

# FOSSIL FUEL SUBSIDIES IN BRAZIL IN 2018

KNOW, EVALUATE, REFORM



Realização



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# INTRODUCTION

In 2018, the Institute for Socio-Economic Studies (Inesc) published a study on fossil fuel subsidies practiced from 2013 to 2017. In this edition, we present the data for 2018, following up on our monitoring of those subsidies and on our commitment to ongoing improvement of the methodology.

The study has the merit of gathering and organizing data, some of it public and some previously unpublished, on a long list of subsidies involving tax expenditures, other tax waivers, budget spending, as well as revenue paid by citizens through their electric power bills.

The scale is impressive.

There were **U\$ 23 billion in subsidies to fossil fuels in 2018**, distributed as follows:

MODALITIES OF SUBSIDIES	U\$ BILLIONS	%
Tax expenditures	1,1	5
Other waivers	18,9	81
Direct spending	3,2	14
<b>Total</b>	<b>23,3</b>	<b>100</b>

That U\$ 23 billion was a little bit more than 1% of Brazil's GDP in 2018. It was also equivalent to 2.8 times the budget of the Bolsa Familia program (U\$ 8 billion), twice the value of funds for unemployment insurance (U\$ 11 billion) and 24 times the budget of the Ministry of the Environment (U\$ 1 billion).

Subsidies benefit producers and consumers. Producers were awarded U\$ 6 billion (27% of the total), especially through various special taxation regimes to the oil and gas sector, the largest of which is known as Repetro.

The U\$ 17 billion (73% of the total) allotted to consumption included the difference between rates charged in 2018 and those originally approved by legislation regulating Pis/Cofins and the Cide-fuel on gasoline and diesel, as well as the entire budget of the Fuel Consumption Account (CCC).

These diverse and complex subsidies raise questions, especially in light of serious problems facing Brazil's economy, society and the environment, as well as world-wide climate change.

**What justifies so many subsidies? Are they really necessary? Whom do they benefit? What are their impacts on the country, on people's rights and for the planet?**

Although seemingly distant from public debates, such issues affecting the daily lives of people and the direction of the country's development must be discussed. This is why Inesc decided to monitor fossil fuel subsidies and promote public awareness around such questions.

This publication follows up on work begun in 2018 to defend the urgency of **knowing, evaluating and reforming subsidies to fossil fuels in Brazil.**

Inesc is grateful to the Avina Foundation and the KR Foundation for their support to this initiative, as well as the Fundación Ambiente y Recursos Naturales (FARN) for their partnership.

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# 1. METHODOLOGY ADOPTED

This version follows the general methodology adopted in our study on the 2013 to 2017<sup>1</sup> period, including the methodology developed by the Overseas Development Institute (ODI), in partnership with Oil Change International (OCI) and the International Institute for Sustainable Development (IISD) for the years 2013 and 2014<sup>2</sup>.

To estimate the subsidies in 2018, the following official sources were used:

- 1) Estimates of tax expenditures, with final data for 2016 and estimates for 2017 and 2018, published by the Brazilian Federal Revenue authority (RFB);
- 2) Yearly listings of official tax reductions, including waivers not classified as tax expenditures, published by the RFB;
- 3) Responses to requests filed through the Law on Access to Information (LAI);
- 4) Time series on the volume (in m<sup>3</sup>) of sales of petroleum and ethanol derivatives, by the National Agency for Petroleum, Natural Gas and Biofuels (ANP);
- 5) Spending forecasts for the Fuel Consumption Account (CCC) and the Energy Development Account (CDE coal), published by the Brazilian Electricity Regulatory Agency (Aneel);
- 6) Actual budget execution for direct spending (Siop-Ministry of Economics).

Conceptual and methodological adjustments were made as part of our ongoing commitment to improve this monitoring, including:

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<sup>1</sup> The full version and executive summary of the 2018 study are available at Inesc's website: <https://www.inesc.org.br/tag/combustiveis-fosseis/>

<sup>2</sup> In this regard see: <https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/9989.pdf>

## **(1) Separation between tax expenditures and other waivers**

In the previous edition, we included as Tax Expenditures all forms of revenue waivers that reduce potential tax collection; both those classified as Tax Expenditures by the Brazilian Federal Revenue authority (RFB), as well as those not recognized as such by the government.

In this edition, we have separated subsidies that translate into revenue loss in two categories: i) tax expenditures, according to the concept adopted by the RFB; ii) other waivers not classified as tax expenditures.

This choice aims to draw attention to the breadth of special regimes and other waivers that are not currently computed as tax expenditures, but which significantly impact the collection of taxes and contributions.

As the RFB recognizes<sup>3</sup>,

“Our legal order lacks a norm to regulate the concept of tax expenditure or to define it sufficiently to address the majority of doubts related to the matter.”

6 The fact is that, in the absence of such a norm, the general parameter used is any deviation from the Reference Tax System (STR). This means that although the legal basis encompasses an extensive list of tools within the concept of waivers, only those that in the government’s interpretation deviate from the STR’s general rule are classified as tax expenditures.

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<sup>3</sup> - SIC Cetad, Ceará/Copan Note 120, April 25, 2019 (released under the LAI Law).

## **The legal frameworks of the concepts of Tax Expenditures and Waivers**

### **Article 165 of the Federal Constitution**

*Paragraph 6. The budget bill shall be accompanied by a regionalized statement of the effect **on revenues and expenses**, deriving from exemptions, amnesties, remissions, subsidies and benefits of a financial, tributary and credit nature.*

### **Article 14 of the Fiscal Responsibility Law**

**(...)**

*Paragraph 1. Waivers include amnesty, remission, subsidy, presumed credit, granting of exemption on a non-general basis, change of rate or modification of calculation base that implies a discriminated reduction of taxes or contributions, and other benefits that correspond to differentiated treatment.*

The Brazilian Federal Revenue authority, in turn, conceptualizes Tax Expenditures as “indirect government expenditures carried out through the tax system in order to achieve economic and social objectives, as an exception to the general tax system, reducing potential tax revenue and, consequently, increasing the economic means available to the taxpayer.”

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In short, a significant number of waivers are not classified as tax expenditures by the Brazilian Government, particularly: (i) waivers that reduce the base for calculating Pis/Cofins and Cide-Fuel taxes on gasoline and diesel oil; (ii) waivers under the Repetro; and (iii) waivers on the basis of Provisional Measure 795 (now Law 13,586/2017), also known as the “Trillion-Real Law.”

Therefore, to better align concepts and interpretations, and to highlight what was excluded, we have chosen to separate Tax Expenditures from other waivers.

In this regard, since 2010 the government has published an annual list of waivers instituted each year<sup>4</sup>, whether classified as tax expenditures or not.

The figures presented are, however, estimates, which may diverge from the actual waivers. Moreover, these tax benefits are always calculated based on the tax parameters of the latest legislation in force. That is, one does not use a “standard” rate as a reference for a longer period of time. This is another problem for fossil fuel subsidy measurements, especially consumer subsidies, when cumulative changes occur over time that substantially alter the difference between actual revenue and what could have been collected, if the reference were the limit originally set by law. As we shall see, this is the case of the Contributions for Intervention in the Economic Domain (Cide) and the Social Integration Program (Pis), coupled with the Contribution for the Financing of Social Security (Cofins).

## **(2) Calculation of waivers for diesel oil and gasoline based on our own methodology**

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Waivers on revenues from Cide-Fuels and Pis/Cofins today represent the bulk of subsidies to fossil fuel consumption in Brazil. This point will be emphasized as we calculate effective waivers for the specific cases of diesel and gasoline based on two distinct methodologies:

- a) The methodology that considers the loss of revenue as compared to the previously regulation, which approximates the waiver recognized by the government’s calculations;
- b) The methodology that considers the loss of revenue compared to the original legal limit, as practiced by the Organization for Economic Cooperation and Development (OECD).

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<sup>4</sup> In this regard, see: <http://receita.economia.gov.br/dados/receitadata/renuncia-fiscal/desoneracoes-instituidas/desoneracoes-instituidas-capa>



In order to perform the calculations, Inesc worked with information provided by the Federal Revenue authority under the Law on Access to Information (LAI). Using the volumes of diesel oil and gasoline sold in 2018 (ANP), we discounted the 8% of biodiesel mixed into diesel oil until February 2018, and 10% from March to December of 2018<sup>5</sup>.

It should be noted that improvements in the methodology for measuring subsidies to fossil fuels make it hard to compare them to the time series in our first study. We therefore decided to focus this edition on analyzing and discussing the year 2018. In addition, unlike the first edition, in the present study we do not present information on financing and investments for the sector. This is due to the need for more extensive methodological discussions on these two dimensions of subsidies.

In the case of **Direct Spending**, we used the same concepts and methodology adopted in the previous study, namely, transfers of public resources to benefit the producer sector, for example, public spending on research and development (R&D) to develop technologies or for exploratory drilling, as well as investments in infrastructure that directly benefits the sector. Subsidies to reduce fuel prices are also classified as direct spending, such as subsidies to reduce the price of diesel oil.

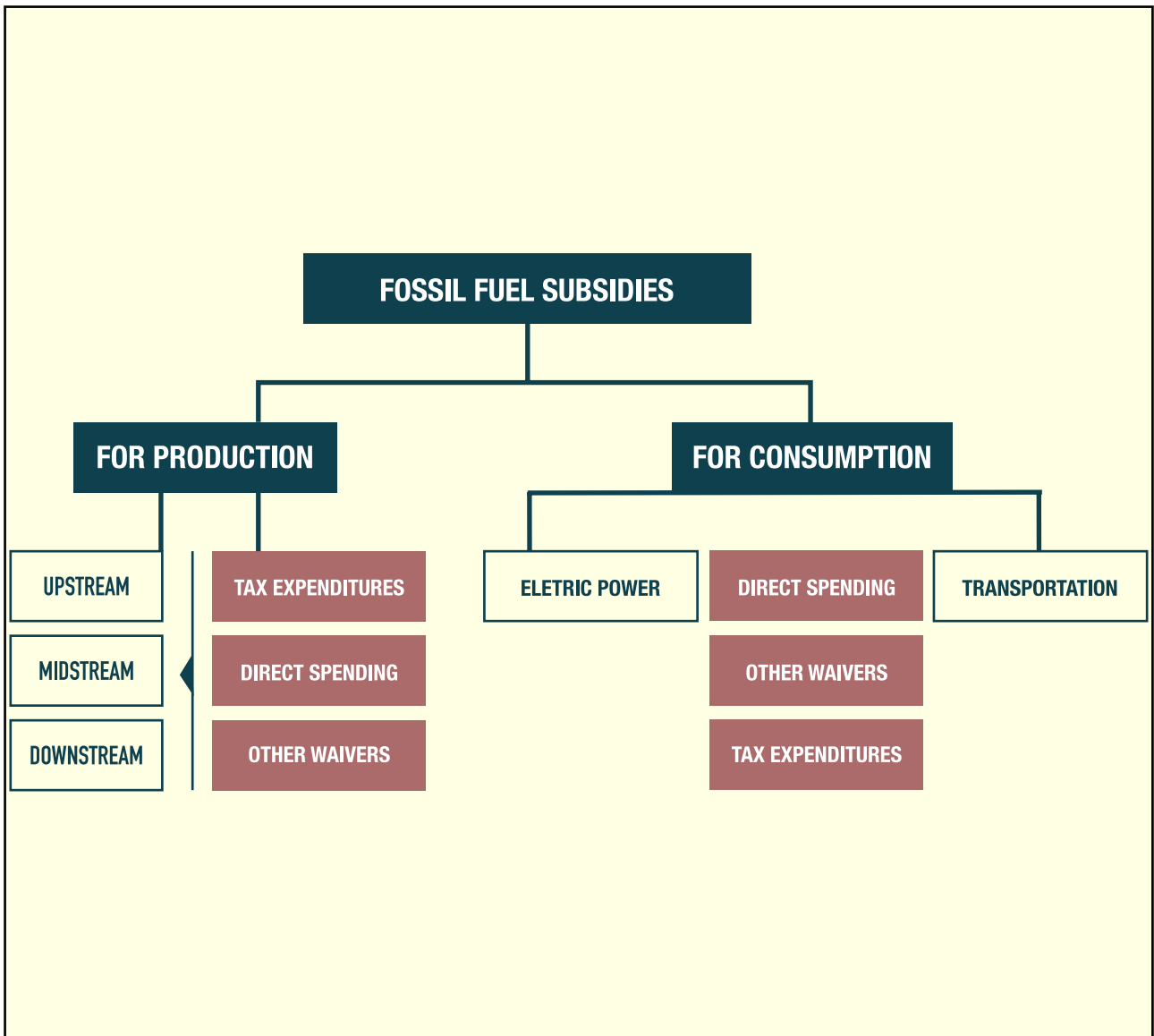
Finally, our methodology classifies the subsidies in three modalities and two categories.

**Modalities:** tax expenditures, other waivers, direct spending.

**Categories:** production subsidies and consumer subsidies.

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<sup>5</sup> Since 2008, the mixture of pure biodiesel (B100) into diesel oil became mandatory with a gradual increase. From 2015 until February 2017 the mixture was 7%, from March 2017 to February 2018, 8% and, since March 2018, 10%.



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## 2. WHAT DO THE NUMBERS SAY?

### 2.1 Remarkable volume of subsidies

In 2018, Brazil federal subsidies in fossil fuel amounted U\$ 23 billion, as we see in Table 1. These values represent a little bit more than 1% of the country's GDP, which was U\$ 1.9 trillion that year.

## 2.2 Hefty tax waivers

Tax expenditures, based on the concept used by the RFB, are the smallest share of those subsidies, at U\$ 1.1 billion, or 5% of the total. In other words, the special regimes behind these subsidies are not specific to the Oil & Gas sector and the numbers presented refer to the portion of waivers related to the energy, transportation and industry functions.

The other waivers accounted for most of the subsidies, 81% (U\$ 18.9 billion), including major subsidies to the production of Oil & Gas, Repetro and waivers created by MP 795 (now Law 13,586/2017). Also counted as waivers are the series of measures to reduce Pis/Cofins and Cide on the sale of gasoline and diesel oil.

Subsidies through Direct Spending (14%), in turn, amount to U\$ 3.24 billion, funded by the public budget and by revenue from the Energy Consumption Account (CCE).

## 2.3 Priority on subsidizing consumption

The production subsidy category includes all waivers, whether classified or not as tax expenditures, plus direct spending that benefits the fossil fuel production sector.

In 2018, as we see in Table 2, production subsidies amounted U\$ 6 billion. Topping the list was Repetro, which we conservatively estimate at the same level as 2016, followed by new waivers under MP 795/17.

Consumer subsidies, meanwhile, totaled U\$ 17 billion in 2018. This category covers waivers due to changes in the assessment base for Pis/Cofins and Cide-Fuel contributions, which reduced revenue from gasoline and diesel oil sales. Other subsidies are linked to the generation of coal and diesel thermal power.

**TABLE 1**  
**Brazil: Fossil fuel subsidies**  
**by spending mode, 2018**

TAX EXPENDITURES	SOURCE	VALUE U\$
<b>Reidi:</b> Special Regime for Infrastructure Development Incentives (Reidi-Energy)	Statement of Tax Expenditures: actual figures for 2015 and 2016; time series for 2014 to 2019	285,218,449
<b>Reporto:</b> Tax Regime Incentives to Modernize and Expand the Port Structure.	Statement of Tax Expenditures: actual figures for 2015 and 2016; time series for 2014 to 2019	55,382,206
Thermoelectricity (power)	Statement of Tax Expenditures: actual figures for 2015 and 2016; time series for 2014 to 2019	143,309,243
Liquefied Natural Gas	Statement of Tax Expenditures: actual figures for 2015 and 2016; time series for 2014 to 2019	82,850,350
Investment in Infrastructure (Energy)	Statement of Tax Expenditures: actual figures for 2015 and 2016; time series for 2014 to 2019	26,396,782
Petrochemicals (Industry)	Statement of Tax Expenditures: actual figures for 2015 and 2016; time series for 2014 to 2019	139,685,763
Boats and aircraft	Statement of Tax Expenditures: actual figures for 2015 and 2016; time series for 2014 to 2019	417,409,503
<b>TOTAL TAX EXPENDITURES</b>		<b>1,150,252,297</b>

OTHER WAIVERS	SOURCE	VALUE U\$
<b>Special tax regime</b> for O&G activities (MP 795; Law 13,586/2017)	SRF report on reductions adopted (2018-2020)	1,494,292,750
	SRF report on reductions adopted (2018-2020)	44,470,588
<b>Repetro:</b> Special Customs Regime for Exports and Imports of Goods Intended for Exploration and Production of Petroleum and Natural Gas.	Law for Access to Information (values rounded to R\$ millions). 2016 values repeated for 2018 due to gap in LAI information.	3,569,630,643
Cide-Fuel (diesel and gasoline)	Inesc calculation for diesel	5,031,534,837
	Inesc calculation for gasoline	7,974,651,775
Reduction of Pins /Cofins (for diesel and gasoline)	Inesc calculation for diesel	789,416,511
	Inesc calculation for gasoline	-
<b>TOTAL OF OTHER WAIVERS</b>		<b>18,903,997,105</b>
DIRECT SPENDING	SOURCE	VALUE U\$
Diesel oil subsidy.	Siop-Planning Portal (actual budget execution)	1,317,745,801
CCC Fuel Consumption Account	Eletrobrás (rounded to millions)	1,701,778,386
CDE Energy Development Account – Domestic Coal	Eletrobrás (rounded to millions)	214,500,684
Geology and Geophysical Services for Oil and Natural Gas Prospecting	Siop-Planning Portal (actual budget execution)	4,978,999
CT-Petro	Siop-Planning Portal (actual budget execution)	950,414
<b>TOTAL DIRECT SPENDING</b>		<b>3,239,954,284</b>
<b>TOTAL FOSSIL FUEL SUBSIDIES</b>		<b>23,294,203,686</b>

Produced by the authors.

**TABLE 2**  
**Brazil: Fossil fuel subsidies by categories, 2018**

PRODUCTION SUBSIDIES	SOURCE	VALUE U\$
<b>Reidi:</b> Special Regime for Infrastructure Development Incentives (Reidi-Energy)	Statement of Tax Expenditures: actual figures for 2015 and 2016; time series for 2014 to 2019	285,218,449
<b>Reporto:</b> Tax Regime Incentives to Modernize and Expand the Port Structure.	Statement of Tax Expenditures: actual figures for 2015 and 2016; time series for 2014 to 2019	55,382,206
Thermoelectricity (energy)	Statement of Tax Expenditures: actual figures for 2015 and 2016; time series for 2014 to 2019	143,309,243
Liquefied Natural Gas	Statement of Tax Expenditures: actual figures for 2015 and 2016; time series for 2014 to 2019	82,850,350
Infrastructure Investment (Energy)	Statement of Tax Expenditures: actual figures for 2015 and 2016; time series for 2014 to 2019	26,396,782
Petrochemicals (Industry)	Statement of Tax Expenditures: actual figures for 2015 and 2016; time series for 2014 to 2019	139,685,763
Boats and Aircraft	Statement of Tax Expenditures: actual figures for 2015 and 2016; time series for 2014 to 2019	417,409,503
Special tax regime for O&G activities (MP 795; Law 13,586/2017)	SRF report on reductions adopted (2018-2020)	1,494,292,750
	SRF report on reductions adopted (2018-2020)	44,470,588

<b>Repetro:</b> Special Customs Regime for Exports and Imports of Goods Intended for Exploration and Production of Petroleum and Natural Gas.	Access to Information Law 2016 values repeated for 2018 due to gap in LAI information.	3,569,630,643
Geology and Geophysical Services for Oil and Natural Gas Prospecting	Siop-Planning Portal (actual budget execution)	4,978,999
CT-Petro	Siop-Planning Portal (actual budget execution)	950,414
<b>TOTAL PRODUCTION SUBSIDIES</b>		<b>6,264,575,690</b>

<b>CONSUMER SUBSIDIES</b>	<b>SOURCE</b>	<b>VALUE U\$</b>
Cide-fuels (diesel and gasoline)	Inesc calculation for diesel	5,031,534,837
	Inesc calculation for gasoline	7,974,651,775
Reduction of Pis/Cofins (for diesel and gasoline)	Inesc calculation for diesel	214,500,684
	Inesc calculation for gasoline	-
Diesel oil subsidy.	Siop-Planning Portal (actual budget execution)	1,317,745,801
CCC Fuel Consumption Account	Eletrobrás (rounded to millions)	1,701,778,386
CDE Energy Development Account – domestic coal	Eletrobrás (rounded to millions)	214,500,684
<b>TOTAL CONSUMPTION SUBSIDIES</b>		<b>17,029,627,994</b>
<b>TOTAL FOSSIL FUEL SUBSIDIES</b>		<b>23,294,203,686</b>

Produced by the authors

Tables 1 and 2 portray the many, complex fossil fuel subsidies. There are several special tax regimes, tax systems with a variety of bases and a myriad of modalities and categories of subsidies. All this makes it very difficult to analyze subsidies in Brazil.

Yet it is a necessary exercise because, although methodological choices may vary and give different results, on the one it involves major losses of potential revenue and, on the other, it affects economic and policy choices about which sectors, activities and products should be encouraged with subsidies.

Given the breadth and complexity of the theme, we highlight here some of the largest subsidies to production and consumption in 2018, to help answer the questions we raised at the beginning.

## **3. FURTHER REFLECTIONS ON CERTAIN TYPES OF SUBSIDIES**

### **3.1 Subsidies to Oil & Gas production**

#### **3.1.1 Repetro**

Created in 1999, Repetro is the highest value production subsidy. It is exclusive to this sector and, unlike Reporto and Reidi, is focused on the Prospecting and Production phase.

Companies qualified as beneficiaries by Brazil's Federal Revenue authority are exempt from II, IPI, Pis/Cofins and AFRMM on equipment used directly in the prospecting and production of oil and natural gas<sup>6</sup>. Inesc filed for information on Repetro's tax exemptions through the Law for Access to Information. In 2018, the RFB provided yearly estimates up to 2016, when they amounted to U\$ 3.6 billion.

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<sup>6</sup> For more details on Repetro see : [https://www.inesc.org.br/wp-content/uploads/2018/06/Estudo\\_completo\\_Inesc.pdf?x31288](https://www.inesc.org.br/wp-content/uploads/2018/06/Estudo_completo_Inesc.pdf?x31288)



For this 2019 update, Inesc once again filed for information on Repetro-related waivers, and also asked why the authority does not classify this Regime as a Tax Expenditure.

In response to the LAI request, the RFB presented the “SIC Cetad/Copan Note No. 120, of April 25, 2019,” in which it essentially argues that *“the calculation of the waiver requires the stipulation of a reference to determine an exemption from each tax covered by a specific regime. However, there are no reference models for Repetro.”*

Finally, instead of the waivers, which it had provided in response to the 2018 LAI filing, the RFB provided a table with the volume of imports related to Repetro for the period from 2013 to 2018.

Inesc therefore opted to assign a value of U\$ 3.6 billion for Repetro waivers. However, according to Table 3, if we apply the same standards for waivers granted in previous years, the increase in the value of imports benefited by Repetro would be around U\$ 4.4 billion in 2018.

**TABLE 3**  
**Repetro: Estimates for 2011-2018**

Year	Total Waiver (II, IPI, Pis/Cofins) – in nominal U\$ billion	Values of imports of goods for Repetro – in nominal U\$ billion (3)	% Waiver/Import Values
2011 (1)	2.7	10.7	26%
2012 (1)	3.2	12.2	26%
2013 (2)	3.3	12.0	27%
2014 (2)	2.4	9.3	26%
2015 (2)	3.1	11.3	28%
2016 (2)	3.6	12.7	28%
2017 (4)	1.6	5.8	28%
2018 (4)	4.4	15.7	28%

Produced by the authors.

**Notes:**

- (1) Values presented to the TCU in the RFB/Audit/DIAEX Note N° 32, June 16, 2015.
- (2) Values provided to Inesc in the RFB's response to its LAI filing, in the SIC Cetad/Copan Note No. 45, March 22, 2018.
- (3) Import values of goods destined for Repetro in the definitive modality (as per item IV, art. 458, Decree No. 60.759/2009) and the temporary modality (point "a," item I, art. 376, Decree No. 6.759/2009). The values were provided to Inesc in the RFB's response to its LAI filing, in the SIC Cetad/Copan Note No. 120, April 25, 2019.
- (4) Estimated waiver values calculated with the hypothesis that waivers remained at 28% of the value of imports as reported by the RFB for 2015 and 2016

### **3.1.2 Law 13,586/2017 (MP 789/17)**

Law 13,586/2017 created a new "Special tax regime for the exploration and production of petroleum, natural gas and other fluid hydrocarbons." In 2018, with its entry into force, waivers increased significantly.

According to official estimates provided through the "annual listing of adopted tax reductions," the government forwent revenue of **U\$ 1.5 billion** from companies that explore for, develop and produce petroleum, natural gas and other fluid hydrocarbons.

The waiver is due to the suspension of federal taxes – II, IPI, Pis/Pasep-Imp, Cofins-Imp, Pis/Pasep and Cofins – on (1) goods whose permanence in the country is final and (2) raw materials, intermediate products and packaging material imported or purchased on the domestic market to be used in full in the production process. Also, the full deduction of the amounts applied, for each period of calculation, in the exploration and production of oil and natural gas, to determine real profit and the basis for calculating the Social Contribution on Net Profit (CSLL).

### 3.1.3 Issues for debate

For beneficiaries, subsidies reduce a company's or sector's production or distribution costs, either through lower taxes or contributions or through direct public investments to support development of the sector.

For the government, subsidies are justified for their collective benefits through, for example, more economic activity that brings more income and jobs or develops a region or sector. Moreover, arguments in favor of subsidies always presume that greater investments would not otherwise be made without them.

Do such arguments justify investments in oil exploration today in Brazil? As far as Repetro is concerned, a study by the Federal University of Rio de Janeiro (Coppe/UFRJ) has shown that some Pre-Salt fields would be profitable without subsidies, suggesting a thorough review of such policies.

#### **Reflecting on the effectiveness of Repetro**

The study “Are fiscal incentives for the oil business in Brazil really necessary?” was aimed at estimating the impact of Repetro tax incentives on the economic feasibility of Brazil's “Pre-Salt” fields. To this end, the authors adopted the internal rate of return (IRR) as an economic tool to measure the profitability of the Pre-Salt prospects in Brazil, with and without reductions under Repetro. The results show that there are projects, especially in Pre-Salt fields, that do not require tax incentives to be profitable and that the existence of Repetro gives rise to excessive profits for companies exploiting this resource, while reducing the government's share in oil income. In addition, the authors conclude that, considering the climate-change challenges and commitments undertaken by Brazil in Paris (UNFCCC, 2015), besides the country's urgent social needs, tax incentives should be revised (PEDRA, Patrícia; Alexandre SZKLO; 2018. Coppe/UFRJ)

It is significant that the special tax regime for Oil & Gas was approved and Repetro renewed in a context of growing Pre-Salt exploration investments not only by Petrobras, but also by transnational oil companies.

In late 2016, a bill penned by then Senator José Serra was approved to expand the participation of private and foreign investments in the Pre-Salt area. In the 2018 auction (15th Round) of four Pre-Salt areas, the two largest were taken by foreign giants, American Exxon and Anglo-Dutch Shell.

Since the beginning of the exploration of Pre-Salt, Brazil has produced record volumes of oil. In 2016, the country became the world's ninth largest producer of oil and other fluids and the third largest in the Americas, behind only the United States and Canada (EIA, 2017<sup>7</sup>). 2018 brought yet another record: 977,310,000 barrels of oil equivalent, according to the ANP.

Of course, subsidies often are not based on technical analyses, but arise from political decisions influenced by complex power games and interests. The Oil & Gas sector is, par excellence, an arena where this game is global, with geopolitical implications including war and peace between nations. In other words, if it were not for strong economic and political pressure, led by domestic and foreign interest groups, would Repetro subsidies have been renewed and then expanded by the new law?

We can also presume that, were it not for the government's decision to renew and expand subsidies, there would not have been such an economic and political push to expand production in areas of high environmental sensitivity.

For example, a new Post and Pre-Salt exploration auction (16th Round) is scheduled for October 2019, including seven areas located adjacent to the Abrolhos National Marine Park. According to the press<sup>8</sup>, Ibama produced an official opinion against the inclusion of these areas in the auction but was overruled by the president of the federal environmental authority, who approved the environmental analysis issued prior to ANP bidding rounds.

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<sup>7</sup> Country Analysis Brief: Brazil. November, 2017. US Energy Information Administration. Available at: <https://www.eia.gov/beta/international/analysis.cfm?iso=BRA>.

<sup>8</sup> <https://exame.abril.com.br/brasil/presidente-do-ibama-rejeita-analise-e-autoriza-leilao-proximo-a-abrolhos/>

What if, even without subsidies, the Oil & Gas sector were producing at the same levels we observed? In this case, **the Brazilian federal Treasury would have been U\$ 6.3 billion richer in 2018.**

Issues such as these help us understand the strategic importance of a serious and transparent debate in Brazil over the scale of subsidies to fossil fuel production and their validity.

### **3.2 Diesel and gasoline consumption subsidies**

On May 30, 2018, in the wake of the truckers' strike, the government published Decree 9,391/18, reducing the price of diesel oil by R\$ 0.16 per liter. The discount was enabled by three measures to subsidize consumption:

- 1) a R\$ 0.11 per liter reduction in the Pis/Cofins;
- 2) a R\$ 0.05 reduction in the Cide-fuel contribution;
- 3) up to R\$ 9.5 billion in subsidies from the 2018 general federal budget.

To justify this tax waiver, as required by the Fiscal Responsibility Law (LRF), the government published the amount of revenue to be forgone due to these measures. Its estimate was that the revenue waiver would amount to U\$ 1,1 billion, as follows:

- 1) U\$ 752 million, by reducing the Pis/Cofins; and
- 2) U\$ 342 million, from the Cide-fuels exemption.

In addition, an economic subsidy limited to U\$ 2.6 billion was included in the 2018 budget by MP 838/2018, which became Law 13.723/2018.

Also, in compliance with the LRF, the government announced its “willingness” to compensate revenue losses by reviewing other waivers, including the reinstatement of payroll taxes in various economic sectors and a change in the collection of the IPI tax on soft drink syrup. This latter step, however, taken by Decree 9,394/18, was questioned by Coca-Cola and other soft drink manufacturers, after which the government backed down, published a new decree and, in practice, reinstated the tax break for these companies.

This IPI soft-drink tax example shows how undoing a waiver often brings political pressure from affected groups, who succeed in reversing such measures.

Moreover, even with provisions in the law to compensate for revenue loss, the government is not obliged to evaluate ex-post how the overall situation actually evolved. In practice there is no assessment at all of compensation outcomes.

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## What has the impact of the measures been?

Those handouts, like any public expenditure, were included in the budget of the National Agency for Petroleum, Natural Gas and Biofuels (ANP) under the “Special Operations” program as an “Economic Subsidy to the Domestic Sale of Diesel Oil.” Effective spending through this subsidy amounted to U\$ 1.3 billion in 2018, below the legally established limit.

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<sup>9</sup> Any bill of law that may reduce federal revenue, even when subject to global limits, must be accompanied by an estimate of its budgetary-financial impact and corresponding compensation, state the purpose of the measure and comply with art. 14 of the LRF (LDO 2018).

<sup>10</sup> For an analysis of the legal controversy over this, see: <https://www.conjur.com.br/2018-jun-20/consul-tor-tributario-reoneracao-folha-pagamentos-produzir-efeitos-2019>

<sup>11</sup> <https://exame.abril.com.br/negocios/pressionado-temer-cede-a-coca-cola-e-reduz-imposto/>

The waiver must be seen from two different angles:

## I – Waivers as seen by the government

Waivers are calculated based on estimates, considering both projected fuel sale volumes and the change in the new compared to the old tax rate.

This means that, even using the government's own methodology, there may be a difference between prior estimates and actual outcomes. In this case, according to Inesc's calculations, using the methodology adopted by the Government:

**TABLE 4.1**  
**Revenue collected and forgone – Pis/Cofins on diesel oil (according to the government's methodology), 2018**

Revenue collected and forgone – Pis/Cofins on diesel oil (using the government's methodology)	2018(1)
<b>Total volume sold in year in m<sup>3</sup> (1)</b>	<b>50.231.623</b>
A – Actual revenue from Pis/Cofins	5,553,098,997
B – Pis/Cofins revenue based on the limit of Law 10,865/2004 (with no changes in 2018)	6,342,515,508
C – Loss of revenue from Pis/Cofins (A-B)	-789,416,511

Table produced by the authors.  
Calculation based on data accessed via LAI.

**Notes:** parameters for calculations:

**(1)** Volumes sold, less the required biodiesel mixture. Since 2008, the mixture of pure biodiesel (B100) into diesel oil became mandatory with a gradual increase. From 2015 until February 2017 the mixture was 7%, from March 2017 to February 2018, 8% and since March 2018, 10%.

**A-** We used the tax rate informed by the Government, through LAI, for January-June 2018, i.e. U\$ 126.3 per m<sup>3</sup>. From July to December we considered the impact of Decree 9,391/18, which altered that rate to U\$ 96.2 per m<sup>3</sup>.

**B-** Law 10,865/2004 set a limit of U\$ 126.3 per m<sup>3</sup> of diesel oil sold.

- The Pis/Cofins waiver on diesel cost U\$ 788 million, U\$ 34 million more than the government's initial estimate (U\$ 752 million).
- The Cide waiver on diesel cost U\$ 358 million, U\$ 15,7 million more than the government's initial estimate (U\$ 342 million).

**TABLE 4.2**  
**Revenue collected and forgone**  
**Cide on diesel oil**  
**(according to the government's methodology), 2018**

Revenue collected and forgone – Cide on diesel oil (using the government's methodology)	2018(1)
Total volume sold in year in m <sup>3</sup> (1)	50.231.623
D – Revenue without Decree 9,391/18	687,163,110
E – Actual revenue	328,337,423
F – Loss of Cide revenue estimated by the government to comply with Decree 9,391, issued on 30/05/2018.	343,091,655
G – Actual loss of revenue from Cide (D-E)	358,825,687

Table produced by the authors.  
 Calculation based on data accessed via LAI

**Notes:** parameters for calculations:

- (1)** Volumes sold, less the required biodiesel mixture. Since 2008, the mixture of pure biodiesel (B100) into diesel oil became mandatory with a gradual increase. From 2015 until February 2017 the mixture was 7%, from March 2017 to February 2018, 8% and since March 2018, 10%.



## II – Waivers based on legal limits

Over time, several decrees changed Cide and Pis/Cofins rates on diesel and gasoline. The changes had major impacts on potential revenues, compared to earlier limits. The next two tables document this process.

**TABLE 5**  
**History of changes in Cide-C Fuels**  
**(U\$ per m<sup>3</sup>), 2004-2018**

Fuel Type	Legal Limits	2004	2008	2009	2011	2011*	2012	2015	2018
Gasoline (m <sup>3</sup> )	235.29	76.61	49.25	62.93	52.69	24.90	0.00	2.74	27.36
Diesel (m <sup>3</sup> )	106.70	19.15	8.21	19.15	19.15	12.86	0.00	13.68	0,00

Table produced by the authors.  
 Calculation based on data accessed via LAI.  
 \* Second change in the year 2011.

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**TABLE 6**  
**History of changes in Pis/Cofins**  
**for fuels (R\$ per m<sup>3</sup>), 2004-2018**

Fuel Type	Legal Limits	2004	2015	2017	2018
Gasoline	216.83	71.57	104.40	216.83	216.83
Diesel	126.27	40.49	67.85	126.27	96.17

Table produced by the authors.  
 Calculation based on data accessed via LAI.

**TABLE 7.1**  
**Revenue collected and forgone**  
**Cide on diesel oil (using INESC’s**  
**methodology), 2018**

Collection and effective waiver – Cide on diesel oil (using Inesc’s methodology)	2018
Total volume sold in year in m <sup>3</sup>	50.231.623
A - Actual Cide revenue, based on current tax rates (zeroed by Decree 9.391/18)	328,337,423
B – Cide revenue as per legal limit in Law 10.336/2001 (as per response via LAI)	5,359,872,260
C - Loss of revenue due to change in legal limits (A-B)	<b>-5,031,534,837</b>

Table produced by the authors.  
Calculation based on data accessed via LAI.

The question to be addressed here is:

If in lieu of the waiver assessed by the government, we count potential revenue based on the originally law, how much did that waiver really cost?

According to Inesc’s calculations, based on data accessed via LAI (Law for Access to Information), the total loss of Cide and Pis/Cofins revenue for diesel oil and gasoline was **U\$ 13.79 billion**:

- a) U\$ 5.03 billion from the Cide waiver on diesel oil;
- b) U\$ 7.97 billion of the Cide waiver on gasoline; and
- c) U\$ 789.41 million in Pis/Cofins revenue on diesel.

**TABLE 7.2**  
**Collection and effective waiver**  
**Cide on gasoline (using Inesc's methodology)**

Collection and effective waiver – Cide on gasoline (using Inesc's methodology)	2018
<b>Total volume sold in year in m<sup>3</sup></b>	<b>38.351.779</b>
F – Cide revenue using current tax rates	1,049,296,286
G - Cide revenue as per legal limit in Law 10.336/2001 (as per response via LAI)	9,023,948,062
H - Loss of revenue due to change in legal limits (F-G)	<b>-7,974,651,775</b>

Table produced by the authors.  
Calculation based on data accessed via LAI.

Our calculations displayed in these tables reveal how, depending on the methodology adopted, the value of the waivers varies significantly, for both diesel and gasoline.

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## Discussion

To raise public debate, Inesc decided to present the value of forgone revenues from Cide and Pis/Cofins fuel taxes, based on changes in legal limits.

When the government reduces the rate charged on sales per cubic meter, it is sacrificing revenue, but this is not considered a tax expenditure. The official justification is that intervention in the fuel sector through the Cide is the rule, rather than a deviation or exception. Similarly, the Government fails to classify the tax waiver from cuts in Pis/Cofins rates as a tax expenditure, with the excuse that there is no general reference on specific rates for these two tributes.

Revenues, nonetheless, are falling, faster or slower depending on one's methodology, with impacts on public accounts over time. The problem of subsidies to fuel consumption should also be viewed, therefore,

as a loss of revenue with major impacts on public accounts and on a governments' capacity to implement public policies, particularly when a country is undergoing a profound fiscal and economic crisis. The broader debate on fossil fuel consumption subsidies should not focus on the issue of waivers alone. Consumption of fossil fuels, for freight transport and urban, has impacts emissions of greenhouse gases and climate. The Climate Observatory<sup>12</sup> data by sector show that in 2017, 21% of the net CO2 emissions came from the energy sector. Within this sector, emissions from fuel combustion fossils accounted for 94%.

The logic is that the more a given mode of transport consumes fossil fuel, the greater will be its negative impacts, in terms of emissions. However, when assessing consequences of intensive fuel use in each mode of transport, other effects, such as accidents, vehicular pollution, travel times and traffic jams, must also be considered.

This raises the following question: do fossil fuel prices, as heavily taxed as they are, take into account all the costs associated with their use in transportation?

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That is to say, to what extent do fuel prices and taxation reflect externalities stemming directly from the burning of fossil fuels (atmospheric pollution and GHGs) and others related to the intensity of a vehicle's use (accidents and congestion, for example)?

Will reducing fuel prices through lower Pis/Cofins and Cide rates help build less polluting transport systems, with fewer emissions and less harm to our health and quality of life in the cities?

Or, on the contrary, could taxes be used to better reflect environmental and social costs that are not now internalized in the price of fuels? If so, should governments also redirect such added revenue into investments in modes of transport that pollute less and improve urban mobility and quality of life in cities?

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<sup>12</sup> <http://plataforma.seeg.eco.br/sectors/energia>

# FINAL CONSIDERATIONS KNOW, EVALUATE, REFORM: AN URGENT AGENDA

Defining fossil fuel subsidies is a complex challenge itself, in Brazil or anywhere else. Different methodologies and interpretations of each country's tax system lead to varied and controversial results. That is why governments in the G20 signed an international commitment to review subsidies and took up the challenge of dealing with the issue through a dialogue with peers about their measurement methodologies. By 2018, two such peer reviews had taken place, involving China and the United States, and Argentina and Canada. Although results were not very encouraging, steps were taken by governments to measure such subsidies, paving the way for their reform.

In Brazil, debates on fossil subsidies revolve around transparency. They must be identified if they are to be evaluated and reformed. This publication takes steps in that direction by building a database based on methodological choices, bringing together dispersed bits of public information and gathering even more information through the Law on Access to Information.

This study still needs to evolve, and the government must do its part as well. Today, many of the subsidies are not disclosed, such as Repetro. In addition, subsidies must always be evaluated ex-post, both the waivers themselves and their expected effects.

Information on which companies are benefiting from subsidies, and by how much, must be fully transparent. Executive orders granting tax breaks are published in the Official Gazette, but staggered over time, with the value of taxes forgone by each beneficiary protected by fiscal secrecy.

Greater debate is more urgent than ever, especially as mankind is demanding that the climate crisis be faced through a drastic reduction in fossil fuel production and consumption. That urgency dovetails with Brazil's own need to finance public policies without generous tax waivers that, besides being wasteful, bankroll a sector that holds back sustainable development.

In view of this, our main suggestions are:

### **To the National Congress:**

▪ Pass a law to show the Brazilian people which companies benefit from tax waivers and by how much. The Senate has taken a step in this direction by approving Bill 188/2014, which would create a Complementary Law obliging the RFB to disclose companies benefiting from tax and contribution exemptions. The bill, authored by Senator Randolfe Rodrigues (from the Rede Party), is now on the agenda of the Chamber of Deputies. Its approval is the objective of a web campaign **#SoAcreditoVendo (#SeeingsIsBelieving)**, launched by Inesc in the second semester of 2018, which collected more than 700 signatures to a manifesto delivered to Senator Randolfe Rodrigues' office last February.

- Discuss the significance of fossil fuel subsidies with society at large.

### **To the Federal Revenue authority (RFB):**

▪ Agree on methodologies to measure and disclose tax waivers related to fossil fuel production and consumption.

▪ Make available, in an open format, information on tax waivers involving fossil fuels, such as those created under Repetro and Law 13,586/2017.

### **To the Ministry of Economics:**

▪ Establish a working group, with the participation of civil society, to discuss and agree upon methodologies to calculate fossil fuel subsidies in Brazil.

- Participate in the peer review strategy launched by G20 financial ministers in 2013, in which countries dialogue in greater depth about methodologies for measuring and evaluating subsidies and deal with outstanding issues not only on the scope of what to include as a subsidy in each country's context, but also on which subsidies to exclude as "inefficient" or even "wasteful." In the process leading up to these reports, in addition to the pairs of countries, other countries and the OECD also take part, with their expert reviewers. Positive aspects identified in this process include mutual learning and a more realistic understanding of challenges faced by reform efforts. Active participation by non-governmental institutions and public opinion in this process could be another fundamental contribution to further the challenge of knowing, evaluating and reforming fossil fuel subsidies in Brazil.

- Carry out, in partnership with the Ministry of Mines and Energy, an independent, quantitative and qualitative evaluation of fossil fuels subsidies in order to gauge their relevance, efficiency, efficacy, impacts and sustainability.

# ACRONYMS

**ANEEL** – Brazilian Electricity Regulatory Agency

**ANP** – National Agency of Petroleum, Natural Gas and Biofuels

**AFRMM** – Additional Freight for the Renewing of the Merchant Marine

**CCC** – Fuel Consumption Account

**CCE** – Energy Consumption Account

**CIDE** – Contributions for Intervention in the Economic Domain

**COFINS** – Contribution for the Financing of Social security

**COPPE** – Alberto Luiz Coimbra Institute for Graduate Studies and Research in Engineering, Federal University of Rio de Janeiro.

**CSLL** – Social Contribution on Net Profit

**DOU** – Official Gazette of the Union

**E&P** – Exploration and Production

**GEE** – Greenhouse Gases

**ICS** – Institute for Climate and Society

**IEA** – International Energy Agency

**II** – Import Taxes

**IPI** – Tax on Industrialized Products

**LAI** – Access to Information Law

**LDO** – Budget Guidelines Law

**LRF** – Fiscal Responsibility Law

**MP** – Provisional Measure

**ODI** – Overseas Development Institute

**O&G** – Oil and Gas

**OCDE** – Organization for Economic Cooperation and Development

**R&D** – Research and Development

**PASEP** – Public Servant Asset Formation Program

**GDP** – Gross Domestic Product

**PIS** – Social Integration Program

**REIDI** – Special Incentive Regime for Infrastructure Development

**REPENEC** – Special Incentive Regime for the Development of Oil Infrastructure in the North, Northeast and Midwest Regions

**REPETRO** – Special Customs Regime for Exports and Imports of Goods Intended for Exploration and Production of Petroleum and Natural Gas.

**REPORTO** – Special Incentive Regime for the Modernization and Expansion of Port Structure

**RFB** – Brazilian Federal Revenue authority, Ministry of Economics

**UFRJ** – Federal University of Rio de Janeiro

**UNFCCC** – United Nations Framework Convention on Climate Change



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