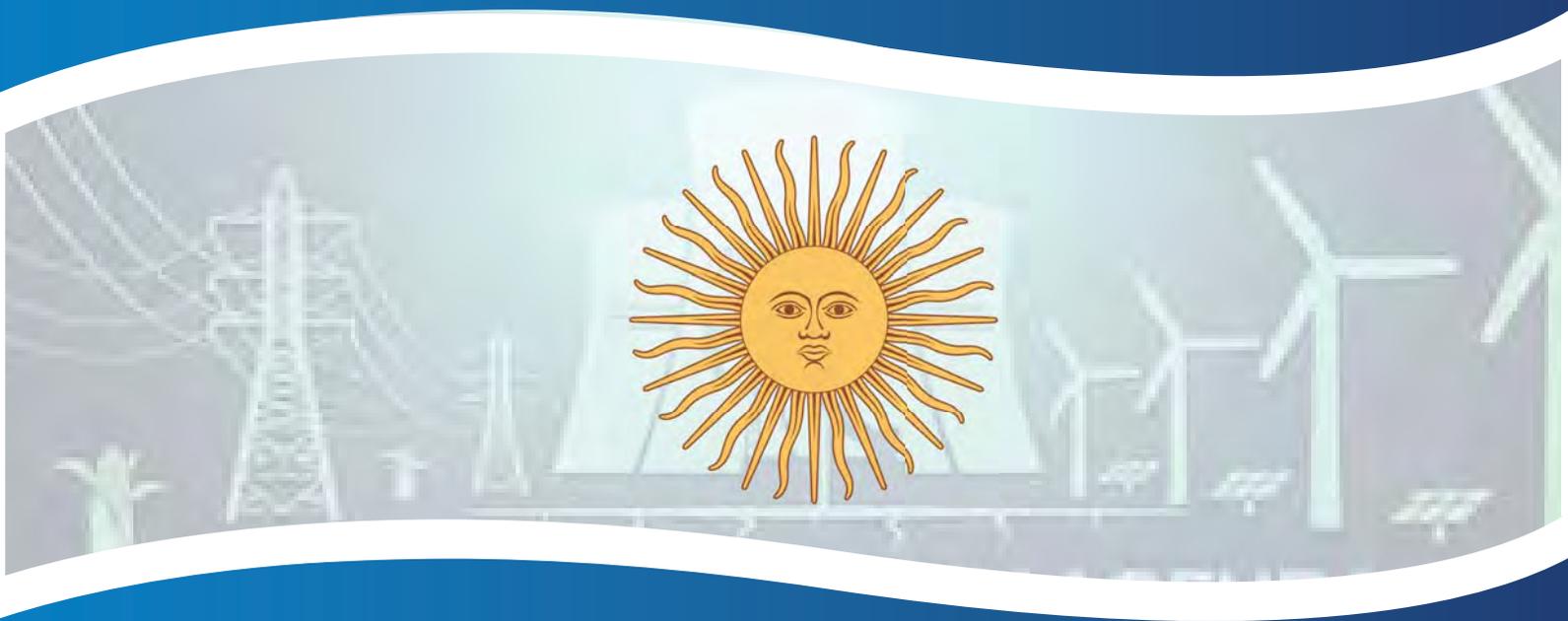


TAKING STOCK OF THE MACRI ENERGY REFORM AGENDA: TARIFFS AND SUBSIDY REDUCTION

Carlos Abi Ganem

SENIOR ADVISOR
INSTITUTE OF THE AMERICAS



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Introduction

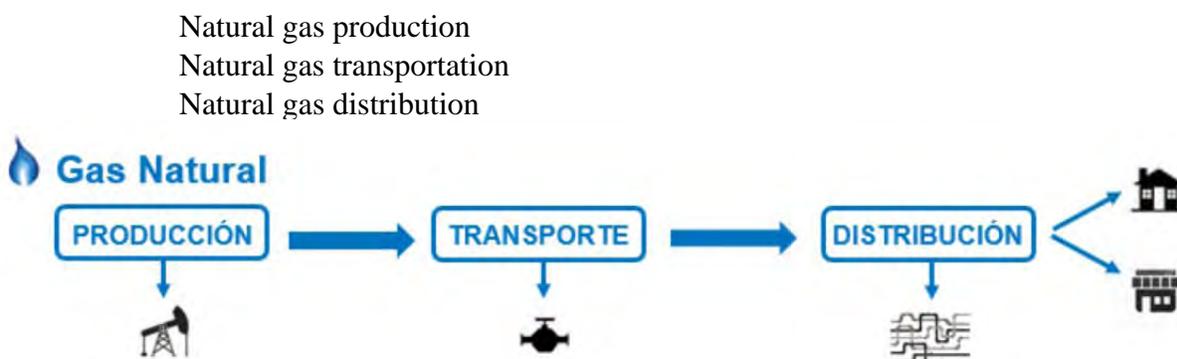
One of the biggest challenges that the Macri administration faced when it took office in December 2015, was to tackle subsidies (especially in energy) without producing a social disturbance. Confronting subsidies was particularly urgent and challenging as it had to be done in a context of historically high tax burden, growing fiscal deficit of about 6% of GDP, a poverty rate around 30% and one of highest inflation rates in the world.

The broader efforts aimed at normalization of the energy sector were critical particularly because of the strategic importance that a competitive, self-supplied energy market has at a political, economic and social level.

The urgency was even more pronounced in the case of natural gas, given that although the electricity network has greater coverage in terms of area and users, about 80% of the generation of electricity is produced by natural gas turbines, making Argentina highly dependent on this hydrocarbon.¹

The Supply System of Natural Gas

In Argentina, the supply system of the natural gas sector consists of the provision of three services²:



Source: Ministry of Energy and Mining of Argentina (2017), *Precio del Gas Natural en el PIST* (available at <https://www.argentina.gob.ar/audiencias-publicas/material-de-consulta>)

¹ See Section *The State of Natural Gas and Electricity Sectors Inherited by the Macri Administration* below

² See Ministry of Energy and Mining of Argentina (2017), *Precio del Gas Natural en el PIST*, §III.

Given that each segment requires cost recovery, the natural gas service bill is composed of the following elements:

- Natural gas price at the entry point into the transportation system (PIST for its acronym in Spanish)
- Transportation charge
- Distribution charge

In addition, the final energy bill contains national, provincial and municipal taxes that account, on average, for around 28% of the total amount of the bill. The PIST price of natural gas represents around 44%, while both transportation and distribution charges represent 28% of the total, on average.³

By law, transportation and distribution charges are the responsibility of the National Gas Regulator (ENARGAS for its acronym in Spanish).⁴ This entity performs periodically, comprehensive rates review (RTI for its acronym in Spanish) where they set the new charges for transportation and distribution for five years.

In the case of the PIST price of natural gas, the law establishes that it must be freely negotiated between producers and distributors, since the production has not been defined as a public service.⁵ However, in the context of an abrupt drop in gas production, limitations for investments in infrastructure, and the consequent insufficiency of the supply to meet demand, the former Energy Secretariat under the Kirchner government established in 2014 the application of a rationalization scheme for the use of natural gas. That scheme determined the prices of natural gas in the PIST per basin for residential and commercial users.⁶

The context where the PIST price was determined by the authority presented a challenge for the administration since the immediate liberalization of the market of natural gas would have likely been detrimental to end users, because of the imbalance inherent in that market. The Macri government therefore adopted a gradual approach to “protect the rights of users”.⁷

³ That is the case of the average bill in the Province of Buenos Aires under Gas Natural Ban jurisdiction. See Ministry of Energy and Mining of Argentina (2017), Precio del Gas Natural en el PIST, ¶14.

⁴ See Law 24.076 passed in 1992 (available at <http://mepriv.mecon.gov.ar/Normas/24076.htm>)

⁵ See Law No. 24.076 dated May 20, 1992.

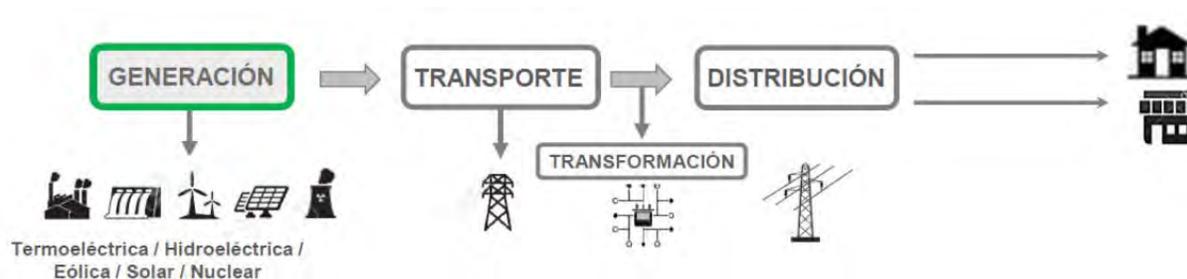
⁶ See Resolution MINEM No. 226 dated March 31, 2014 of the former Energy Secretariat.

⁷ See Ministry of Energy and Mining of Argentina (2017), Precio del Gas Natural en el PIST, ¶16.

The Supply System of Electricity

Similar to natural gas, the electricity sector is structured in three independent segments:⁸

- Electricity generation⁹
- Electricity transportation
- Electricity distribution



Source: Ministry of Energy and Mining of Argentina (2017), *Precio Mayorista de la Energía, Cargos de Transporte y Tarifas de Distribución de Electricidad* (available at <https://www.argentina.gob.ar/noticias/se-anunciaron-cambios-en-la-tarifa-de-electricidad-y-gas-natural>)

Therefore, similar to the case of natural gas, the electricity bill is composed of:

- Seasonal price of electricity (PEST for its acronym in Spanish)
- Transportation or transmission charge
- Distribution charge (also referred to as VAD, an acronym in Spanish for Distribution Value Added)

The final electricity bill, as in the case of natural gas, contains national, provincial and municipal taxes that account, on average, for around 26% of the total. The seasonal price of electricity

⁸ See Ministry of Energy and Mining of Argentina (2017), *Precio Mayorista de la Energía, Cargos de Transporte y Tarifas de Distribución de Electricidad*, p. 2.

⁹ Distributors, large users and generators, buy and sell the electricity in the Wholesale Electricity Market (MEM for its acronym in Spanish) that is operated by the state-owned company CAMMESA (Spanish acronym for Electricity Wholesale Market Administrator Company) where CAMMESA is the single buyer and seller.

represents around 36%, transportation charges represent around 3% and distribution charges represent near 35% of the total amount.¹⁰

In accordance with Law 24.065, transportation and distribution charges are the responsibility of the applicable authority.¹¹ Unlike the case of natural gas, the electricity sector does not have a centralized regulator, each province has its own. The national government can issue general guidelines and suggestions, but the provinces have the autonomy to decide regarding electricity prices in the regulated section. However, the National Electricity Regulator (ENRE for its acronym in Spanish) that covers the Autonomous City of Buenos Aires and Greater Buenos Aires, is under the orbit of the Ministry of Energy and Mining.¹² These entities must perform periodically, comprehensive rates review (RTI for its acronym in Spanish) where they set the new charges for transportation and distribution for five years.

In the case of the seasonal price or PEST, the law establishes that it must be freely negotiated between generators and distributors, since the production has not been defined as a public service.¹³ However, the case of electricity was even more complex given that the majority of the generation was thermal,¹⁴ using gas turbines that would be impacted by the changes in the natural gas market. The Macri government decided to adopt (as in the case of natural gas) a gradual approach to reduce subsidies to the electricity sector through a staggered path of subsidy reduction.

Natural Gas

The new administration described the inherited system as distorted, unequal, unfair and obsolete.¹⁵ The reasons behind that qualification are that the system presented a series of

¹⁰ See Ministry of Energy and Mining of Argentina (2017), Precio Mayorista de la Energía, Cargos de Transporte y Tarifas de Distribución de Electricidad, p. 2.

¹¹ See Law No. 24.065 dated December 19, 1991.

¹² See Law 24.065 dated December 19, 1991 (available at <http://servicios.infoleg.gob.ar/infolegInternet/anexos/0-4999/464/texact.htm>).

¹³ See Law 24.065 dated December 19, 1991 (available at <http://servicios.infoleg.gob.ar/infolegInternet/anexos/0-4999/464/texact.htm>).

¹⁴ In 2016, nearly 65% of the installed capacity were thermal generators. See Ministry of Energy and Mining of Argentina (2017), Precio Mayorista de Generación y Transporte de Energía Eléctrica - Verano 2017/2018, p. 6.

¹⁵ See Ministry of Energy and Mining of Argentina (2017), Precio del Gas Natural en el PIST, ¶21.

overlapping subsidies and regulations accumulated for years, that lacked comprehensive coherence.¹⁶ In addition, 40% of households in Argentina did not have access to the natural gas grid and paid a price four times higher for alternative fuels, i.e., carafes and tubes of liquefied petroleum gas. Furthermore, the largest consumers received greater subsidies while consumers who needed the subsidy the most were unprotected. Among residential users, the richest 20% of the population received more than 30% of the subsidies while the 20% with lower income received only 8% of subsidies.¹⁷

Lastly, with the Kirchner era price structure, there were no incentives for efficiency and savings in consumption as it was reflected in the fact that Argentinian consumers used 60% more natural gas than consumers in neighboring countries. This overconsumption also had an important impact on the environment.

The whole system presented a fundamental problem: unsustainability.

Most important, perhaps, is in the winters, when Argentina imports a third of its natural gas consumption and, despite regasification plants operating at full capacity, some industrial users must switch to other more expensive and higher emission fuels like Gas Oil. Worse yet, some other industrial and commercial users suffer total or partial service outage. Clearly, this affected current production and limited the development of new projects decreasing the potential for output increase and hence, job creation.

In addition, there was a large discrepancy in the prices paid for the same service along the country. For example, the government subsidized until October 2016, 98% of the cost of natural gas for regions like Patagonia, La Pampa, Puna y Malargüe, while for the rest of the country, the subsidy reached 81%.¹⁸ Even in 2017, with the second stage of the demand-side subsidy reduction plan implemented, the amount of subsidy was near US\$ 2.2 billion.¹⁹

In 2015, the average price paid by all users of the gas supply system was US\$ 2.50 per million BTU, while the cost of that gas was US\$ 5.83 (and in 2016, of US \$ 5, 22). As for residential

¹⁶ In the case of Patagonia, that has a differential price or provinces and municipalities who asked for legal protection against and therefore had tariff structures from 2008, the price paid was about one tenth of the price paid in the rest of the country. *See* Ministry of Energy and Mining of Argentina (2017), *Precio del Gas Natural en el PIST*, ¶21.

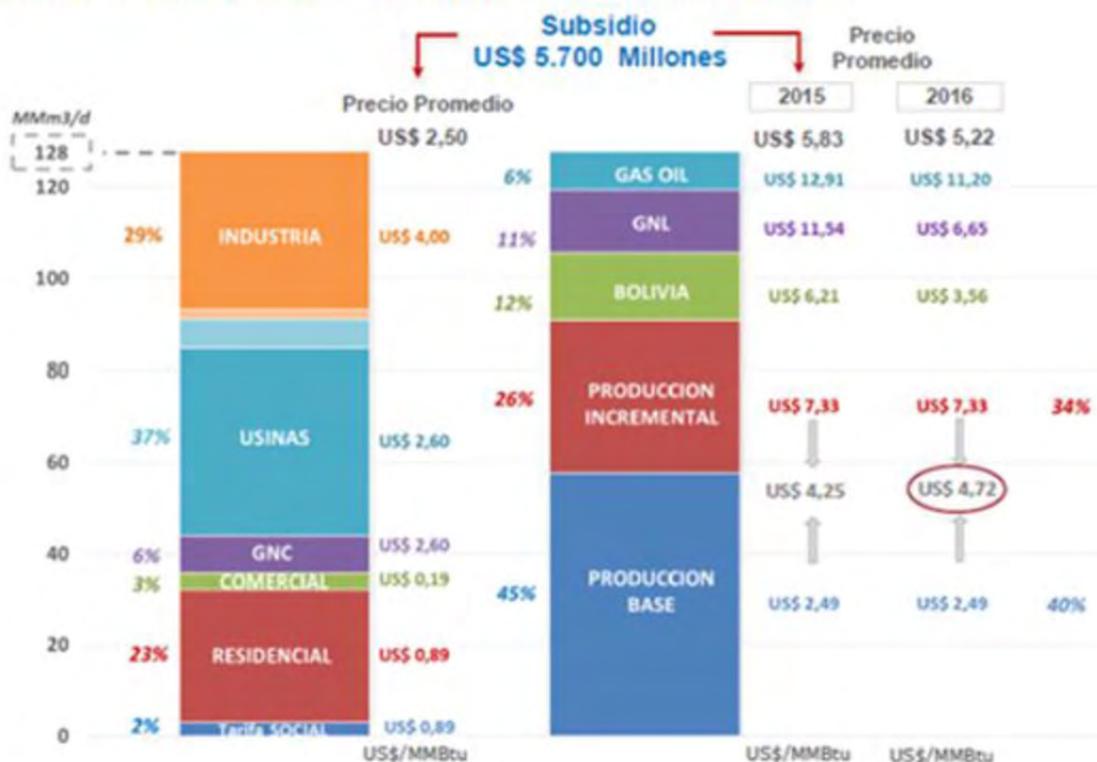
¹⁷ *See* Ministry of Energy and Mining of Argentina (2016), *Propuesta de Precios del Gas Natural en el PIST*, ¶13.

¹⁸ *See* Ministry of Energy and Mining of Argentina (2017), *Precio del Gas Natural en el PIST*, ¶22.

¹⁹ *See* Ministry of Energy and Mining of Argentina (2017), *Precio del Gas Natural en el PIST*, ¶22.

users, the average price for gas consumed was US\$ 0.89, so that more than 80% of the price was subsidized by the State. Between 2006 and 2015, the total amount of subsidies reached US\$ 23.1 billion, with an annual average of US\$ 2.6 billion.²⁰ In 2015, subsidies reached US\$ 5.7 billion as shown by the chart below.²¹

Gas Natural (Volumen 2015): Consumo vs. Oferta



Source: Ministry of Energy and Mining of Argentina (2016), *Propuesta de Precios del Gas Natural en el PIST*

²⁰ See Ministry of Energy and Mining of Argentina (2017), *Precio del Gas Natural en el PIST*, ¶38.

²¹ See Ministry of Energy and Mining of Argentina (2016), *Propuesta de Precios del Gas Natural en el PIST*, §III.1.

Due to the market distortions discussed above, gas supply in Argentina was unable to meet demand. For that reason, industrial users suffered cuts in supply when residential demand was high.

In terms of gas supply, in 2015, 71% came from local production and the remaining 29% was imported. Within the local production there were two prices, according to the current plans -Plan Gas I and II-, created in 2013 by the former Secretary of Energy.²² The aim of this scheme was to give feasibility to unconventional exploitation projects. This plan ended on December 31, 2017 and was replaced for another plan of incentive that will be discussed below.²³

Electricity

Only days after taking office, the Macri government declared, through a presidential decree, an “Energy Emergency” until December 2017 to avoid a “collapse”.²⁴ The main reasons of concern, as described in the text of the decree were:

- The remuneration systems established in the (MEM) since 2003 have not given enough economic signals to make private agents to invest the required amounts to allow the supply of electric power to match the growth of the demand for such service.
- That the lack of investments in infrastructure for the electricity distribution networks and the dependence on mobile generation equipment when demanding meteorological conditions or unexpected failures of critical equipment occurred, resulted in the increase in the number of supply interruptions and their duration.

The overall quality of the system was also affected by the lack of investments, deteriorating year by year from 2003 to 2015.²⁵

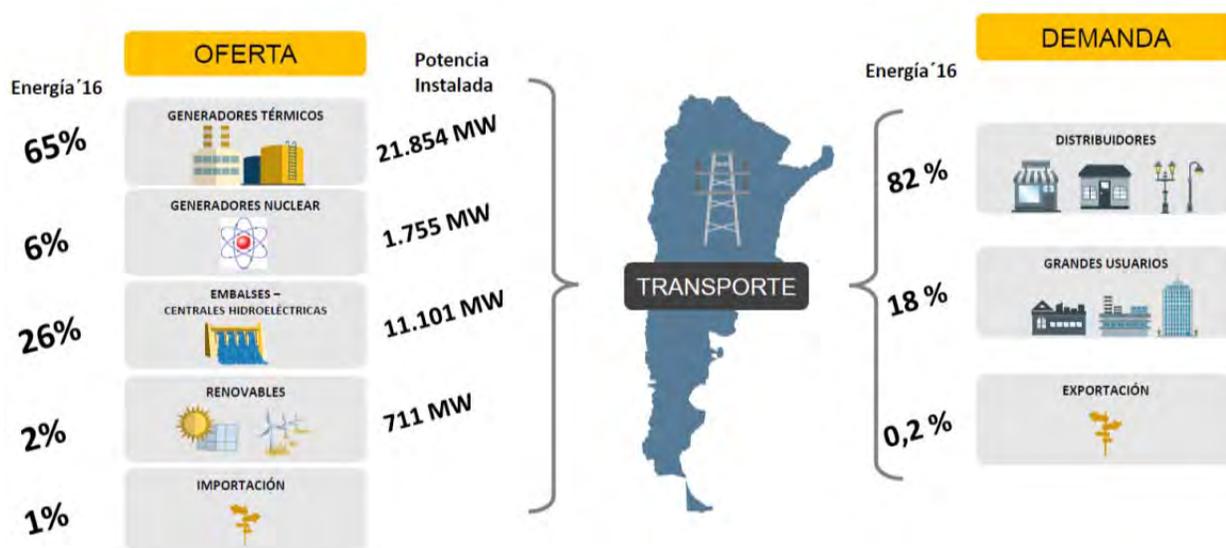
²² It was called "adjusted base production" to the volume of gas production that each company had in 2012 -the year before the creation of the programs-, adjusted monthly by curve of decline in production of each company. "Incremental production" was the volume of production that in each period exceeded the "adjusted base production". During its term, the program guaranteed producers a remuneration for their production, establishing that the "base production" is remunerated with the same price per million BTU as in 2012 (US\$ 2.49 per million BTU), while incremental production is remunerated at US\$ 7.55 per million BTU.

²³ See Section Current State of the Energy Sector below.

²⁴ See Presidential Decree No. 134 dated December 16, 2015.

The situation was aggravated due to the dependence of the electricity generation on the supply of imported natural gas that, as mentioned before, was up to 30% of the total consumption during winters.

The figure below shows that in 2016, 65% of the generation was thermal, that uses turbines fueled mainly by natural gas.²⁶



Source: Ministry of Energy and Mining of Argentina (2017), *Precio Mayorista de Generación y Transporte de Energía Eléctrica – Verano 2017/2018* (available at <https://www.argentina.gob.ar/audiencias-publicas/material-de-consulta-0>)

In the case of the buyers of electricity in the MEM, the larger buyers are the distributors, who take 82%, followed by large users who take 18%. Exports only represents 0,2% of the demand while imports represent 1% of the supply.

²⁵ The quality indicators such as SAIFI (System Average Interruption Frequency Index) and SAIDI (System Average Interruption Duration Index) had showed persistent increase in the metropolitan area from 2003 - 2015. See National Energy Regulator (ENRE) (2015), Informe Anual ENRE 2015, chapter 6.

²⁶ During natural gas outages, these turbines may work with Fuel Oil and Gas Oil.

The Roadmap to a Liberalized Natural Gas and Electricity Markets

As mentioned before, when the Macri administration took office, they faced a challenge regarding subsidies of public utilities such as natural gas and electricity. The heavily subsidized sectors were having a huge fiscal drag and, if no action was taken immediately, another socioeconomic crisis could occur.

In this context, the new Ministry of Energy and Mining acted quickly by instructing both regulators (ENRE y ENARGAS) to carry out the Comprehensive Rate Reviews (RTI for its acronym in Spanish).²⁷ That way, the transportation and distribution sectors, both in electricity and natural gas, would receive an updated price, one that more reflected market realities and thus provide a more reasonable economic equation for the service concession companies.

Having addressed the regulated part of the market, the Macri administration had the challenge of disarming the regulations on the prices that, by law, should be negotiated freely. The Macri administration was aware of the risk associated with abruptly liberalizing prices given that the adjustment could be very pronounced and cause social instability. The Government of Argentina then set a path of prices to progressively eliminate subsidies and eventually liberalize the market. This path was implemented together with targeted subsidies to protect the lower income sectors of society and with a better discount scheme for savings in consumption and efficiency.²⁸

The Path to a Liberalization of Prices

Natural Gas

Since in some regions of Argentina the price paid for natural gas was only a fraction than in the rest of the country, the Government foreseen to extend the period of reduction of subsidies for the regions with a lower starting point in order to avoid abrupt increases. However, the subsidies reducing path set for those regions was still based on the same PIST price target established for the rest of the country.²⁹ Therefore, the Government foreseen to extend the period of reduction of

²⁷ See Resolution MINEM No. 7/2016 dated January 27, 2016. See also Resolution MINEM No. 31/2016 dated March 29, 2016.

²⁸ See Section Tarifa Social (Social Rate) below.

²⁹ In Patagonia, La Pampa, Puna and Malargüe the PIST prices valid until September 2016 were significantly lower than the rest of the country. Given this regional difference, the price equalization between the price paid there and the price paid in the rest of the country would have implied a very sharp relative increase for users in Patagonia *et al* had been implemented all at once in October 2016.

subsidies for this region, but still based on the same PIST price target established for the rest of the country.

Through resolutions MINEM 212 - E/2016, MINEM 74 - E/2017 and MINEM 474 - E/2017, the Ministry of Energy and Mining established the first three stages of the subsidy reduction as set by the path of prices established in resolution MINEM 212 - E/2016.³⁰

The weighted average PIST prices in the natural gas of the path of gradual reduction of subsidies, foreseen in Resolution MINEM 212 - E / 2016 for the whole country, except for Patagonia, La Pampa, Puna and Malargüe, were set according to the following table:

Valores vigentes al:	Categoría	R1-R 21- R 22-R 23	R 31-R 32- R 33	R 34	P1 - P2	P3	Precio Prom Ponderado	% de Subsidio
		US\$/MMBtu	US\$/MMBtu	US\$/MMBtu	US\$/MMBtu	US\$/MMBtu	US\$/MMBtu	%
07-oct-2016		2,16	3,82	5,26	0,90	2,48	3,42	50%
01-abr-2017		2,62	4,20	5,49	1,26	2,93	3,77	45%
01-oct-2017		3,17	4,63	5,73	1,76	3,47	4,19	38%
01-abr-2018		3,83	5,10	5,98	2,47	4,10	4,68	31%
01-oct-2018		4,64	5,61	6,24	3,46	4,86	5,26	23%
01-abr-2019		5,61	6,18	6,52	4,85	5,75	5,96	12%
01-oct-2019		6,80	6,80	6,80	6,80	6,80	6,80	0%

Source: Ministry of Energy and Mining of Argentina (2017), Precio del Gas Natural en el PIST (available at <https://www.argentina.gob.ar/audiencias-publicas/material-de-consulta>)

The table above illustrates the weighted average prices of the path of gradual reduction of subsidies, as well as those corresponding to each category of users and the percentage of subsidy remaining.

The weighted average prices of the path of PIST prices for Patagonia, La Pampa, Puna and Malargüe, as well as those corresponding to each category of users and the percentage of subsidy remaining are summarized in the table below.

³⁰ See Resolution MINEM No. 212 – E/2016 dated October 6, 2016. See also Resolution MINEM No. 74 – E/2017 dated March 30, 2017. See also Resolution MINEM No. 474 – E/2017 dated November 30, 2017.

Categoría Valores vigentes al:	R1-R 21- R 22-R 23	R 31-R 32- R 33	R 34	P1 - P2	P3	Precio Prom Ponderado	% de Subsidio
	US\$/MMBtu	US\$/MMBtu	US\$/MMBtu	US\$/MMBtu	US\$/MMBtu	US\$/MMBtu	%
07-oct-2016	0,82	1,46	2,02	0,70	0,94	1,29	81%
01-abr-2017	0,97	1,66	2,23	0,85	1,11	1,48	78%
01-oct-2017	1,16	1,88	2,46	1,02	1,31	1,69	75%
01-abr-2018	1,38	2,14	2,72	1,23	1,54	1,93	71%
01-oct-2018	1,64	2,43	3,00	1,49	1,81	2,20	67%
01-abr-2019	1,96	2,75	3,32	1,80	2,13	2,52	62%
01-oct-2019	2,33	3,13	3,67	2,17	2,51	2,89	57%
01-abr-2020	2,78	3,55	4,06	2,62	2,95	3,32	51%
01-oct-2020	3,32	4,03	4,49	3,16	3,48	3,81	43%
01-abr-2021	3,95	4,58	4,96	3,81	4,10	4,38	35%
01-oct-2021	4,72	5,20	5,49	4,60	4,83	5,05	25%
01-abr-2022	5,63	5,91	6,07	5,56	5,69	5,82	13%
01-oct-2022	6,72	6,72	6,72	6,72	6,72	6,72	0%

Source: Ministry of Energy and Mining of Argentina (2017), *Precio del Gas Natural en el PIST* (available at <https://www.argentina.gob.ar/audiencias-publicas/material-de-consulta>)

Likewise, based on the methodology described in Resolution MINEM 212 – E/2016, the Government established a scheme of discounted PIST prices for residential customers who registered savings in their consumption equal to, or greater than 15% with respect to the same consumption period of the base year, 2015.³¹

To make sure that these measures would not affect the low-income population, the Macri administration implemented a scheme of targeted subsidies called “Tarifa Social” (Social Rate) that will be described later.

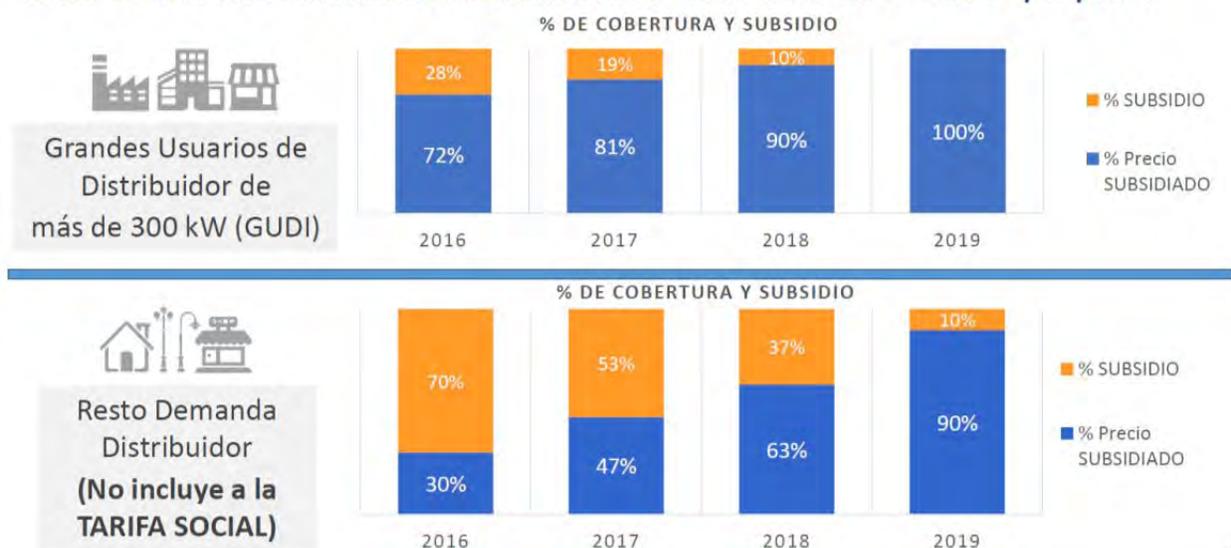
Electricity

During the public audience that took place in December 2016, the government presented the proposal for the path of reduction of subsidies of the seasonal prices in the MEM.

³¹ See Ministry of Energy and Mining of Argentina (2017), *Precio del Gas Natural en el PIST*, ¶¶73-75.

The proposal for large users was to reduce the subsidy from 28% on average in 2016, to 0% in 2019, subsidizing 19% in 2017 and 10% in 2018.³²

Sendero Gradual de Reducción de Subsidios 2016-2019: Audiencia Pública 14 /12 /2016



Ministry of Energy and Mining (2017), *Normalización del Precio Mayorista de la Electricidad en el país y Revisión Tarifaria Integral de Transporte y Distribución AMBA* (available at https://www.minem.gob.ar/servicios/archivos/6960/AS_14858840071.pdf).

In the case of distributors, the percentage of subsidy in 2016 was 70% and the plan was to reduce it to 10% by 2019. In 2017 the target of subsidy was 53% and in 2018, 37%.³³

³² See Ministry of Energy and Mining (2017), *Normalización del Precio Mayorista de la Electricidad en el país y Revisión Tarifaria Integral de Transporte y Distribución AMBA*, p. 5 (available at https://www.argentina.gob.ar/sites/default/files/precios_estacionales_mem_2018_martes_31_octubre_2017.pdf).

³³ See Ministry of Energy and Mining (2017), *Normalización del Precio Mayorista de la Electricidad en el país y Revisión Tarifaria Integral de Transporte y Distribución AMBA*, p. 5 (available at https://www.argentina.gob.ar/sites/default/files/precios_estacionales_mem_2018_martes_31_octubre_2017.pdf).

Tarifa Social (Social Rate)

Argentina's poverty levels of around 30% on top of a persistently high inflation required that the Macri government design a subsidy scheme that ameliorated the impact of market normalization and protected citizens in the lower income sectors and other groups. The scheme for natural gas had some differences with that set for electricity users. The implementation of the subsidy was a coordinated work among different institutions. The ministry in charge of implementing the subsidy, in the sense of determine who was eligible and who was not, is the Ministry of Social Development,³⁴ and each regulator is the responsible for ensuring that the distributors are applying the discount to the eligible consumers.³⁵

Access to the Social Rate benefit is granted automatically for all users who meet the criteria listed in the Appendix I of Resolution 219 – E/2016. About 4% of the beneficiaries of the Social Rate who meet the criteria did not receive the benefit automatically and had to request it.

In addition to the scheme of social rates, the government also modified the existent savings scheme to incentive consumers to rationalize consumption through a discount in the price (PIST or PEST) paid had consumption been a certain percentage lower than the same billing period of 2015.

Natural Gas

Through the Resolution MINEM 28/2016, the Ministry of Energy and Mining determined the application of the “Tarifa Social Federal” (Federal Social Rate) for the service of natural gas, across the country. According to this resolution, the beneficiaries would have to pay only for taxes, transportation and distribution charges. The price paid for the natural gas was then, completely subsidized by the State.

In December 2017, the mechanism of the benefit was updated to match the mechanism in electricity. The goal was to rationalize and make efficient the consumption, and to treat equally

³⁴ Using a database from SINTyS, Spanish acronym for National Tax and Social Identification System. See Ministry of Energy and Mining of Argentina (2017), Precio del Gas Natural en el PIST, §VII.2.

³⁵ See Ministry of Energy and Mining (2017), Normalización del Precio Mayorista de la Electricidad en el país y Revisión Tarifaria Integral de Transporte y Distribución AMBA, pp.19-20 (available at https://www.argentina.gob.ar/sites/default/files/precios_estacionales_mem_2018_martes_31_octubre_2017.pdf).

beneficiaries of the Social Rate both in electricity and natural gas.³⁶ Currently, the beneficiaries of the Social Rate are entitled to a discount in the final settlement of the service equivalent to:

- 100% of the gas price on a block of maximum consumption determined³⁷ -free block-, and
- 75% of the price of gas on a block of excess consumption of up to the same magnitude of the free block

Consumption above three times the free block pays 100% of the price of the natural gas.

Nowadays, around 2 million residential users receive the benefit, that is 22.5% of total users.³⁸

Electricity

The Federal Social Electricity Rate consists of the application of a discount on the wholesale price of electric power. This benefit is intended for users in all the provinces of the country who are deemed vulnerable in socio-economic terms.³⁹

The beneficiaries of this program had a "Free Block" of electricity of 150 kWh per month. This means that the beneficiaries did not pay for the first 150 kWh consumed in each month.⁴⁰

³⁶ See Resolution MINEM No. 474 – E/2017, Article 4, dated November 30, 2017.

³⁷ The free block is defined according to the tariff zone, and its maximum is the upper threshold of the lowest fare category -R1. See also Resolution MINEM No. 474 – E/2017, Appendix II, dated November 30, 2017.

³⁸ See Ministry of Energy and Mining of Argentina (2017), Precio del Gas Natural en el PIST, ¶121.

³⁹ See Resolution MINEM No. 6/2016 dated January 25, 2016, Art. 7.

⁴⁰ The magnitude of this Free Block was determined based on technical estimates of the minimum monthly consumption of an average household. Users from the Argentinean North West region (NEA for its acronym in Spanish) do not have access to natural gas pipelines. Since the substitute power source for natural gas is electricity, they have a free block of 300 kWh to compensate for their dependence on electricity. The price of the consumption of electric power more than the Free Block of 150 kWh per month (300 kWh in NEA), i.e. the "Surplus Block", could be with or without a discount depending on the level of consumption compared to the same period of the year 2015. If the beneficiary of the Social Rate had a monthly total electricity consumption less than or equal to that registered in the same period of 2015, the reference price of the energy paid includes a discount. If, on the other hand, the beneficiary of the Social Rate had a total monthly consumption greater than that registered in the same period of 2015, the

The discount was applied always to the seasonal price only, transportation charges, VAD and taxes were paid fully by the consumers with the benefit. Therefore, electricity users with the benefit are entitled to a discount equivalent to:

- 100% of the seasonal price on a block of maximum consumption determined⁴¹ - free block-, and
- 50% of the seasonal price on a block of excess consumption of up to the same magnitude of the free block

Consumption above three times the free block pays 100% of the seasonal price of Electricity.

After the first stage of implementation of the subsidy, the potential beneficiaries identified were 3.7 million of households, which represents 28% of the total households that use the electric power service.⁴²

The second stage, allowed increasing the number of potential beneficiaries of the Federal Social Rate to a total of 4.0 million households, which represents 30% of the total number of households that use the service of electric power.

The Comprehensive Rate Reviews (RTI)

After the crisis that occurred between 2001 and 2002 in Argentina, the government passed in March 2002 Law No. 25.561, which authorized the executive branch to renegotiate the administrative contracts that had the provision of public services as a purpose.⁴³ The mentioned law, stated that contracts with adjustment clauses in dollars or other foreign currencies and the indexation clauses based on price indexes of other countries and any other indexing mechanism agreed upon in those contracts would be rendered ineffective.

reference price of the energy paid by the Surplus Consumption Block had no discount. *See* Resolution MINEM No. 6/2016 dated January 25, 2016, Art. 7.

⁴¹ The free block is defined according to a base consumption of a typical household. *See* MINEM (2018) Tarifa Social Federal para servicios de Electricidad y Gas por redes en Argentina, p. 10.

⁴² Until September 2016, the criteria used to identify potential beneficiaries was more restrictive. With resolution MINEM 219/2016 the government relaxed the inclusion and exclusion criteria and expanded the base of beneficiaries of the Social Rate. *See* Ministry of Energy and Mining (2016), Documento De Acompañamiento De La Presentación Del Ministerio De Energía Y Minería Para La Audiencia Pública De Energía Eléctrica, pp. 4-8. *See also* Resolution MINEM No. 219/2016 dated October 11, 2016.

⁴³ *See* Law No. 25.561 dated March 2002.

Subsequently, Law No. 25.561 was extended several times. Finally, in October 2015 was extended through Law No. 27.200 until December 31, 2017.⁴⁴

During the Kirchner administration, some Public Audiences were performed between 2006 and 2007 and resulted in signing Letters of Understanding with the proposal of the license renegotiation with concessionaires. Until Macri's administration took office in December 2015, no contract had been renegotiated since the signing of the Letters of Understanding.

Through Resolution No. 7 dated January 27, 2016 and Resolution No. 31 dated March 29, 2016, the Ministry of Energy and Mining instructed the electricity and natural gas regulators respectively, to carry out the RTIs as stated in the Letters of Understanding signed almost ten years before under the Kirchner administration.⁴⁵

The RTIs for electricity and natural gas consisted in determining the transportation and distribution charges for each concessionaire that would recompose the economic-financial equation after more than a decade of virtual rate freeze.⁴⁶

Both natural gas and electricity RTIs were carried out by ENARGAS and ENRE respectively, applying the new rates in three stages in order to minimize the impact of rates normalization on the household economy.

Current State of the Energy Sector

With the implementation of the measures discussed above, the Macri government embarked on a path to normalize the market for electricity and natural gas. Since 2016, and after a slight delay and modifications due to judicial proceedings, the Macri administration began increasing the prices and production of natural gas and generation of electricity while instructing the regulators to carry out the RTIs with the purpose of normalizing transportation and distribution services.

Currently, the PIST and PEST prices have been increased as well as transportation and distribution charges. In addition, some other measures were taken aimed at boosting production and generation of natural gas and electricity, respectively.

⁴⁴ See Law No. 27.200 dated October 2015.

⁴⁵ See Resolution MINEM No. 7/2016 dated January 27, 2016. See also Resolution MINEM No. 31/2016 dated March 29, 2016.

⁴⁶ See ENARGAS (2016), Guía Temática Revisión Tarifaria Integral de Distribución y Transporte de Gas Natural §IV (available at https://www.enargas.gob.ar/secciones/audiencias-publicas/RTI/GUIA_TEMATICA_RTI.pdf)

Natural Gas

Of the total supply of natural gas in 2017, 79.5% came from local production and the remaining 21.5% was imported (against 71% and 29%, respectively, in 2015).⁴⁷

Since 2016, natural gas was imported from Chile to increase the availability of natural gas and reduce the use of gas oil and fuel oil, which was approximately US\$ 3/MMBTU on average, more expensive than the gas coming from Chile during 2017.

In addition, the Ministry of Energy and Mining established through Resolution MINEM 46-E/2017 a program aimed to incentivize investments in production of non-conventional natural gas.⁴⁸ The program sets a minimum price that a producer receives for natural gas extracted from non-conventional reservoirs until December 31, 2021.

The Minimum Price set was US\$ 7.50/MMBTU for 2018 and would decrease in US\$ 0.50/MMBTU each year until reaching US\$ 6.00/MMBTU by 2021.⁴⁹

Regarding LNG, between 2015 and 2017, the cost of import dropped by 40%.⁵⁰ Although prices of LNG fell, making cheaper to import LNG, the participation of LNG in the total supply fell too. This means that although importing LNG was cheaper, the Macri administration managed to replace part of the imports with other less expensive sources, reducing subsidies even more.

The government, through the Ministry of Energy and Mining took other measures regarding the LNG market, including an assessment of private-public participation in the commercialization of LNG.⁵¹

⁴⁷ See Ministry of Energy and Mining of Argentina (2017), Precio del Gas Natural en el PIST, ¶25.

⁴⁸ The program was called "Program to Stimulate Investment in Development of Natural Gas Production from Non-Conventional Reservoirs". See Resolution MINEM 46-E/2017 dated March 2, 2017.

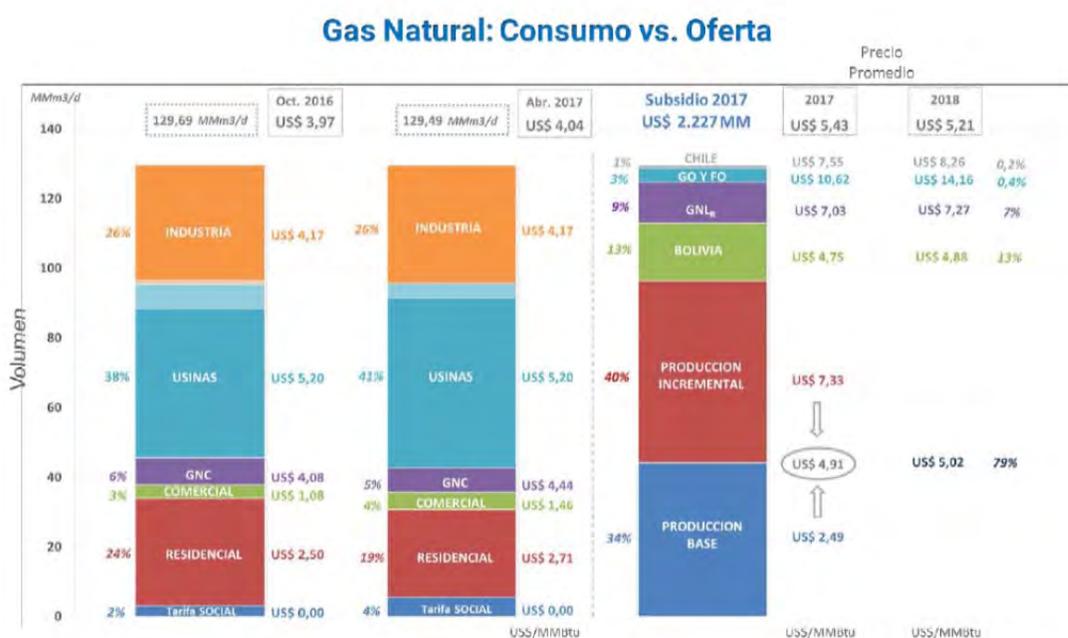
⁴⁹ See Resolution MINEM 46-E/2017 dated March 2, 2017.

⁵⁰ According to the Ministry of Energy and Mining, there were four reasons for this fall in price of LNG: "i) Increase in competition; ii) the opening of more tenders for the purchase of LNG; iii) an increase in transparency in the bidding process and purchase process; iv) improvements in the purchase strategy." See Ministry of Energy and Mining of Argentina (2017), Precio del Gas Natural en el PIST, ¶29.

⁵¹ The Ministry of Energy and Mining proposed a regulation with the aim of facilitate the existence of a secondary capacity market for LNG plants, where the owner of the primary capacity can freely negotiate the transfer of the right to use it to a third party. See Ministry of Energy and Mining website (available at

In addition, other measures were implemented with the objective of normalizing the market for natural gas. For example, emergency exports to Chile with the commitment of re-import were approved. The volume of natural gas would have to be re-imported within a month, or year depending upon the reason of the export in the first place.⁵²

As of April 2017, the average price paid by natural gas consumers was US\$ 4.04/MMBTU, while the supply price of that gas was, on average, US\$ 5.43/MMBTU (in 2018 it is estimated at US\$ 5.21/MMBTU).⁵³



Nota: Precio de demanda residencial afectado por Tarifa Diferencial. La suma de los porcentajes puede no sumar 100% debido al redondeo.

Source: Ministry of Energy and Mining of Argentina (2017), Precio del Gas Natural en el PIST (available at <https://www.argentina.gob.ar/audiencias-publicas/material-de-consulta>)

<https://www.argentina.gob.ar/consulta-publica-reglamento-de-comercializacion-de-capacidad-de-plantas-de-gnl>).

⁵² See Resolution MINEM 8 – E/2017 dated 13/01/2017. See also Resolution MINEM 407 – E/2017 dated 26/10/2017.

⁵³ See Ministry of Energy and Mining of Argentina (2017), Precio del Gas Natural en el PIST, ¶34.

In 2015, the average price paid by consumers was US\$ 2.50/MMBTU and the average price of supply was US\$ 5.83/MMBTU.⁵⁴ Therefore, the gap had closed from US\$ 3.33/MMBTU to US\$ 1.17/MMBTU underscoring a subsidy reduction of US\$ 3.4 billion from US\$ 5.7 billion in 2015 to US\$ 2.2 billion in 2017.⁵⁵ In 2016, subsidies were US\$ 2.7 billion. By 2018, it is estimated that subsidies will cost the State about US\$ 1.1 billion.

Electricity

Within 6 days of taking office, the government declared the emergency of the electric sector, ending in December 2017. This decree instructed the Ministry of Energy and Mining to *“elaborate, put in force, and implement a program of actions that are necessary in relation to the segments of generation, transport and distribution of electric power of national jurisdiction, in order to adapt the quality and security of the electricity supply and guarantee the provision of public electricity services in adequate technical and economic conditions.”*⁵⁶

Since then, the Ministry of Energy and Mining has executed a series of measures tending to reduce subsidies, reduce service outages and improve the quality and output of the service of electricity. Among the most relevant actions are:

- The call for private investors to expand the installed capacity through international public tenders that allowed a significant increase in installed power generation capacity.⁵⁷
- The implementation of the “Plan Renovar” for the installation of renewable energy plants (wind, solar, biomass, small power plants).⁵⁸
- The decrease in supply outages and the increase in the quality of the public electricity service.⁵⁹

⁵⁴ See Section The State of Natural Gas and Electricity Sectors Inherited by Macri.

⁵⁵ See Ministry of Energy and Mining of Argentina (2017), Precio del Gas Natural en el PIST, ¶38.

⁵⁶ See Presidential Decree No. 134 dated December 16, 2015, Article 2.

⁵⁷ See Ministry of Energy and Mining (2017), Normalización del Precio Mayorista de la Electricidad en el país y Revisión Tarifaria Integral de Transporte y Distribución AMBA, pp. 17-31 (available at https://www.argentina.gob.ar/sites/default/files/precios_estacionales_mem_2018_martes_31_octubre_2017.pdf).

⁵⁸ Ministry of Energy and Mining website for the program Renovar (available at <https://www.minem.gob.ar/www/833/25413/renovar-programa-de-energias-renovables>)

- The realization of the processes of Comprehensive Rate Review for the companies of distribution of Federal Jurisdiction and for the companies of Transport in Extra High Tension and the main distributors.⁶⁰
- The implementation of the Social Rate Regime for the lower-income sectors.⁶¹
- The normalization of the regulators of national jurisdiction (ENRE and ENARGAS) through public contest.⁶²
- The gradual elimination of electricity generation subsidies that were strongly increasing over the last 12 years of virtual tariff freeze.

Conclusions, Next Steps and Challenges

The measures implemented by the Macri government to normalize the energy sector and begin to address the distortions in the market are beginning to show results.

When it comes to natural gas, the gap between the prices paid by customers and the price received by producers is closing. Reducing the gap underscores that the State now has to dedicate less resources to subsidize customers and ultimately, it is reducing the fiscal deficit. In addition, from 2015 to 2017 the percentage of domestic gas production has increased from 71% to 79.5% with an overall growth in production.

Similarly, in the electricity sector the gap between the price paid by consumers and the price received by generators has started to close, thereby reducing subsidies in that sector too.

The measures taken by the Macri administration seem to place the nation's energy sector and national budget on a more sustainable path given that subsidies are being reduced and those remaining are more targeted and focused exclusively on the lower-income sector of the country's population. In addition, the quality of the public services of natural gas and electricity are improving too, along with important gains in local production.

⁵⁹ See Ministry of Energy and Mining website (available at <https://www.minem.gob.ar/energia-electrica/prensa/26862/primer-informe-semestral-de-desempeno-de-edenor-y-edesur>)

⁶⁰ See ENRE website (available at <http://www.enre.gov.ar/web/web.nsf/home?openframeset>)

⁶¹ See Section

Tarifa Social (Social Rate)

⁶² See Presidential Decree No. 83 dated January 29, 2018. See also Presidential Decree No. 84 dated January 29, 2018.

Despite the many positive signals and indicators surrounding the energy market, including public tenders and institutions with enhanced transparency and long-term policies, the sustainability question persists. In particular, given Argentina's history of boom-bust economic cycles and political changes, there are concerns over future political interference in the market and reverting back to a heavily subsidized system. The fact that the economic emergency law was not extended and ended in December 2017 makes this scenario more unlikely since in order to re-impose large levels of subsidies, a new government would have to pursue such changes legislatively thereby requiring a majority in the Congress.

Between now and the next electoral cycle in 2019, the challenge for the Macri administration appear to be more about balance between the macroeconomic and political side. Even with progress in normalizing the energy market and reducing subsidies, fiscal deficits and inflation remain high, making some segments of the public feel as though the burden of the adjustment falls largely on them. There certainly exists the potential for this tension to produce some political instability in the future if the macroeconomic variables do not show a marked improvement in the short term and definitely before the 2019 presidential election cycle.

The path to normalizing the energy sector and the many steps along the way have been elucidated by President Macri. Delivering the results of those changes and insuring that a majority of the public understands the path forward and feels that they are benefiting from the overhaul of the energy sector will be critical for the government if the intention is to continue with the change initiated in 2015.

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