

Government Intervention in the Natural Gas Market: THE ARGENTINA CASE

BY

Raul García

NON RESIDENT FELLOW



INSTITUTE OF
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ENERGY & SUSTAINABILITY PROGRAM

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Introduction

This report is about government intervention in the gas sector in Argentina. The cases analyzed are the Reforms of the 1990's and the subsequent intervention of the government in the gas market when gas supply/demand imbalance in 2004 transformed itself into a supply crisis that lasted for more than a decade. The intervention had pervasive effects on the gas deregulated market.

Government intervention in the 1990's can be described as a 'structuring intervention' that was key in the design and reorganization of the gas sector. Moreover, regulatory institutions created in the gas and electricity sector carried out an independent role from the government, and these agencies regulated and monitored the performance of the energy sector, set tariffs, a role exercised politically by governments previous to the Reform.

Government intervention after the macro devaluation and economic crisis of 2002 took a different pattern. It replaced energy regulatory agencies in tariff setting functions and introduced price controls in the gas deregulated markets. Regulatory agencies carried out mostly a technical function, following government indications on pricing and transaction matters.

The effects from these interventions are described and analyzed in this report and lessons are drawn. Possibly the most important lesson of all is that sooner or later economic pricing emerges as the principle that governments cannot disregard and need to make it operational in all kinds of market interventions; and that a smooth working of interphase of the regulated (bundled market) vis-a-vis deregulated (unbundled) market also needs well defined regulations and clear allocation of roles among agents of the industry.

The report has been structured as follows. Section 2 discusses a practical definition of regulation that relates to government intervention. Section 3 discusses the swinging pendulum of government intervention that has taken place in Argentina, and the last section delves into lessons learned from government intervention.

Government Intervention in the Energy Market

Government intervention takes many forms, most notably, indicative/mandatory investment planning, setting energy prices and tariffs, restricting the type of transactions in the domestic and export/import markets, awarding permits and licenses to for private companies to provide services, setting out the policy objectives of the energy sector, and the list of activities could certainly go on.

Alfred Kahn, well-known for his work on US airline deregulation in the 1980's, provided a definition of regulation that relates directly to government intervention. Succinctly stated, "*government regulation is replacing decisions usually taken by agents in a market with the institutional orders emanating from the authority.*"

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Examples follow: in a competitive market agents enter/exit the market freely depending on excess/deficit return over normal return whilst entry/exit of firms in a regulated market needs authorization from the regulatory authority; prices and other contractual conditions are negotiated among agents in the market, whilst in an intervened market prices and tariffs are set by the government and/or the regulatory authority; quality of the services to be provided are also regulated. Indeed, the definition also lends itself to clarify stakeholder's roles. In many markets the government regulates not all decisions to be taken by agents and this implicitly helps define the role for each party.

During the 1990's governments in Latin America undertook structural and organizational changes in the energy sector that involved redefining roles of the government itself and of the private sector. The Argentine reform was a case in point because it limited roles for the government in the energy market and allocated remaining roles to regulatory bodies and to the private sector. **(Annex 1 provides further background on reforms of the 1990's and the change in roles and organization of the energy market in Argentina)**

The definition above helps explain the change in the rules of the game in the energy sector after the supply/demand imbalance of 2004, the forced re-allocation of roles among market agents and the constrained role played afterwards by regulatory agencies. The Government undertook the function of determining tariffs and the regulatory agency was implicitly left with technical duties.

To reduce the domestic supply/demand gas imbalance the government redirected gas from exports to supply the domestic market; this intervention mechanism was intensively used instead of resorting to the market mechanism: letting gas market prices adjust upward to bring supply and demand into balance¹. Needless to emphasize, the principle of free availability of gas was no longer in force – producers choosing/contracting in the domestic or export market-; producers had to obey government orders and firm transportation and gas sale agreements lost any significant value under these circumstances. The conflicts that arose among the government and concessionaires, and among gas exporters and importers in this situation related to a large extent challenging that gas market intervention were 'institutional orders,' that is, reflected the gas regulatory framework.

Since 2015 the present government administration is taking measures to redefine roles so as to comply and fulfill the laws 24.065 and 24.076 approved for setting out the reforms of the electricity and gas sectors respectively in the 1990's – the backbone of the energy regulatory framework. The next section expounds further on this issue.

¹ This and the mechanism of curtailing interruptible contracts were established in the gas regulatory framework. Gas curtailment was used throughout all periods. However, as shown below, curtailment was highest during 2007-2008 when exports were practically reduced to an insignificant quantity.

Allocation of Roles

The Swinging Pendulum of Government Intervention in Argentina

There were some distinctive aspects of the Reform implemented by the Argentine Government in the gas industry in the period 1989-92² which can provide context and aid understanding subsequent events in the energy sector in the last fifteen years. These events cannot be disentangled from the nature and extent of energy market intervention by the Argentine Government.

Agents in the gas sector undertake contract commitments and long term investments trusting the 'rules of the game' would not be changed. However, after the macro-crisis of 2002 the Argentine government intervention measures in the gas market superimposed on

existing regulations in unexpected ways effecting negatively gas transactions in the domestic and export-import markets.

Quantitative as well as pricing intervention measures brought about the deepening and the persistence of gas supply/demand imbalances since 2004. The macroeconomic tsunami of 2002 distorted energy relative prices (the exchange rate tripled and tariffs were frozen); supply shortages developed in 2004 as price adjustment mechanisms remained suspended since 2002 and the Government of Argentina substituted these mechanisms with quantitative measures such as redirectioning gas from the export to the domestic market; de-contracting in the natural gas chain took place as contracts were not renewed; the government defined gas allocation rules unrelated to market valuation to assign the short supply to customers; gas reserves and domestic gas supply fell, imports as well as direct subsidies were increased to encompass political tariff objectives (i.e. avoid any tariff increase), export/import trade and fiscal deficits increased, and the energy micro problem of 2004 grew to become a macro problem; and as of today we have both a macroeconomic problem (high fiscal deficit from high subsidies, high inflation) and an energy problem that is gradually being corrected by the Macri administration.³

Questions coming forward from these intervention cases are: What can go wrong with government intervention? Is it plainly ignoring basic economic understanding of resource allocation and dynamic productivity over the years? Why did the supply/demand imbalance

last for so long? How to solve the problem today: Is there a transition path to previously existing rules, basically laws instituted in 1992, and will that be once again be the

² Beginning with the enactment of the State Reform Law N° 23.696/89 and the Economic Emergency Law N° 23.697/89, the Oil and Gas sector started a deep institutional and organizational transformation in all markets. The purposes of the new hydrocarbons policy were: the deregulation and privatization of state-owned companies and the transfer of oil and gas property, as well as the transfer of YPF's commercial risk to private investors (many of them former contractors).

³ Resolving these problems involves reducing subsidies whilst implementing price and incentive measures to elicit gas supply through further exploration and development of non traditional reserves – tight and shale gas.

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cornerstone for unleashing investment and gas supply growth? These questions will be addressed during the report.

A non-avoidable part of the solution is to remove relative prices distortions (upward change of price of energy/rest of the economy) whilst taking measures to reduce poverty and fight inflation back⁴. Thus, the most important issues to tackle in the present context are: i) 'economic' tariff and pricing, ii) re-introducing 'contracts' consistent with role allocation/responsibilities among agents; iii) recreating a competitive gas market where price signals are transmitted to whole gas chain and where the private sector commands investment decision making. Notwithstanding the efforts from the government since late 2015 to reverse the above situation, the departure conditions at that time presented a bit of an obstacle to a swift change; price/tariff distortions and direct/cross- subsidies were high and government remains a big player in the supply of imported and domestic gas and in the electricity sector.

The Reforms of the 1990's

The reforms of the 1990s aimed at developing energy markets in a steady and efficient manner in order to solve supply and infrastructure bottleneck issues. The energy regulatory framework created the foundations for a model of institutional organization and operation of the energy sector comprising the allocation of roles and creation of regulatory agencies, the rules for transactions to be carried out by agents and the pricing and tariff formation mechanisms.

This institutional organization meant to: review the roles of the State and of the private sector by means of clearly allocating responsibilities to each player, create new independent regulatory institutions, restructure the provision of services, replace the generalized intervention over prices deregulating the gas and energy commodity markets (production and commercialization of gas), and regulate rates in the infrastructure monopoly services based on economic principles (transportation and distribution services).

The adequate operation of the contractual, regulatory and pricing mechanisms established in the gas regulatory framework sent the right signals to industry agents a wide and integrated (domestic and export) market was kept well-supplied and in balance. This is evidenced by certain facts: the Reform led to a swift and sustained growth of the domestic and the export gas markets. Both markets increased pari-passu with domestic gas supply and gas reserves. There is, above all else, one primary conclusion: The export market was not a residual market dependent on the supply needs from the Argentine domestic market. This situation which lasted 12 years changed dramatically after the supply crisis of 2004.

⁴ Which themselves will inpinge on inflation momentarily but not permanently.

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Some key performance figures of the gas reform from 1993 to 2004:

- Size and evolution of the ‘deregulated gas market’ for large users: it grew from few transactions in the deregulated market in 1993 to 60% of domestic/export gas sales 10 years later; in quantity of contracts: 25 contracts in 1993 and 1,520 contracts in 2001
- Exports represented 17% of domestic gas supply;
- In 2001, industries contracted 61% of their demand firm basis, while power generators only contracted 27%
- Reserves almost doubled in 10 years; and production increased by 50% in the same period

The results from those years lends credence to the idea that good performance became part of an information set that effected positively on long term investment and contracting, thus setting in motion a virtuous circle. Under that framework, gas demand/supply imbalances could not be permanent and were solved by price movements and contractual rules set forth to handle gas imbalances without changing the rules of the game.

The Supply Crisis of 2004

When a government undertakes market reforms or when trying to solve problems stemming from previous inadequate market intervention/regulation, it shall take into consideration that:

- i) Markets are interrelated, particularly the regulated or retail market, which usually is a prioritized demand, and the deregulated (wholesale) markets, since imbalances in the regulated gas market will likely impinge in the deregulated market;
- ii) Flexible price and contracting mechanisms help backing license supply obligations;
- iii) Removing subsidies is a difficult job once subsidies are either awarded to suppliers or to customers.

To resolve the 2004 gas supply demand imbalance, the Kirchner administration reinterpreted the domestic market priority and imposed on producers the obligation to supply the domestic market. This was a negative signal for infrastructure investment in the gas chain. What then was the incentive to invest in upstream activities and to undertake contractual obligations that will be reinterpreted by the government into uncertain supply obligations? The response from the market agents was very little investment beyond obligations established in ongoing contracts.

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Free availability of gas and the priority to supply the domestic market in an integrated energy market had been solved during the reform period under the 'correct interpretation' that long term contracting could only take place if the priority to supply the domestic market was assessed by the government before granting export permits and regulatory/market price mechanisms were in place to accommodate for supply/demand imbalances.

But government intervention in 2004 mutated the role of producers making them responsible for supplying the domestic market, an obligation that the Reform had placed on distribution companies⁵. Frozen tariffs and suspension of the gas price pass-through mechanism became an obstacle to gas contracting, which in turn led to further government intervention in the supply/demand chain as domestic gas supply contracted. First, gas exports were redirected to the domestic market, then gas curtailments to large users were increased, and when these measures were not sufficient to allocate the gas to the prioritized uses, the government resorted to increasing imports and thus commencing a direct subsidization policy to avoid price/tariff increases.

Figure 1 on reserves and production shows a steady decrease of reserves and production, the latter from its peak in 2004; Figure 2 shows the increasing gap between gas consumption in the domestic market and unrestricted demand since 2004 and deepening in 2007-8.

During this period, the Government of Argentina played as many roles as before the Reform of the 1990's, though on this occasion of an unsuccessful nature: supplier of imported gas through government owned ENARSA, nationalization of YPF and regulator of the 'before' deregulated energy market. Gradual de- contracting and increasing direct subsidies were the

other side of the coin of a permanent shortage in the domestic deregulated and regulated gas markets.

After 12 years of price- quantity government intervention, the figures are illustrative:

- Direct national government subsidies to the energy sector scaled up from roughly 500 MM USD in 2005 to 15 B USD in 2013 (30 x); and to the gas sector from 300 MM USD in 2006-7 to 6 B USD in 2013 or 40% of energy sector subsidy.
- Gas curtailments: from almost none in 2001 to an average of 20 MMm³/d;
- Reserves (proven) were cut in half in 10 years (2002/2012).

⁵ The gas regulatory framework allocated separate roles to private agents and governmental agencies. Gas distribution companies had the obligation to supply gas to its (including some firm users and all interruptible ones) and that implied contracting gas and transportation as necessary; producers' obligations in respect to their delivery commitments to both the domestic and the export market agents were established in the respective gas contracts.

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- Gross gas production fell from 50 B M3/year in 2004 (unsustainable) to 40 B M3/year.
- Imports increased (maximum today is near 34 MM m3/d in LNG and 17-20 pipeline gas from Bolivia, totaling near 50-54 MM m3/d or 40% of gas consumption);

Figure 1

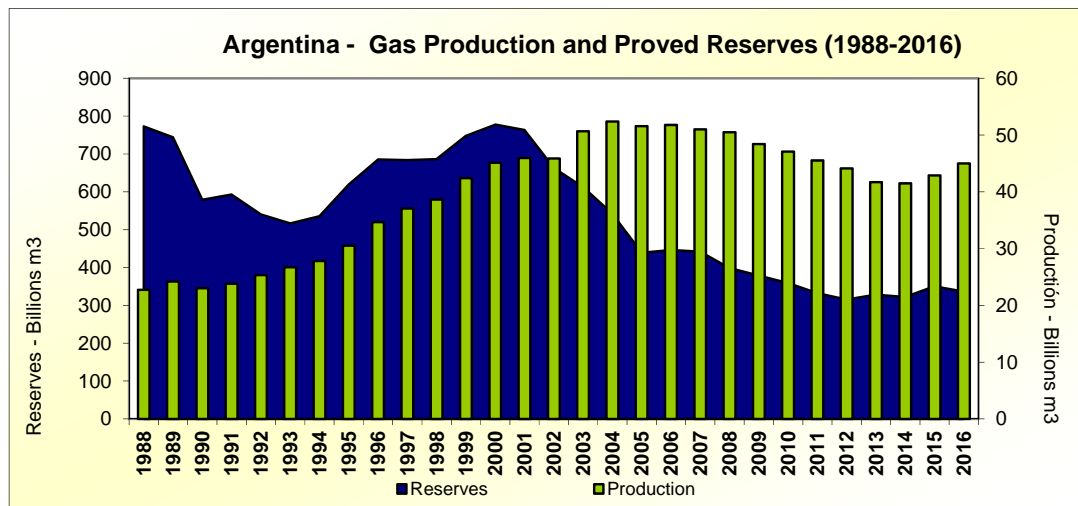
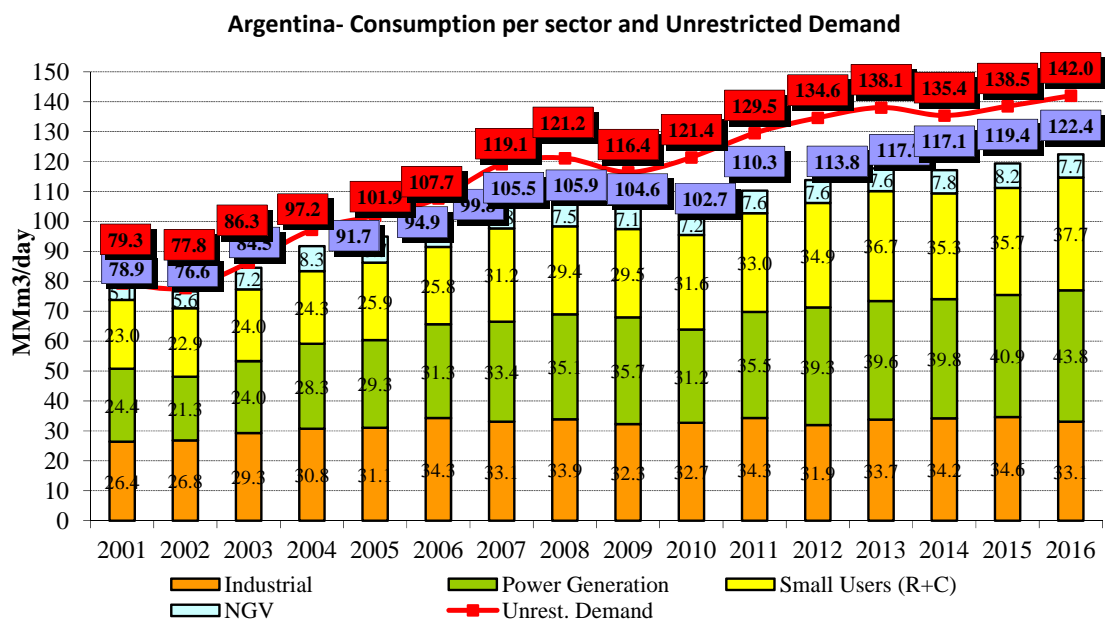


Figure 2



Source: author's own elaboration with data from Enargas, Cammesa and the Secretary of Energy.

Unlocking Domestic Gas Supplies: The Government Agenda Since 2015

Argentina's new government administration⁶ has been very active in trying to resolve the macro problems of high inflation, unemployment and reducing poverty. Price distortions related to energy is of great magnitude and the government has focused on energy prices and tariff adjustments.

The aim of the government is to recreate contracting, investment, to put the private sector at the core of transaction decision making, to connect the regulated and deregulated segments of the industry through the market price mechanism (gas negotiated in an open market) and to move albeit slowly to regional energy integration; and on the institutional side to revert powers and independence to regulatory authorities (electricity and gas).

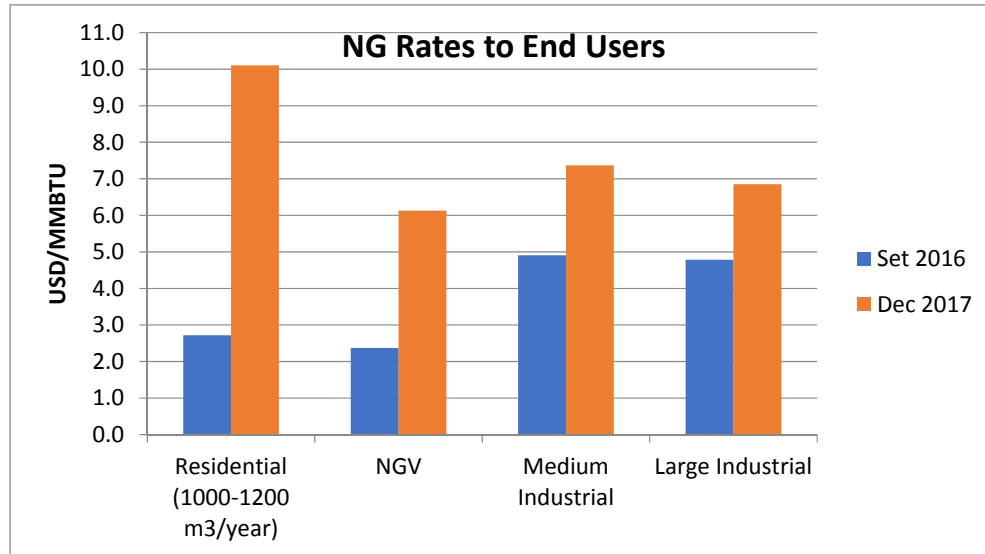
In short, the Macri administration is gradually removing pricing and tariff intervention measures introduced in the last 13 years and restoring and allocating roles to private and government agencies in accordance to the existing Gas and Electricity laws (Laws 24.065 and 24.076). Though in a new paradigm of energy sources, notably the revolution of renewables and unconventional gas sources, the energy market scenario is beyond oil transactions, it now includes LNG, bringing in more competition into the international energy market. This certainly effects the gas market positively as there are more sources of import and production of domestic gas.

Gas prices are being increased and realigned in reference to the LNG import gas price, and will continue until April 2018, thereafter tariffs will change in accordance to license price cap indexation mechanism; all concessions and licenses in the electricity and gas sectors have been renegotiated; electricity and gas tariffs are being reduced as tariffs increase, excepting those customers under the social tariff umbrella; investment is being attracted through open-transparent biddings, and contracting for gas and transportation capacity is increasingly taking place in a what remains a price-intervened deregulated market.

The transition to an open competitive market with less government intervention will take at least two/three more years not only because of the de-contracting process that needs to be reverted in full, but also because the government has become a bigger player through the nationalized YPF and the gas import monopoly held by ENARSA needs to be replaced by open access in the gas regasification terminals. More structural and organizational changes to a more profound market liberalization will be part of the transition agenda.

⁶ Since December 2015, the Executive Power is now exercised by President Mauricio Macri from the party Cambiemos. The Peronist movement had been in power since the macro crisis of 2002 and the consequent resignation of President De la Rúa. After a short period of successive temporary presidencies, Nestor Kirchner was elected as president and was later succeeded by his wife, Cristina F. de Kirchner.

Figure 3



Note: author's own elaboration based on ENARGAS resolutions.

Increasing Competition Through Market Opening

The reform of the 1990's aimed at increasing competition in the gas market. Part of the reform package included the provision to allow customers to choose a supplier different than the distribution company. The regulatory agency was empowered to set the threshold level for customers to be able to exercise choice⁷.

Three pillars of successful market opening relate to: effective regulated open access in the provision of network services – transportation and distribution-; supply and demand diversification; a reasonable timing for market opening and a defense of competition agency and anticompetitive measures in place. The government, usually through different agencies: the gas regulatory agency and the defense for competition agency help structure and monitor the evolution of competition in this market. There are many market opening success cases in the European Union energy markets, in the US, and in Latin America.

Table 1 shows the experience of market opening in several countries with regard to the threshold level as well as the timing to full (all customers being able to choose their supplier) or partial opening of the market.

⁷ Customers below the threshold level can only purchase a bundled service from the distribution company. Those above the threshold can purchase unbundled services: gas from a producer or commercialization company and network services from the Transportation and distribution companies.

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Table 1. Selected International Cases – Market Opening

Timing in the implementation of Market opening						
Country	Wholesale Market		Retail Market		Total	
	Stages	Years	Stages	Years	Stages	Years
Argentina	4	12	-	-	4	12
United Kindom	9	2	3	3	12	5
Australia-NSW	4	5	1	Implemented from 2002	5	6
Spain	5	4	1	Implemented from 2003	6	6
Italy	1	3	1	Implemented from 2003	2	3
Australia-Victoria	3	3	1	Implemented from 2002	4	3

Note: author's own elaboration.

The Argentine case was a successful case and the deregulated market reached in 2001 almost 60% of the gas market, nonetheless supply diversification was initially a low figure⁸. The gas regulatory framework envisaged that market opening would increase over the years; and vertical and horizontal restrictions to engage in the transport and distribution businesses helped develop gas competition by means of strengthening effective access to network services. Moreover, measures undertaken by the regulatory authority such as allowing for a capacity resale market increased contract options to sellers and customers.

Table 2 shows threshold level changes in the Argentine gas market as well as the number of users who purchased unbundled services.

Table 2. Argentine – Case on Market Opening

Market opening			Users (In number)		
	Rules	Consumption Threshold	Bundled		Unbundling
			Medium Users	Large Users	
Dec 1995	Optional (since privatization, dec 92)	>350 MCFD	44	356	32
Dec 2000	Optional (since privatization, dec 92)	>175 MCFD	87	300	140
July 2005	Mandatoy (until July 2005)	>17,5 MCFD	102	99	336
Dec 2010	Mandatoy (since July 2005)	>17,5 MCFD	-	-	4176

Volume (In MMCFD)					
	Bundled		Unbundling	Total	Unbundling/ Bundled %
	Medium Users	Large Users			
Dec 1995	6.5	851.6	292.3	1,150	19,6%
Dec 2000	7.6	406.4	920.2	1,334	22,7%
July 2005	6.3	190.5	1.2	1,426	24,2%
Dec 2010	-	-	1.8	1,972	33,5%

Note: author's own elaboration.

⁸ YPF at the time of privatization in 1992 supplied approximately 90% of the market. This slowly changed in the coming years.

The Impact of Intervention Measures in the Deregulated Market

Before the price interventions of 2002, price signals from transactions in the deregulated market were used by the regulatory authority to monitor and to authorize the pass-through of negotiated gas prices into tariffs – gas prices which stemmed from contracts celebrated among distribution companies and producers. Moreover, price and tariff signals fed into market decision makers and supply/demand imbalances were corrected through price changes and through voluntary interruptible contracts.

As described in section 3 the tariff freeze and suspension of the pass-through mechanism brought in a supply/demand imbalance. The regulated market (consisting mostly of prioritized demand from small customers) was kept well supplied by means of redirecting gas from exports and from large domestic gas users into that market. Contracts no longer reflected the parties' rights and obligations and firm contracts, most notably, were not renewed and had little value except for litigation purposes – which in fact occurred in almost all gas export transactions.

Circumventing price controls became an important activity and the number of transactions increased to avoid tracing the origin and destination of the gas (cheap regulated gas converted into a highly priced gas) and increasingly creating inefficiencies by increasing transaction costs. This is an interesting outcome: when market opening occurred, transactions also increased. But in this latter case transactions are increased reflecting market distortions created from government intervention.

Once again, the measures enacted by the Argentine Government, far from encouraging supply, had the opposite effect. Gas supply was declining – as did reserves – and demand continued to increase as a result of government tariff repression of both gas prices and transport and distribution rates. Without a doubt, a mistaken intervention on the variables that previously determined the market, prices and quantities, and of those regulated variables-tariffs, whose determination responded to rules in the regulatory framework, created diverse distortions, the magnitude of which was expressed in the growth of unmet demand that reflected in involuntary gas curtailments particularly from firm transportation contracts and gas sales agreements with take or pay obligations.

The valuation of scarce gas made by the economic agents differed from the regulated prices, which since 2002 were distancing from those that would have resulted from unconstrained market operations. This situation encouraged agents operating in these markets to adopt transaction schemes that sought to generate value from avoiding deliveries and lower-value consumptions of natural gas. This was why the number of transactions since 2005 increased and the operations carried out by marketers were of increasing importance.

In other words, the distortions created by the government led agents to devote resources to assemble transactions to arbitrate between market segments with significant price differences and to profit in a market with excess demand. Private actors took advantage of the ensuing trading but at the same time implied losses to society because those same resources would not

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have been dedicated to those ends if the government had allowed the regulated prices and tariffs will approach economic values.

Conclusion & Lessons from Government Intervention

Government intervention through price controls bring short term benefits to customers and votes to politicians. But the devil is in the details or just around the corner. Sooner or later energy objectives are not met, supply/demand imbalances become evident and energy prices have to be changed. In other words, economics 101 is at work, but politicians dislike and avoid taking unpopular measures to the extent possible, particularly during times of crisis.

The analysis of the Argentine case is indeed interesting because it brings to light government roles that are quite distinctive. The reforms of the 1990's created a complex system with separate and clear roles for the private and government agents along with market and regulatory institutions that supported a steady growth domestic and export markets. The government undertook a 'structuring role,' it created a different organizational system for the energy sector as a whole (oil, gas and electricity).

Each regulatory environment faces its own obstacles and challenges in market liberalization processes. The government can play both a structuring and a supervisory role to ensure that competition develops.

Removing price controls and removing subsidies is certainly more difficult under both political and economic terms. It effects negatively on consumers in the short term and brings benefits in the medium term. Possibly the best advice from regulatory experience is: do not introduce price controls and subsidies to correct market imbalances, let the market work these out.

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ANNEX 1

Referring to the reforms of the 1990s to the energy sector merely as a 'privatization' is an understatement of the magnitude of the reforms at both the macro level and the energy sector in particular.

Private capital becomes a more efficient vehicle for growth “if” productive capital replaces unproductive - government friendly investment. The aim of the Reforms was to devise and establish an institutional/regulatory framework that would enable private sector investment to increase productivity (efficiency) and to benefit consumers with more goods and services.

Through the Reforms, the energy sector was subject to a deep restructuring that included: deregulating competitive markets, such as the hydrocarbon upstream activities and electricity generation; breaking up public service monopolies into various interconnected segments that were regulated separately such as the activities of transportation and distribution of natural gas or electricity; privatization of the various segmented business units by awarding concessions and licenses; establishing a modern regulatory framework encompassing also the 1989 deregulation decrees for the electricity and gas sectors; and creating new regulatory agencies.

Since the Argentine Government played several roles with evident conflicts of interests, the Reform placed utmost importance in clearly allocating roles among government institutions and among government institutions and agents from the private sector - including players providing goods and services in the regulated and deregulated markets.

Thus, the private sector became the main provider of gas services that were regulated through licenses awarded by the Executive Power, and the Secretary of Energy established and enforced the energy policy. New independent regulatory institutions were created. ENRE for regulating the electricity sector with powers at the national level, and the ENARGAS for regulating the transportation and distribution services at the national level; the licenses granted stated the rights and obligations of transportation and distribution service providers; transactions in the sector were carried out using different terms as instruments to hire gas, transportation and distribution services; and explicit regulations were set up to supplement market mechanisms for matching gas supply and demand; rates were set so as to allow prudent operators to recover their costs for providing the services.

Briefly, the reforms were aimed at solving the problems encountered under the previous institutional organization. It needs to be emphasized that subsequent government interventions by the three administrations in office from 2002 to 2012, re-visited the old problems prior to the Reform.

Description of the organizational/institutional arrangements of the periods previous to the Reforms

The Argentine Government played multiple roles in the Energy sector: provider of goods and services through its state own companies, which in turn were the vehicles to instrument the government's energy policy. Prices and rates were set by the government through both the Secretary of Energy and the Ministry of Economy, which in turn issued energy policies and granted concessions and licenses.

Energy prices, whether for natural gas, liquid hydrocarbons and/or electricity, had little relation to the cost of providing these goods or services, and did not carry any signal of energy market imbalance. At whatever artificial price set by the government there was an energy demand/supply gap, and shortages, particularly, were managed in the following manner: in the short term, by prioritizing the allocation of the short supply to various uses, and resorting to imports when necessary; and in the medium term, by planning and constructing infrastructure to provide the necessary goods and energy infrastructure services. In other words, neither market price mechanisms nor prices were set by the government as market clearing tools to make demand match supply. The consequence of such state-of-affairs was large deficits run by the government owned companies financed by the Government Treasury.

To make matters worse, prices in the Energy sector served two other interrelated purposes: 1) anchoring the ongoing usually-high inflation, particularly when an anti- inflationary plan was put in place, and 2) redistributing income among energy users. In the first case, after a large initial increase in the level of energy prices and tariffs, these remained at the same level for some period of time. For the second purpose, rate increases promoted cross subsidies among consumer categories usually benefiting small users at the expense of large users. Sooner or later, the Energy sector problems – energy shortages - or the macro problem of the unresolved inflation prompted another substantial increase in the repressed energy prices so as to alleviate the once again unwelcomed financial distress of the government owned companies with impact on both the budgetary deficit of the government and on the energy trade balance (increasing imports).

Capital productivity was low in the energy sector as a whole. The periods in which private capital was invited to participate to boost production with more realistic pricing formulas helped alleviate some of the problems caused by the inadequate organization of the sector.

This brief description not only characterized the period before the Reforms of 1990's, but also, to a large extent, what happened after the 2002 macro crisis and the supply/demand gap of 2004 which in the next ten years mutated into an energy crisis.