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ISSN : 1875-418X
Issue : Vol. 10 - issue 3
Published : March 2012

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Oil, Gas & Energy Law Intelligence

The Ongoing Discrepancy of the Mexican Oil Industry. A Tale of Two Reforms by A. de la Vega Navarro

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*Submitted to OGEL (Oil Gas Energy Law) for its
10th Anniversary Special Issue*

The ongoing discrepancy of the Mexican oil industry. A tale of two reforms

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Revised version, March 8, 2012

The National Oil Companies now have «*to seek exploration acreage, production sources and markets for petroleum services beyond the national borders. (...) The path to successful survival for a State petroleum company –whatever the petroleum potential of the home country– lies in the transnationalization*». Thomas W. Wälde (1991; p. 415).

The reference, when analyzing the evolution of oil and gas industries in the 1990s, is what we will call a «norm of transnationalization», which was supposed to structure both the global economy and the national economies. Since 2007, the reference is a world economy immersed in a global crisis: the financial crisis originated in the U.S. has led to a larger crisis that affects production processes linked with growth and employment in several countries and regions of the world.

In the 1990s, at a time when, in different forums and countries, reform was a synonym of privatization and opening, Mexico implemented an oil reform that maintained the connection between the nation's property rights to resources and the exclusive exploitation of these resources by the state, illustrated by the preservation of PEMEX² as a state monopoly. Within this framework, international oil companies had no access to exploration and production (E&P) activities in the national territory. Behind this refusal, historic and institutional factors as well as an economic and strategic reasoning was present: the belief that maintaining the property rights and the legal monopoly was crucial to controlling the oil rent.

* Professor, Graduate Department of Economics of UNAM (National Autonomous University of Mexico). This article is in homage to and in memory of Professor Thomas W. Wälde (1949-2008), who invited me to lecture at the University of Dundee's Centre for Energy, Petroleum and Mineral Law and Policy (CEPMLP) in April 1997. My lecture was entitled "The discrepancy between the analysis of transnationalisation and the oil industry's evolution in Mexico" and drew elements from my article (*Revue de l'Énergie*, 1997, see Bibliography), retaken partially here. With this precedent, the *10th Anniversary OGEL Special Issue* is an opportunity to examine recent developments in an industry that appears to maintain, since then, its discrepancy regarding mainstream changes in the international oil industry. I am grateful to the Inter-institutional Seminar of Economic History audience, where an earlier draft of this article was presented (El Colegio de México, February 27, 2012). Special mentions deserve the comments received from Adrian Lajous, former CEO of PEMEX (1995-1999) and now Chairman of the Board of Governors, Oxford Institute for Energy Studies. I take sole responsibility for the views expressed here and for all remaining errors, omissions or misunderstandings.

² Petróleos Mexicanos, the Mexican oil company. State owned.

In the reform that took place during the 1990s, the limit not to exceed was the nation's property rights. There was a conviction that in Mexico changes in property rights were not required to induce changes in the industry's performance. Emphases were placed on changing the organization model in order to induce changes in the industry and improve its performance. During these same years, other countries, like Brazil, went beyond that limit and proceeded to a deeper oil reform.

Concerning the 2008 energy reform in Mexico, certain lines of thought stressed, since the outburst of the financial crisis, that a lasting reactivation would require important changes in institutional frameworks and in organizational forms of production. Energy industries should undertake new, innovative forms of organization that could contribute to a new kind of growth, leading to a new energy-environment paradigm for which scientific, technological, and industrial knowledge already exists. At present, privatization of *National Oil Companies* (NOC) is not very much under discussion, while good governance, modernization, competition, management for profitability, and partial opening of their social capital are at stake, but without jeopardizing State control. These NOC are not obsessed with generating short-term revenues for their debt-ridden governments nor are they considered by them only solely as generators of tax revenue: they are more concerned with investments on a long-term basis and innovation, attempting to access more costly and complex oil resources. Statoil (Norway), Petrobras (Brazil), Petronas (Malaysia), and CNPC (China) are examples of these oil state companies of a new generation that have a new presence on the international energy scene, due not only to their control of reserves (in total more than 80% of the world reserves), but also because of their technological and financial dynamism. These new NOC are not characterized by a privileged relationship with the resources of their national territory, but they also penetrate other territories and other segments of the industry: refining and petrochemicals; distribution, etc. They adapt themselves to competitive environments and to the new forms of competition, cooperation, and association that predominate in the present international oil industry, especially in the case of projects on a great technological scale.

A decade after the 1990s reform, there was in Mexico a general feeling that the industry has not improved in terms of performance: many indicators showed, for example, a declining

trend of oil production, reserves, and exports³. On the other hand, PEMEX continued to confront difficulties in establishing a new relationship with central international actors, even in associating strategically with NOCs such as Petrobras or Statoil, beyond some information exchanges or training programs. Through many documents and debates, a consensus was created that Mexico needed a new energy reform and the Federal Congress passed a new one, in October 2008. Privileged access to resources was maintained and PEMEX was not enabled to innovate its forms of association, in addition to some new contracts whose characteristics and restrictions will be dealt with later. In fact, certain basic features of the historic “Mexican Model of Oil Industry Organization”⁴ were preserved.

What appears evident is that in Mexico, a resistance to change the institutional framework and some basic elements of the industry organization remains very strong. Is Mexico defending the past or preserving its future?

1 - The transnationalization norm: the reference for the 1990s oil reform

Some features were set forth in the 1990s regarding the implications of this norm⁵ for the hydrocarbon industries:

³ From the PEMEX side, there was a diagnosis that preceded the new reform, with impressive facts: “*Diagnóstico: Situación de Pemex*”, May 2008. Since then, situation has not improved: oil production was on average 3.26 million (MM) b/d in 2006 and 2.58 MM b/d in 2010. In those same years, 2006 and 2010, oil exports were 1.79 MM b/d and 1.23 MM b/d, respectively; crude proven reserves 11.05 billion (MMM) and 10.16 MMM. The declining of Cantarell, the giant field that fed Mexican exports since the 1970s is considered irreversible, without clear substitutes; imports of natural gas, oil products, and petrochemicals continue to grow at important rates.

⁴ For a systematic elaboration of the Mexican model of oil industry within its proper context, see De La Vega Navarro (1999). It is useful to remember from the beginning that for the Mexican Constitution of 1917 (Art. 27) to the Nation belongs the direct dominion (inalienable) of all minerals or substances such as (...) solid mineral fuels, petroleum and all hydrocarbons solid, liquid, or gaseous (...). Following the reforms of November 9, 1940, in the field of hydrocarbons “neither contracts nor concessions” and it is “the Nation” the only one that can exploit oil and gas. The state monopoly was strengthened when the oil industry and 13 other sectors were declared strategic (Art. 28), where the state has the exclusive right to operate.

⁵ This term is understood here both in the sense of the positive economy (the study of economic processes and phenomena as they take place) and in the normative economy sense (in which the norm determines what has to be carried out). In the 1990s, «conventional wisdom» codified abundant propositions considered to be inescapable if the objective was development of countries and the efficiency of their industries. Some examples: “one dominant economic system is emerging [with a] common set of institutions”; recent years “have witnessed the most remarkable institutional harmonization and economic integration among nations in world history”; “A global capitalistic system is taking shape, drawing almost all regions of the world into arrangements of open trade and harmonized economic institutions. (...) this new round of globalization promises to lead to economic convergence for the countries to join the system”. All quotations are taken from J.D. Sachs & A. Warner [1995; pp. 1, 61, and 63].

- ‘de-geopolitization’ and the move toward the opening of the entire oil and gas industries;
- opening of upstream activities, especially of exporting countries’ oil industries. As a result, there would be a shift from the predominance of the possession of reserves to a situation in which access to capital and technology dominates. Thus, oil companies and market forces would rule while the states would only support the movement.
- relationships between States and international oil companies consist mainly of negotiating the most favorable host conditions within a liberalized framework;
- new interrelationships among the actors of the transnationalized oil industries generate a renewal of the forms of the practice of power on the international scene.

Mexico’s oil industry, as well as other countries at the time, did not adapt fully to the transnationalization trends and despite NAFTA (North American Free Trade Agreement), Mexico did not become a full partner of Canada and the U.S. in the energy area.⁶ At the time, many analysts could neither conceive of why the Mexican State restricted the access of foreign investment to the hydrocarbon industry, nor why Mexican oil was not openly put at the disposal of the world’s biggest consumer. Were these temporary discrepancies or an apparent situation, as shown by certain indicators?⁷

In the nineties, opening to competition and market regionalization went hand-in-hand in North America. An energy symbiosis existed between the U.S. and Canada because these two countries converged in a similar institutional framework, while their energy industries moved toward greater deregulation.

In order to analyze the Mexican case, first, the instruments implemented to achieve the “transnationalization norm” (of which NAFTA comprised the most important expression during the 1990s) will be referred. Second, discrepancies against this norm presented by the evolution of

⁶ As will be stated later, only the U.S.-Canada energy exchanges were really being regionalized within the North American context. Moreover, it appeared that it was primarily Venezuelan oil that was turned toward a regional complementarity regarding North America. Cf. “Regionalizing oil markets”, *Oil and Gas Journal*, July 15th 1996, together with several analyses and declarations emitted in recent years by some Venezuelan representatives.

⁷ Among others, the share of Mexican oil exports already going to the U.S. (nearly 80% in 1996), the *de facto* effects of the co-lateral guarantee demanded at the time of the 1995 financial rescue (‘the peso package’), and the attempts to sell petrochemical plants and the opening up of natural gas industry, which could allegedly be a sign of further and larger opening and privatization, etc.

Mexican petroleum industry will be emphasized. This will be achieved by distinguishing two types of discrepancies:

- one is related with a misled hope: that the whole of the Mexican economy, its sectors and its industries, would attain the transnationalization norm in the short term;
- the remaining results from the rhythms and characteristics specific to any economy and from the consideration of historical and institutional factors.

According to the former, no decisive change occurred, because the core of the oil and gas industries were not been completely opened and PEMEX⁸ had not been fully privatized. With respect to this position, it is assumed here that a reform does not, instantaneously and radically, changes the whole institutional and organizational structure of a sector. Instead, it can be judged as an instrument to promote changes that can engage a short-, medium-, and long-term process via the introduction of new institutional and regulatory criteria, together with incentives to economic actors. Consequently, the main question is whether within the Mexican context a process of reform of the institutional, organizational, and regulatory framework, which has been in operation since the nationalization of the oil, was engaged by the 1990s reforms.

1.1. Transnationalization norm, its implications

At the end of the 1980s and during the first half of the 1990s, a vision that implied the commercial and financial liberalization of economies imposed itself. This vision included the norm and the instruments required to achieve this: on the one hand, new market-oriented public policies and, on the other hand, a new institutional framework expressed at the global level. The most complete expression of this process, on the continent, was the U.S. proposal to sign Free Trade Agreements with Latin American countries.

Within the new international order, which has apparently emerged since the fall of the Berlin Wall and the first Gulf War, it was considered that the only viable economies were those opened to foreign investment and that operated a State withdrawal to the advantage of the

⁸ **Petróleos Mexicanos**, the Mexican state-owned oil enterprise. According to PIW grading (December 16, 1996), **PEMEX** was globally the 6th most important petroleum company worldwide. Overall, PEMEX's place in the world represented 5% of total oil production, proven reserves, and exports; excluding the Gulf countries, it represented 7% of oil production, 8% of exports, and 15% of reserves. In 1996, oil production averaged 2.86 million b/d and oil exports 1.54 MMb/d. PEMEX was the most important source of public finances: fiscal duties amounted to 70% of all of its outflows in 1996, providing nearly 30% of the total fiscal income of Mexican Federal Government. In 1996, PEMEX net exports amounted to approximately 7,500 million dollars (USD) (current).

market. The energy sector, especially hydrocarbon industries, appeared to succeed in representing the very example of a State-directed sector, closed to foreign capital. Henceforth:

“The overall paradigm underlying the current situation is a redefinition of the role of the state with respect to the economy. The state, quite generally, is retreating from a pervasive presence in business to a role as regulator, (...). **This is particularly true where oil and gas is a country’s key industry”**⁹.

De-monopolization and privatization of state enterprises in Latin America was a major aspect of this strategy, the justification appeared obvious with “the growing conviction that free enterprise advances the wealth of nations better than nationalized industries and planned economies”¹⁰. The expected benefits of such a strategy have often been put forth. Regarding international companies, it was assumed that their reserves should increase to an unprecedented level within the context of new financial and technological improvements. Producing countries’ companies would benefit by receiving new investments, new scientific, technological, and organizational developments and penetrating international product markets.

Until the 1994 December crisis of Mexico, “mutually reinforcing beliefs and expectations created a mood of euphoria about the prospects for the developing world (...). It was a very happy picture”¹¹. At the beginning of the 1990s, the concept that a “new golden age of global capitalism”¹² was on the threshold spread worldwide. Influxes of foreign capital returned to state-controlled countries, which converted these into market economies. The Mexican case and its supposed entrance into the «First World» became the reference and illustrated the relevance of the norm.

1.2. Instruments required in order to attain the norm: new public policies and NAFTA

The new economic policies aimed at reducing the distance between norm and real economies by achieving deregulation, privatization, opening to competition, and sound public finances.

⁹ Thomas W. Wälde [1996; p. 192]; parts underlined by the author of the present paper.

¹⁰ Energy Information Administration (U.S. Department of Energy) [1996], p. 51.

¹¹ Paul Krugman [1995; p. 39].

¹² Paul Krugman [1995, p.29].

External institutional constraints needed to be included within public policies if this process were to be irreversible. “NAFTA locks in these policy changes...”¹³.

Free trade agreements were a starting point; however, their implementation belonged to a larger framework. Beyond its strictly commercial aspects, NAFTA represented an ambitious project of re-institutionalization, a whole proposal toward a new regulatory regime. Through this agreement, the U.S. offered Latin-American societies the key elements of their own economic model of free trade, market economy, and liberal democracy:

“In fact, NAFTA represents a kind of big economic-legal machinery which can support the Mexican modernizing elite in its effort to conform the country to the rules of ‘market democracy’ ”. This treaty, “since it establishes **drastic norms in key areas**, not only the legal area, but also the political one, becomes, therefore, **a powerful world-wide centre of elaboration and promulgation of economic norms, regulations and behaviors**” (...) “It really is, therefore, a matter of the reinforcement of the U.S.A.’s capacity **to elaborate and ‘export’ a regulation process** whose objective (...) is to supervise the great movement towards world-wide economic globalization”¹⁴.

NAFTA was not only thought of as a device to favor commercial exchanges, it was also supposed to stimulate the generalization of certain institutional and behavioral rules. Even within the energy area, institutional aspects were emphasized, when they were considered to be elements liable to induce new processes. One example is NAFTA’s rewriting of the government procurement process, specially designed to guarantee that U.S. and Canadian contracts bids would receive fair consideration by Mexican public energy enterprises. «This revision makes an

¹³B. De Long *et al.* [1996; p. 10].

¹⁴ Alfredo G.A. Vallado [1995]. Pages 38-39 and pp. 132-133. Parts underlined by the author of the present paper. This export of a regulation process has important implications from the legal point of view, as has been shown by two U.S. laws adopted at the time (known as Helms-Burton’s and Amato’s Laws), which include economic sanctions of an extra-territorial nature. According to Brigitte Stern, Professor of international Law (Paris I-Sorbonne), these laws claim, on behalf of U.S. foreign politics requirements, to “impose a certain behavior to all the economic agents world-wide”, behaving as if globalization “had been irremediably achieved and had swept away national economic areas”. The scope and the implications of this situation are discussed by the author, who states that it is “extremely desirable that globalization does not lead to an imperial structuralization of international society dominated by one single power”, *Le Monde*, “Les Etats-Unis et le droit imperialiste”, September 12th 1996. **All translations from French or Spanish are mine, if not indicated otherwise.**

important contribution to building Mexico's legal infrastructure and, as such, is one of the most important parts of NAFTA»¹⁵.

1.3. Was there a consensus around this strategy?

Mexican elite sectors made important steps toward North American projects. This is particularly important when taking into account the country's history: "Mexico has stopped defining itself by its opposition to the United States and is instead attempting to imitate the United States and to join it in the North American Free Trade Area. Mexican leaders are engaged in the great task of redefining Mexican identity and have introduced fundamental economic reforms that eventually will lead to fundamental political changes"¹⁶. This was the official context of the Salinas presidential era (1988-1994).

However, beyond official statements, the terms of the debate have effectively changed. In this perspective, the alternative project that was developed by Cuauhtémoc Cárdenas¹⁷ is very significant. Cárdenas opposed U.S. projects of "hemispherical" integration, with "true continental co-operation", which could not be established in the existing situation. "The exploitation of cheap labor, energy and raw materials, technological dependency and lax environmental protection should not be the premises upon which Mexico establishes links with the US, Canada and the world economy". He spoke in terms of "a coherent, integrated, global approach conducive to a broad, long-term continental free trade and development pact". The starting point should have been a clear vision of the characteristics of the Mexican economy. Accordingly, the origin of Mexico's problems must be found within the Mexican economy and in the way development policies were conceived and implemented, instead of rejecting the responsibility to the structure of the international economy alone¹⁸. Markets can work in a

¹⁵ Congressional Budget Office [1993; p. 18]; parts underlined by the author of the present paper.

¹⁶ Samuel P. Huntington [1993; p. 43]. Mexico's previous president, Carlos Salinas, declared, in an interview with *Le Figaro* on August 1st 1991, that he wanted to change the course of history and that hate between "gringos" and "latinos" ought to disappear. Consequently, he had decided to "change the Mexican people's mentality concerning [their] relationship with the United States".

¹⁷ Cuauhtémoc Cárdenas [1991]. All of the following quotations concerned with this alternative project are taken from this document. Cuauhtémoc Cárdenas is not only the son of the Mexican president Lázaro Cárdenas, who nationalized the oil in 1938, but was also an important candidate in the 1988 presidential elections.

¹⁸ According to C. Cárdenas, in Mexico, these policies are characterized by: "lack of vision, the absence of any democratic accountability, corruption, mismanagement and demagoguery", C. Cárdenas [1991; p. 2].

developing economy, although “the responsibility for solving these interrelated problems is not only for the market”.

Within the Mexican context, Cárdenas’s analysis was far reaching:

“Movements of capital, particularly direct foreign investments, are the central component of the new continental partnership we want to build. (...) We must learn to see foreign investments not as an unavoidable evil but as a desirable opportunity and even a necessary instrument to attract resources, to close technological gaps and to move decisively into world markets”.

As far as foreign investments were concerned, only oil could remain an exception, in Cárdenas’s opinion:

“Those sections of the law and regulations limiting foreign investment in Mexico that we believe must be maintained have to do with access to natural resources and the strategic sectors of the economy mainly oil. The existing state monopoly on the exploration, extraction, refining and industrial transformation of Mexico’s oil must remain intact and be excluded from this negotiation. This obviously includes, from our point of view, any commitment to a guaranteed supply of oil to the United States, in contrast to what Canada accepted in the US-Canada Free Trade Agreement”.

Thus, an alternative project to “neo-liberalism” attempted neither to ignore the contemporary international context nor its own country’s environment or circumstances.

1.4 “And then came the Mexican crisis”

During the first half of the 1990s, the world, therefore, appeared to be in a unique situation: a clear norm and a consensus around public policies that would reduce the discrepancy between reality and the norm by achieving structural changes while integrating the economies in the global context. All of the components fitted together in a harmonious way: market economy, as a model for social organization; a framework for economic policies (The ‘Washington’s Consensus’); new attitudes of the elites corresponding to projects of integration of the dominant power.

“And then came the Mexican crisis”¹⁹. Information concerning the performance of Mexico’s economy during the Salinas presidency has obscured unresolved problems of the Mexican economic and political system. On January 1, 1994, the starting point of both NAFTA’s implementation and the “Zapatista” uprising in Chiapas²⁰, the fragility of the economy, the serious crisis of the political system, and the fact that large parts of Mexican society and entire sectors of the economy were not ready to enter the “First World”, became visible worldwide. These facts questioned the concept of a soft transition toward the transnationalization norm: integration into the developed world was a complex process and required a more sophisticated approach.

“Neoliberal” policies did not take this complex framework into consideration and appear today to be the instruments of a forced movement toward the transnationalization norm, which led to the 1994/1995 crisis and its terrible consequences for the economic growth and well-being of the population²¹. These policies are, today, evaluated very severely in Mexico in that they comprised:

- the violent opening of the Mexican economy toward foreign markets and an integration process within a deeply asymmetrical framework that could not drive toward convergence;
- the withdrawal of a State that had up to that time played a central role in terms of investments and direct participation in the key sectors;
- the de-regulation and privatization within a not yet fully democratic system that has not yet established clear rules affecting the relationships between public and private areas (corruption, asymmetries among the privates actors themselves and in their relationship with the state, etc.);

¹⁹ Paul Krugman [1995; p. 30].

²⁰ Before this date, several Mexican intellectuals and economists drew attention to the fragility and deficiencies of Mexican-style neo-liberalism. In the U.S., Rudiger Dornbusch presented some lines of analysis on the deficiencies and effects of Salinas’ economic policies prior to the December 1994 crisis: “Mexico suffers from a failure to accompany the stabilization of inflation (...) and the impressive array of economic reforms with not only true political reform but also economic progress”, R. Dornbusch, A. Werner, “Mexico: Stabilization, Reform and No Growth”, *Brookings Papers on Economic Activity*, I: 1994, pp.253-315, p. 253.

²¹ A few indicators: between 1994 and 1995, the gross domestic product (GDP) decreased from 230,132 to 214,023 (millions US\$ 1980); the GDP per capita fell from 2,557 to 2,336 (millions US\$ 1980); the GDP growth rate decreased from 3.5 to -7%.

- the economic policy that considered foreign investment as the key variable both to finance the large trade deficit and to lead to modernization of the industry, without real questioning on the nature, volatility, and productive involvement of these investments.

The Mexican government has clearly not been able to manage the very movement of trade and financial liberalization that it initiated and plunged the country in the 1994/1995 monetary crisis and the following recession.

2 - Evolution of the Mexican oil industry in relation to the transnationalization norm and to internal constraints

2.1. Discrepancies against the expected evolutions

On the one hand, international oil-industry managers expected to be free to invest immediately in the whole chain of the Mexican oil industry; on the other hand, the U.S. expected Mexican oil to fit within the schedule of the regional integration experienced with Canada.

2.1.1. The expected evolutions related with NAFTA

Regarding transnationalization, few results were achieved in the energy field, as it was nearly unanimously recognized abroad:

“For the most part, the **energy chapter of NAFTA sets out exceptions to the principles of free trade with Mexico that the rest of the agreement embraces**. In particular, NAFTA would do very little to increase U.S. access to Mexican oil resources...”. Therefore, it can be stated that “NAFTA’s accomplishment [represents] **only a first step towards free energy trade with Mexico**: constitutional prohibition against foreign ownership of energy resources; no desire to weaken state monopolies in oil, natural gas and electricity (...)”²².

“The agreement did not fundamentally undermine PEMEX’s monopolist position; instead, it restricted itself to favor, in a limited way, the access for Mexican and foreign companies to certain sectors of activity within PEMEX”²³.

“The failure to open Mexico’s oil market to foreign investment as part of the North American Free Trade Agreement is a tragedy for Mexico”²⁴.

²² Congressional Budget Office [1993; p. 1]. Parts underlined by the author of the present paper.

²³ OCDE, MEXIQUE, Etudes Economiques de L’OCDE, Paris 1992, p. 297, p. 101. Our translation from French.

In contrast with the regional evolutions expected following the Canadian example, Mexican oil has remained formally outside regional integration. Mexico retained the right to determine its own export levels without guaranteeing a preferential supply to its partners. Consequently, according to the current energy literature, Mexico does not belong to “the North American energy market (USA and Canada) [which] contains 5% of the world population and consumes 27% of the world’s energy. (...) It is the world’s largest and it has 65% self-sufficiency”²⁵. Obviously, the whole energy picture with respect to this area would change if Mexican oil, production, and reserves were taken into consideration.

Curiously, the very people who advocated, within the U.S., the opening and total privatization of the Mexican oil industry, expected that the Mexican government would guarantee U.S. supplying, without even apparently considering the contradiction between these two positions. Indeed, if M.A. Adelman’s analysis on the integrated international oil market²⁶ is assumed, oil supplying can no longer be considered in terms of national security²⁷: whether the oil consumed by the U.S. comes from Mexico or elsewhere is irrelevant within the global economy.

However, even those who supported this position had to recognize that for the U.S., Canadian oil imports are more secure than others: “Canada has no outlet other than the U.S. and all Canadian crude is shipped to the U.S. by pipeline integrated into the U.S. supply system. Furthermore under NAFTA (...) oil shipments to the U.S. must be fully maintained in an emergency unless Canadian internal consumption is also reduced”²⁸. Thus, «given the physically integrated nature of Canadian crude oil imports and the NAFTA treaty, the availability of Canadian crude to US refiners can be rated very highly»²⁹.

²⁴ P.K. Verleger Jr., “The North American Free Trade Agreement: implications for the parties and world oil markets”, *The Energy Journal*, Vol. 5, 1993, Special Issue, p. 99.

²⁵ Ibid, pp.1 and 4.

²⁶ M.A. Adelman [1991]: “The world oil market, like the world ocean, is one great pool. Who exports the oil Americans consume is irrelevant”.

²⁷ See, for instance, John H. Lichtblau [1994]: “Oil imports and national security: is there still a connection?”, *The Energy Journal*, Vol. 15, Special Issue, pp. 329-356.

²⁸ Ibid, p. 339. In 1995, Canada exported, solely via pipeline, 1 million b/d of crude oil to the U.S. In fact, Mexican exports to the U.S. were quantitatively fairly similar to Canadian ones. In 1995, Mexico exported 1,037,000 b/d to the U.S, which is 80% of total Mexican crude oil exports. Cf. PEMEX [1996], Table 108, p. 266.

²⁹ John H. Lichtblau [1996], “The North American Energy Scene”, 19th IAEE Energy Conference, Budapest, Hungary, p. 4.

As for Mexico, energy interpenetrations in the North American framework did not follow the same rhythm, and this explains why Mexico was not granted a significant presence within the regional scheme after NAFTA was signed: “Mexico will likely remain a relatively minor player in North American natural gas markets **until an internally-driven deregulation process occurs**”³⁰. However, after the 1993 signing and approval of the NAFTA, the opening out of gas and oil industries continued.

2.1.2. The expected evolutions related with reforms subsequent to NAFTA

A direct implication of free trade was the privatization of the whole energy sector. There was a belief that was founded upon the assumption that privatized firms functioning in a competitive environment will operate more efficiently, making better use of scarce resources. Additional reasons were that privatization was able to free these resources for more important uses, improve operational efficiency of privatized entities, and increase the investment and technological innovation of the whole economy. In separating political and commercial spheres by means of privatization, a lesser amount of corruption, patronage, and cronyism were expected.

An important trend abroad has been demanding the privatization of PEMEX, together, sometimes, with the abrogation of the 27th article of the Mexican Constitution concerning the nation’s ownership of mineral resources³¹. Concretely, rejection was demanded of the monopoly and the establishment of open access to acreage by competition. According to international energy circles, the only interpretation of the term “reform” was privatization and total opening of the oil industry, especially within oil and gas E&P. As an influential international magazine put it: “It is time to privatize PEMEX, the inefficient state oil company”³².

³⁰ A. Plourde, “Natural gas trade in North America: building up to the NAFTA”, *The Energy Journal*, Issue dedicated to the theme “North American energy markets after free trade”, Vol. 14, no. 3, 1993. Parts underlined by the author of the present article.

³¹ The nation’s ownership of mineral resources is enshrined in the Mexican Constitution, which also places the state in exclusive control of all subsurface minerals, including “petroleum and all solid, liquid, and gaseous hydrocarbons”. From the opponents’ side, the 27th article of the Constitution, which deals with the nation’s ownership of subsoil resources, must be first abrogated, and then the national oil industry must be privatized. Such a view appears to take into consideration only the example of the U.S. oil industry. However, as Bernard Mommer has often stressed in his writings, the U.S. oil industry is an exception rather than the rule in term of mineral rights since private ownership of the subsoil resources is dominant in this country. However, worldwide, this is clearly not the case. Nowhere else can a trend toward the privatization of natural resources be depicted. On the contrary, existing private property rights over natural resources are generally increasingly restricted. See B. Mommer [1997].

³² *The Economist*, June 29th, 1996.

As a consequence, evaluation of the reforms could only be mitigated, in that there has not been any fundamental change concerning the ownership of the resources and the major place occupied by PEMEX³³ :

«Despite some initial efforts, reforms in Mexican oil have faltered. Foreign participation in oil and gas exploration, production and refining remains proscribed by the constitutional requirement which allows only PEMEX to engage in those activities»³⁴.

Skepticism toward reform included the new legal and regulatory framework:

“At present, it is not certain that the legal, regulatory and pricing innovations developed by the Mexican Government and the Comisión Reguladora de Energía in 1995-1996 will be interpreted by the investment community and its lenders as offering an acceptable balance of risk and reward”³⁵.

In fact, the central concern of international energy circles was the failure to open up oil and gas E&P. Compared with the previous opinions, IEA emitted a more balanced point of view:

“All countries have to choose an approach to regulation of the energy industries which is suited to their own institutions and circumstances. Exactly the same is true of deregulation (...). They have to choose a course which takes account of the structure and history of their hydrocarbon industries, of policy constraints and priorities, of the specific objectives of deregulation”³⁶.

2.2. Discrepancies related with internal constraints: «a Mexican model of transformation and opening of the oil and gas industries»?

After the 1938 nationalization, Mexico established a set of rules and institutional arrangements in order to construct symbiotic relationships between the hydrocarbon industry and a closed economy,

³³ The statutory law of the 27th Article of the Constitution, approved in May 1995, began thus:

Art. 1 - The direct, inalienable and imprescriptibly ownership of all hydrocarbons in the national territory - including the continental plateau - (...) corresponds to the Nation.

Art. 2 - Only the Nation shall carry out the various exploitations of hydrocarbons that make up the petroleum industry under the terms of the following article (...).

Art. 3 - The petroleum industry encompasses: the exploration, exploitation, refining, transportation, storage, distribution and first hand sales of oil and products deriving thereof; the exploration, exploitation, elaboration and first hand sales of gas as well as the transportation and storage required to interconnect the exploitation and elaboration thereof, and the elaboration, transportation, storage, distribution and first hand sales of oil derivatives susceptible of becoming basic industrial raw material, and gas derivatives used as basic petrochemicals.

³⁴ Energy Information Administration, US Department of Energy, [1996; p.57].

³⁵ George Baker [1996; p. 33].

³⁶ IEA [1996; p. 81]; parts underlined by the author of the present paper.

centered in the internal utilization of the oil rent, the energy supply to a growing internal market and the modernization and integration of the economy. These rules basically derived from public ownership of subsoil resources and from the existence of a state monopoly of an oil industry that was, at the time, absent from the international oil market. When Mexico once again became an important exporter during the second half of the 1970s, and especially when it began to open its economy in the mid-1980s, deficiencies, gaps, and inadequacies became apparent, mainly in the technological and organizational fields. At the same time, the international oil industry was in a process of deep change following the two oil shocks. In particular, concerning the organizational field, the model of closed vertical integration was changing for a more open one in which market transactions could take place.

The changes within NAFTA and subsequent evolutions in the deregulation and privatization of hydrocarbon industries must be assessed, taking into consideration the institutional and historical factors that appeared to be of central importance in understanding the peculiar characteristics acquired by the hydrocarbon sector reform in Mexico.

It is important to consider privatization not only in its basic definition (the sale of public assets or changes in property), but also within a wider meaning. The latter comprises the progressive introduction into the public sector of certain conditions that prevail in the private sector and/or of certain measures that diminish public ownership and control. Moreover, property rights and the introduction of market mechanisms were not considered the unique aspects of a reform of the energy sector. Other components included the changing in the nature of the relationships between this sector and the rest of the economy. As stated in the Energy Program (1996), the energy sector must to contribute “to the global competitiveness of the producing sector, by the supply of goods and services which have international quality and price standards”³⁷.

If the reorganization of the oil industry in Mexico is considered accordingly³⁸ and although PEMEX assets have not been sold, one cannot therefore consider that the oil industry was completely at variance with the mainstream economic reform of the time. This is the same when the presence of the state is considered: it was not realistic to imagine a complete retreat. An

³⁷ Secretaría de Energía [1996].

³⁸ See A. De La Vega Navarro [1994].

example is the analysis of the shift in industrial policies and of new actors and behaviors in Mexico's post-NAFTA deregulation policies³⁹.

2.2.1. PEMEX's reorganization

At the time, there was an awareness of problems with state oil company:

- regulator, operator, and government department;
- control over the state company and its resources by political power;
- some comparisons showed state enterprises to be greatly inefficient with respect to private international oil companies (but no appropriate efficiency/benchmarking methods);
- fusion of state enterprise with government budget made investment decisions difficult and inefficient;
- oil reserves remain untapped because of lacks of financial backing and technology to develop them;
- PEMEX operated only in its own country.

The need for the reorganization of PEMEX was brought forward subsequent to the serious financial restrictions experienced by the Mexican economy and PEMEX in the 1980s. As a result of these, there has been a decrease in PEMEX's investments, which has affected exploration and development drillings, together with output and reserves⁴⁰. Moreover, "PEMEX has been unable to achieve cuts in production costs comparable to many other major petroleum companies"⁴¹. This latter fact points out the basic essential challenges for PEMEX's strategic definitions and reorganization. For many specialists, and apparently also for PEMEX's top management⁴², this company could no longer ignore international competition nor the performances of other oil

³⁹ Concerning the petrochemical industry, Isidro Morales [1996] suggested that the shift in industry policies does not mean the end of state-led policies even if they are conceived in a way that is radically different from the pre-NAFTA economic regime: «On the contrary (...) in this new business-oriented environment, the state will remain the major single institutional actor that will be able to reduce or compensate for the asymmetries prevailing among private actors as well to ensure a fair distribution of the costs and opportunities provoked by those asymmetries ».

⁴⁰ "Since 1985, the total number of wells [oil and gas] drilled annually has gone down substantially, reflecting tighter resources constraints. From a high of 303 wells around 1985, the number of wells drilled declined to 72 in 1994. During the same period, the number of active drilling rigs went down from 200 to 27", IEA [1996; p. 43].

⁴¹ IEA [1996; p. 34].

⁴² "PEMEX's ambitious program should allow the company to act and take place among the most important integrated oil companies worldwide. This requires changes within the company, in its relationships with the government and in market structures», Adrián Lajous, *La Jornada*, Mexico, January 19, 1996.

companies, either private or public, in the area of the management of reserves and of industrial and technological development.

PEMEX's reorganization has speeded up essentially since 1991. During that year, strategic definitions were designed. PEMEX decided to refocus its investments and its financial and human means strictly on energy concerns, particularly on the industry's core. Exploration, production, and operation of oil and gas "are the strategic activities the Mexican Nation and State will continue to realize through PEMEX"⁴³. The state enterprise will have to make a tremendous effort in investment in oil and gas production in order to achieve before the year 2000 approximately 3.1 Mb/day oil production and 1.4 Mb/d exports. Particular efforts needed to be conducted in natural gas to increase production.

In July 1992, PEMEX was reorganized with an aim toward new management and organization criteria. Four subsidiary companies were created with a holding-type central structure. New management criteria and accounting and pricing systems were created in order for these subsidiary companies to become independent and to act as profit centers. PEMEX's reorganization went beyond strictly administrative aspects since between 1987 and 1995, the company's staff decreased from 210,000 to 100,000 employees. This reorganization caused, indeed, a breakup of the traditional labor relations built in order to make work particular organizational mode of the Mexican oil industry.

2.2.2. NAFTA's energy contents

Aside from the exceptions concerning the hydrocarbon industry introduced by Mexico within NAFTA, this treaty set new institutional elements and led to new changes:

- Mexican private consumers and Canadian and U.S. natural gas suppliers will be able to negotiate sales and supply contracts directly, while PEMEX acts as a third party;
- NAFTA allowed competition to appear, officially or non-officially, in certain formerly monopolist areas;
- a revision and clarification of the procedures dealing with energy companies public markets has been accepted by Mexico;

⁴³ Adrian Lajous, PEMEX's General Director, Statement, September 12, 1995. PEMEX has adopted "a more expansive strategy in its exploration and production activities, which is oriented towards the increase of production capacity, essentially of gas, and towards other strategic initiatives such as the sale of its secondary petrochemical assets, the liberalization of gas transport and distribution and the improvement of its refining margins", A. Lajous Vargas, *La Jornada*, January 19, 1996.

- within NAFTA's dynamics, the Mexican government reclassified numerous petrochemical products that were previously exclusively produced by the State, in order to allow for their production by private companies;
- "risk contracts" remained forbidden; nevertheless, evolutions in this area were expected: "NAFTA's provision for performance clauses in service contracts may ultimately be interpreted as allowing U.S. drilling firms to own part of the oil or gas they discover in Mexico, even though Mexico does not accept that interpretation now"⁴⁴.

Another important change concerned the industrial policy that characterized the pre-NAFTA era: preference for domestic engineering and construction companies in the procurement of goods and services, subsidized refined products for industry and transport, commitments for technological cooperation, and industrial agreements with Mexican oil importers. Competition, value creation, and opportunity cost gradually became the new key words.

2.2.3. The liberalization of the natural gas area

It was common in Mexico to consider natural gas simply as a joint product of oil that was either to be used or wasted. However, gas gradually became a full energy source that required development for economic and environmental reasons. Therefore, a new regulatory framework was set up in order to promote the development and utilization of this resource and to attract private capital. Within the perspective of the reform, the influx of venture capital was a key element for the future of Mexican gas development.

- In May 1995, the new regulatory law of the 27th article of the Mexican Constitution was approved. Henceforth, domestic or foreign private investors were allowed to transport, store, and distribute natural gas, as well as build, operate, and own the natural gas transport, distribution, and storage systems that previously were exclusively attributed to PEMEX. However, PEMEX maintained transport and storage related with the production process.

- In October 1995, the law establishing the Energy Regulatory Commission, a new entity related with the process of reform⁴⁵ was set, with technical and operational independence.

⁴⁴ Congressional Budget Office [1993].

⁴⁵ Control of this agency and the degree of influence and power held by actors such as consumers, state companies, private investors, or energy bureaucracies are not yet well defined. These represent new uncertainties within the context of the opening up of the Mexican energy sector to private investment.

The sphere of activity of this commission, which was at first restricted to the electric industry, has been extended to the natural gas area. Henceforth, the Commission develops regulation concerning the distribution of natural gas and ownership of the pipelines. The role of large public companies (e.g., PEMEX, CFE) in certain areas of competence of this commission remained undefined as yet because, to date, these companies often have overlapping operational and regulatory responsibilities.

- In November 1995, a new regulatory framework concerning natural gas was set. This presents in detail the operational regulations toward a new kind of development of this industry, which includes the participation of private actors within the areas indicated by the new regulatory law.

- In March 1996, The “Directive on the determination of prices and rates for natural gas and related activities” was established.

Two main positions toward this opening process can be highlighted. On the one hand, officially: «A fundamental change in Mexican natural gas markets has already been initiated which will tend to speed up during the following years»⁴⁶. On the other hand, a position was shared by international oil circles:

“Mexico’s Constitution still bars private companies from taking equity interests in oil and gas production. Some challenge the idea that a country can successfully introduce competition in energy markets while retaining full control of upstream activities”⁴⁷.

According to this latter view, inasmuch as the upstream sector was not substantially altered, credibility could not be afforded to the reform. However, other opinions were articulated. According to the IEA, the changes brought forward are not radical, but they do open new perspectives:

“The changes do not, of course, amount to the wholesale deregulation. PEMEX retains a special position (...) [and] retains, for the moment, a *de facto* monopoly there as well as *de jure* monopoly of natural gas exploration and production in Mexico. However, the changes are much more than nominal. (...) So there remains a possibility of a degree of real competition and, to a greater extent, of using regulation to produce the result which

⁴⁶ Adrian Lajous, *La Jornada*, January 19, 1996.

⁴⁷ “Industry skeptical about Mexican gas reforms”, *Oil and Gas Journal*, December 4, 1995.

would be expected of a competitive market. There is also a scope, provided the reforms are implemented effectively for a significant introduction of private capital and for significant expansion of the Mexican gas market”⁴⁸.

2.2.4. Privatization of the petrochemical industry

Within the petrochemical sector, the deregulation process began in the mid-eighties and NAFTA contributed toward a disintegration of PEMEX’s monopoly in this area. PEMEX will no longer be the leading actor in the organization of the petrochemical industry: new private agents, mainly foreign-owned firms, were emerging while those previously implanted were strengthening their position.

Although PEMEX retained exclusive rights to the production of «basic» petrochemicals, the number of these products has been considerably limited through successive re-classifications in 1986, 1989, and 1992: finally, only eight petrochemicals bore restrictions of the original 34. In fact, the Mexican government used these «re-classifications» based on arbitrary criteria in order to materialize a radical change in policies concerned with the petrochemical industry. The objective was to diminish the number of petrochemical products classified as basic and to increase the number of the «secondary» products because foreign capital had better access to the production of the latter. This trend has been accompanied by some changes in the foreign investment law (1993) in order to allow fully foreign participation in the production of secondary petrochemicals. In so doing, new steps toward the privatization of the sector were made possible in legal and administrative terms.

In March 1995, the decision to sell all of the “secondary”⁴⁹ petrochemical plants was undertaken. This represented 61 installations, among which Casolecaque, the most important Latin-American producer of ammonia. Although this sale was to have begun in October 1995, its implementation was delayed by a large political and unionist opposition to privatizations and “a

⁴⁸ IEA [1996; pp. 69-70].

⁴⁹ ‘Secondary’ petrochemicals include: ammonia; acetylene; benzene; butadiene; butylene; ethylene; methanol; n-paraffins; orthoxylene; paraxylene; toluene, and xylene. PEMEX manufactures these products but private firms can produce them after obtaining Mexican Government authorizations. Other ‘secondary’ chemicals require no authorisation”, IEA [1996; p. 12n].

lack in clarity and precision in the [new] regulatory framework”,⁵⁰. A significant part of medium- and small-size Mexican businesses also expressed their disagreement regarding the selling process. Moreover, international investors proved to be skeptical, although private investments in the activities that were formerly in the domain of the Mexican state are protected by NAFTA’s investment dispositions: national treatment; safeguards against unjustifiable expropriations; international arbitration procedures; protection of intellectual property rights, and other enforcement mechanisms. Foreign companies were reluctant, particularly because PEMEX controls the basic substances necessary for the operation of plants and these foreign companies cannot be sure that a constant supply of these will be available.

In October 1996, the Mexican government redefined its strategy: it decided to allow the sale of 49% equity ownership in the plants, it will retain 51% of the plants’ capital, and it announced the creation of new companies from January 1997 onward. Within these latter companies, the domestic and foreign private sector will be able to possess shares up to 100% of the capital.

The opposition to privatization was not only due to ideological reasons. The privatization of petrochemical plants has been announced within a complex social context. The main part of the population has indeed been affected by low employment, income, and standard living levels as a consequence of the 1994/1995 crisis. Meanwhile, several aspects of the liberalization trends have deeply affected Mexican society, especially regarding the conditions within which the former privatizations were carried out. Mexican society began to express at this time requirements for more clarity, transparency, and accountability.

3 – THE ENERGY REFORM OF 2008: An impasse? A definitive lock- in?

3.1. The context of the reform

The economic context has changed profoundly since the 1990s: the U.S. economy was growing during this decade; information and knowledge were thought to lead to a new economy where crises were excluded; states were retracting from different economic and social spaces; signs and concrete initiatives appeared oriented toward building a global institutional framework for trade,

⁵⁰ “Legal risks in relation to the privatization of secondary petrochemical complexes”, *Proceso*, No. 1021, May 27th 1996, Mexico. This document, reported by this weekly magazine, was allegedly elaborated within the Mexican Government.

economic integration, investment, and environment. Regional agreements were considered the engines of integration, running in front of multilateral integration.

Since the outburst of the financial U.S. crisis and the subsequent fall in growth and employment in the global economy, some countries continued to grow: the so-called “emerging economies”, such as China, India and Brazil. Their economic dynamism is accompanied by energy consumption at impressive growth rates, forcing them, especially China, to seek resources with a planetary strategy. Their oil companies are present, often with strong state support, accessing resources in different territories throughout the world. Some examples: in October 2010, Sinopec and Repsol formed an important energy group targeting Brazilian subsalt. In the case of India, ONGC Videsh is present near a Mexican border, in the Cuban deep waters.

Mexico’s reference in the energy scene –including renewables– is obviously global. At least it is required to follow what is happening in its own hemisphere. Gone is the time when it had only to compare with Venezuela as a crude exporter and competitor in the U.S. market⁵¹. Mexico cannot ignore what is happening with conventional and unconventional oil and gas resources in the U.S., Canada, Brazil, Colombia, and other zones of the hemisphere. In North America, the new and important fact is its expected energy self-sufficiency in a near future: supplies are rising, because the development of new production technologies, regulations and market forces. Will Mexico turn its back to all those new developments or will this country benefit from them, in order to rethink the whole issue of North America’s energy integration? New forces are acting towards a transformation of the energy systems, due to environmental, industrial and technological reasons.

The 2008 energy reform has been preceded by debates and a profusion of documents published in different media. The political environment had changed since the wining of the presidency by a different political party, in 2000, after seven decades of one-predominant-party rule. Because oil-industry organization was a key element not only in a particular development model, but also in a specific political regime, deep changes were expected. What really changed since the 1990s reform? What new elements were there with respect to the previous reform⁵²?

⁵¹ For an important research on this theme, see Juan Carlos Boué and Liliana Figueroa, 2002

⁵² A severe assessment of the 2008 reform can be found in: LAJOUS Adrian [2010b]: “legal regulatory, organizational and governance structures, (...) resulted in a *statu quo* inferior to the previous one () This *statu quo* didn’t appear sustainable and directed PEMEX to a high-risk situation, potentially disastrous”.

Have these taken into account the deep changes in the global and political environment? *Mons parturiens?*

3.2. A reform focused on oil; in diagnoses and proposals

In 2008, PEMEX continued to appear, on the world energy scene, as a major oil producer and an important exporter to the U.S. It was –and remains– the most important contributor to the Mexican Federal government (distinct taxes represent around 65% of total PEMEX sales, which in turn represents more than one third of the Federal budget). The Mexican state maintains exclusivity, constitutionally enshrined, in the upstream (exploration, production, and processing of oil and gas). In oil, the monopoly included the wholesale distribution of oil products, especially gasoline.

Concerning natural gas, as we have previously seen, downstream activities were opened to private competition (transport, storage, and distribution, as well as building, operation, and ownership of transport, distribution, and storage systems). Subsidiaries deriving from the 1990s reform continued to be in charge of their previously mentioned industrial sectors, which were supposed to be interlinked by transfer prices –established on some type of market-value basis–, and sharing the same corporate management (*Corporativo*). Within this framework, many problems surfaced; for example, PEMEX-Refining appeared as an inefficient subsidiary, not only due to the prices imposed on its purchases of crude oil from PEP (PEMEX – Exploration and Production, a subsidiary), but also because of internal organization and management factors.

Oil and PEMEX governance, internal structure, operation, and auditing were the main objectives of the 2008 reform. But following debates and discussion in Congress, it encompassed other domains, such as the development of renewable energies and the transition to renewable energy production⁵³. Initially, private participation in refining was one of the main targets of the reform, because of growing consumption and fuel imports, especially gasoline. New challenges that had surfaced gradually related with oil, particularly in civil society sectors, were expected to be addressed: the appropriate maintenance of the sector’s facilities and pipelines, and the

⁵³ Two laws in particular: Ley para el Aprovechamiento de las Energías Renovables y el Financiamiento de la Transición Energética (Law for the Use of Renewable Energies and the Financing of the Energy Transition), and Ley para el Aprovechamiento Sustentable de la Energía (Law for the Sustainable Use of Energy); both aimed at promoting the diversification of the energy sources, especially to generate electricity through the use of renewable energies.

undesirable effects on the environment. More generally, the search for a better environmental quality and increasing demands for environmental accountability in the energy industries were also factors pushing in the direction of energy reform.

A precise distinction was expected between more efficient administration of the state enterprise and the entry of new participants. Changes in institutional and organizational arrangements were seen to in order to provide a clear framework for accessing the country's hydrocarbon resources. One dilemma was not clearly stated: the creation of an institutional framework that would stimulate E&P activities to increase production and reserves while at the same time boosting fiscal revenues. The absence of clear views on this matter would entail some problems from the beginning, especially regarding new-contract conditions. The access of resources required new perspectives and long-term views, which were absent in the reform.

Despite persistent malfunctioning, there was a consensus that in order to face challenges, Mexico required a strong, government-owned company, but that PEMEX radically required reinforcing and modernizing: be segregated from public finance, a new tax regime, autonomous operation, professional corporate-government bodies, transparent management of funds and accountability. Proposals were advanced from different sides: to capture fiscally only the economic rent originating from the exploitation of oil and gas and to tax other parts of the value chain as any other industrial activity; to allow PEMEX to compete in international markets, permitting them to explore beyond Mexican borders, and to open the capital of the state-owned oil company. Considering the limits imposed by the 1990s reform with regard the natural gas industry' upstream, there were also proposals to advance a new framework for the participation of private investment in the E&P of dry, non-associated natural gas.

3.3. Components of the reform

Despite the 1990s reforms, many governance problems with state oil company remained. The Reform⁵⁴ attempted to take into account some best international practices for improving PEMEX's corporate governance: increasing management's execution capacity in investment decisions; enlarging administrative and financial room-for-maneuver; allowing private contractors, both national and foreign, to have access to resources with some restrictions, in

⁵⁴ Reforms were settled by a new law (*Ley de Petróleos Mexicanos*), enforced on November 29, 2008, and new regulations (*Reglamento de la Ley de Petróleos Mexicanos*), enacted by the President on September 5, 2009.

some fields (“mature”, with difficult geological conditions, as in Chicontepec or in deep waters), and providing incentives. Private-sector participation in storage, transportation, and refining products was not taken into consideration.

The main components of the reform can be organized as follows:

- 1 – Improve and strengthen the functioning of the State enterprise
- 2 – Create new relations with international oil industry
- 3 – Set up a new regulation framework.

3.3.1. – Improve and strengthen the functioning of the State enterprise

The reform sought greater autonomy and technical capacity for PEMEX decision-making and management organs. A new PEMEX Board of Directors includes independent, professional advisors. Supported by two new technical committees, it will play, in particular, a role in examining E&P projects: the *Comité de Adquisiciones, Arrendamientos, Obras y Servicios* (Committee for Acquisitions, Leasing, Works, and Services), and the *Comité de Estrategia e Inversiones* (Committee for Investment and Strategy). Despite the important technical work performed by the new independent and professional advisors, the general impression is that the intervention of political parties in their nomination have had pernicious consequences. Additionally, these advisors frequently lack information, as it was revealed in the PEMEX-Sacyr agreement for syndicating their voting rights in seeking Repsol control.

In order to fortify Pemex financial capacity, the new law also included the issue of “citizen bonds” for small investors, linking its return to state-enterprise performance. This modest measure, whose aim is to open PEMEX capital to the public, found, until now, many limitations for its implementation, related to the very nature of this state entity, not exactly a NOC, as Petrobras or Statoil. In addition, despite some fiscal measures the government take⁵⁵ continue to limit investment and Pemex remains integrated with national finances.

3.3.2. A new relationship with the international oil industry

Once again, the international oil industry expected a deeper reform of the Mexican oil regime and its specific institutional and regulatory framework. As we see above, private participation in

⁵⁵ According to PEMEX’s CEO, Dr. J. José Suarez Coppel, The “government take” of PEMEX cash flow is higher than 90% hampering the company’s ability to invest in new production. Presentation at IHS CERA Week March 6, 2012.

the oil industry is not allowed, because this is strictly reserved for the state-owned monopoly PEMEX. In this framework, it is very difficult to establish relations with private actors, especially in the field of E&P. Literally taken, “neither contracts nor concessions”, as it is stated in the constitution, means exactly that: all contracts can be considered unconstitutional. Each new proposal is required to deal with this situation, be it “Multiple Service Contracts⁵⁶” (2003-2005) to produce only natural gas, “integrated contracts”, or “incentive contracts” in mature fields or deep waters. They are either considered unconstitutional, because they allow foreign companies to exploit and appropriate subsurface minerals, or they are regarded as functionally equivalent to privatization. Even if the Supreme Court does not declare whether a given contract is unconstitutional, uncertainty pervades the discussion.

As a result of the 2008 reform, new rules for contracting the acquisition of products and services tried to give PEMEX operational flexibility without changing constitutional principles⁵⁷. Control of oil and gas production and reserves is at all times in PEMEX’s hands: prohibition is explicitly established for contractors to register Mexican oil reserves as assets of their own⁵⁸. In short, within the new reform, PEMEX may award works or services contracts, as long as it do not share reserves, production, or the “oil rent”. Taking that into account, new oil contracts do not align to internationally accepted practices in the oil industry. Furthermore, they failed to recognize characteristics, behaviors and risks of key international energy actors, whose cooperation is needed.

⁵⁶ “Multiple service contracts” that were meant to increase natural gas production have not had the desired results, above all in attracting the interest of international oil companies (majors), and were likewise subject to legal uncertainty.

⁵⁷ Exploration and production activities will no longer be subject to the traditional government procurement procedures. The new Pemex Law and its Regulations contain ad hoc provisions on procurement and contracting for “strategic activities”, and mandated PEMEX’s Board of Directors to issue detailed rules. On January 6, 2010, the Board of Directors of PEMEX enacted the new Contracting Rules for Acquisitions, Leases, Works, and Services for Strategic Productive Activities of PEMEX and Subsidiaries. Subsequently, PEMEX’s Board of Directors approved the model contract on November 24, 2010, and in December 2010, the Supreme Court confirmed the constitutionality of articles of the PEMEX Law and the Regulatory Law on Article 27 of the Constitution in Relation to Oil, that have been challenged. For a presentation of the new legal framework, see: «The New Pemex E&P Risk Service Contracts», *The Energy Law Advisor*, consulted on February 5, 2012: http://www.caillaw.org/iel_advisor/industry_news/pemexep.html

⁵⁸ On February 20, 2012, The US and Mexico have signed an agreement allowing exploration and development of oil and gas resources along the two countries’ maritime boundary in the Gulf of Mexico. Nevertheless, because of the prohibition mentioned, many problems subsist to arrive at an exploitation of transboundary reservoirs following the rules prevailing in the international oil industry.

Traditionally, under the former procurement law, PEMEX assumed all risks and paid a private drilling company a fixed fee, even if no oil was found. PEMEX is now expressly allowed to award the exploration, development, operation and production of blocks of oilfields for a period of time within the contract area. Integrated service contract will be awarded to the company offering the lowest fee-per-barrel, and partial reimbursement of its costs and capital expenditures are considered. Nevertheless, PEMEX payments will be subject to the cash flow available for the project. Additionally, these contracts describe a more flexible bidding process, which includes elements, such as pre-qualification, in order to establish a list of qualified bidders. Beginning with “mature” fields⁵⁹, the new rules recognize that small companies are best suited to small projects; PEMEX, with the economy on a scale of a big company, corresponding best to large-scale projects.

One of the most important new rules concerns remuneration, which is not in-kind but in cash and paid eventually based on performance criteria. Remuneration can be linked with goals accomplished, in terms of explicit and quantifiable indicators, expressed in measurable units, such as production, capacity, the reserve-replacement ratio, incorporation of reserves, and cost reductions. For some critics, considering that remuneration is related with the achievements of the project and indirectly with hydrocarbon resources, contracts are, in consequence, unconstitutional.

An interesting feature of new contracts, probably inspired by the experiences of other countries, is that PEMEX will be able to relate training of its personnel and transfer of technology with contracts, especially those involving new activities, models, or services. Contract amendments are allowed if they originate from technology developments, new information, price variations in materials and equipment, or from other efficiency-associated reasons.

In general terms, analysts consider that the new rules provide PEMEX with more operational flexibility. Nevertheless, for some of them, these new rules are not the solution because of the undesirable effects produced by a harsh fiscal regime that does not allow a

⁵⁹ See the B.A. thesis of Priscila A. Rodríguez-Santamaría: “El régimen fiscal petrolero en México: una propuesta para la reactivación de campos maduros”, Economics Department, National Autonomous University of Mexico (UNAM), 2011.

sufficient cash flow for enabling PEMEX to invest⁶⁰. Their specific clauses –often a straitjacket– have also to come upon government objectives to obtain short-term revenues.

3.3.3. Reinforcement of the institutional and regulatory framework

An indispensable complement of different laws and measures composing a reform is the design of a complete institutional architecture that guarantees governance of the oil industry. In particular, when new actors must cohabitate with state companies, strong and independent regulatory entities are required. In the case of this reform, an important institutional element came into being with the new *Comisión Nacional de Hidrocarburos* (National Hydrocarbons Commission) for supervising E&P activities and providing technical support for the definition of oil and gas policy. Until then, PEMEX was an auto-regulated monopoly, particularly in upstream activities. This new commission is in charge of defining the technical regulation of E&P projects, their technical assessment, registration of contracts, and auditing and revising the way in which PEMEX establishes incentives. It has been allowed technical autonomy in order, for example, to approve PEMEX reports on the evaluation and quantification of reserves and their certification by independent firms. Many problems have arisen concerning the functioning of this commission: budget; lack of qualified personnel; real independence. However, its resolutions, reports, and technical opinions on oil production and reserves have gained consideration by specialized actors and public opinion (for example, in the case of Chicontepec results⁶¹). The work carried out to elaborate regulations to reduce the flaring and venting of natural gas is particularly appreciated.

The 2008 energy reform was also concerned with the existing *Comisión Reguladora de Energía – CRE* (Energy Regulatory Commission). It was given more scope and authority in order, for example, to issue the methodology for determining the price of first-hand sales of heavy oil, gas, and basic petrochemicals. It was additionally endowed with more powers in the field of renewable energies and efficient co-generation, in order to regulate activities specifically related to the production, transmission, dispatch and sale of electricity generated from renewable sources and to access the transmission grid of the national electric system. Since then, the CRE has issued a number of guidelines and directives designed at promoting renewable energies. This

⁶⁰ Ibid.

⁶¹ See, for example, CNH, “Proyecto aceite terciario del golfo. Primera revisión y recomendaciones”, April 2010.

extension of the CRE's powers in the regulation of renewable energies is an interesting step, but it lacks sufficient authority to regulate and control successfully the two governmental energy monopolies (PEMEX and CFE, the electricity company). Furthermore, CRE needs a comprehensive and strong framework backed by political decisions, oriented toward the transformation of the existing energy system, which is highly dominated by fossil energies.

Final considerations

Energy supply is not merely a problem of energy resources, but above all one of finding adequate institutions, organizations and regulations to provide a cleaner, more diversified and sustainable energy services. In Mexico, the evidence suggests a domestic institutional and regulatory environment that is less dynamic than its international partners and counterparts.

While analyzing the Mexican reorganization of the oil industry, through two reforms at different moments and international frameworks, it appears that there are strong obstacles to follow the same pathways that other countries have successfully passed through. In this respect, two main aspects must be highlighted:

- changes within the Mexican oil industry aim at aligning it with the workings of international oil industry and the norms, criteria and performances that are imposed to oil-producing countries within the global economy;
- Mexico's own historical and institutional aspects, however, necessarily influence this trend toward adaptation.

Within this context, the role of two different types of institutional settings needs to be questioned. On the one hand, some, such as the public monopoly of the entire oil industry, guaranteed the cohesion of a specific mode of development, which predominated for decades, since the 1938 oil nationalization. On the other hand, some are related with the viability of the Mexican nation, such as national ownership of natural resources. In Mexico, these two different elements tend to be confused and make it difficult even to debate on necessary institutional and organizational changes.

Is the maintenance of the oil state monopoly compatible with a trend toward the adoption of the international oil industry norm and criteria? Should this trend require a homogenization of regulatory and institutional frameworks that is compatible with the regional integration in North America? Even in the case of the energy symbiosis like the one that the U.S. and Canada were on

the verge of in the 1990s, total homogenization was not achieved. Furthermore, the present crisis calls into question many aspects of regional trade and the integration process, especially in the energy and environmental fields.

Oil is not yet a commodity like any other. It is charged with political and geopolitical content, as has been emphasized strongly since the beginning of this century. States, from consumer and producer countries, take this into account and set forth sovereignty and security reasons and concerns. Even in Europe, where there are attempts to build a common energy policy, strong statements are made frequently from different sides, assuring that the sources of the energy mix correspond to national competence. In this zone, where a more advanced integration process exists, there is no consensus on abandoning to the market responsibility of a secure energy supply.

In summary, three main points can be considered here:

- The role of the 1938 oil nationalization in the basis of the Mexican economic and political system explains the country's discrepancy with the norm;
- This institutional aspect should not be conceived of simply as internal rigidity that ought to be discarded in order to achieve the norm of transnationalization. This measure plays an important role in the Mexican economic and political cohesion, on which the capacity of any government for developing reforms relies. It is precisely the respect for these strong institutional elements that can allow for implementation of reforms.
- If the Mexican oil industry has not adjusted more fully to the norm of transnationalization to date, it is because certain institutional aspects, which appear to be dysfunctional in relation to this norm, continue to play a decisive role in the country's social, political, and economic cohesion. A country that has undergone, since the 1970s, severe economic and political crises while attempting to rework its social and institutional contract, is required to identify precisely the institutional aspects that are to be changed radically and those that are to remain.

Nations together with their ideology and institutions are presently confronted with a global economic context within which they must deal and negotiate. This leads to the abandonment and/or the redefinition of certain aspects of their institutional endowment and heritage. Institutional environments and organization forms change to attain some objectives and

contribute to development: this process influence actors' behavior and decisions, organizations' strategies and governance structures. In fact, some oil producing countries have been able to reform their oil industries with clarity and we can now make a positive balance sheet of their performances and results. Mexico can count on multiple *atouts* for the transformation of its energy system, but institutional and regulatory changes are needed in order to obtain more efficient organizations. Way forward is still open to deeper evaluations and debates, including the results and the eventual remaining potential of the 2008 energy reform.

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