

FOSSIL FUEL SUBSIDIES

2019-2020

Is every little thing “gonna be alright”?

AUGUST 2020



The authors of this document completed its elaboration and drafting in June 2020 based on the information available up to that date. However, some data were updated to August 2020 during the editing process prior to publication and dissemination. In turn, this work is the continuation of previous research “Fossil fuel subsidies in Argentina 2017-2018” and “Fossil fuel subsidies in Argentina 2018-2019”.

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This document takes into account information available until June 2020.

SUMMARY

The Earth is experiencing a health, social and economic emergency, now deepened by the pandemic caused by COVID-19. With half of the world under lockdown measures, the fall in fossil fuel consumption is noticeable, as well as the plummeting of prices. In Argentina, a new government (but with already known formulas) still holds on to the idea of operating Vaca Muerta. For instance, the selling price of the crude oil barrel in the domestic market was fixed at US\$ 45 (55% more than the average international price in May 2020) so that extractive companies could cover their operational costs. Plan Gas IV, a new stimulus program for gas extraction with a fixed price of US\$ 3.5/MMBTU to be announced in August 2020 is in the works, and the development of a fossil fuel act is expected once the pandemic is over.

Continued devaluations of the Argentine peso make it difficult for the national government to obtain dollars to tackle simultaneously the payment of subsidies and the negotiation and payment intentions of the external debt. A consequence of the devaluations is that economic subsidies and capital expenditure in energy **in 2019 were 16% higher in pesos and 26% lower if the analysis is done in dollars.** These amounts equate to **the outlays for the Universal Child Allowance (AUH) and the different household allowances for working and non-working population. In 2019, total fossil fuel subsidies represented 5% of the budget.**

After a 57% year-over-year fall of subsidies actually paid in dollars in 2016/2017 and a 73% descend in 2017/2018, a 69% increase can be observed in 2018/2019. These transfers to hydrocarbon companies in 2019 amount to 27.812 billion Argentine pesos (\$) (US\$ 576 million), which represent 0.2% of the gross domestic product (GDP) or 15 million AUH. If it is compared with the expenses to fight COVID-19, they represent 4%.

In particular, the companies that received more subsidies in 2019 were Tecpetrol (47%), Compañía General de Combustibles (16%) and YPF (12%). **According to their financial statements, in 2019 subsidies represented 29% of Tecpetrol's total sales revenue, 25% of Compañía General de Combustibles' and 2% of YPF's.**

One of the serious consequences of subsidizing hydrocarbon extractions is greenhouse gases (GHG) emissions. **It is estimated that subsidies in 2019 increased emissions by 26,594,694 tCO₂e, which represent 7% of the country's total GHG emissions.**

When it comes to distributing companies, amounts allocated in dollars experienced a 42% year-over-year increase in 2016/2017 and the year-over year fall was 56% in the last period of analysis. Despite the shrinkage, the amount is equivalent to 0.13% of the national budget, more than 586,000 retirement pensions or the construction of 280 preschools.

Additionally, Patagonian provinces also benefit from the subsidies granted by the national government, receiving royalties. Subsidies granted to Neuquén cover the 2019 budget of the Ministry of Citizenship, the Ministry of Production and Industry and the Provincial Legislature; those granted to Río Negro cover the 2019 budget of the Ministry of Education and Human Rights and the Ombudsperson; and in the case of Santa Cruz, royalties represent the budget of the Lower House.

In 2019, hydrocarbon companies reported investments for a total US\$ 8.41287 billion, 25% more than in 2018. After cross-referencing information, **subsidies to Tecpetrol covered 58% of their investments, those to Compañía General de Combustibles covered 40% and those received by Wintershall covered 50%.**

Furthermore, after analyzing the prices fixed by the government to promote extraction, there was a stark difference with gas prices. The program agreed to pay, in 2019, the difference between the

price received by companies and a minimum of 7 US\$/MMBTU. At the same time, residential prices were, to April, 3.97 US\$/MMBTU. There were increases later on, but prices remained under the agreed amounts. It was also authorized to export at values beneath the fixed price and to export at prices lower than those paid by Argentine households.

Moreover, prices paid to import gas in the first quarter of 2019 were higher than the average export prices in 2019. 80% of all export prices were below the values paid to import gas from Bolivia.

Regarding 2020 subsidies to the energy sector, if expenses to March 2020 are compared with the same period of the previous year, expenses show a growing trend both in pesos and dollars, with a 132% increase in pesos and 72% in dollars. There is no 2020 National Budget at the moment since it has not been discussed by the Congress yet, so the 2019 Budget is being used as a reference.

For the time being, a payment of over \$18.790 billion of debts of the Unconventional Gas Program has been determined, to become effective in July 2020. The recipients will be companies Tecpetrol and Compañía General de Combustibles, as well as the provinces of Neuquén and Santa Cruz. **The total amount is equivalent to over 1,800,000 payments of the Emergency Household Allowance (IFE), or to more than the total amount allocated for the payment of the bonus for healthcare workers in the context of the pandemic.**

Even though some still suggest that Vaca Muerta is the energy and economic solution to the country's problems, facts show the risks involved in the hydrocarbon business and the need for the government's support to attract investments and continue extraction. This way, it seems the economic crisis will lead to leveraging installed capacity and avoiding a higher impact on jobs and consumption, with the possibility of relaxing environmental regulations in order to maintain activity levels in the fossil fuel sector.

Governments' efforts (both national and provincial) will tend to support and deepen the extractivist system and hydrocarbons will not be an exception.

Therefore, supporting the current fossil fuel consumption model would be considered part of the solution. However, it is important to consider that the social and environmental cost of maintaining a production, extraction and consumption model that led to this unprecedented health crisis seriously affecting the economy will be even higher.

It is necessary to question the fossil fuel extraction-based development model, which enhances the dependency of fixed prices in foreign markets. The crisis should create the possibility to debate a clean, fair and inclusive energetic transition.

INTRODUCTION

2020 will be remembered as a historic year, in which the planet is experiencing a pandemic caused by COVID-19 and the economic crisis that has been deepened as a result of it. At the same time, Argentina has a new government and the pandemic is making it use most of its resources to overcome it, leaving other ideas or policies in the agenda on standby. Even though the new government is of a different political color than the former, it seems that the idea of using fossil fuels as the main resource in the strategy to reach energetic self-sufficiency and as a source of inflow of foreign currency is still active, mostly through the operation of Vaca Muerta, conventional extraction and offshore platforms.

The need for a foreign currency inflow mostly stems from the commitment to pay, between 2022 and 2023, US\$ 43.777 billion in external debt (Zeolla, 2019). In 2019, fuel and energy exports represented 6% of all national exports (National Institute of Statistics and Censuses [INDEC], 2019), an amount much lower than the 64% for agricultural exports, which was one of the objectives of the National Energetic Plan presented by the former national government in 2018.

In his inaugural address to Congress in March 2020, the current president, Alberto Fernández, predicted a change of course, while he anticipated that he would submit a bill on the development of the hydrocarbon and mining sectors to Congress, with the objective of promoting and attracting investments, developing the value chain and creating direct employment.

In order to achieve an increase of hydrocarbon sector exports, it is necessary to invest throughout the sector, which is highly dollarized. Not to mention subsidies granted to the sector, which amounted to US\$ 3.668 billion between 2016 and 2018. As a result, dollars are needed if dollars are to be received (Di Paola, 2020).

In 2019, 89% of the energy matrix was made up by gas and oil, 1% more than in 2018. That year, oil and gas extraction increased by 4% and 5%, respectively, while solar and wind power increased by 640% and 123% in the energy matrix compared to 2018. Nevertheless, both together do not reach a percentage point in the matrix (Ministry of Social Development, 2020). This creates an opportunity to promote renewable energy, not only as a means to generate energy, but also to meet the climate objectives set by the Argentine government in the context of the Nationally Determined Contributions of the Paris Agreement.

The change of administration resulted in a new restructuring of the government organizational chart. The Secretariat of Energy is still standing, under Sergio Lanziani, but it is now under the scope of the Ministry of Productive Development (previously under the scope of the Ministry of Finance), under Matías Kulfas. At the beginning of 2020, the minister commented on the government's intention of "creating conditions for the large-scale development of Vaca Muerta", which would generate 500,000 jobs (Lewkowicz, 2020).

Later, due to the pandemic, the resulting plummeting of consumption and the increase of oil barrels in stock because of their lower international price, the words of the government official changed into a recommendation: to wait for a normalization of the situation before continuing the discussion on the potential development of Vaca Muerta.

Since it was expected that companies that extract gas and oil would not leave oil fields in spite of the fall of domestic consumption; and because income in oil-producing provinces depends on hydrocarbon royalties, a fixed price of US\$ 45 per oil barrel was set. This price is 55% higher than the average international price in May 2020.

Therefore, on May 19, 2020, **Executive Order 488/2020** was published in the Official Gazette, offering incentives for the hydrocarbon sector in the context of a lower demand due to the COVID-19 pandemic and the collapse of international oil prices. It establishes several measures with the goal of keeping energetic self-sufficiency all over the country and maintaining activity levels and jobs associated to the hydrocarbon industry at the same level of 2019. In order to achieve this, it sets the crude oil barrel selling price in the domestic market at US\$ 45 until December 2020, so that extractive companies can cover operational costs (it is important to highlight that the equilibrium price to cover costs in Vaca Muerta is between 35 and 40 US\$/barrel).

By doing this, the ten member provinces of the Federal Organization of Hydrocarbon-Producing States (OFEPHI) will receive royalties based on the fixed price of 45 US\$/barrel. Until the publication of the executive order, these provinces received royalties based on prices between 30 and 35 US\$/barrel. This means they will increase their royalty income by 20%-30%.

Moreover, refineries and traders will have to buy the total demand for crude oil from companies that extract in Argentina, prohibiting the import of hydrocarbon products.

The executive order also regulates the reduction of export duties on gasolines and gas oil by 0%-8% based on the international crude oil price (Brent), which had a former rate of 12%. Tax revenue in 2019 from foreign trade in the energy and fuel sectors was US\$ 374 million (INDEC, 2020). The executive order also sets a Liquid Fuel Tax (ICL) and the Carbon Tax until October, with values between 14.522 and 15.277 \$/liter for the former and between 0.936 and 1.074 \$/liter for the latter, depending on the product.

In addition, the executive order sets price ceilings for the sale of bottled liquefied petroleum gas (LPG) in the context of the *Programa Hogar* and updates the fines for companies that fail to meet the commitments of their annual investment programs. Finally, extractive companies will not have access to the foreign exchange market, which means that all transactions in dollars will be made in pesos at the official exchange rate. Even though this measure tries to support a sector that is considered to be essential to the national economy, it does so by supporting an extraction model that is part of the problem and not the solution.

On the other hand, although it has not been released yet, Plan Gas IV, a new stimulus program for gas extraction that is expected to be presented in August 2020, is in the works. The program has the intention of avoiding the import of liquefied natural gas (LNG) in the future and the resulting leak of dollars, and tries to promote investments in gas extraction. Initially, the reference price would be US\$ 3.50/MMBTU, a value near the profitability limit according to companies (Terzaghi, 2020) and much lower than the US\$ 6.50/MMBTU paid in 2020 by **Resolution N° 46-E/2017**¹. The objective is that, in exchange for that price, companies meet certain extraction volumes and, if they exceed them, they will have allocation priority. Delivery commitments will be limited to distributing companies and the Wholesale Electricity Market Management Company (CAMMESA). A way of transferring costs to prices is being analyzed; if there are differences, the government would pay them through subsidies. It is also possible that export volumes are authorized (Gandini, 2020a).

While it is true that the COVID-19 crisis has generated great distortions both in the domestic and foreign hydrocarbon markets, the minister of Productive Development has continued to support the potential of Vaca Muerta and the hydrocarbon sector for the national economy.

Amid a health, social and economic crisis mostly consequence of the pandemic, accompanied by the fall of hydrocarbon prices, it is necessary to reevaluate political and social consensus regarding

1. Resolution N° 46-E/2017 creates the "Stimulus program for investments in natural gas coming from unconventional gas reservoir production developments".

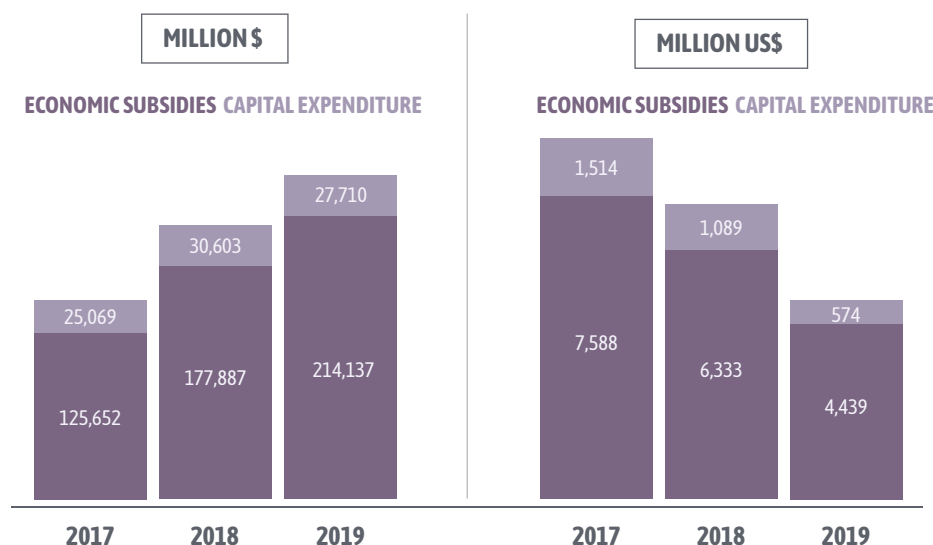
Vaca Muerta and past and future investments, their damage to the environment and society (indigenous and provincial communities and the State as a whole), in a context that should deepen the debate toward a fair, accessible and equitable energetic transition (Acacio and Wyczykier, 2020).

EVOLUTION OF SUBSIDIES IN 2019

As it was mentioned in the document published in 2018, over the past few years the Argentine peso has been devaluated more than 100% with regards to the American dollar (currency used to present data in this document). This may result in lower amounts when expressed in dollars. However, the efforts made by the government to meet commitments made in dollars but paid in pesos have meant an increase when trying to come up with a measurement in national currency².

Accordingly, the data analyzed for 2019 shows that economic subsidies and capital expenditure in energy (Ministry of Finance, 2019), when compared to the total expenses of 2018, **were 16% higher when analyzed in pesos, while there is a 26% reduction if the analysis is in dollars**, due to the effect of the devaluation of the national currency, as seen in Graph 1. It is important to highlight that the percentage jump in the year-over-year analysis for 2017-2018 had a 38% increase in pesos and a 18% fall in dollars. **In 2019, the total economic subsidies to energy equated to the outlays for the Universal Child Allowance (AUH) and the household allowances for working and non-working population.**

Graph 1. Evolution of subsidies and capital expenditure in \$ and US\$



Source: Compilation based on data from the Ministry of Finance (2019).

It is important to highlight that the biggest increases appear in economic subsidies and not in capital expenditure. Therefore, it seems it is preferred to transfer directly to companies to cover short-term expenses instead of carrying out infrastructure works.

2. For conversion of amounts in Argentine pesos from the Central Bank of the Argentine Republic was used, presented as Reference Exchange Rate, Communication "A" 3500 (Wholesale), available at <http://www.bcra.gov.ar/Pdfs/PublicacionesEstadisticas/com3500.xls>. The values are \$65 in 2020 (average to 06/12/2020); \$48.24 in 2019; \$28.10 in 2018; \$16.60 in 2017 and \$14.80 in 2016 (the annual average takes into account the last four years).

Nevertheless, economic subsidies and capital expenditure included in the **Monthly Report on the Sector's Income and Expenses** from the Ministry of Economy for the energy sector do not totally belong to energy generated through fossil fuels, because it also takes into account other transfers, such as those linked to the generation of energy through hydroelectric dams or nuclear plants. Because of this, economic subsidies to energy, closely related to generation through fossil fuels, will be analyzed in detail (Table 1).

Fossil fuels have the greatest share among economic subsidies to energy, representing almost all of them in 2019, 97% in 2018, 95% in 2017 and 99% in 2016. **In 2019, the total amount of fossil fuel subsidies represented 5% of the budget**, a fall of one and a half percentage point regarding the previous year.

Table 1. Detailed account of economic subsidies to energy for fossil fuels

BENEFICIARIES	MILLION \$				MILLION US\$			
	2016	2017	2018	2019	2016	2017	2018	2019
Wholesale Electricity Market Management Company (CMMESA)	144,846	74,280	102,514	138,664	9,807	4,486	3,649	2,874
Integración Energética Argentina SA (IEASA)	13,496	12,093	42,730	43,160	914	730	1,521	895
Yacimientos Carboníferos Río Turbio (YCRT)	3,490	3,877	2,665	2,370	236	234	95	49
Liquefied Petroleum Gas (LPG) Trust Fund - Social Bottled Gas	4,811	3,469	7,898	6,339	326	209	281	131
Plan Gas and other programs	40,673	25,842	16,810	29,832	2,754	1,561	598	618
Compensations for gas distributing companies	-	-	-	5675	-	-	-	118
Total	207,316	119,561	172,617	226,040	14,036	7,220	6,145	4,686

Source: Compilation based on data from **Presupuesto Abierto**.

Specifically, CAMMESA uses the subsidy funds to tackle price disparities between seasonal prices paid due to demand by distributing companies and the real costs of energy generation, an amount that is transferred to the Wholesale Electricity Market (MEM) through the Stabilization Fund. For instance, the government buys gas, through CAMMESA, for thermal power stations. However, it is worth mentioning that part of the funds received by CAMMESA are used for the generation of hydroelectrical, thermal, nuclear and renewable energy. In this document in particular thermal energy is especially noteworthy because it uses fossil fuels as its primary source. The percentage of electric energy generated through thermal sources was 65% both in 2016 and 2017, 64% in 2018 and 62% in 2019 (CAMMESA, 2020).

Meanwhile, IEASA (formerly ENARSA) receives funds from the government to cover, as regards fuels, the difference between the import price and the domestic market selling price.

YCRT, the mineral coal exploration and exploitation state-owned company from Río Turbio, Santa Cruz, receives funds from the government to cover operational costs.

When it comes to subsidies to consumption, it is possible to find transfers from the National Treasury to trust funds, such as the fund for residential consumption subsidies (**Act 26,020**) that corresponds to the *Programa Hogar*, which aims at guaranteeing low-income users access to bottled LPG.

Plan Gas and other programs include expenses from several programs, including some that are not active but for which the government is still paying associated debts. The programs are:

- *Plan Gas I* - **Resolution 01/2013**. This program includes economic compensations paid by the government with funds from the National Treasury to companies registered in the National Hydrocarbon Investment Registry that make investment commitments and increase their total injection of natural gas above certain levels. In addition, it provides a differential price of 7.50 US\$/MMBTU on top of the US\$ 2.49 paid for the base production to companies that have increased their fluid production since 2013.
- *Plan Gas II* - **Resolution 60/2013**. It complements *Plan Gas I* to stimulate production in companies that, due to their production levels and/or the geological characteristics of their reservoirs, were not able to participate in the previous program.
- *Plan Gas III* - **Resolution 74/2016**. This program aims at tight and shale gas producers in the Neuquén basin that, once *Plan Gas I* and *II* expired at the end of 2017, tried to continue accessing subsidized prices.
- Unconventional Gas Program - **Resolution 46-E/2017**. It expects that the government set a preferential price of 7.50 US\$/MMBTU in 2018 that will decrease (50 dollar cents lower every year) until it reaches 6 US\$/MMBTU in 2021 specifically for new investments in Vaca Muerta.
- Natural Gas and Undiluted LPG Network Producers - **Resolution 148/19**. This program set a gas price discount at the point of entry into the transportation system of 27% and 12% respectively.
- Guaranteeing Undiluted LPG Supply Conditions for Distribution Networks - **Executive Order 934/03**. Producing companies commit to supply undiluted LPG to network distributing and sub-distributing companies, with a price fixed in pesos based on a polynomial formula.

As regards **compensations for gas distributing companies**, there are mainly two budget items:

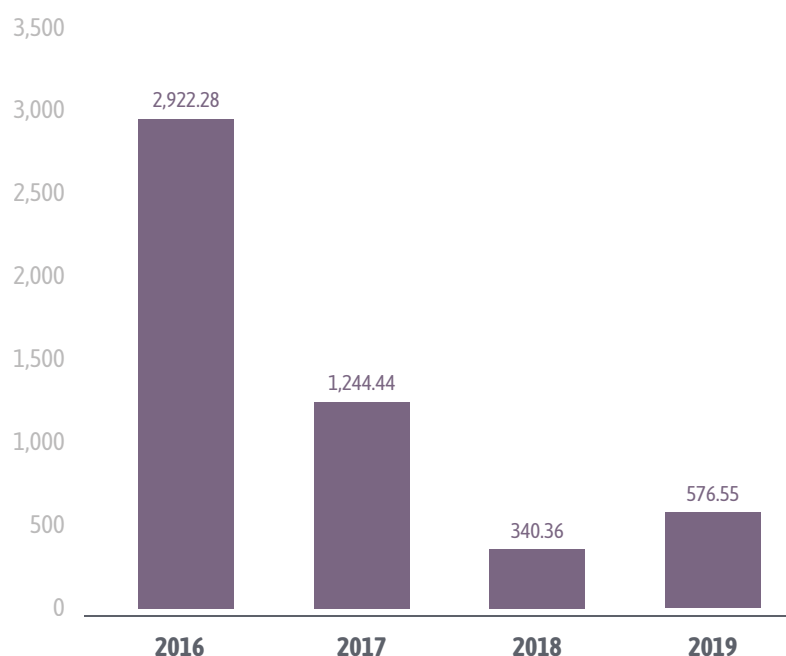
- Financial Support to Gas Distributing Companies - **Resolution 508/2017**. This is the amount paid by the government to compensate turnover discounts and differences for non-compensated natural gas.
- Support to Distributing Companies for Accumulated Daily Differences - **Executive Order 1053/18**. Monthly payment of the accumulated daily differences between the value of gas bought by the natural gas network distributing companies and the value of natural gas included in current pricing tables due to variations in the exchange rate and corresponding to delivered natural gas volumes.

Plan Gas: beneficiaries³

As it was previously mentioned, *Plan Gas* covers the programs that distribute direct subsidies paid by the national government to gas extraction and whose beneficiaries are mostly private companies. In this section, these expenses will be analyzed in detail.

The year-over-year analysis of the amounts paid is carried out in dollars to avoid the effect of inflation. The decreasing trend observed between 2016 and 2018 changes in 2019 (Graph 2). **The year-over-year fall was 57% in 2016/2017 and 73% in 2017/2018. Then, a 69% increase can be observed in 2018/2019⁴.**

Graph 2. Subsidies to extractive companies (in million US\$)



Source: Compilation.

Transfers to hydrocarbon companies in 2019 **amounted \$27.812 billion or US\$ 576 million, which represents 0.2% of the GDP, 0.7% of the 2019 budget, 0.22% of public debt or 15 million universal child allowances⁵.**

3. It is worth noting that the difference between the data presented in this section and data in Table 1 is due to changes in how information is presented. Data in Table 1 are accrued resources, which means that beneficiaries will have the right to receive money and, at the same time, that the National Administration will have to pay. In addition, data presented here and in the following section are amounts paid, which means that these funds have already been received or are available for the National Treasury (the collection office authorized to receive them) to use.

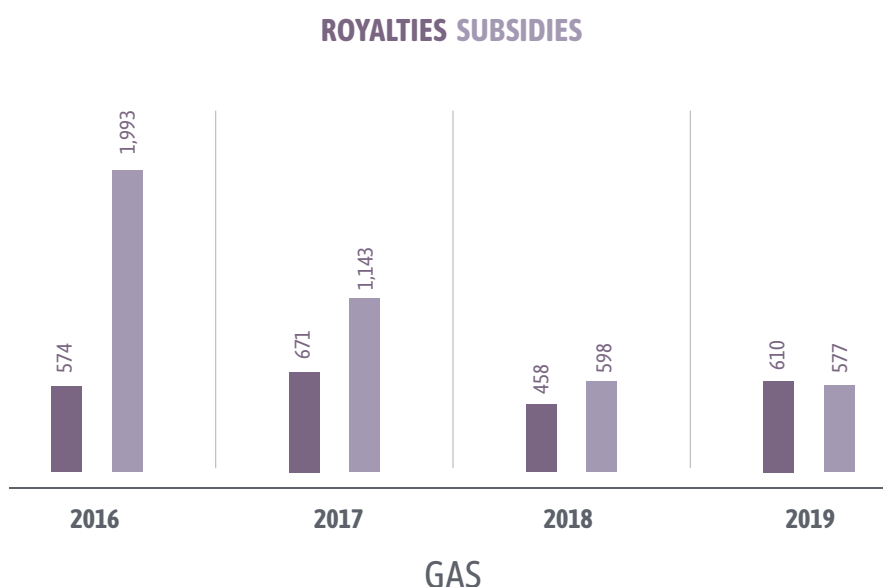
4. The detail per company and year is available in Annex I.

5. Data calculated based on Chequeado (2020).

As of now, the government has allocated over US\$ 10.5 billion (\$700 billion) in aid to the health emergency caused by COVID-19 (Congressional Budget Office [OPC], 2020). The package of support measures during the pandemic includes: tax measures, benefits for companies and self-employed workers, a rent freeze and other. In most cases, aid is aimed at social and economic assistance of households through the IFE and the Work and Production Aid (ATP). It is estimated that to June 23, the equivalent to 2.7% of the GDP had been spent and the equivalent of 0.3% of the GDP would not be collected (OPC, *op. cit.*). The amount spent in 2019 **in transfers represented, when this document was written, 4% of the expenses allocated to fight the coronavirus pandemic.**

Regarding the comparison between royalties received by the government and subsidies paid for extracted gas, 2019 is the first year in which the State's revenue for gas extraction is higher than the subsidies paid (Graph 3). Even though the government paid US\$ 3.5 in 2016, US\$ 1.7 in 2017 and US\$ 1.3 in 2018 for every US\$ 1 received from royalties, this trend was reverted in 2019, since companies received US\$ 0.94 for every US\$ 1 the State received from royalties.

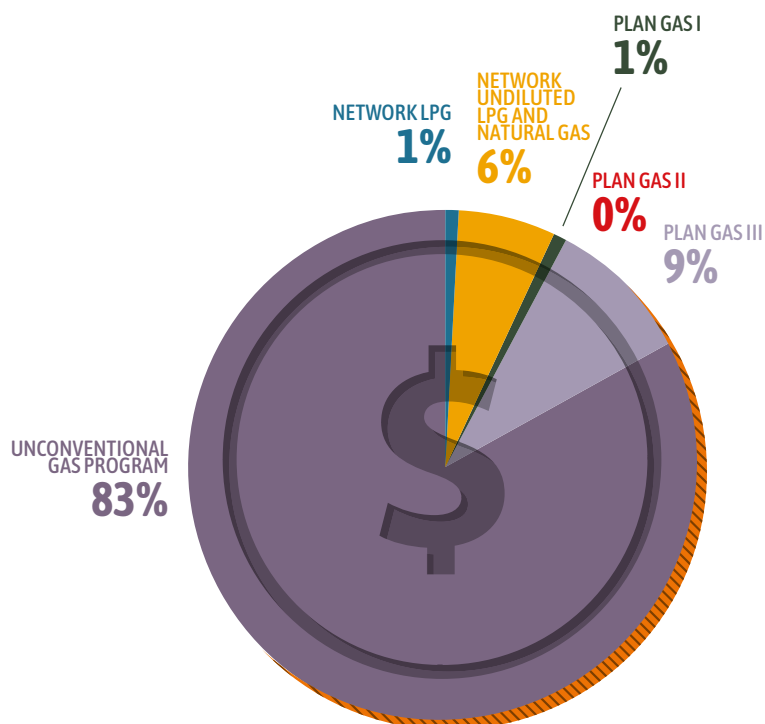
Graph 3. Royalties received and gas subsidies paid by the government between 2016-2019 (data in US\$ million)



Source: Compilation.

These expenses mostly covered the payment of 83% of the obligations established in the context of the Unconventional Gas Program, while the gas-related programs from previous years (*Plan Gas I, II and III*) represented 10% of the transfers. LPG represented 7 % of the funds (Graph 4).

Graph 4. Payments to companies in the context of the *Plan Gas* in 2019



Source: Compilation.

As regards a detailed account of companies (Table 2), the three beneficiaries that received more subsidies in 2019 were Tecpetrol (47%), Compañía General de Combustibles (16%) and YPF (12%). The remaining 22 companies completed the missing 25%. Moreover, **according to the data in their financial statements⁶, in 2019 subsidies represented 29% of Tecpetrol’s total sales revenue, 25% of Compañía General de Combustibles’ and 2% of YPF’s⁷.**

6. Links available in bibliography.

7. If only gas sales were considered, percentages would rise to 35% for Tecpetrol and 53% for Compañía General de Combustibles.

Table 2. Subsidies received by companies in 2019

BENEFICIARIES	TOTAL (\$)	TOTAL (US\$)
Tecpetrol SA	12,976,061,406	268,989,664
Cía. General de Combustibles SA	4,570,862,772	94,752,545
YPF SA	3,240,458,729	67,173,688
Total Austral SA, sucursal Arg.	1,914,485,106	39,686,673
PBB Polisor SRL	1,431,138,456	29,667,049
Petrobras Operaciones SA	1,001,040,855	20,751,262
Wintershall SA	802,745,561	16,640,663
Pan American Energy SL, Argentina branch	787,323,813	16,320,975
Capex S.A.	542,432,388	11,244,452
Cía. Mega SA	174,530,411	3,617,960
Transportadora de Gas del Sur SA	71,659,388	1,485,477
Pan American Sur SA	63,837,711	1,323,336
Pluspetrol SA	54,965,071	1,139,409
Shell Arg. SA	52,283,983	1,083,830
Vista Oil & Gas Arg. SA	45,922,833	951,966
Rafael G Albanesi SA	36,810,808	763,076
Pampa Energía SA	17,366,393	360,000
Cía. Inversora de Energía SRL	12,823,357	265,824
Enap Sipetrol Arg. SA	6,603,516	136,889
Mobil Arg. SA	3,083,342	63,917
Petrolera El Trébol SA	2,867,054	59,433
Exxon Mobil Exploration Arg. SRL	1,423,313	29,505
Cía. De Hidrocarburos No Convencional SRL	1,062,215	22,019
Roch SA	1,010,624	20,950
Río Cullen - Las Violetas SA - San Enrique Petrolera SA - DPG SA - Cía. Papelera Sarandí SA - Dispet SA - Roch SA	37,563	779
Total subsidies to companies in 2019	27,812,836,668	576,551,341

Source: Compilation based on data from the Secretariat of Energy.

It is worth remembering that Tecpetrol filed a suit against the State for an incorrect account of subsidies in 2018. In the lawsuit, Tecpetrol asks that the State pay \$2,553,326,826 (US\$ 40 million) for a new account of payments, plus interests and taxes⁸.

8. The conflict originated in the calculation of amounts, because the State based it on the production committed in the subsidy programs, while the company asks for the account to be based on the total unconventional gas volumes delivered by the Fortín de Piedra concession, which entered the program in November 2017.

Additionally, it is also important to highlight that YPF shares gas extraction in Vaca Muerta with Chevron, Petrobras, Shell, Equinor and Schlumberger. This means that part of the subsidies that YPF receives are used in the extraction carried out by these associated companies.

With the subsidies the government allocates to Vaca Muerta to increase gas extraction, GHG emissions are increased too. **It is estimated that subsidies in 2019 increased emissions by 26,594,694 tCO₂e** (FARN's calculations, with the support of the National University of the Center of the Buenos Aires Province). **This amount represents 7% of the country's total GHG emissions**, according to available data in the 2014 inventory (MAyDS, 2017), which is far from being a solution for climate impact in our territory.

Some provinces also receive part of the compensations that stem from Resolution N° 46-E/2017 that establishes the payment of unconventional gas subsidies. Companies receive 88% of the subsidies, while the province receives 12%, which corresponds to each concession included in the program. This payment is made in royalties. 75% of the funds went to Neuquén, while 6% went to Río Negro and the remaining 19%, to Santa Cruz (Table 3).

Table 3. Funds received by provinces benefited by the Unconventional Gas Program

PROVINCE	TOTAL (\$)	TOTAL (US\$)
Neuquén	2,401,278,468	49,777,746
Río Negro	190,176,737	3,942,304
Santa Cruz	617,253,405	12,795,469
Total	3,208,708,610	66,515,518

Source: Compilation.

In Neuquén's case, revenue from this program would cover the 2019 budget of three entities⁹ such as the Ministry of Citizenship, the Ministry of Production and Industry and the Provincial Legislature. In Río Negro, the revenue represents the 2019 budget¹⁰ of the Ministry of Education and Human Rights and the Ombudsperson. In Santa Cruz, the amount covers the budget of the Lower House¹¹.

Distributing companies

Gas distributing companies benefit from state subsidies. In this section, the amounts of the last few years will be analyzed. The year-over-year analysis of the amounts spent will also be in dollars in order to avoid the effect of inflation. The growing trend observed between 2017 and 2018 changes in 2019 (Graph 5). **The year-over-year increase was 42% between 2016/2017, while the year-over-year fall was 56% last year¹².**

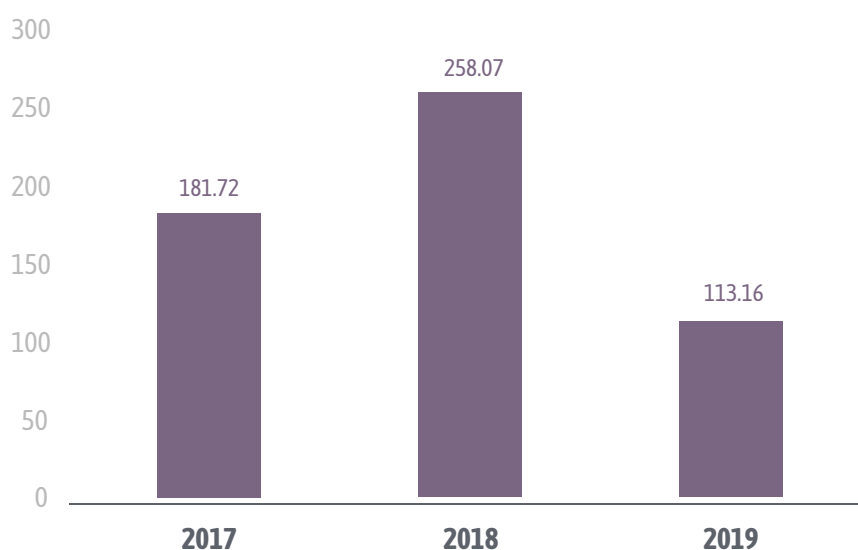
9. The corresponding budgets are: Ministry of Citizenship, \$421,272,371; Ministry of Production and Industry, \$528,255,830 and the Provincial Legislature, \$1,436,605,815.

10. The 2019 provincial budget is \$140,371,929 for the Ministry of Education and Human Rights and \$47,326,721 for the Ombudsperson.

11. Its budget was \$613,796,475.

12. The detailed account per company and year is available in Annex II.

Graph 5. Subsidies to distributing companies (in million US\$)



Source: Compilation.

\$5.459 billion (US\$ 113 million) were divided between the ten distributing companies that receive subsidies, **an amount that represents 0.13% of the national budget, more than 586,000 retirement pensions or the construction of 280 preschools.** The first four account for 73% of the funds: Camuzzi de Gas Pampeana, 25%; Naturgy, 22%; Metrogas, 16% and finally, Camuzzi Gas del Sur, 10% (Table 4).

Table 4. Subsidies received by distributing companies in 2019

COMPANIES	TOTAL (\$)	TOTAL (US\$)
Camuzzi de Gas Pampeana SA	1,357,226,557	28,134,879
Naturgy Ban SA	1,184,627,286	24,556,950
Metrogas SA	900,360,024	18,664,180
Camuzzi Gas del Sur SA	530,373,344	10,994,472
Litoral Gas SA	382,884,793	7,937,081
Distribuidora de Gas Cuyana SA	358,987,236	7,441,692
Distribuidora de Gas del Centro SA	347,315,320	7,199,737
Gasnor SA	323,635,261	6,708,857
Gas NEA SA	52,008,926	1,078,129
Redengas SA	21,513,062	445,959
Total	5,458,931,809	113,161,936

Source: Compilation.

Investments and subsidies

In 2019, hydrocarbon companies submitted to the **Secretariat of Energy** affidavits with investment plans for a total US\$ 8.41287 billion, of which 6.5% (US\$ 579.49 million) would be destined to explore new fossil fuel wells and the rest to existing wells (Table 5). Compared to 2018, declared investments increased by 25%, but there are no great differences when it comes to the intended destination, since 6% of the declared investments that year went to exploration and the rest to exploitation.

The company that reported more investments was YPF, with 43%, followed by PAE with 12%, and then Austral, Pluspetrol, Exxonmobil and Tecpetrol, with around 6% each.

Table 5. Reported investment plans in 2019, according to the type of activity (data in million US\$)

COMPANY	EXPLORATION	COMPLEMENTARY EXPLORATION	EXPLOITATION	TOTAL
YPF SA¹³	18.57	148.54	3,461.17	3,628.28
Pan American Energy SL	33.40	0.00	1,011.51	1,044.91
Total Austral SA	0.66	0.00	553.80	554.46
Pluspetrol SA	3.56	32.00	479.39	514.95
Exxonmobil Exploration Argentina SRL	0.00	0.00	496.30	496.30
Tecpetrol SA¹⁴	30.25	0.30	430.86	461.41
Vista Oil & Gas Argentina SA ¹⁵	1.70	3.83	279.21	284.75
O&G Developments LTD SA	0.00	0.00	277.90	277.90
Compañía General de Combustibles SA	65.72	0.00	172.70	238.42
Capex SA	8.00	4.75	116.35	129.10
Pampa Energía SA	0.23	11.50	96.49	108.23
Chevron Argentina SRL	0.00	7.80	17.38	95.18
Compañías Asociadas Petroleras SA	0.00	0.00	82.38	82.38
Sinopec Argentina Exploration and Production, inc.	0.00	0.00	76.41	76.41
Petroquímica Comodoro Rivadavia SA	0.00	0.00	68.24	68.24
Petrolera El Trébol SA	22.23	0.00	37.02	59.25
Enap Sipetrol Argentina SA	20.98	0.00	24.84	45.82
Wintershall Energía SA	2.21	0.00	31.05	33.26
President Petroleum SA	3.00	0.00	24.67	27.67

13. As for the joint venture YPF, it declared in its annual report to investors a total of US\$ 3.5 billion (YPF, 2020b), an amount barely under what was indicated in the affidavit submitted to the Secretariat of Energy.

14. Tecpetrol published in its 9-month Results presentation, on September 30, 2019, that “net investments in property, plants and equipment of acquisitions not paid at the end of the period reached US\$ 408 million in the first nine months of 2019, corresponding mostly to the development of the Fortín de Piedra area” (Tecpetrol, 2019).

15. Company Vista Oil & Gas reports total investments for US\$ 224 million in its 2019 annual results, including operations both in Mexico and Argentina. Out of the 13 concessions the company has, 11 are in Argentina, 3 of which have unconventional extraction as an objective. One of the concessions was not operational in 2019. Out of the total investments made by Vista Oil & Gas, 52% went to unconventional oil projects (Vista Oil & Gas, 2020).

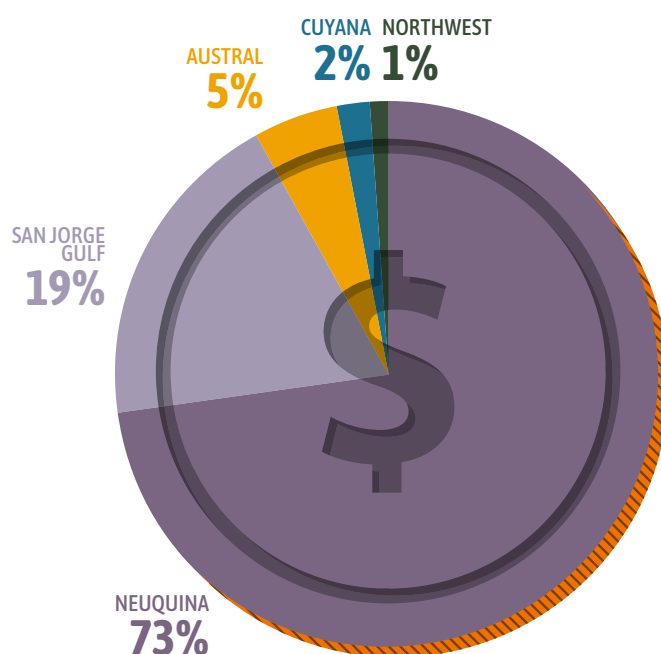
Kilwer SA	24.51	0.00	0.00	24.51
Roch SA	0.00	9.15	12.62	21.77
Grecoil y cia. SRL	18.54	0.00	1.27	19.81
Geopark Argentina LTA (Argentina branch)	0.46	0.00	15.60	16.06
Selva Maria Oil SA	11.12	0.00	4.05	15.17
Madalena Energy Argentina SRL	8.07	0.00	6.99	15.06
Petróleos Sudamericanos SA	1.20	0.00	13.10	14.30
Medanito SA	0.00	0.00	13.11	13.11
Apco Oil and Gas International INC (Argentina branch)	0.00	0.00	8.37	8.37
High luck group LTD (Argentina branch)	7.00	0.00	0.00	7.00
Other	6.70	3.50	20.57	30.77
Total	288.12	291.37	7,833.88	8,412.87

Source: Compilation based on data from the Secretariat of Energy.

According to the descriptions of the action plans, 34% of the investments would go to the drilling of oil wells (82% more than in 2018) and 17% would go to the drilling of gas wells (24% less than the previous year). Less than 1% of the investments are aimed at environmental actions (33% less than in 2018).

As regards the basins (Graph 6), the Neuquén basin, where Vaca Muerta is located, would receive the highest share, accounting for 73% of the investments, followed by the San Jorge Gulf, with 19%. Compared to 2018, total investments increased by 25%. This increase is mostly represented by the growth of the Neuquén basin, with 40% more investments than the year before. It is followed by the Northwest basin and the San Jorge Gulf basin, with 13% and 12% respectively. Investments in the austral basin decreased by 38% and in the Cuyo basin, by 5%.

Graph 6. Investments per basin in 2019



Source: Compilation based on data from the Secretariat of Energy.

When comparing with subsidies, the companies that received more subsidies are among the companies that invested the most (the first four companies are among the first ten in terms of subsidy amounts received from the State). To provide an example, **subsidies received by Tecpetrol covered 58% of their investments**, while in the case of **Compañía General de Combustibles the amount is 40%**. In YPF's case, on the contrary, subsidies received in 2019 only represent 2% of their investments. **Wintershall's case is particularly interesting because, in 2019, subsidies represented 50% of its investments.**

Subsidies and exports

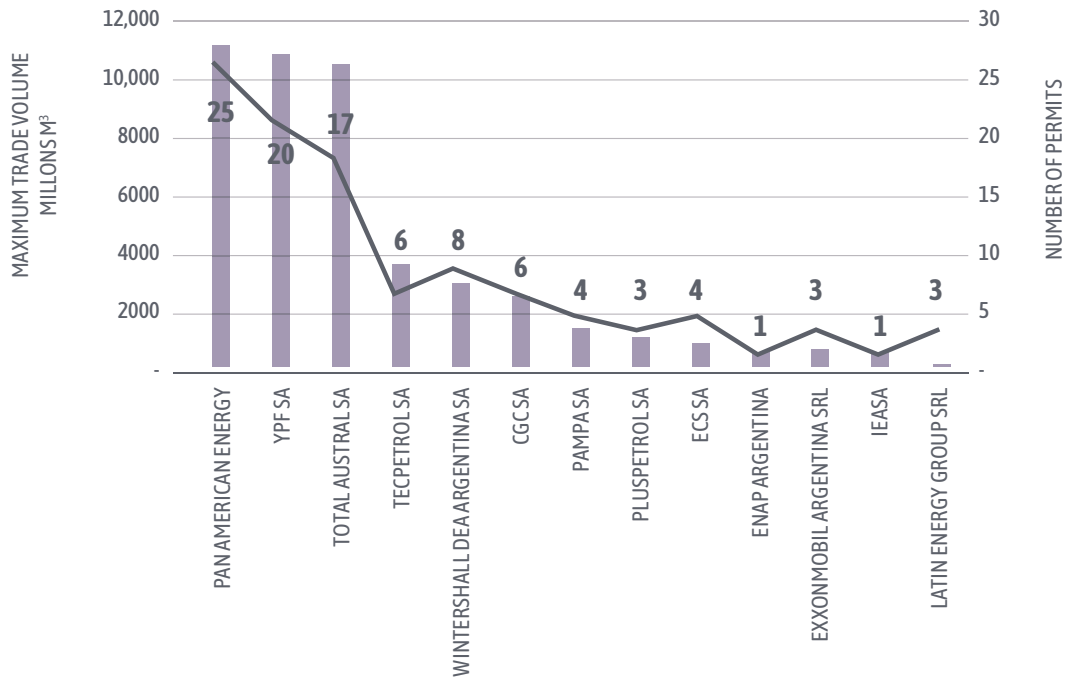
It is expected that Vaca Muerta not only provides energy to achieve national self-sufficiency, but that it also promotes a foreign currency inflow through its exports, whether this helps to improve the balance of trade or to raise the funds to pay the external debt.

From August 2018 to the end of December 2019 (latest data available), according to data from the **Secretariat of Energy**, 101 natural gas export permits were authorized. It is worth mentioning that there are no records of natural gas export permits in 2020. The last export registered in the official data is from December 4, 2019.

As it can be seen in Graph 7, company Pan American Energy¹⁶ received the highest number of export permits with a total of 25, with a maximum trade volume above 10.7 billion m³, followed by YPF, with 20 permits for more than 10.4 billion m³. Total Austral follows both in quantity and volume. These three companies account for 71% of the total volume authorized to be exported, with 61% of the permits.

16. Pan American Energy LLC Argentina branch, Pan American Energy SL, Argentina branch and Pan American Sur SA.

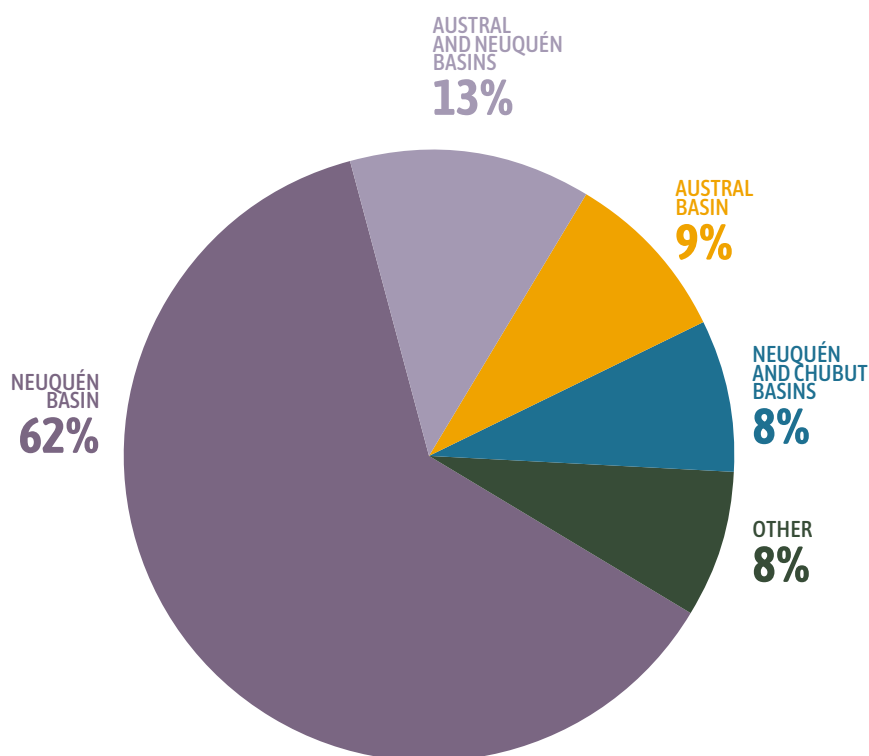
Graph 7. Natural gas volumes and export permits



Source: Compilation based on data from the Secretariat of Energy.

The Neuquén basin offers the highest authorized gas volumes, reaching 62%; followed by the Austral and Neuquén basins put together, which determines that most volumes come from unconventional reservoirs (Graph 8).

Graph 8. Authorization volumes by basin



Source: Compilation based on data from the Secretariat of Energy.

The export destination is, mostly, Chile, with 92% of the authorized volume, followed by Brazil and Uruguay, both with 4%. Chile was the country that paid the lowest price per MMBTU out of the three buyers, with prices between 2.33 and 6.52 US\$/MMBTU, while the highest prices went to the authorizations to Uruguay, with prices between 3.61 and 9.20 US\$/MMBTU. In Table 6, the minimum and maximum average prices paid by each destination country can be observed.

Table 6. Average export prices by destination country

EXPORT DESTINATION	MINIMUM AVERAGE PRICE (US\$/MMBTU)	MAXIMUM AVERAGE PRICE (US\$/MMBTU)
Chile	3.54	4.18
Brazil	4.00	4.29
Uruguay	4.20	6.00

Source: Compilation based on data from the Secretariat of Energy.

In Tables 7 and 8, the price averages by basin and type of field are detailed. As regards price averages paid by basin of origin, those coming from the Neuquén and Austral basins received the lowest prices.

Table 7. Average export prices according to the basin of origin

BASIN	MINIMUM AVERAGE PRICE (US\$/MMBTU)	MAXIMUM AVERAGE PRICE (US\$/MMBTU)
Neuquén basin	3.65	4.14
Austral basin	3.14	4.12
Austral and Neuquén basins	3.39	4.03
Neuquén and Chubut province basins	3.45	4.25
Austral sea basin	3.72	4.45
Chubut province	3.61	7.02
Northwest basin	4.05	5.80
San Jorge Gulf, Anticlinal Grande concessions	5.22	9.20
General average	3.59	4.27

Source: Compilation based on data from the Secretariat of Energy.

Table 8. Export prices according to the type of field

TYPE OF FIELD	MINIMUM PRICE (US\$/MMBTU)	MAXIMUM PRICE (US\$/MMBTU)
Conventional	3.51	4.89
Unconventional	3.67	4.13

Source: Compilation based on data from the Secretariat of Energy.

Most of the gas export contracts established lower prices for gas extraction than those paid by Resolution N° 46-E/2017, which establishes 7.50 US\$/MMBTU for 2018; 7.00 US\$/MMBTU for 2019 and 6.5 US\$/MMBTU for 2020.

Meanwhile, residential prices in 2019 were **3.97 US\$/MMBTU** (Bertero, 2019), price to April 2019, when the rates rose **10%, followed by 9% and 8%** in the following months (President's Office, 2019). In winter 2019, bills were decoupled, transferring 22% of their amounts to the summer months, when consumption is lower.

This means there were 26 export permits for amounts lower to those paid by Argentine households (between 2.6 and 3.94 US\$/MMBTU) before the price increase, and 50 permits after the increase (prices between 4.01 and 5.13 US\$/MMBTU).

Moreover, YPF, in its annual presentation to investors, stated that the price of gas was 3.7 US\$/MMBTU (18% lower than in 2018). Additionally, Vista Oil & Gas, in its 2019 income statement presentation to investors, reported that the annual average price was 3.3 US\$/MMBTU (27% lower than in 2018).

Furthermore, the average price of the last tender for gas to generate electricity, dated May 27, 2020, had a general average of 2.55 US\$/MMBTU, with a 2.66 US\$/MMBTU price for gas coming from Neuquén. These prices are lower than the export prices registered to 2019 and under the 3.5 US\$/MMBTU price the government intends to set as a reference price in the upcoming Plan Gas IV (Gandini, 2020a). Nevertheless, according to oil companies, the tender values are much lower than the production costs (Diamante, 2020).

These values are under the minimum prices set by Resolution N° 46-E/2017. This means that the State is paying the differences between the prices mentioned above and the 7 US\$/MMBTU (for 2019) that the resolution promises.

As regards LNG, in 2019 the first export was carried out from the port of Bahía Blanca, where Argentina’s first regassification vessel can be found. YPF was the company that exported 25,000 m³ of LNG to Brazil (YPF, 2019) in May, as a test trial. In November, it exported 50,000 m³ to Brazil too (El Economista, 2019) and, in December, 130,000 m³ more to Barcelona, Spain¹⁷. Most of the traded gas came from Vaca Muerta. This volume represents 123,000,000 m³ of natural gas, the equivalent to 8% of the natural gas imported from Bolivia in 2019.

Comparison between costs of imports and subsidies

When it comes to natural gas imported from Bolivia, the price in the first two quarters of 2019 can be found in Table 9. This data comes from the **4° addendum of the natural gas sales contract to Bolivia** between IEASA-YPFB¹⁸.

Tabla 9. Prices of natural gas imported from Bolivia

PRICES (US\$/MMBTU)			
2018	Q1	5.57	
	Q2	6.08	
	Q3	6.62	
	Q4	7.17	
2019	Q1	7.14	
	Q2	Apr	6.07
		May	6.72
		Jun	6.86
	Q3	n/a	
	Q4	n/a	

Source: Compilation based on data from IEASA.

17. There was no official data available on the price of these exports.

18. The prices of the first two quarters were used because it was not possible to find data on the annual average price. These are the updated prices after the last 2019 addendum. Available at: <http://www.ieasa.com.ar/wp-content/uploads/2019/02/USO-PUBLICO-sobre-la-4ta-adenda-al-contrato-compra-venta-IEASA-YPFB-feb-2019.pdf> (last visit: 05/28/2020).

Q1 2019 import prices were (very much) above 2019 average export prices. 80% of all export prices are lower than the prices paid for gas imports from Bolivia. In addition, while the subsidy from the Stimulus Program to Development Investments in Natural Gas Production paid 7US\$/MMBTU in 2019, in Q1 that year higher prices were paid to import gas from Bolivia. The rest of the year (according to available data), values were lower.

Furthermore, the average price paid for LNG by the port of Escobar in 2019 was between 4.25 and 6.34 US\$/MMBTU, and the total tendered volume was 1.479 billion m³¹⁹ (Table 10). These prices are also higher than the prices of more than 40% of the export authorizations, and lower than the values paid by the government through the Stimulus Program to Development Investments in Natural Gas Production. In contrast, in the first tenders of 2020 it was possible to find average prices of 3 US\$/MMBTU, among the lowest prices paid. This reduction is a result of the oversupply caused by a fall in consumption due to COVID-19 (Spaltro, 2020).

Table 10. Average prices of Escobar LNG

TENDER	TENDER DATE	AVERAGE PRICE (US\$/MMBTU)	VOLUME (1000 M ³)	MMBTU	TOTAL (US\$)
N°1	2/15/2019	6.34	512,118	18,900,000	119,807,100
N°2	3/12/2019	6.23	739,726	27,300,000	170,179,800
N°3	6/11/2019	4.81	170,706	6,300,000	30,275,700
N°4	9/3/2019	4.25	56,902	2,100,000	8,925,000

Source: IEASA.

SUBSIDIES IN 2020

As it was previously mentioned, the Congress did not debate the General Budget Act for the National Public Administration for Year 2020. Due to the change of government, it was expected that a revision of the bill drafted by the outgoing administration would be carried out to submit to Congress once the debt renegotiation process finished. But so far (June 2020), this has not happened because of the health crisis and the social, preventive and mandatory lockdown measures established in the context of the coronavirus pandemic.

The Congress did pass **Act 27,541 on Solidarity and Productive Recovery** at the end of 2019. This act declares a state of emergency in the economy, tax collection system, administration, energy network, health system, society, finances, pensions and prices and allows the Executive Power to make decisions concerning public debt, prices of the energy network, productive recovery, fiscal sustainability, pension assets and salaries, among other.

Nevertheless, the Ministry of Economy is working on the 2021 budget. Therefore, this document will use the year 2019 Budget (which is the current one, despite some changes) to analyze data from 2020.

19. <http://www.ieasa.com.ar/index.php/detalle-de-licitaciones-gnl-escobar-2019/>

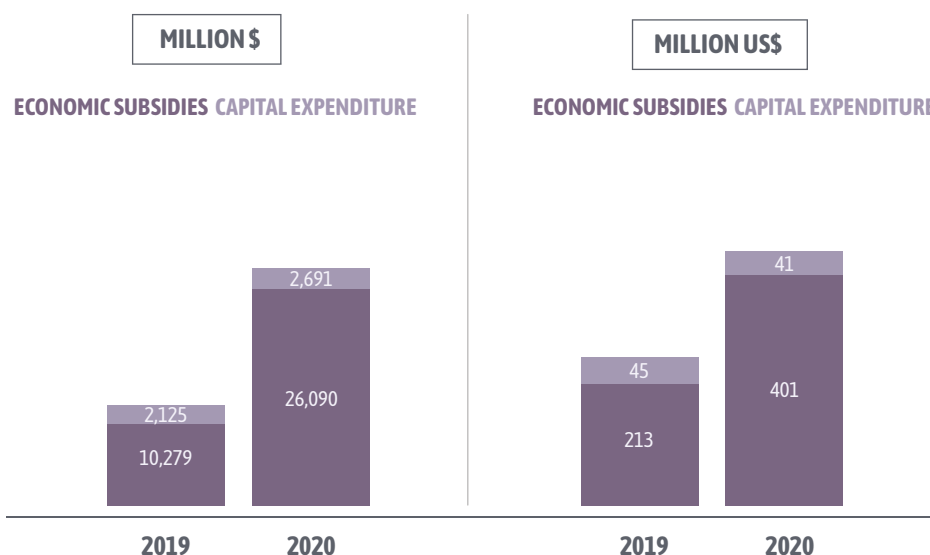
In his inaugural speech, in December 2019, incoming president Alberto Fernández officially announced that the outgoing administration’s Budget for 2020 would not be debated in Congress²⁰. As a result, the validity of the existing budget for 2019 was extended and the new budget would depend on the outcome of the debt renegotiation. Therefore, through the **Administrative Decision 1/2020**²¹, the General Budget for the National Public Administration for Year 2019 was extended to cover year 2020.

As regards external debt, in June 2018, a Stand-by Agreement was signed with the International Monetary Fund (IMF) for US\$ 57 billion, making the total Argentine external debt reach over **US\$ 320 billion**, according to data from the Ministry of Economy. In June 2020, the current minister of economy, Martín Guzmán, was negotiating with creditors to avoid a default, although some creditors consider that Argentina is already in default due to the delay in a payment to the Paris Club (Burgueño, 2020). The minister stated that he wants to change the interest rate and to obtain a very low capital reduction regarding the negotiation with the bondholders. Vaca Muerta is one of the ways intended to generate foreign currency inflows to face the repayment of the debts.

Moreover, while the national debt puts pressure on Argentina’s politics and economy, private debt also puts pressure on the Central Bank. In 2019, YPF had more than 75% of its annual revenue in debt, while Tecpetrol’s debt exceeded its annual revenue (EJES, 2020). Both their debts mature in the next few years, for amounts close to US\$ 10 billion, which will have to come from Argentina’s Central Bank.

In Graph 9, expenditure to March 2020²² is compared with the previous period, extracted from the Monthly National Public Sector Revenue and Expenditure Report (Ministry of Economy, 2020a), and it can be seen that subsidy expenses for the energy sector show a growing trend both in their calculation in national currency and in dollars: the year-over-year variation between January and March 2019 and the same period in 2020 experienced a 132% increase in pesos, while the increase was 72% in dollars.

Graph 9. Evolution of subsidies and capital expenditure in \$ and US\$ (Q1 2019 and 2020)



Source: Compilation based on data from the Ministry of Economy (2020).

20. An analysis of the subsidies in the budget bill presented by the former government can be found in the following link: <https://farn.org.ar/archives/27160> (last visit: 06/29/2020).

21. <https://www.boletinoficial.gob.ar/detalleAviso/primera/224513/20200113>

22. The latest data available as of 06/25/2020 on the web dates back to March 2020, with no publication of the data for May and with the link broken to access April’s.

This data is in line with the government's announcements, through which it has authorized the payment of over \$18.79 billion (US\$ 289 million) to companies that benefit from the Unconventional Gas Program, payments that would become effective in July 2020 (Gandini, 2020b). The beneficiaries of these payments will be Tecpetrol, with \$13.3 billion (US\$ 205 million) and Compañía General de Combustibles, with \$3.25 billion (US\$ 50 million), apart from the provinces of Neuquén and Santa Cruz, which will receive royalties for \$1.8 billion (US\$ 28 million) and \$440 million (US\$ 7 million), respectively (Gandini, 2020b). **These amounts paid to companies represent more than 1,800,000 IFEs (10% of the total already allocated to June 23), or more than the total destined to pay a bonus to healthcare workers. The amounts also equate to the total amount spent to buy health, laboratory, pharmaceutical and medicinal equipment in the context of the coronavirus pandemic (OPC, op. cit.).**

It is estimated that paying these debts is linked to the need of gas in wintertime, since it will be necessary to import LNG if the supply does not come from internal extraction. In fact, this year 22 cargoes with a total cost of US\$ 270 million (with an average price of 3 US\$/MMBTU) have already been bought (Gandini, 2020b).

FINAL CONSIDERATIONS

Argentina should have a decarbonization strategy based on the promotion of an efficient use of energy and the production of electricity through renewable energy. In addition, it should take into account the socioeconomic and socio-environmental aspects more than the cost-benefit ratio (economic) when making decisions. It should also consider the potential negative impact on consumers, workers and companies resulting from reducing economic activities that would generate a downsizing of fossil fuel production (jobs and consumption), or the price increase that reducing subsidies would mean (Keesler and Blanco, 2020).

While some sectors still trumpet that Vaca Muerta is the energetic and economic solution for the country, facts show that nothing is completely stable and sustainable in the business of hydrocarbons and that the government's aid is essential to attract investments to continue extracting. In this sense, at the time this document was finished (June 2020), it is being questioned whether natural gas production from Vaca Muerta will be enough to supply the country with energy in wintertime.

This situation opens a debate on the risks of centering Argentina's development on a model based on fossil fuel extraction that strengthens the dependence on prices fixed in external markets and that, in the case of a collapse of international prices—like the one in April 2020—would lead to economic crises such as the one experienced on an international level.

This economic crisis will lead to attempts of leveraging the installed capacity and avoiding a greater impact on employment and consumption, with many countries choosing to promote investments by relaxing environmental regulations.

Climate commitments, both on a national and an international level, show the risk of future investments in infrastructure related to fossil fuels becoming stranded assets, which are those that do not pay off nor provide profit as a result of the changes associated to a transition toward an economy with low carbon emissions.

Therefore, it seems that governments' efforts will aim at maintaining and deepening the extractivist system, where hydrocarbons will be no exception, wasting the opportunity to start proposing and debating a clean, fair and inclusive energetic transition.

For this reason, holding on to the current model of fossil fuel consumption will be considered part of the solution. However, it should be taken into account that the social and environmental cost resulting from continuing a model of production, extraction and consumption that led to this unprecedented health crisis and that affected the economy greatly will be even higher.

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ANNEX I, COMPANIES THAT RECEIVED FOSSIL FUEL SUBSIDIES IN 2016-2019

EXTRACTIVE COMPANIES BENEFITED	MILLION US\$				MILLION \$			
	2016	2017	2018	2019	2016	2017	2018	2019
Quintana E&P Argentina SA	0.05	0.00	0.00	0.00	0.67	0.00	0.00	0.00
Administración del Interior SA	0.00	0.04	0.00	0.00	0.00	0.65	0.00	0.00
Alianza Petrolera Argentina SA	0.00	0.32	0.00	0.00	0.00	5.33	0.00	0.00
Apco Oil and Gas International INC - Argentina branch	7.77	15.38	0.00	0.00	114.82	254.70	0.00	0.00
Capex SA	15.95	0.53	9.55	11.24	235.55	8.82	268.20	542.43
Colhue Huapi SA	0.11	1.08	0.00	0.00	1.59	17.83	0.00	0.00
Compañía de Hidrocarburo No Convencional SRL	48.72	20.12	0.00	0.02	719.58	333.19	0.00	1.06
Compañía General de Combustibles SA	32.07	37.74	60.49	94.75	473.65	625.05	1,699.29	4,570.86
COMPAÑIA INVERSORA DE ENERGIA SRL	0.00	0.00	0.00	0.27	0.00	0.00	0.00	12.82
Compañía Mega Sociedad Anónima	21.49	13.08	9.20	3.62	317.45	216.57	258.50	174.53
Conipa SA	0.00	0.76	0.00	0.00	0.00	12.52	0.00	0.00
Compañías Asociadas Petroleras SA	4.79	0.00	0.00	0.00	70.82	0.00	0.00	0.00
Crown Point Energía SA	0.06	3.46	0.00	0.00	0.90	57.26	0.00	0.00
Enap Sipetrol Argentina SA	9.02	3.50	0.00	0.14	133.19	58.01	0.00	6.60
Exxonmobil Exploration	0.00	0.00	0.00	0.03	0.00	0.00	0.00	1.42
Argentina SRL	0.00	0.00	0.00	0.03	0.00	0.00	0.00	1.42
Ingeniería Alpa SA	0.87	0.00	0.00	0.00	12.91	0.00	0.00	0.00
Madalena Energy Argentina SRL	0.65	0.00	0.00	0.00	9.57	0.00	0.00	0.00
Medanito SA	1.34	0.00	0.00	0.00	19.80	0.00	0.00	0.00
Mobil Argentina SA	0.00	0.00	0.00	0.06	0.00	0.00	0.00	3.08
New American Oil SA	0.00	0.02	0.00	0.00	0.00	0.28	0.00	0.00
Pampa Energía SA	0.00	35.39	31.21	0.36	0.00	586.04	876.83	17.37
Pan American Energy LLC - Argentina branch	1,023.79	167.17	9.55	16.32	15,121.31	2,768.26	268.17	787.32
Pan American Sur SA	12.22	0.00	0.00	1.32	180.50	0.00	0.00	63.84
Pbbpolisur SRL	0.00	34.09	60.22	29.67	0.00	564.53	1,691.66	1,431.14
Petrobrás Argentina SA	44.28	0.00	17.78	20.75	653.99	0.00	499.45	1,001.04
Petrolera El Trébol SA	0.22	1.48	0.00	0.06	3.31	24.52	0.00	2.87
Petrolera Pampa SA	87.67	40.77	0.00	0.00	1,294.83	675.08	0.00	0.00
Petroquímica Comodoro Rivadavia SA	0.00	13.02	0.00	0.00	0.00	215.67	0.00	0.00

PlusPetrol SA	16.94	16.84	1.05	1.14	250.27	278.82	29.51	54.97
Rafael G. Albanesi SA	0.00	0.00	0.00	0.76	0.00	0.00	0.00	36.81
Río Cullen - Las Violetas SA - San Enrique Petrolera SA - DPG SA - Compañía Papelera Sarandí SA - Dispet SA - Roch SA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
Roch SA	0.00	0.00	0.00	0.02	0.00	0.00	0.00	1.01
President Petroleum SA	0.13	0.00	0.00	0.00	1.93	0.00	0.00	0.00
Refinería del Norte SA	0.00	50.58	0.00	0.00	0.00	837.54	0.00	0.00
San Jorge Petroleum SA	0.95	0.24	0.00	0.00	14.08	4.02	0.00	0.00
Shell Compañía argentina de Petróleo SA	0.00	1.00	0.00	1.08	0.00	16.49	0.00	52.28
Sinopec Argentina Exploration and Production INC	8.11	5.88	0.00	0.00	119.79	97.34	0.00	0.00
Tecpetrol SA	8.16	1.11	103.80	268.99	120.47	18.34	2,915.65	12,976.06
Total Austral SA – Argentina branch	158.89	136.75	14.23	39.69	2,346.81	2,264.58	399.64	1,914.49
Transportadora Gas del Sur SA	8.25	8.89	5.82	1.49	121.93	147.15	163.44	71.66
Vista Oil & Gas Argentina SA (*)	14.69	9.12	0.92	0.95	216.91	151.01	25.82	45.92
Wintershall Energía SA	106.64	89.02	7.45	16.64	1,575.06	1,474.24	209.35	802.75
YPF SA	1,261.84	517.02	9.09	67.17	18,637.31	8,561.93	255.24	3,240.46
YSUR Energía Argentina SRL	26.00	19.44	0.00	0.00	384.06	321.97	0.00	0.00
Desarrollos Petroleros y Ganaderos SA	0.00	0.21	0.00	0.00	0.00	3.47	0.00	0.00
Interenergy Argentina SA	0.01	0.00	0.00	0.00	0.17	0.00	0.00	0.00
Metro Holding SA	0.60	0.40	0.00	0.00	8.83	6.69	0.00	0.00
TOTAL	2,922.28	1,244.44	340.36	576.55	43,162.06	20,607.90	9,560.74	27,812.84

Source: Compilation.

ANNEX II, EVOLUTION OF SUBSIDIES TO DISTRIBUTING COMPANIES 2017-2019

DISTRIBUTING COMPANIES	MILLION US\$			MILLION \$		
	2017	2018	2019	2017	2018	2019
Camuzzi de Gas Pampeana SA	34.46	42.35	28.13	570.60	1,189.58	1,357.23
Camuzzi Gas del Sur SA	26.45	7.50	10.99	438.00	210.70	530.37
Distribuidora de Gas Cuyana SA	0.00	30.73	7.44	0.00	863.11	358.99
Distribuidora de Gas del Centro SA	0.00	19.13	7.20	0.00	537.50	347.32
Edesur SA	9.55	0.00	0.00	158.07	0.00	0.00
Metrogas SA	45.85	69.17	18.66	759.20	1,942.89	900.36
Distribuidora del Norte SA (EDENOR)	7.40	0.00	0.00	122.59	0.00	0.00
Gas NEA SA	3.11	1.02	1.08	51.52	28.64	52.01
Gasnor SA	8.33	10.12	6.71	138.00	284.16	323.64
Litoral Gas SA	10.68	16.49	7.94	176.90	463.27	382.88
Redengas SA	0.00	0.58	0.45	0.00	16.25	21.51
Naturgy Bay SA	35.89	60.98	24.56	594.40	1,713.04	1,184.63
TOTAL	181.72	258.07	113.16	3,009.28	7,249.14	5,458.93

Source: Compilation.