



Fuel Price in Brazil Study Series

Understanding fuel price composition in Brazil

Brazil's Energy Research Office

July 2023

This publication aims to better inform and clarify aspects related to fuel pricing in Brazil. Due to the high complexity of this issue, especially regarding fuel taxes, this material has simplifications, which were considered to facilitate reader's understanding.

“Understanding fuel price composition in Brazil” is a publication aligned with the Strategic Planning of Energy Research Office (*“Empresa de Pesquisa Energética - EPE”*, in Portuguese), which has a strategic objective of reducing information asymmetry, favoring decision-making in the energy industry.

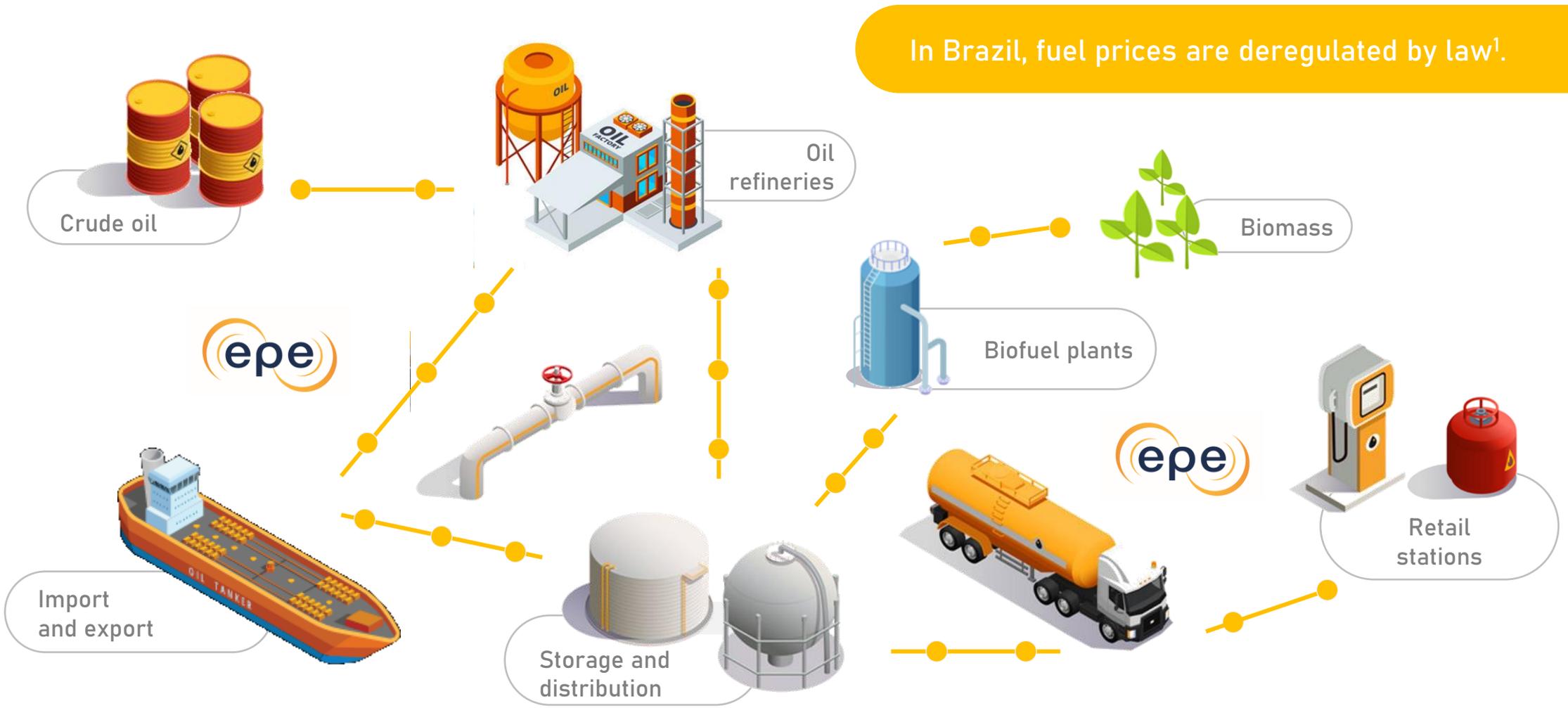
The content presented in this publication does not seek to replace the consultation of legislation and regulations in force, especially when the objective is practical application or economic analysis of any kind.

For more details, we suggest reading the publications of Fuel Price in Brazil Study Series at www.epe.gov.br/en.

Version control:

Version	Date	Description
v1	August 10, 2022	Original publication on the EPE website.
v2	July 14, 2023	Update of federal and state tax rates on fuels.

Fuel supply chain overview



In Brazil, fuel prices are deregulated by law¹.

⁽¹⁾ According to Law 9,478/1997 (known as the Petroleum Act), amended by Law 9,990/2000, since January 2002, economic agents are free to determine fuel margins and prices in Brazil, in a free competition market.

Fuel pricing in Brazil

- Ex-refinery price
- Biofuel cost
- Distribution and resale margins
- Federal and state taxes on fuel

How fuel prices are formed in Brazil

Final price to the consumer is essentially made up by four main components:

Fuel pricing in Brazil is complex and can be difficult to understand.



*Applies only to blends of petroleum product with biofuel, as in the case of gasoline/ethanol and diesel/biodiesel.

>> Ex-refinery price (when produced in the country) or ex-terminal price (when imported), before taxes.



Crude oil acquisition cost at the origin

Largest component of ex-refinery price. It can vary significantly over time, region, and between crude grades.



Crude oil delivery costs

Transport of crude oil to its destination refinery, including freight costs, insurance, Brazil's addition to the freight rate (known as Additional Freight for the Merchant Marine Renewal – “AFRMM”), storage, losses, and other costs.



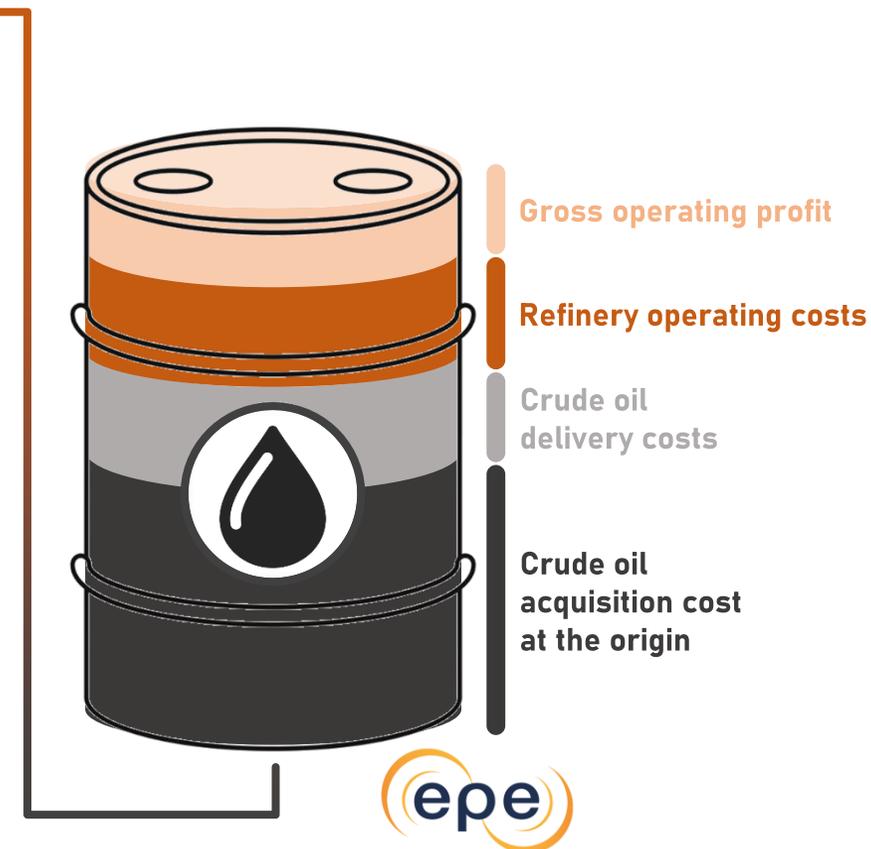
Refinery operating costs

Typically divided into fixed and variable costs. Fixed costs do not vary with the level of throughput, such as labor, equipment and maintenance costs. Variable costs vary with refinery throughput level, such as energy, utilities and chemicals. Asset depreciation is also included in refinery operating costs.



Gross operating profit

Economic return (refiner or importer). In order to calculate the net income, selling, general and administrative expenses and impairment loss must be deducted.



For further details on ex-refinery price, [click here](#).

>> Biofuel cost: ex-plant price (when produced in the country) or ex-terminal price (when imported), before taxes.



Farm production costs

Include rent, labor, machinery, crop seeds, fertilizers, chemicals, energy, water use, biomass storage, asset depreciation, property fees, and other costs.



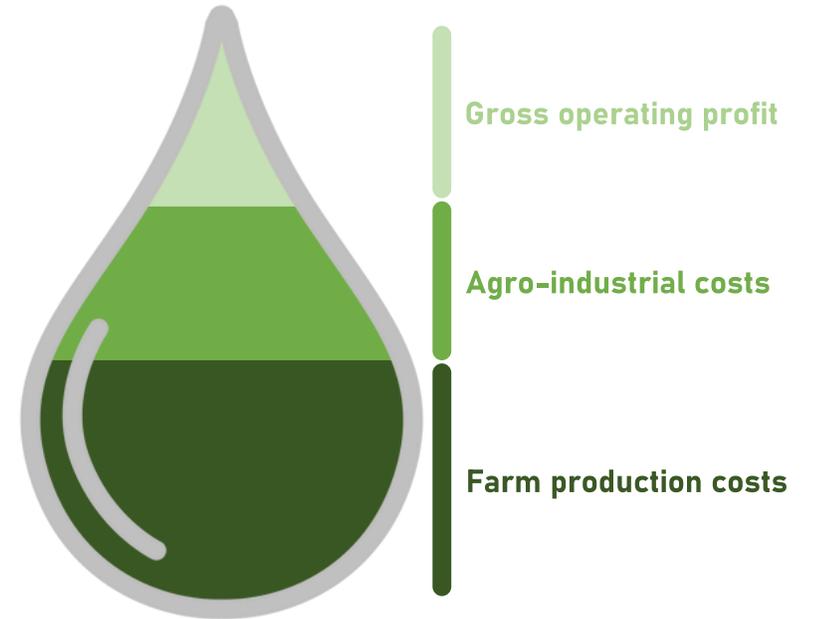
Agro-industrial costs

Related to the industrial transformation of biomass into biofuel, in which include labor, machinery, equipment, maintenance, energy, utilities, chemicals, asset depreciation and other costs.



Gross operating profit

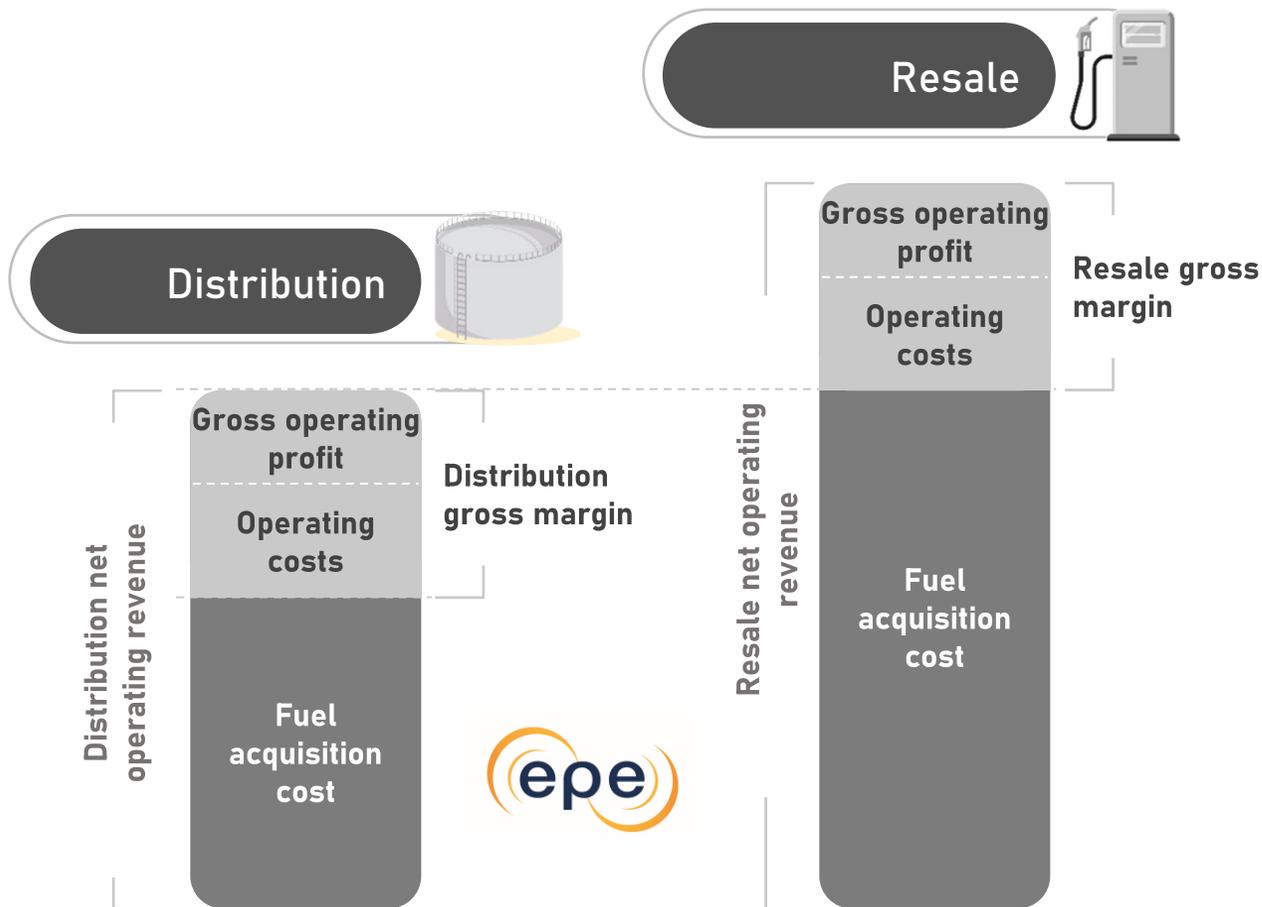
Economic return (biofuel plant or importer). In order to calculate the net income, selling, general and administrative expenses and impairment loss must be deducted.



Distribution and resale margins



Distribution and resale margins vary for each fuel, depending on the different cost structures and the market for each product.



Operating costs

>> Distribution:

Leasing/renting, labor, equipment, maintenance, freight, transport and storage, energy, utilities, quality and marketing, insurance, financial and legal expenses, taxes, asset depreciation, and other costs.

>> Resale:

Leasing/renting, franchise expenses, labor, energy, utilities, insurance, marketing, taxes, credit card processing fees, asset depreciation, and other costs.

Notes: (1) Taxes in operating costs of distribution companies and retailers include taxes on properties, vehicles and corporate income, union dues, permit and other fees; (2) In most Brazilian States, the distributor is responsible for collecting state and federal taxes levied on biofuels.



For further details on distribution and resale margins, [click here](#).

Federal taxes



PIS/Pasep and Cofins

- Contribution to the Social Integration Program and Civil Service Asset Formation Program ("PIS/Pasep"), and Contribution to Social Security Financing ("Cofins").
- Social contributions calculated as a percentage of revenue.



I.I. and I.E.

(Import Tax and Export Tax)

- Taxable event: entry or exit of the good in/from the Brazilian territory.
- Single-phase incidence regime on the agent carrying out international trade.



Cide

(Contribution on Intervention in the Economic Domain)

- Contribution levied on the import and sale of crude oil and petroleum products, natural gas, and other fuels.
- Taxable event: sale of fuels by producers and importers.
- Cide distribution rules: 29% of its collection goes to the States and the Federal District. Of that amount, 25% is allocated to their municipalities.



State tax



ICMS

- Tax on the Circulation of Goods and Transportation and Communication Services ("ICMS").
- Value-added tax that has as taxable event all sales along the fuel supply chain.
- ICMS on oil products is fully allocated to the State of destination, but 25% of the resource belongs to the municipalities that comprise it.



For further details on federal and state taxes on fuel in Brazil, [click here](#).

Tax burden on fuels in Brazil



	PIS/Pasep (BRL/l or %)	Cofins (BRL/l or %)	Cide (BRL/l)	I.I. (%)	I.E. (%)
Gasoline 'A' ⁽¹⁾	BRL 0.1411/l	BRL 0.6514/l	BRL 0.10/l	-	-
Anhydrous ethanol	BRL 0.02338/l	BRL 0.10752/l	-	16% ⁽⁵⁾	-
Hydrous ethanol	BRL 0.04319/l	BRL 0.19862/l	-	16% ⁽⁵⁾	-
Diesel 'A' ⁽¹⁾	- ⁽²⁾	- ⁽²⁾	-	-	-
Biodiesel	- ⁽²⁾	- ⁽²⁾	-	11.2% ⁽⁵⁾	-
Jet fuel	BRL 0.01269/l	BRL 0.05851/l	-	-	-
Liquefied Petroleum Gas (LPG)					
- 13-kg cylinder or smaller	-	-	-	-	-
- bulk	- ⁽³⁾	- ⁽³⁾	-	-	-
Compressed Natural Gas (CNG)	1.65% ⁽⁴⁾	7.6% ⁽⁴⁾	-	-	-

Federal tax rates on fuels
Tax rates valid in July 2023



 *For further details on tax burden on fuels in Brazil, [click here](#).*

Notes: (1) Gasoline 'A' is ethanol-free and Diesel 'A' is biodiesel-free; (2) PIS/Pasep and Cofins rates on diesel 'A' and biodiesel are temporarily reduced to zero until September 30, 2023 (Provisional Measure 1,175/2023 and Provisional Measure 1,178/2023). Regular PIS/Pasep rates are BRL 0.06261/l on diesel 'A' and BRL 0.02641/l on biodiesel, and regular Cofins rates are BRL 0.28889/l on diesel 'A' and BRL 0.12159/l on biodiesel (Decree 5,059/2004, Decree 9,391/2018, and Decree 10,527/2020). PIS/Pasep and Cofins rates on biodiesel are the general ones, however, in certain circumstances, lower rates are applicable; (3) PIS/Pasep and Cofins rates on bulk LPG are temporarily reduced to zero until December 31, 2023 (Law 14,592/2023). Regular PIS/Pasep rates are BRL 0.02985/kg and regular Cofins rates are BRL 0.13785/kg (Decree 5,059/2004 and Decree 10,638/2021); (4) PIS/Pasep and Cofins rates on CNG are non-cumulative; (5) Anhydrous/hydrous ethanol and biodiesel import tax rates are temporarily reduced to 16% and 11.2%, respectively, from June 2022 to December 2023 (Gecex Resolution 353/2022). Regular import tax rates are 20% on anhydrous and hydrous ethanol and 12.6% on biodiesel.

Tax burden on fuels in Brazil



ICMS
(BRL/l or BRL/kg or %)

Gasoline 'A' ⁽¹⁾

BRL 1.22/l

Anhydrous ethanol

BRL 1.22/l

Hydrous ethanol

MG	AL
9.29%	21%
▼	▼
(min.)	(max.)

Diesel 'A' ⁽¹⁾

BRL 0.9456/l

Biodiesel

BRL 0.9456/l

Liquefied Petroleum Gas (LPG)

BRL 1.2571/kg

Compressed Natural Gas (CNG)

BA, PE, RJ, RS, SC, SE	RN and TO
12%	20%
▼	▼
(min.)	(max.)

Notes: (1) Gasoline 'A' is ethanol-free and Diesel 'A' is biodiesel-free; (2) ICMS rates on gasoline, anhydrous ethanol, diesel and LPG are fixed (*ad rem*) and uniform in all Brazilian states, while ICMS rates on hydrous ethanol and CNG are proportional to value (*ad valorem*) and established for each Brazilian state; (3) Single-phase regime and *ad rem* state tax rates for gasoline 'A' and anhydrous ethanol were established by the National Council of Finance Policy (CONFAZ) through the ICMS Agreement 15/2023, while single-phase regime and *ad rem* state tax rates for diesel 'A', biodiesel and LPG were established by the ICMS Agreement 199/2022; (4) Brazilian states abbreviations: Alagoas, AL; Bahia, BA, Minas Gerais, MG, Pernambuco, PE; Rio de Janeiro, RJ; Rio Grande do Norte, RN; Rio Grande do Sul, RS; Santa Catarina, SC; Sergipe, SE; Tocantins, TO.

State tax rates on fuels

Tax rates valid in July 2023



For further details on tax burden on fuels in Brazil, [click here](#).



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