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ARGENTINE ENERGY POLICY:  
TAKING STOCK OF THE PERIOD 2003-2015

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**Abstract**

Energy policy, like any other public policy, requires the powers of the government to devise precise and coordinated provisions to efficiently manage a strategic sector. Every country adopts its own energy policy based on factors like resource endowment, macroeconomic policy, the regulatory framework, and its own vision of the relationship between the state and market in a given field, to name a few factors. This paper analyzes energy policy in twenty-first century Argentina, considering its most notable peculiarities, how it has changed and remained the same, and the principal challenges looming ahead.

**Keywords:** Energy policy, hydrocarbons, natural gas, renewable energy, production and consumption, economic development.

**INTRODUCTION<sup>2</sup>**

Up until the early years of the nineteen-seventies, debates on the energy question in Latin America—and, it might be added, worldwide—revolved fundamentally around technical and economic aspects, failing to consider its implications for the political equation, with the exception of countries whose economies rely on exporting hydrocarbons (Moneta, 1984, pp. 131-132). The oil shocks of the age were decisive in lending strength to the treatment of the energy question as a problem impacting both the domestic sphere and the global agenda. Likewise, factors like asymmetries in availability and/or access to non-renewable sources, demographic expansion, industrial growth, the vagaries of international hydrocarbon—especially oil—prices, and environmental issues, among other factors, have caught the attention of the governmental powers to be as to the need to place energy policy at the center of public policy-making.

The way in which a state manages its energy resources is subject to myriad components. The nature of the energy mix; the production/consumption ratio; exogenous drivers; and the macroeconomic guidelines of the moment are, among others, weighty indicators for governments to consider when managing the role of a strategic sector in socioeconomic development. Beyond these aspects, any assessment of a country's energy policy ought also to consider whether or not the country holds a forward-looking stance.

The objective of this paper is to describe the energy policy in the Republic of Argentina during the mandates of the Frente para la Victoria (FPV - Front for Victory) party under Néstor Kirchner (2003-2007) and Cristina Fernández (2007-2015). In broad strokes, the questions are as follows: What is understood by the term energy policy? What are the main features of the energy policy in the time period? What challenges is the country facing in this sector in the short and medium term?

An underlying assumption to this work is that beginning in 2004, the country started to experience difficulties in self-supplying natural gas, which pushed energy issues to the top of the national policy agenda, considering that more than half of the energy matrix is underpinned by natural gas production. The FPV administrations vocally asserted the need for an energy policy in which the state would play a preeminent role in an attempt to reverse the negative fallout of the transnationalization of the sector in the nineteen-nineties. Nevertheless, rather than holistic provisions designed to make this objective reality, the era witnessed a series of context-reactive, biased, and short-sighted measures, in turn gradually eroding the country's position as an exporter of gas and turning it into an importer (of gas and other energy sources). It also threw off the commercial energy balance, and showed clear lack of planning to leverage renewable energy sources in the national energy matrix.

This paper is divided into two sections. The first offers a cursory introduction to the notions of energy policy and public policy, and provides the conceptual rationale for analyzing the Argentine case. The second section is an examination of the particularities of energy policy in the Republic of Argentina in the time period 2003-2015, considering several aspects preceding this range of years in order to understand the backdrop against which the Néstor Kirchner and Cristina Fernández administrations deployed a series of actions and measures in the energy sector. Derived from this analysis, a discussion of how the sector will change, what will remain the same, and the challenges coming up in the future.

**1. ENERGY POLICY AS PUBLIC POLICY: A CONCEPTUAL APPROACH**

To the Latin American Energy Organization (OLADE), a country's energy policy is understood as just another public policy and, as such, plays out through governmental decisions that ought to be designed to attain not only energy efficiency, but also to promote overall domestic socioeconomic development. According to Oxilia and Blanco (2016, p. 17), an energy policy covers: "a set of strategic provisions and guidelines agreed on and assumed by a competent governmental authority meant to deal with public situations and meet requirements related to the energy sector." Moreover, the authors assert that any energy policy "takes the form of a guideline or mandate [that expresses] priorities or lines of action [which reflect] the political will [to act] in given situations, producing results" (Oxilia and Blanco, 2016, p. 17).

Related to the foregoing, studies<sup>3</sup> by Oszlak and O'Donnell (1976), Lindblom (1991), Aguilar Villanueva (1992), Martínez Nogueira (1995), and Tamayo Sáez (1997), among others, reveal that public policies elucidate governmental decisions containing objectives, actions, and omissions in response to a specific question with a significant impact on society as a whole.

Now, whether it is referred to as a set of actions (or inactions), or more specifically as a "program of governmental action"—as Becerril García and Albornoz Mendoza (2010, p. 95) call it—, any public policy establishes the "predominant position of the State in response to a question [of widespread interest]" (Oszlak and O'Donnell, 1976, p. 22). Likewise, they underscore that because a policy of this sort holds the possibility for a stance on a particular context—through the existence of actions or lack thereof—public policymaking is far from an unchanging process. *Au contraire*, policymaking is a complex, open, and dynamic process (Martínez Nogueira, 1995, p. 4) and, quite often, uncertain (Lindblom, 1991, p. 13). This is explained in large part because governments are not isolated from their own national contexts or the avatars moving through the international system. As Oxilia and Blanco (2016, p. 15) put it:

Implementing actions requires significant management across diverse stakeholders and social groups dependent upon one another to varying degrees (...) The national backdrop against which public policies are executed is unavoidably neither isolated nor independent from the international context tied to the global markets (in the case of oil) or a regional (or even) bilateral context, when it comes to integration projects involving international agreements and infrastructure to harness energy resources, or the interconnectivity of networks or energy systems.

Thus, energy policies display specific traits pursuant to the socioeconomic and political nature of the country in question; the endowment of available energy resources; domestic and exogenous drivers; and the vision of each government toward managing the sector, considering the interaction between the public and private spheres.<sup>4</sup>

Finally, the Oxilia and Blanco (2016) study highlights that a series of factors intervene in energy policy design—as is the case for any public policy. These include: defining the baseline, meaning the starting situation; the strategies shaping the journey to reach the goals set—decisions and actions made by way of regulations, government programs, etc.—; and, finally the desired situation (or an approximation of such), which speaks to the aspirations of the policymakers.

## 2. ARGENTINA: PRELUDE TO THE ENERGY CRISIS<sup>5</sup>

An end-to-end examination of the energy outlook in Argentina points to two broad considerations. The first is the makeup of its supply, marked by fossil fuels—oil and natural gas—which as of 2015, accounted for 89% of the same. This value exceeds the global rate, estimated at 80%, and the regional rate, calculated to be 71% (Villalonga, 2013, p. 14). It is worth clarifying that over the past 35 years, the share of oil in the national energy matrix has fallen due to the growth of natural gas (a resource that now accounts for over half of primary energy production). Natural gas expansion came on the heels of a government decision to create Gas del Estado in 1946 (a company that retained the monopoly on natural gas distribution and transportation until the nineteen-nineties). Knowing that Argentina had natural gas potential, Yacimientos Petrolíferos Fiscales (YPF), a state enterprise (founded in 1922), which acted in the exploration and exploitation phases, sold the hydrocarbon at a low cost to Gas del Estado, which in turn offered the resource to users at accessible rates, quickly converting the country to gas (Mansilla, 2007, p. 27).

All of which makes it understandable the degree to which Argentina consumes gas. As compared to the rest of South America, Argentina is the number one consumer of natural gas, with 42.8 million tons of oil equivalent (Mtoe), exceeding even Brazil, which comes in at 36.8 Mtoe (BP Global, 2016). Renewable energy has grown to some extent, especially hydraulic, solar, and wind, although their shares continues to be insignificant as a piece of the larger energy pie (see Table 1).

Table 1. Evolution of Primary Energy Production

<i>Primary Energy</i>	<i>Years</i>					
<i>(Production in thousands of toe)</i>	<i>1970</i>	<i>1980</i>	<i>1990</i>	<i>2000</i>	<i>2010</i>	<i>2015</i>
Hydraulic energy	0.56	3.9	3.8	4.7	4.6	4.8
Nuclear energy	n/d	2	4.4	n/d	n/d	n/d
Natural gas	22.2	27.8	39	52.7	52.1	51.5
Oil	68.4	61	48.9	38.5	38.2	37.5
Coal	1.2	0.54	0.31	0.05	0.04	0.02
Firewood	3.4	1.5	1	0.94	1	1.2
Bagasse	1.1	1.6	0.86	1.1	1	1
Plant oils	n/d	n/d	n/d	1.3	2.1	2.2
Plant alcohols	n/d	n/d	n/d	0.01	0.08	0.5
Wind energy	n/d	n/d	n/d	0.1	0.1	0.2
Solar energy	n/d	n/d	n/d	n/d	n/d	0.001
Other primary	2.9	1.4	1.4	0.3	0.4	0.4

(\*) Percentages based on expressed values. No data (n/d)

Source: Created by the author based on data from the Argentine Ministry of Energy and Mining.

The second consideration is related to how the national energy policy has shifted over time. Until the Carlos Saúl Menem (1989) administration, the government retained control over the industry, although it did allow private actors to work in the sector, as the Hydrocarbons Act 17.319/67 had granted several concession permits for the upstream portion of the sector. According to Mansilla (2007, p. 36): "the State strongly imposed its macroeconomic objectives on the energy sector [...], took the lead on investment to guarantee maintenance of the resource, [set] prices and crude availabilities for every refiner, and decided how much [to extract]." Furthermore, unprocessed crude exports were prohibited in order to achieve self-sufficiency. In other words, up until the dawn of the nineteen-nineties, the state played the starring role on the energy policy stage, setting the guidelines and rules to follow up and down the entire hydrocarbons chain.

With the advent of economic liberalization, as the country began to open up after Menem took office, the energy policy began to undergo profound transformations. Argentina, just like Bolivia and Peru, were radical examples in their time, because their respective administrations—each in its own way—sought to change the model by which state-owned and transnational enterprises interacted in the sector. Based on the status report—the baseline, as Oxilia and Blanco (2016) wrote—the Menem administration classified YPF and Gas del Estado as unproductive and inefficient companies. As a result, it declared the need to create the conditions for the "active and direct participation of investment from private capital" (Decree 1055, 1989) and the "restructuring of the gas industry [by permitting the entry] of private venture capital," leaving the state in the role of regulator (Decree 633, 1991). Both regulations, among others,<sup>6</sup> signaled what the national government's strategy would look like: privatization, which indeed was the fate that befell these two companies. To do so, they amended the laws preventing private actors from getting involved and created tax incentives. Following a complex process to divide up its shares, YPF was finally acquired by the Repsol group in 1999. Gas del Estado was split into 10 different companies: two forwarders and eight distributors. Other provisions removed the crude quotas and did away with the prohibition on exporting crude; freed up foreign currency; deregulated oil and gas prices; and released tenders for areas previously under the charge of YPF.<sup>7</sup>

All of these measures completed the government's initial goal, which was to set up a market-centered energy policy, because by privatizing the industries across the board, the only role left for the state was the power to authorize or deny exports pursuant to domestic supply priorities (Kozulj, 2005, p. 18). Lacking the capacity to intervene, transnational companies were at full liberty to decide the *what* and *how* of the sector and, consequently, the state relinquished control of the future of the industry. This does explain the tremendous growth in hydrocarbon productivity throughout the entire decade, as Argentina started to meet the demand in Brazil, Chile, and Uruguay (see Table 2). Exports kicked off the decade at 670.74 MMm3; rose to 1,985 MMm3 in 1998; and hit 3,385.87 MMm3 in 1999.

Lack of state oversight prompted the oil companies to maximize their profits by selling to foreign markets, focusing on intensive exploitation of already discovered reserves<sup>8</sup> rather than on the exploratory phase to find future fields (Campodónico, 2004; Kozulj, 2005). The domestic market was careless when it came to medium- and long-term sustainability. Proof is found in the fact that because production failed to meet domestic demand, the country imported small amounts of natural gas from Bolivia despite burgeoning gas exports.

On another note, other authors have remarked that Argentina failed to expand its domestic transportation routes, because

private companies poured investment into infrastructure works for exporting (Mansilla, 2007). The results of this policy came to the fore after the collapse of convertibility<sup>9</sup> in 2002 and the *a posteriori* measures designed to deal with the economic crisis ailing the country. In an effort to ease the shock, wellhead hydrocarbon prices were converted to pesos—they had previously been in dollars—; taxes were levied on natural gas exports; and an upper ceiling was set for the free availability of foreign currency from hydrocarbon and byproducts exports.<sup>10</sup> As was to be expected, over time, producers began to restrict the energy supply as a sort of pressure mechanism to raise energy prices (Kozulj, 2005, p. 9). These actions in conjunction with the implementation of a shortsighted policy lacking state control, designed to leverage foreign trade by ramping up the intensity of extraction without tackling domestic industry planning, sowed the seeds for the energy difficulties the country would begin to face with the Néstor Kirchner administration.

Table 2. Evolution of Gas Production, Consumption, Reserves, and Exports in Argentina

	1980	1985	1990	1995	2000
Production	8.4	13.9	17.8	25.0	37.4
Consumption	11.5	16	20.3	27	33.2
Reserves	0.6	0.7	0.7	0.6	0.8
Exports (*)	s/d	s/d	s/d	s/d	4 642.7

(\*) Expressed in MMm3. The rest is expressed in Bcm.

Source: Created by the author based on data from IAPG (2007) and BP Global (2016).

## 2.1 THE ENERGY POLICY UNDER KIRCHNERISM

Between when the Repsol group acquired YPF in 1999 and December 2003, the hydrocarbon sector spiraled downward. In that short period of time, the reserve/production ratio declined from 10.5 to 9.8 years for oil and 17.6 to 12.1 for natural gas.<sup>11</sup> Considering that Argentina's energy matrix is primarily gas and that gas is the preponderant resource in the country, supply problems quickly came to light. Against the impossibility of meeting the demands of the domestic market and demands from foreign neighbors, the executive branch released (in March 2004) a hydrocarbon export rationalization program to prevent the domestic supply from buckling altogether. Thanks to this measure, natural gas exports to Brazil, Chile, and Uruguay began to fall, with the exception of the country's neighbor across the Andes, which began to recovery slightly starting in 2010/2011, although never returning to the values from 2004 (see Table 3).

Chile is unique because the rationalization process, which in practice entailed not only service restrictions but also suspensions, was not foreseen by the FPV administration. In fact, it took the Ricardo Lagos (2000-2006) administration by surprise, setting off the so-called gas crisis between the two countries (Lorenzini, 2011). Chile's complaints came swiftly. The country had structured its entire energy system around importing Argentine gas starting in 1997. Aware of the mistake in relying on a single supplier, the Chilean executive branch began to search for alternative liquefied natural gas (LNG) suppliers to offset the energy deficit resulting from cuts and/or suspensions of natural gas from Argentina.

To deal with the insufficient energy supply, Néstor Kirchner's first line of defense was to approach the Carlos Mesa Gisbert (2003-2005) administration to negotiate a natural gas purchase agreement. At that point in time, the FPV administration's strategy was to quickly find a regional supplier to help out in fulfilling domestic natural gas requirements in an effort to offset the negative fallout for the economy as a whole, which was barely beginning to recover after the exit from convertibility.

The Andean state has historically enjoyed a positive production/consumption ratio, making it a net natural gas exporter in the region. Argentina's gas needs opened up a new chapter in their bilateral ties and, at the same time, brought the energy question back to the table as a priority issue on the shared agenda.<sup>12</sup> On April 21, 2004, Kirchner and Mesa Gisbert signed a temporary natural gas purchase agreement for four million m3 daily, which was renewed in the months of November 2004 and 2005 on request of the Argentine government to increase amounts sent to up to 7.7 million m3 per day (Convenio Temporario de Venta de Gas Natural, 2004).

(SEE TABLE 3)

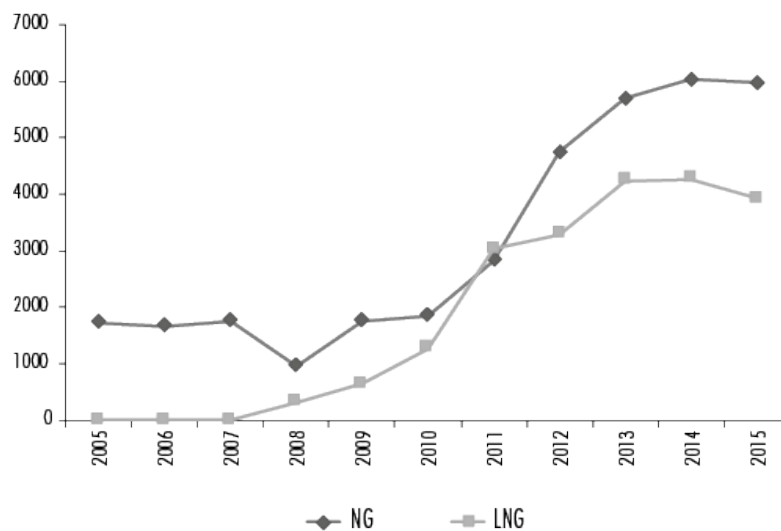
The inability to reduce dependency on imported natural gas in the short term became clear after the announcement of the nationalization of Bolivian hydrocarbons (Decree 28.701), on May 1, 2006, when the Kirchner administration became one of the first to negotiate a new supply contract as part of the provisions set by the Evo Morales administration. On October 19, 2006, Yacimientos Petrolíferos Fiscales Bolivianos (YPFB) and Energía Argentina Sociedad Anónima (ENARSA)—created by the president in 2004—on behalf of their respective governments, signed a natural gas import/export agreement extending to 2026. It is worth noting that in the former president's speech to the opening of the session of the Legislative Assembly, on March 1, 2007, ENARSA was rolled out as a "company witnessing (...) the recovery of the share

of the state in the Argentine energy market" (Kirchner, 2007). In reality, ENARSA was created to intervene in the various upstream and downstream phases of the sector, but as a limited liability company with 53% of the shares in the hands of the state. Some 35% of the shares were reserved for the private sector. The rest went to the provinces (Law 25.943, 2004).

What was special about the ENARSA-YFPB contract was that the amounts for Argentina to buy were set to rise gradually until reaching a final volume of 27.7 million m3 daily (Contrato de Compra-Venta de Gas Natural ENARSA-YFPB, 2006). To the 2006 agreement is added the signing of an interruptible contract, on July 18, 2012, permitting ENARSA to buy additional volumes of natural gas to be marketed at the behest of YFPB pursuant to market requirements.

Up until 2009, natural gas exports to Brazil, Chile, and Uruguay exceeded imports coming from Bolivia. From that point forward, nevertheless, purchases began to rise constantly, practically eclipsing the amounts sent to the bordering countries. Likewise, in 2008, LNG imports from regional destinations and even places outside of the region, to supplement the Bolivian, joined the mix.<sup>13</sup> Just like the pipeline gas, LNG purchases were on the rise (see Figure 1). In monetary terms, the preponderance of energy imports to energy exports gave rise to two parallel situations: scaling up of state spending to cover these purchases and a rising energy trade balance deficit throughout the two Cristina Fernández terms. Solely in the case of natural gas, the negative balance in 2010 amounted to 81,785,578 dollars, ascending to 1,338,375,237 dollars by 2015.<sup>14</sup> To this figure must be added imports of other energy sources and/or fuels, like LNG, LPG, electricity, and gasoline.

Figure 1. Imports of Bolivian Natural Gas and LNG



Source: Created by the author based on data from IAPG, ENARSA, and Indec.  
Natural gas (in millions of m3). LNG (in millions of net kg).

Besides continuously and increasingly turning to imported energy, the Néstor Kirchner and Cristina Fernández administrations bore witness to the enactment of other measures to reverse the energy deficit. Bravo's (2015) paper stands out, analyzing thoroughly and in great detail the hydrocarbon policy implemented between 2003 and 2014. The author examines the entire patchwork of actions and provisions comprising the national energy policy, shaping the government's strategy to manage the sector. This tapestry includes measures such as maintaining the export duties on hydrocarbons (enacted in 2002); creating the Fiduciary Funds to develop energy infrastructure (2006); the Total Energy Program (2007); and the Petróleo Plus and Gas Plus programs (2008) among some of the highlights. Other measures that might be thought of as larger scale also took place, like the creation of ENARSA; the expropriation of 51% of the equity of YPF SA and Repsol YPF Gas SA in 2012; and the partial modification of the hydrocarbon regulations in 2014.<sup>15</sup>

Regarding the efficacy of the former (to which the role of ENARSA must be added),<sup>16</sup> looking at the statistical data on gas and oil reserves and gas production and consumption volumes, it is inferred that these measures were not enough to reverse the downward spiral of the energy balance and make a substantial dent in the energy matrix. At the end of 2003—the first year of the Kirchner administration—oil reserves amounted to 425,213 thousand m3 (Mm3), and production was at 42,980 Mm3, while gas reserves were calculated at 612,496 million m3 (MMm3) and production was at 50,576 MMm3. As the second Fernández term drew to a close, oil reserves had declined to 380,731 Mm3 and production to 31,971 Mm3. Looking at natural gas, reserves fell to 350,484 MM3 and production 42,896 MMm3, although consumption rose nearly 25%.<sup>17</sup>

The lack of significant progress with respect to renewable energy, despite the country's potential and the enactment of regulations related to the sector,<sup>18</sup> also epitomizes the lack of a holistic approach to the energy agenda. By way of

example, as said before, as of 2015, hydraulic energy accounted for just 4.8%, wind 0.2%, and solar 0.001% of the energy supply. Looking at biofuels, especially biodiesel, production has taken off since 2008 (from 711,864 to 1,810,659 tons in 2015), but it is primarily exported abroad. Said another way, the Argentine energy supply continued to remain heavily reliant on hydrocarbons, mainly natural gas, exacerbating its dependency on imports. To this should be added the loads of LNG from Nigeria, Qatar, Trinidad and Tobago, among places.

## 2.2 THE EXPROPRIATION OF THE REPSOL GROUP

On May 3, 2012, with Law 26.741, the expropriation of 51% of the equity of YPF SA and Repsol YPF Gas SA was approved, declaring hydrocarbon self-sufficiency to be of “public interest” and a “priority objective” for the country (Law 26.741, 2012).<sup>19</sup> The measure was pushed through against the backdrop of, on the one hand, poor performance for the company—production and reserves waning and imports waxing—and the government's own failures (described above). As Bravo (2015, p. 21) aptly noted: “something had to be done.”<sup>20</sup>

On the other hand, the government weighed the potential of unconventional reserves—tight gas and shale gas—which began to gain a higher profile starting in 2011. Their exploitation would help shore up Argentina's energy security. In 2011, the U.S. Energy Information Administration published an initial assessment of the shale gas situation in 32 countries, which was updated two years later. The top ten countries with technically recoverable shale gas resources (in TCF) were: China (1.115), Argentina (802), Algeria (707), United States (665), Canada (573), México (545), Australia (437), South Africa (390), Russia (285), and Brazil (245) (U.S. EIA, 2013, p. 10).<sup>21</sup> YPF views non-conventional energy sources as an unprecedented opportunity to move toward self-supply and, in this regard, Barrera *et al.* (2015, p. 14) asserted that the company's expropriation was key in leaving behind an energy policy that had been preeminent in the market. Even so, considering the gravity of the energy situation the country began to face in the aughts; the brief amount of time that has passed since the expropriation of Repsol; and the nascent state of the YPF agreements with oil transnationals, Law 26.741 should be analyzed without falling into such a stringent standpoint.

On the one hand, the Barrera *et al.* (2015) study emphasized how the capitalization of the company became stronger through profits and job creation related to extractive activities in the hydrocarbon provinces. The redirecting of the profits has allowed the company to focus on exploration and exploitation to help the sector recover. The statistics show that as of 2015, natural gas and oil reserves were slightly on the rise, calculated at a 6.7% increase for the former and a 2.7% increase for the latter between 2013 and 2015.<sup>22</sup> However, these figures should not be looked at without remembering, as described before, that during the Kirchner administrations, the reserves behaved, on the whole, negatively.

Looking at employment, the analysis underscores—based on Mendoza, Chubut, Neuquén, and Santa Cruz—that “between 2012 and 2014, there was a veritable increase in the gravitation of the four provinces in employment in the field [oil and gas extraction] (from 40.9% to 44.4%)” (Barrera *et al.*, 2015, p. 33).

Although the FPV, just like other parties that governed in the region this century—the PT in Brazil; MAS in Bolivia; the PSUV in Venezuela; and more—has been sharply critical of neoliberal reforms and the lack of state presence in strategic economic sectors, like the energy sector; actions leaning toward upholding the central features of the state/market interactions of the nineteen-nineties have tended to predominate. Former President Fernández de Kirchner affirmed that with the expropriation, YPF would remain a “limited liability company” and that it was not a “nationalization model” (Fernández de Kirchner, 2012). In other words, the process of striking a true inflection point with the past and looking to an energy policy of the future whose provisions and actions grant the state a larger role is still taking its first steps.

One year after the expropriation of the Repsol group, the president announced the signing of agreements between YPF and other groups, like Chevron, Dow, and Petronas, to exploit Vaca Muerta, one of the principal non-conventional fields, located in the Neuquén basin in the southeastern area of the country. The total surface area of Vaca Muerta is 30,000 km<sup>2</sup>, of which 12,000 km<sup>2</sup> belong to the YPF concession. Now, it must not be forgotten that mining shale gas also requires large amounts of investment that must be sustained over time—due to the complexity of the extraction process —; one speaks of technical recoverable reserves (not proven reserves) and accurate information is still lacking as to the socioenvironmental impacts of ongoing projects (Apud *et al.*, 2014, pp. 180-183; Bravo, 2015). Along these lines, there have been significant controversies swirling around the YPF-Chevron agreement signed on July 16, 2013, in response to the lack of transparency as to its content. It has spurred concern and uncertainty as to the powers granted by the Argentine government<sup>23</sup> to access one of the country's largest non-conventional reserves.

It is worth bearing in mind that Law 26.741 on hydrocarbon sovereignty is governed by Decree 1277 of July 25, 2012, supplemented by Decree 929 (July 11, 2013), in other words, days before the YPF-Chevron agreement. Decree 929 provided for the creation of a system to promote investment in exploiting hydrocarbons; its objectives included achieving hydrocarbon self-supply to ensure economic development and boosting investment and join national to foreign capital in the exploration and exploitation phases of conventional and non-conventional fields (Decreto 929, 2013). Because attracting investment is key to breathing momentum into the industry, these regulations stipulated incentives to free commercialization of 20% of oil and gas production to the concession holders—starting in the fifth year—in the foreign market without having to pay the respective export duties, and the free availability of foreign currency derived from the transaction in projects where investment exceeds one billion dollars (Decreto 929, 2013). To García *et al.* (2016, p. 10): “the potential seen in shale has served as a motor [to] enact a new hydrocarbons act,” Law 27.007 of October 29, 2014, which, in reality, introduced amendments to the Hydrocarbons Act (17.319/67) to contemplate questions pertaining to

non-conventional energy sources. Several of the most salient aspects are as follows: 1) the difference in the exploration permit timeframes, for both conventional and non-conventionals; 2) no limits are set on how many exploration permits an individual or enterprise can hold; 3) the exploitation concessions for conventionals are 25 years long, but 35 years long for non-conventionals, including a five-year pilot period. If the holders of the concessions live up to their obligations, they can apply for 10-year extensions; 4) it reduced the amount required for investment projects to enjoy the benefits in Decree 929 from one billion to 250 million dollars. The benefits outlined in the Decree will be recognized starting in the third year; 5) environmental obligations are meager. The only requirement is to pass uniform environmental laws with an eye to implementing best environmental management practices (Law 27.007, 2014; Bravo, 2015). All of these provisions were pushed by the executive branch to encourage transnational companies to get involved in the sector. But in terms of rhetoric, it has defended the energy policy objective of needing the state to provide guidance and control in those sectors, like the energy sector, that drive socioeconomic development.

## BY WAY OF REFLECTION

If energy policy, like any public policy, refers to the suite of decisions, actions, and provisions made by the governmental powers to manage the energy sector, the following aspects emerge in the case of Argentina. First and foremost, several factors drive how the energy question has been treated on the domestic agenda and how the energy policy has both changed and remained the same over time. In the nineteen-nineties, energy came to the forefront of the policy debate, as it was deeply involved in economic liberalization and opening, which provided the umbrella for the privatization for YPF and Gas del Estado. With the Kirchner administration, energy became a focus of concern due to the energy crisis that hit the country and its reconversion from gas exporter to importer (with the economic impacts entailed). This led to fallout for regional bilateral ties, because Argentina's energy difficulties meant, on the one hand, a commercial opportunity for Bolivia and, on the other, a setback for its relationship with Chile, because, as Lorenzini contended (2011, p. 23): "the gas crisis was the most severe conflict the bilateral relationship had experienced [...] since 1990." The situation evinced the lack of an effective energy policy with market predominance and, at the same time, the executive's error in pulling the state back from controlling a strategic industry. Thus, the common thread flowing through all energy policies beginning with the Menem administration was to map out an entire scheme of regulatory and fiscal facilities to attract transnational capital that would guide, in the place of the state, the fate of the sector.

Despite the poor results of the energy policy of the nineteen-nineties, Kirchnerism did not undertake holistic decisions to change the backbone of the policy. Until the expropriation of the Repsol group in 2012—which would come to be an inflection point in the future—context-reactive actions prevailed, lacking any view of the medium or long term, which failed to bring the discourse of defending the role of the state as the main player in energy policy to fruition. That is to say, the market continued to hold the spotlight when it came to managing the sector. Now, five years after the expropriation (partial, to be sure), uncertainties outweigh certainties, because it is still unclear what the state/private sector interactions are going to look like.

Second, looking to the future, it is evident that the challenges are multiple, complex, and sometimes, contradictory: the decrease in energy imports due to their weight in the trade balance—especially in times of high international prices—; the burgeoning national hydrocarbon business (conventional and non-conventional) with an eye to self-supply; an increase in using renewable energies; and, in particular, the mapping out of an energy policy that goes beyond the immediate. This final point will be key to determining the what, how, and why of a public policy in pursuit of effective implementation.

The country has energy potential for both renewables and non-renewables. As a result, and in response to the missteps in management committed by recent administrations, it is of vital importance that the current and future administrations design actions and measures designed to gradually build up an energy policy predicated on a solid regulatory base; state control; precise limits on private stakeholders interested in participating; and an inclination toward national socioeconomic development.

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## LEGISLATION

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<sup>3</sup> The points of agreement in the guidelines described have been taken into account.

<sup>4</sup> Bear in mind that the Regional Dialogue on Extractive Industry Governance and Infrastructure (November 8 and 9, 2016) was held by the Economic Commission for Latin America and the Caribbean, in Santiago, Chile, hosting 19 governmental representatives from Latin America and the Caribbean. Azhar Jaimurzina (2016) (ECLAC Infrastructure Services Unit, Natural Resources and Infrastructure Unit) asserted that "natural resource governance is a key element of the 2030 Development Agenda goals (...) and one of the primary pillars of ECLAC." This governance is "exercised through a set of formal institutions, informal institutions, and sovereign policy decisions, whose actions together govern the machinations of the extractive sectors." ECLAC promotes governance beneficial to all three stakeholders, specifically, the government, the private sector, and society. On energy governance, see research by Fontaine and Puyana (2008) and Fontaine (2010).

<sup>5</sup> This paper considers the Tasni (2014) notion of an energy crisis, affirming that an energy crisis should be understood beyond the "energy supply bottlenecks." "It can also describe a state of reliance on single or scant energy sources" (...) "Similarly, it can describe a state of overdependence on a single energy supplier or energy transport route." Interview by Federico Bernal (OETEC), Buenos Aires.

<sup>6</sup> See the set of regulations that made this process possible, IAPG (2007), Estadísticas del Centenario.

<sup>7</sup> See Campodónico (2004); Kozulj (2005); Mansilla (2007).

<sup>8</sup> In the time period 1990.2000, the reserve fluctuated. The slight increase between 1995 and 2000 can be explained by Repsol's acquisition of YPF. Nevertheless, it should be noted that the information from this time period ought to be taken with a grain of salt due to the lack of external audits.

<sup>9</sup> In 1991, the government approved the Convertibility Act (Law 23.928), ushering in a profound reform of the country's monetary system. One key aspect was the establishment of convertibility between the national currency and the United States dollar, a situation which in practical terms, implied 1 to 1 parity. After the end of convertibility, the Argentine currency was devalued.

<sup>10</sup> See the hydrocarbons regulatory framework in the years 2001-2002. IAPG (2007).

<sup>11</sup> Data from the Ministry of Energy and Mining of the Argentine Republic.

<sup>12</sup> As mentioned earlier, despite the intensity of gas production, Argentina needed to buy Bolivian natural gas (between 1972 and 1999). At that point in time, natural gas played a dual role: it contributed to converting the country to a gas user and served political interests. On this latter point, see Escudé and Cisneros (2000), Volumes XIII and XIX.

<sup>13</sup> In reality, LNG imports date back to 2005, but at that point in time in very insignificant volumes. Starting in 2008, LNG purchases took a qualitative leap.

<sup>14</sup> Data based on the information provided by the Statistics and Census Institute (Indec).

<sup>15</sup> See the Bravo (2015) study, providing not only a description and examination of each of them, but also extending analysis to other decisions about the sector.

<sup>16</sup> As Bravo (2015) asserted, ENARSA did not meet the goal of giving the state the preeminent role over the private sector and raising industry productivity. It lacked the human and economic resources to do so.

<sup>17</sup> Data from the Ministry of Energy and Mining of the Republic of Argentina and Indec.

<sup>18</sup> See current legislation on Renewable Energies on the Ministry of Energy and Mining of the Republic of Argentina's website [online], recovered from (viewed on October 3, 2016).

<sup>19</sup> Due to the expropriation, the government of Argentina and the Repsol group had to begin negotiating to reach a compensation agreement (*El Cronista*, 2014).

<sup>20</sup> Even so, see Bravo's (2015) work, providing a critical analysis of the Repsol-YPF expropriation.

<sup>21</sup> According to estimates from Advanced Resources International (ARI), in the case of the United States, the shale gas estimates are 1,161

(TCF) (U.S. EIA, 2013, p. 10).

<sup>22</sup> Percentages calculated based on IAPG data.

<sup>23</sup> The Chevron agreement was validated by the National Congress without revealing any of the details of the transaction. The companies alleged that the letter of the agreement should be kept confidential due to commercial and science/technology reasons. In response to complaints from the political opposition forces and NGOs, in 2015, the Supreme Court ordered the publication of the agreement. In October 2016, the lawmaker Rubén Giustiniani announced the creation of a commission made up of NGOs to study the contract in detail. According to the lawmaker, three points are concerning: 1) the formation of offshore companies for the transaction; 2) the tax issue and environmental accountability; and 3) the dispute resolution model (Infobae, 2016).

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