – Price Indices in Brazil](#).*

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<sup>2</sup> Source: [FIGUEIREDO e FERREIRA, 2002](#) (in Portuguese).

<sup>3</sup> IBGE, the institution which measures IPCA, changes the IPCA basket of goods from time to time.

## 2. What are the weights of regulated prices (aggregate and individual) in the IPCA price index?

Currently, 23 goods and services of the IPCA basket are classified as regulated prices. These 23 items include public services, goods produced by public companies, taxes and tariffs paid to the three spheres of government (federal, state and municipal).

Table 1 presents the complete list of these items and their respective weights in the IPCA.

**Table 1 – Items Classified as Regulated Prices in the IPCA**

Regulated at		Derived from fossil fuel	IPCA category and item	Weight in IPCA (%) (May/16)	Weight in Regulated Prices (%) (May/16)
Federal level	State or municipal level				
			<b>Housing</b>	<b>6.32</b>	<b>26.20</b>
X			Residential electricity	3.62	15.01
	X		Water & sewage fees	1.46	6.05
X		X	Cooking gas - bottled	1.17	4.85
	X	X	Cooking gas - piped (RJ & SP)	0.07	0.29
			<b>Health and Personal Care</b>	<b>6.70</b>	<b>27.80</b>
X			Healthcare plans	3.35	13.91
X			Pharmaceutical products	3.35	13.89
X			<b>Personal Expenses: gambling</b>	<b>0.48</b>	<b>2.00</b>
			<b>Transportation</b>	<b>9.50</b>	<b>39.44</b>
	X		City bus	2.69	11.16
	X		Intercity bus	0.74	3.08
X			Interstate bus	0.25	1.02
	X		City train	0.06	0.24
	X		Subway	0.07	0.28
X			Water transportation	0.01	0.03
	X		Taxi fares	0.37	1.54
	X		Fine	0.03	0.13
	X		Number plate and car license	0.85	3.53
	X		Road Tolls	0.11	0.44
X		X	Gasoline	4.07	16.90
X		X	Diesel oil	0.15	0.61
X		X	Autogas	0.11	0.46
			<b>Communication</b>	<b>1.10</b>	<b>4.55</b>
X			Landline	0.99	4.09
X			Public phone	0.10	0.41
X			Postal services	0.01	0.05
<b>Total (all regulated prices)</b>				<b>24.10</b>	<b>100.00</b>

Sources: [BCB's Inflation Report](#), December 2011 (in Portuguese); [IBGE](#); and [Alves et al \(2013\)](#). The table reflects the composition of the SGS 4449 BCB's time series from January 2012 on. From July 2006 to december 2011 (inclusive), other four items were considered regulated: "ferry boat", "airfare", "lubricating oil" and "cell phone".

The set of regulated prices represented 24.10% of the IPCA in May 2016, reflecting the importance of these goods and services in the consumption of households whose monthly income varies from one to forty minimum wages. In terms of weight in the IPCA, regulated prices concentrate in the Transportation category (9.50%) and in the Health and Personal care category (6.70%).

The composition shown in Table 1 has changed over time, in large part due to the changes in the IPCA composition itself. For example, the [Monetary Policy Committee](#) removed the items "charcoal", "domestic workers" and "school bus" from this classification in November 2002<sup>4</sup>; and in February 2006, removed the item "alcohol." The items "ferry boat", "lubricating oil", "airfare" and "mobile phone" are no longer considered as regulated prices since January 2012.

*To know more about IPCA, see [FAQ 2 – Price Indices in Brazil](#).*

*To know more about Copom, see [FAQ 3 – Monetary Policy Committee \(Copom\)](#)*

## Regulated Prices Adjustments

### 3. How are the prices of oil products determined?

As explained in Question 1, the wholesale prices of oil products (gasoline, diesel, bottled cooking gas) are established by the federally-owned oil company Petrobras.

Sale prices of gasoline "A"<sup>5</sup> and Diesel "A"<sup>6</sup> practiced in the production units in Brazil were, from 2011 to 2015, lower than their respective references in the international market. This situation was reversed at the end of 2014<sup>7</sup>, as shown in Figure 1, both due to the fall in international prices and due to the domestic prices rise.

Therefore, domestic prices may, or may not, follow the international prices, as shown in Chart 1.

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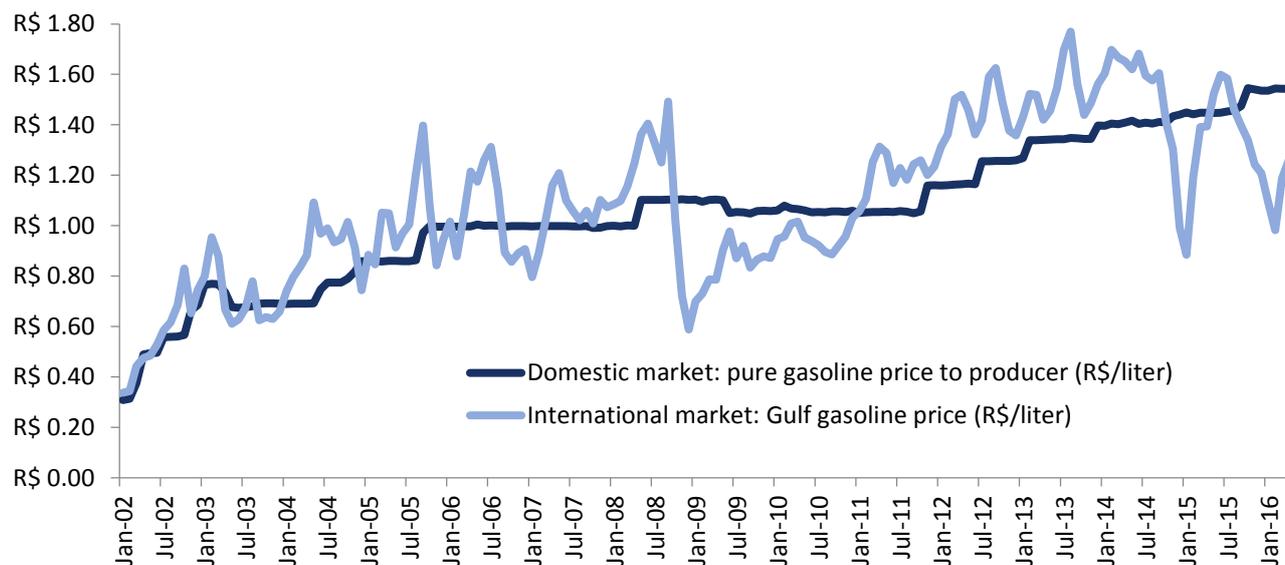
<sup>4</sup> See, in this regard, the [78th minutes of the Monetary Policy Committee](#) of November 2002, section "Assessment of Inflation Trends"

<sup>5</sup> Pure gasoline without anhydrous ethanol. Gasoline C, acquired by the consumer, results from the gasoline A mixed with anhydrous ethanol. Source: [Petrobras](#) (In Portuguese).

<sup>6</sup> Pure diesel, without the adding of biodiesel. Source: [ANP](#) (in Portuguese).

<sup>7</sup> Source: ANP. [Boletim Anual de Preços de Petróleo, Gás Natural e Combustíveis nos Mercados Nacional e Internacional - 2015](#) (in Portuguese).

**Chart 1 – Gasoline Prices (up to April 2016)**



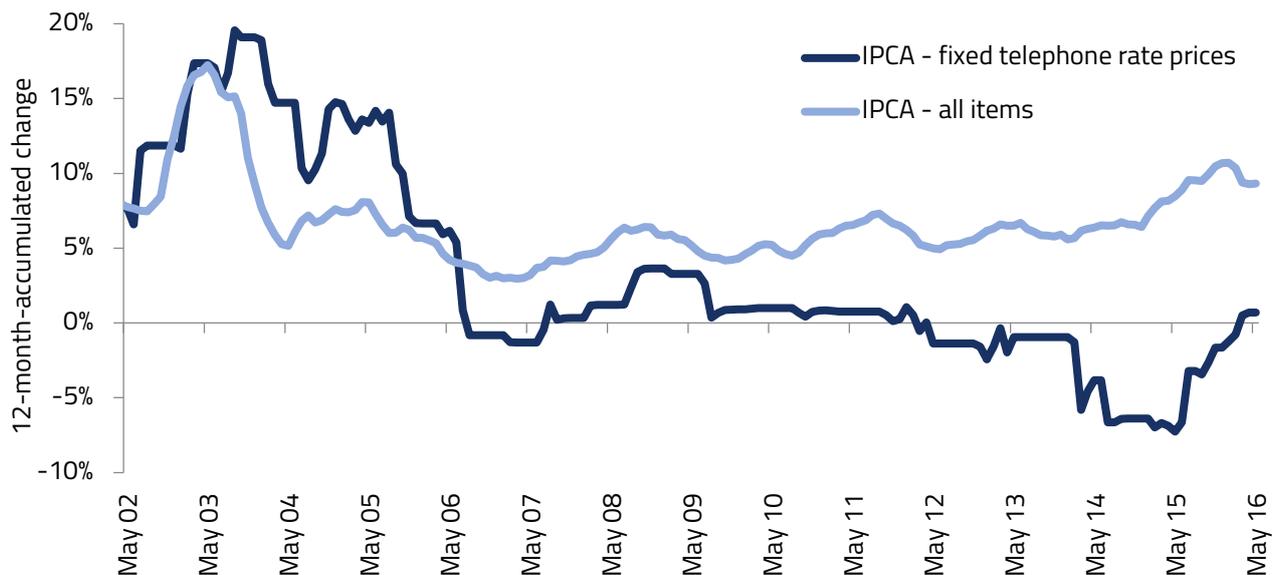
Sources: ANP and [EIA](#).

#### 4. How are telephone services prices set?

The prices of telephone services are regulated by concession contracts previously established between the federal government and the companies that provide these services to consumers. The definition of the fixed telephone rate adjustment is incumbent upon the National Telecommunications Agency (Anatel).

Chart 2 shows the evolution of telephone service rate prices in the IPCA since 2002.

**Chart 2 – IPCA X Fixed Telephone Rate Prices (up to May 2016)**



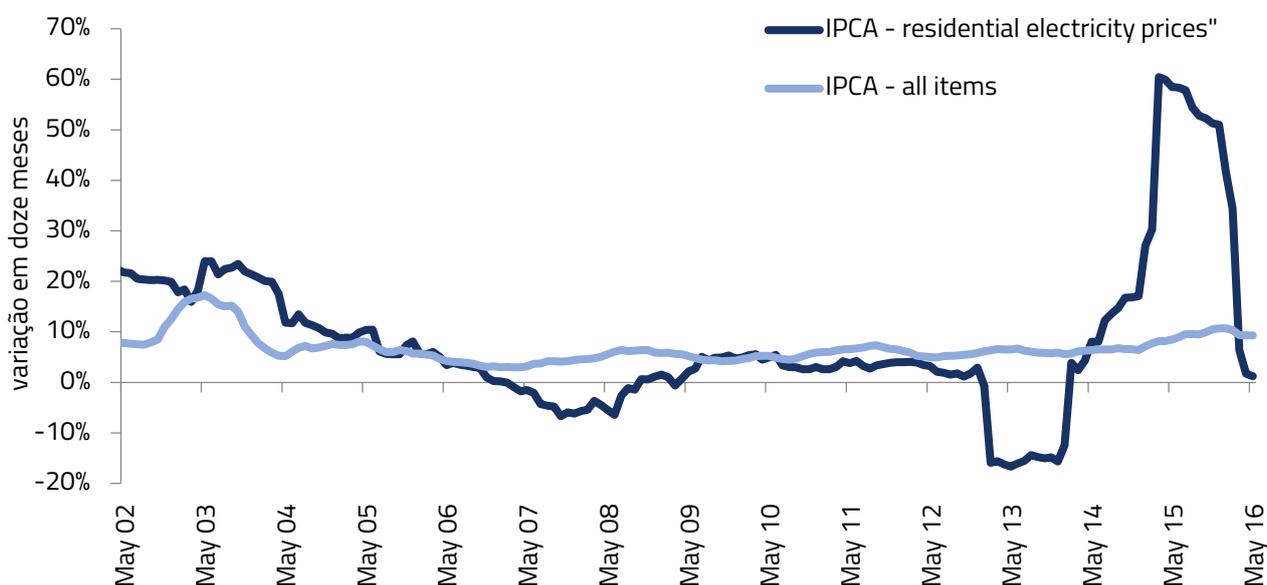
Source: IBGE. Time series can also be obtained at [BCB's website](#) (SGS 433 and SGS 4463).

Since 2006, the calculation of the adjustment uses the Telecommunication Services Index (IST). IST is an industry cost index based on several price indices, with IPCA and "IPA - Industrial machinery and equipment" accounting for 80% of its composition. The adjustment also takes into account a productivity factor and a cushioning factor, the latter used to mitigate IST variations greater than 10%.

## 5. How are electricity prices set?

As with telephone services prices (see question 4), electricity prices are also regulated by concession contracts previously established between the federal government and the companies that provide these services to consumers.

**Chart 3 - IPCA X Electricity Prices (up to May 2016)**



Source: IBGE. Time series can also be obtained at BCB's website (SGS 433 and SGS 4453).

The exploration contracts of electricity distribution public service are regulated by the National Electric Energy Agency (Aneel). The main mechanism to update tariffs is the annual tariff adjustment, which aims to restore the revenue purchasing power of distributors. The company revenues are divided into non-manageable costs (Portion A) and manageable costs (Portion B).

Portion A includes industry charges and energy purchases. With regard to sector charges, Aneel publishes specific resolution at the end of each year, setting the annual quotas to be paid by agents over the next year. Energy purchases, on their turn, depend on the energy supply and demand conditions, on the upgrade of medium and long-term contracts (usually by IPCA) and, in the case of Itaipu rate, on the exchange rate.

Manageable costs (Portion B) are composed of:

- operation and maintenance costs,
- return on capital,

- depreciation quota,
- expenditure on investments in research and development (R & D) and energy efficiency<sup>8</sup>
- expenses with the PIS / COFINS tax.

The items of Portion B are adjusted by the IGP-M observed in the previous 12 months, discounting a productivity factor.

## **6. What are the reasons for the strong fluctuations in the electricity prices in recent years?**

In 2013, the reduction in electricity tariffs (-15.65% in the IPCA, as illustrated in Chart 3) reflected mainly the effects of the extension of hydroelectric generation concessions and the reduction of regulatory charges in the context of [law No. 12,783 of 2013](#).

The 2014 rise in electricity prices (17.06% in the IPCA), on its turn, was related to the lack of rainfall in different regions of the country. The drought reduced reservoirs levels, requiring increased thermal energy production, which has a higher cost of generation.

In 2015 there energy prices increases were even greater than in 2014 (50.99% in the IPCA), reflecting:

- beginning of the application of flags tariffs system, with the red flag;
- need to cover electricity sector costs linked to the Energy Development Account (CDE);
- tariff increase on energy generated at Itaipu (partly due to the exchange rate depreciation);  
and
- beginning of repayment of loans taken by power distribution companies with a consortium of banks in 2014 and 2015.

In early 2016, the disposal of high rates recorded in the corresponding months of the previous year and the change of tariff flag (red for green) favored the retreat of the twelve-month change in energy prices in the IPCA.

## **7. How are other regulated prices determined?**

For other regulated prices, the frequency and magnitude of adjustments depend on the regulatory framework in which they belong. In practice, past inflation plays a key role in determining these adjustments.

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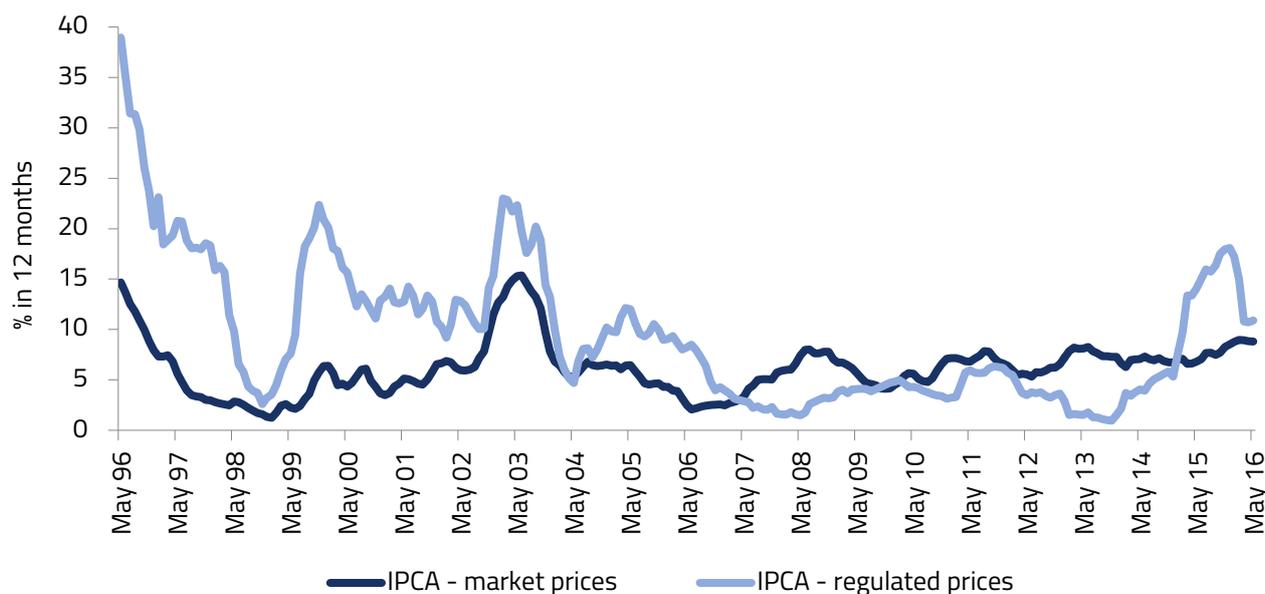
<sup>8</sup> Click [here](#) to know more (in Portuguese).

# Regulated Prices Evolution And Monetary Policy

## 8. How have regulated prices evolved in recent years?

From January 1995 to May 2016, the set of regulated prices in IPCA advanced 664.1%, while the set of market prices increased by 301.3%. Bottled gas prices (1257.8%) and health insurance plan (820.4%) were two of the regulated prices that rose most.

**Chart 4 - IPCA: Regulated<sup>9</sup> and Market<sup>10</sup> Prices (up to May 2016)**



Sources: BCB and IBGE.

In the most recent period, from January 2015 to May 2016, regulated prices inflation (19.7%) was also higher than the market price inflation (12.0%). This behavior was the opposite of what occurred in the immediately preceding years (2012-2014) -, reflecting a realignment of that in relation to this<sup>11</sup>. Table 2 compares the average annual variation of different regulated prices over time.

<sup>9</sup> SGS 4449

<sup>10</sup> SGS 11428

<sup>11</sup> See, in this regard, the [open letter of the governor of Banco Central do Brasil addressed to the minister of Finance](#) (in Portuguese), written in January 2016..

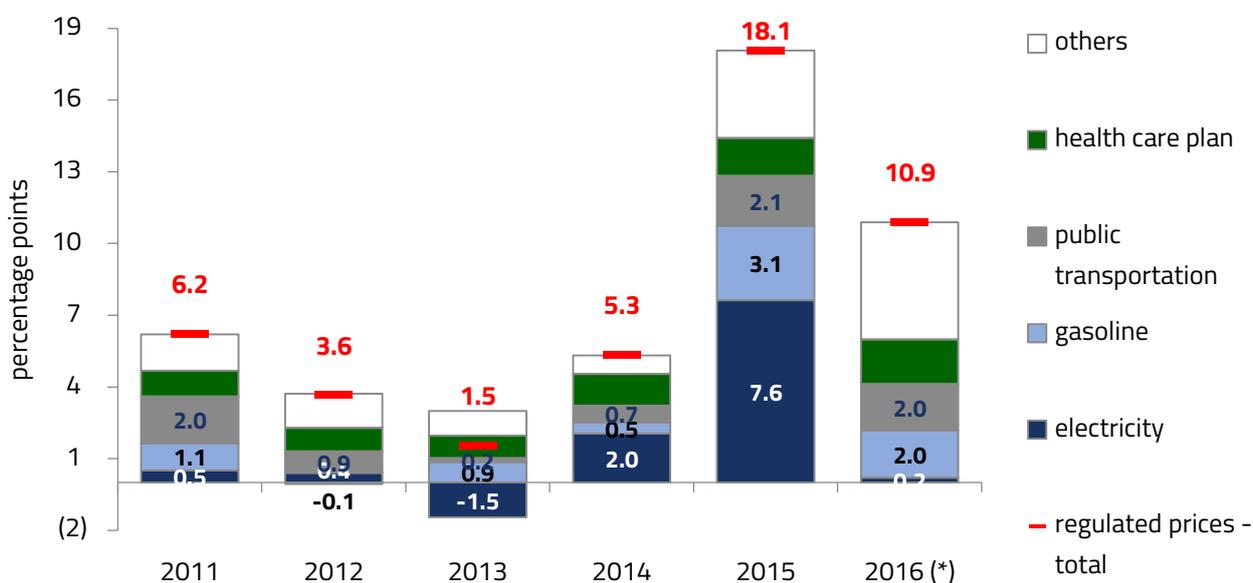
**Table 2 - IPCA and Selected Regulated Prices – Average Annual Change (%)**

	1995- 2005	2006- 2008	2009- 2011	2012- 2014	2015	May/2016 (*)
<b>IPCA</b>	<b>7.4%</b>	<b>4.5%</b>	<b>5.6%</b>	<b>6.1%</b>	<b>10.7%</b>	<b>9.3%</b>
<b>Regulated</b>	<b>13.3%</b>	<b>3.1%</b>	<b>4.7%</b>	<b>3.5%</b>	<b>18.1%</b>	<b>10.9%</b>
Water and sewage	12.1%	5.6%	5.5%	3.9%	14.8%	26.9%
Cooking Gas	19.0%	3.3%	5.8%	5.4%	22.6%	15.2%
Electric Energy	12.2%	-1.6%	3.9%	0.5%	51.0%	1.2%
Number plate and car license	-2.0%	4.8%	-0.6%	0.3%	3.6%	6.2%
City Bus	12.8%	5.3%	7.1%	3.0%	15.1%	12.1%
Gasoline	15.4%	0.7%	3.5%	3.0%	20.1%	12.1%
Health Care Plan	10.1%	8.8%	6.9%	8.6%	12.2%	13.8%
Pharmaceutical Products	9.6%	3.0%	4.5%	4.6%	6.9%	12.1%
Taxi	7.9%	5.1%	5.5%	4.4%	7.2%	7.8%
Landline	21.7%	1.0%	0.7%	-3.0%	-1.6%	0.7%
<b>Market Prices</b>	<b>5.9%</b>	<b>5.1%</b>	<b>6.0%</b>	<b>6.9%</b>	<b>8.5%</b>	<b>8.8%</b>

Source: IBGE. (\*) 12 month accumulated until May 2016.

As shown in Chart 5, the main causes of the more pronounced rise in regulated prices from January 2015 to March 2016 were the rise in electricity and gasoline prices. More than half the high of 18.1% of administered prices in 2015 can be explained by the contribution of these two items.

**Chart 5 – Contribution of Selected Items to 12-months-accumulated-Regulated-Prices-Inflation**



Sources: Prepared by Gerin based on IBGE and BCB data. (\*) Accumulated in 12 months to May 2016.

To know more about 2015 inflation, see the box [“Decomposição da Inflação de 2015”](#) (in Portuguese), from the March 2016 Inflation Report.

## 9. What are the implications of the increase in regulated prices for monetary policy and for inflation targeting regime?

The high share of prices indexed to past inflation in the price indices market basket hinders the action of monetary policy on the price level. Regulated prices inflation tends to be more persistent than market prices inflation, which increases the overall inflationary inertia. Moreover, the elasticity of regulated prices in relation to changes in monetary policy is much smaller.

In the formulation and implementation of monetary policy, the Committee explicitly takes into account the behavior and inertial effects of regulated prices, reacting the same way as with other supply shocks. Specifically, the monetary authority does not attempt to reverse the primary price shock, but seeks to accommodate the primary effects of the price increase, while counteracting the side effects<sup>12</sup> of the shock on the inflation rate.

## More Information on Regulated Prices

### 10. Where can I find additional information about regulated prices?

The Central Bank of Brazil website has many studies and essays about the characteristics and specificities of regulated prices and its impact on monetary policy, presented below.

#### Technical Notes

[22 - Metodologia de Cálculo da Inércia Inflacionária e dos Efeitos do Choque dos Preços Administrados](#)

Paulo Springer de Freitas, André Minella and Gil Riella (July/2002)

[24 - Inflation Targeting in Brazil: Shocks, Backward Looking Prices, and IMF Conditionality](#)

Joel Bogdanski, Paulo Springer de Freitas, Ilan Goldfajn and Alexandre Tombini (August/2001)

#### Working Papers

[59 - Os Preços Administrados e a Inflação no Brasil](#)

Francisco Figueiredo and Thaís Porto Ferreira (December/2002)

[305 - Preços Administrados: Projeção e Repasse Cambial](#)

Paulo Roberto Sampaio Alves, Francisco Marcos Rodrigues Figueiredo, Antonio Negromonte Nascimento Júnior and Leonardo Pio Perez (March/2013)

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<sup>12</sup> A good portion of regulated prices items (such as electricity and fuel) are production inputs and provision of other goods and services. Thus, increases in these prices tend to have an impact on prices throughout the production and distribution chain. These are the side effects of increases in regulated prices. It should be stressed that the existence and magnitude of the side effects will depend on the degree of idleness of the economy.

## **Regulated Prices and Monetary Policy**

[Inflation Report as of December 2002](#), pp. 125-128

### **11. Where can I find more regulated prices data?**

Brazilian regulated prices data are updated monthly, including the main subitems, and released in [time series available in Central Bank of Brazil website](#).

The Central Bank also provides [worksheets in Excel with the main economic indicators](#). The regulated price indices performance is in Chapter I – Economic outlook.