

ALEJANDRO LÓPEZ-VELARDE* and
PHILIP D. VASQUEZ**

Historic Break with the Past: The New Foreign Investment Possibilities in the Mexican Oil and Gas Industry

ABSTRACT

One of the missing oil and gas jurisdictions in the world for private participation was finally opened when the Mexican government reformed its constitution and congressional laws last December 2013 and August 2014. Now, the private sector will be able to participate in the exploration, extraction, refining, transportation, storage, distribution, and commercialization of petroleum and its by-products through (i) contracts to be granted by the National Hydrocarbons Commission, and/or (ii) permits to be granted by the Ministry of Energy or the Regulatory Energy Commission. These are important modifications not only for the Mexican oil and gas industry, but also for the local and foreign private industry. These modifications will be analyzed throughout this article with the purpose of explaining the (i) background of petroleum regulation in Mexico; (ii) modifications made to the Mexican Constitution and the legal protection to be provided to foreign participants; (iii) the new legal system applicable to the private sector in each phase of the industry and the potential for foreign investment; and (iv) the new status and role of the national oil company, “Petróleos Mexicanos,” and its potential joint ventures with private companies.

* Attorney and Counselor-at-law, admitted in Mexico in 1991; J.D., National Autonomous University of Mexico; LL.M. University of Houston Law Center, 1993. Mr. Alejandro López-Velarde was in-house counsel for the Pemex Houston Legal Department in 1992. He is a Professor of Law on Energy at the National Autonomous University of Mexico. He is partner of the law firm López Velarde, Wilson, Hernández & Barhem, S.C. where he acts as Director of the Energy Practice Group of the Mexico City office. alopezv@lvwhb.com.

** Attorney and Counselor-at-law, admitted to practice in Texas in 1987, Bachelors in Business Administration in Petroleum Land Management, University of Texas at Austin, 1978; J.D., University of Houston Law Center, 1987; LL.M. University of Houston Law Center, 2005. He was appointed by President Clinton to lead the Oil and Gas Department at the Department of Energy for the United States. He is working as an independent international energy consultant in the Dallas and Fort Worth area of Texas. pdvasquez@gmail.com.

I. INTRODUCTION

On December 20, 2013, Mexican President Enrique Peña Nieto published modifications and reforms to the Constitution that have now been ratified by a super-majority of Mexican states. For the first time since 1958, foreign companies can directly participate in the upstream and downstream activities of the oil and gas industry in Mexico under the terms and conditions of several new legal ordinances. Part I of this article provides a historical overview of Mexico's production of oil from the Aztecs and Mayas to recent reforms. Part II identifies the legal ordinances that implement this reform. In Part III, we explain how the reform will impact the national oil company and its ability to associate with private companies. Part IV discusses the Mexican Constitution, identifying key shifts in policy and the new tension that exists between the reforms and provisions that remain the same. Finally, Part V identifies the potential for foreign investment and participation in each level of oil and gas production.

II. BACKGROUND

A. Historical Background

Oil has been produced since the time of the Aztecs and the Mayas who used the product to color fabrics and make glue.¹ However, it was not until 1868 that commercial oil production began in the state of Veracruz. Most of the production came from foreign oil companies based in the U.S. and England. At that time, ownership of the oil corresponded to ownership of the land, and much of the prospective oil producing land had belonged to these companies.

The oil and gas industry in Mexico continued to grow until former President Lazaro Cárdenas began expropriating foreign oil company assets and established the national oil company, otherwise known as "Pemex," in 1938. This came on the heels of massive labor strikes by the Mexican oil field workers.² For the next four years, Mexico negotiated compensation for most of the affected oil companies and most parties settled their claims under pressure from the U.S. government, who wanted to keep Mexico from aligning itself with the Axis powers amid

1. Prasanth Boyareddigari, George Newton & Luis Testas, *Mexican Oil Industry* (Nov. 26, 1996), <http://www.trinity.edu/jgonzal1/341f96g1.html>.

2. *Expropiación Petrolera* INDUSTRIA PETROLERA (Mar. 15, 2011), www.industriapetroleramexicana.com/2011/03/expropiacion-petrolera.

the backdrop of World War II.³ However, this act of defiance by the Mexican government against the foreign oil companies and their governments—the U.S., the British and the Dutch—was considered a shining moment in the history of Mexico, a story that every school child in Mexico learns. In fact, the day of the expropriation, March 18, 1938, is called Oil Expropriation Day (*Día de la Expropiación Petrolera*) and is celebrated as a Mexican national day of observance.⁴

Despite these events, the national monopoly was not fully established during Cardenas' administration. Instead, one of the largest present-day monopolies in the petroleum sector was created during the administration of President Ruiz Cortines. Cortines created the monopoly by promulgating the Regulatory Law to Article 27 of the Mexican Constitution in the Petroleum Sector ("Petroleum Law").⁵ This monopolistic stronghold was further strengthened by the enactment of the Regulation of the Petroleum Law in 1959, during the administration of President Adolfo Lopez Mateos.⁶ In 1983, Mexico added "strategic areas" to the Mexican Constitution, which are considered by the Mexican Congress to be the most important economic activities for the development of the country.⁷ Throughout the years, Pemex expanded its scope of activities, beyond "strategic areas" constitutionally reserved to the Nation and reserved for the oil and gas industry under the Petroleum Law, to include a variety of other economic activities.

The possibility of private participation in the oil and gas industry was not revisited until 1994, during the final year of Carlos Salinas' administration.⁸ A plan for private participation gained momentum be-

3. *Milestones: 1937–1945, Mexican Expropriation of Foreign Oil, 1938*, U.S. DEPT. OF STATE OFFICE OF THE HISTORIAN, <https://history.state.gov/milestones/1937-1945/mexican-oil> (last visited Oct. 8, 2014).

4. *18 De Marzo. Decreto de la Expropiación Petrolera*, SECRETARÍA DE EDUCACIÓN PÚBLICA (Sept. 25, 2013 at 1:27:45 pm), http://www.sep.gob.mx/es/sep1/18_de_marzo.

5. *Ley Reglamentaria del Artículo 27 Constitucional en el Ramo del Petróleo* [Regulatory Law to Article 27 of the Mexican Constitution in the Petroleum Sector], *Diario Oficial de la Federación* [DO], 29 de Noviembre de 1958 (Mex.) [hereinafter *Petroleum Law*], available at http://www.cnh.gob.mx/_docs/Leyes/2_ley_reglamentaria.pdf.

6. *Reglamento de la Ley Reglamentaria del Artículo 27 Constitucional en el Ramo del Petróleo* [Regulation to the Regulatory Law to Article 27 of the Mexican Constitution in the Petroleum Sector], DO, 25 de Agosto de 1959 (Mex.), available at <http://www.cre.gob.mx/documento/2732.pdf>.

7. *See C.P., as amended*, DO, art. 28, 5 de Febrero de 1917 (Mex.).

8. *Plan Nacional de Desarrollo 1989–1994* [1989–1994 National Development Plan], DO, 31 de Mayo de 1989 (Mex.), available at <http://ordenjuridico.gob.mx/Publicaciones/CDs2011/CDPaneacionD/pdf/PND%201989-1994.pdf>; *Programa Nacional de Modernización Energética 1990–1994* [1990–1994 National Program for Energy Modernization], DO, 7 de Mayo de 1990 (Mex.), available at http://dof.gob.mx/nota_detalle.php?codigo=4654416&fecha=07/05/1990.

cause Mexico had been unable to develop the natural gas industry on its own due to poor pipeline infrastructure, environmental concerns, and insufficient financial resources, particularly in the northern regions of the country. However, it was the administration of President Ernesto Zedillo that privatized part of the natural gas sector and better regulated Pemex's secondary petrochemical assets in 1996.⁹

No additional important modifications were made to the oil and gas industry during the administration of President Vicente Fox. It was not until November 28, 2008, during the administration of President Felipe Calderon, that the Mexican government published modifications in the Federal Registry (in the energy sector) establishing opportunities for Incentive Contracts ("*Contratos Incentivados*") to foreign companies for the purpose of increasing oil and gas reserves. Calderon's modifications, however, were not enough because they did not modify the Constitution for upstream activities. Further, the modifications did not allow additional participation by the private sector in downstream activities. Therefore, the current President, Enrique Peña Nieto, faced significant challenges to revitalize the energy sector. President Peña Nieto saw the economic potential and promoted this reform. Although his political party—the Institutional Revolutionary Party (*Partido Revolucionario Institucional*, which is known by its Spanish acronym as "PRI")—was the party originally responsible for prohibiting foreign participation, it now became the party that proposed these changes. PRI's political credibility for previously expropriating the foreign companies ensured the passage of this historic constitutional modification that was published in the Federal Registry on December 20, 2013 ("*2013 Constitutional Modifications*").¹⁰

B. Towards Constitutional Modifications

The leaders of Mexico have been forced to confront reserves and energy policy in the midst of dwindling oil production. The major impetus behind this proposal was the desire to increase production of domestic natural gas to meet increasing demand while reducing Mexico's reliance on natural gas imported from the United States. The production of oil in Mexico has fallen precipitously since 2004, from 3.4 million bar-

9. See *Petroleum Law*, *supra* note 5, as amended, 22 de Mayo de 1995.

10. Decreto por el que se reforman y adicionan diversas disposiciones de la Constitución Política de los Estados Unidos Mexicanos, en Materia de Energía [Decree amending and supplementing various provisions of the Constitution of the United Mexican States on Energy Matters], as amended, DO, 20 de diciembre de 2013 (Mex.) [hereinafter *2013 Constitutional Modifications*], available at http://www.dof.gob.mx/nota_detalle.php?codigo=5327463&fecha=20/12/2013.

rels per day to 2.5 million barrels per day.¹¹ Natural gas imports have climbed from 3 percent of consumption in 1997, to 30 percent in 2012. Gasoline imports have risen from 25 percent to 44 percent of the total supply, and petrochemical imports have climbed from 41 percent to 66 percent.¹²

In order to revitalize the petroleum sector, Pemex estimates that it needs to invest \$60 billion per year, which is twice the amount Pemex spends today.¹³ In addition to these startling numbers, the likelihood of finding significant natural gas deposits in Northern Mexico's unconventional sands and shales that trend down from Texas provides another incentive to exploit foreign investment opportunities.

The 2013 Constitutional Modifications make it clear that Pemex will not be privatized. Instead, the secondary congressional laws will allow Pemex to receive first opportunity at existing oil prospects, allowing it to match its capabilities to these projects. The government believes the reform will increase oil output by 1 million barrels a day and lower the prices for gas and power generation. Meanwhile, natural resources including all solid liquid and gaseous hydrocarbons in the Mexican subsoil remain the Nation's property.¹⁴

III. LEGAL ORDINANCES APPLICABLE TO THE OIL AND GAS INDUSTRY

The anxiously awaited congressional laws that provided the guidelines for the 2013 Constitutional Modifications were published on August 11, 2014. Today, the legal regime behind the Mexican oil and gas industry is integrated by a variety of existing public and private legal ordinances. The most important pieces of legislation relevant to the oil and gas industry are: the Mexican Constitution ("Constitution"),¹⁵ the

11. Ley de Hidrocarburos [Hydrocarbons Law], DO, 11 de Agosto de 2014 (Mex.), Statement of Purpose at 3, available at http://www.dof.gob.mx/nota_detalle.php?codigo=5355989&fecha=11/08/2014.

12. *Id.* Statement of Purpose at 2–25.

13. Juan Montes, *Mexico Opens Energy Sector to Private Investors*, WALL STREET JOURNAL (Aug. 7, 2014), <http://online.wsj.com/articles/mexico-opens-energy-sector-to-private-investors-1407392884>.

14. David Agren, *Mexico Opens Up Petroleum Business to Private and Foreign Companies*, USA TODAY (Dec. 20, 2013), <http://www.usatoday.com/story/news/world/2013/12/20/mexico-petroleum-oil-foreign/4152521/>; see also *Hydrocarbons Law*, *supra* note 11, at 10.

15. See Constitución Política de los Estados Unidos Mexicanos [Political Constitution of the United Mexican States], [C.P.], *as amended*, DO, arts. 25, 27–28, 5 de Febrero de 1917 (Mex.).

Hydrocarbons Law,¹⁶ the *Petróleos Mexicanos* Law (“Pemex Law”),¹⁷ the Hydrocarbons Revenue Law,¹⁸ the Foreign Investment Law (“FIL”),¹⁹ the Law on the National Security Industrial Agency and the Environmental Protection (in the Hydrocarbon Sector),²⁰ the Mining Law,²¹ the Regulatory Bodies Law,²² the Law of the Mexican Petroleum Fund for Stabilization and Development,²³ Law on Public-Private Partnerships,²⁴ Federal Budget and Fiscal Responsibility Law,²⁵ and the General Law of Public Debt.²⁶

16. The Hydrocarbons Law abrogates the Petroleum Law and amended the Foreign Investment Law, the Mining Law, and the Public and Private Association Laws. See *Hydrocarbons Law*, *supra* note 11, Second Transitory.

17. The Pemex Law abrogates its predecessor law published on November 28, 2008 and it also derogates the Federal Law of Parastatal Entities [Ley Federal de las Entidades Paraestatales]; the Acquisitions, Leasings and Services of the Public Sector [Ley de Adquisiciones Arrendamientos y Servicios del Sector Público]; and the Public Works and Related Services Law [Ley de Obras Públicas y Servicios Relacionados con las Mismas] and any and all legal and administrative provisions contrary to this Law. Ley de Petróleos Mexicanos, [Mexican Petroleum Law], DO, 11 de Agosto de 2014 (Mex.).

18. Ley de Ingresos sobre Hidrocarburos [Hydrocarbons Revenue Law], DO, 11 de Agosto de 2014 (Mex.), available at http://www.dof.gob.mx/nota_detalle.php?codigo=5355983&fecha=11/08/2014. This new legal ordinance abrogates and adds several provisions of the Federal Rights Law [Ley Federal de Derechos] and the Fiscal Coordination Law [Ley de Coordinación Fiscal] aThird–Fifth Transitory.

19. Ley de Inversiones Extranjeras [Foreign Investments Law] [FIL], *as amended*, art. 5 (I)–(II), DO, 11 de agosto de 2014 (Mex.), available at http://www.normateca.gob.mx/Archivos/66_D_3919_28-08-2014.pdf.

20. Ley de la Agencia Nacional de Seguridad Industrial y de Protección al Medio Ambiente del Sector Hidrocarburos [Law on the National Security Industrial Agency and the Environmental Protection in the Hydrocarbon Sector], DO, 11 de Agosto de 2014 (Mex.).

21. Ley Minera [Mining Law], *as amended*, arts. I, II, DO, 26 de Junio de 1992 (Mex.).

22. Ley de los Órganos Reguladores Coordinados en Materia Energética [Regulatory Bodies Law], DO, 11 de Agosto de 2014 (Mex.).

23. Ley del Fondo Mexicano del Petróleo para la Estabilización y el Desarrollo [Law of the Mexican Petroleum Fund for Stabilization and Development], DO, 11 de Agosto de 2014 (Mex.).

24. Ley de Asociaciones Público Privadas [Law on Public-Private Partnerships], *as amended*, DO, 11 de Agosto de 2014 (Mex.).

25. Ley Federal de Presupuesto y Responsabilidad Hacendaria [Federal Budget and Fiscal Responsibility Law], DO, 11 de Agosto de 2014 (Mex.).

26. Ley General de Deuda Pública [General Law of Public Debt], *as amended*, DO, 11 de Agosto de 2014 (Mex.).

IV. PEMEX AND ITS PRODUCTIVE SUBSIDIARY ENTITIES

A. Pemex as a Productive State Entity

Pemex was created by the Mexican Congress via decree immediately after the expropriation of the oil and gas industry under the Cardenas administration.²⁷ Pemex and its subsidiaries were considered decentralized public entities of the federal Mexican government entrusted by the Nation to carry out the oil and gas industry. Today, Pemex is considered a Productive State Entity (*Empresa Productiva del Estado*) and will now be able to incorporate Productive Subsidiary Entities (jointly referred to as “Pemex”) and affiliated companies.²⁸ This new legal status will provide Pemex with budgetary autonomy subject only to the balance sheet and monetary ceiling established by the Ministry of Finance and Public Credit (*Secretaría de Hacienda y Crédito Público*—known by its Spanish acronym “SHCP”).²⁹ Pemex’s independent legal status allows Pemex to manage and develop industrial and commercial activities related to the Mexican petroleum industry, generating economic value and increasing the profits of the Nation in accordance with the terms of the Pemex Law and the Hydrocarbons Law.³⁰

Despite the above-mentioned modifications, foreign participation in Pemex remains completely prohibited. One of the modifications to article 25 of the Constitution establishes that:

The public sector will be exclusively responsible for the strategic areas established in article 28, paragraph four of the Constitution, *with the federal government maintaining ownership and control over productive state entities*. . . . Regarding the planning and control of the exploration and production of oil and other hydrocarbons, the Nation shall conduct these activities in terms of the provisions of the sixth and seventh paragraphs of article 27 of the Constitution. [T]he law will establish the rules for their administration, organization, operation, pro-

27. Decreto que Crea la Institución Petróleos Mexicanos [Decree Creating the Mexican Petrolero Institution], art. 3., DO, 20 de Julio de 1938, (Mex.).

28. See Ley de Petróleos Mexicanos [*Mexican Petroleum Law*], art. 1–2, DO, 11 de Agosto de 2014 (Mex.).

29. See 2013 Constitutional Modifications, *supra* note 10, Third, Twentieth Trastitory; see also Pemex Law, *supra* note 17, art. 2.

30. See Ley de Petróleos Mexicanos, [*Mexican Petroleum Law*], arts. 4–5, DO, 11 de Agosto de 2014 (Mex.) For a better understanding of Pemex legal status and powers, see Alejandro López-Velarde, *The new foreign participation rules in each sector of the Mexican oil and gas industry: Are the modifications enough for foreign capitals?*, THE JOURNAL OF WORLD ENERGY LAW & BUSINESS, Dec. 23 2009, at 75–77.

curement procedures and other legal acts to be executed by the productive public entities³¹

B. Alliances and Partnerships with Pemex

One of the most important changes in the 2013 Constitutional Modifications was the lifting of a strong prohibition that previously limited the participation of foreign companies in Mexico. The Constitution now allows Pemex or any Productive State Entity to join venture with the private sector (foreign or national).³² Alliances and partnerships can be carried out as follows:

1. Upstream Activities

When the ownership of hydrocarbons located in the subsoil is involved, alliances and partnerships are not allowed between Pemex and the private sector.³³ However, Pemex will be able to execute alliances and partnerships with the private sector regarding exploration and extraction contracts (as mentioned below). This will be carried out through a bidding process before the National Hydrocarbons Commission (*Comisión Nacional de Hidrocarburos*—known by its Spanish acronym “CNH”). CNH will execute a contract with the partnership or alliance to be incorporated between Pemex and the private sector.³⁴ However, alliances or partnerships will have to obtain previous authorization from CNH to execute partnerships or alliances that involve corporate and management control by the contractor or operational control in the contractual area.³⁵ Finally, with respect to upstream activities, CNH cannot execute contracts for public-private associations.³⁶

2. Downstream Activities

On the other hand, alliances and partnerships can be carried out between Pemex and the private sector for downstream activities. Further, the Law on Public-Private Partnerships was amended to allow public-private partnerships in sectors such as refining, natural gas

31. See 2013 Constitutional Modifications, *supra* note 10, art. 25 (emphasis added).

32. See Ley de Petróleos Mexicanos [Mexican Petroleum Law], art. 6, DO, 11 de Agosto de 2014 (Mex.).

33. *Id.* at art. 7.

34. See 2013 Constitutional Modifications, *supra* note 10, Sixth Transitory; Hydrocarbons Law, *supra* note 11, arts. 13–15.

35. See Hydrocarbons Law, *supra* note 11, art. 15; Pemex Law, *supra* note 17, art. 8.

36. See Hydrocarbons Law, *supra* note 11, art. 14.

processing, transportation, distribution and storage of hydrocarbons, Liquefied Petroleum Gas (“LPG”), shale gas, and oil.³⁷

3. Antitrust Issues

Mexican Federal Competition Law (*Ley Federal de Competencia Económica*—the “Antitrust Law”) regulates mergers and acquisitions with the purpose of reviewing what has become known as “concentrations.” Pursuant to Article 61 of the Antitrust Law, a “concentration” is defined as: “[M]erger, acquisition of control or any act whereby companies, partnerships, shares, equity, trusts or assets in general are concentrated among competitors, suppliers, customers or any other business entity.”³⁸ Mexico’s Antitrust Law establishes a pre-merger notification requirement for any concentration that reaches the monetary thresholds established in Article 86 of the Antitrust Law. Specifically, Article 86 establishes the following guidelines for notifying the Federal Economic Competition Commission (*Comisión Federal de Competencia Económica*—the “Antitrust Commission”) prior to executing the transaction:

- i. When an act or succession of acts related to a transaction that is executed in Mexico or abroad, directly or indirectly reaches an amount in the Mexican territory over the equivalent of 18 million times the Minimum General Wage (“MGW”) prevailing in the Federal District (approximately U.S. \$89,720,000 where the daily minimum wage is \$67.29 and applying an exchange rate of \$13.50/U.S. \$1);
- ii. When an act or succession of acts related to the transaction reaches the accumulation of 35 percent or more of the assets or shares of an economic agent, whose annual assets in the Republic or annual sales originated in the Republic are more than the equivalent of 18 million times the MGW prevailing in the Federal District (approximately U.S. \$89,720,000); or
- iii. When an act or succession of acts related to the transaction reaches the accumulation of assets or capital stock in the Mexican Republic in excess of 8.4 million times the MGW prevailing in the Federal District (approximately U.S. \$41,869,333); and if the concentration involves the participation of two or more economic agents whose assets or annual volume of sales in the Mexican Republic, joint or separately, total more than 48 million times the MGW prevailing in the Federal District (approximately U.S. \$239,253,333).

37. See Law on Public-Private Partnerships, *supra* note 24, art. 10.

38. Ley Federal de Competencia Económica [LFCE][Antitrust Law], *as amended*, art. 61, DO, 23, de Mayo de 2014, (Mex.).

V. THE MEXICAN CONSTITUTION

A. Modifications and Restrictions

Before the 2013 Constitutional Modifications were passed, one of the primary purposes of the Mexican supreme law was to control rampant foreign investment, an intent embodied throughout the Constitution, especially in articles 27 and 28.³⁹ Thus, even with the 2013 Constitutional modifications, the Nation retains direct dominion over the subsoil as well as the exclusive right to develop petroleum and gas. The Constitution still prohibits the private ownership of hydrocarbons and reserves ownership of all solid, liquid, and gaseous hydrocarbons, to the State.⁴⁰ National ownership of such natural resources is a Constitutional right that is inalienable and imprescriptible.⁴¹ In addition, “strategic activities,” such as exploration for and extraction of oil and other hydrocarbons, are more heavily regulated under the sixth and seventh paragraphs of Article 27 of the Constitution. The Mexican State will carry out these activities through allotments (*asignaciones*)⁴² granted to Pemex

39. See C.P., *as amended*, DO, arts. 25, 27–28, 5 de Febrero de 1917 (Mex.). For a better understanding of the background of articles 27 and 28 of the Constitution see Alejandro López-Velarde, *Some Considerations on the New Foreign Investment Possibilities in the Mexican Oil and Gas Industry*, 4 MEX. L. LIB.: COM. CODES (Supp. 1997), available at <http://www.lvwhb.com/textos/doc1.pdf>.

40. See C.P., *as amended*, DO, arts. 25, 27–28, 5 de Febrero de 1917 (Mex.); Pemex Law, *supra* note 17, art. 7.

41. See C.P., *as amended*, DO, arts. 25, 27–28, 5 de Febrero de 1917 (Mex.). Article 27 in relevant part reads as follows:

[T]he domain of the Nation is inalienable and imprescriptible, and the production, use or exploitation of these resources by individuals or by companies incorporated under Mexican law cannot be done except through concessions granted by the Executive Branch, in accordance with the legal terms and conditions established by the law In the case of oil and solid, liquid or gaseous hydrocarbons in the subsurface, the property of the Nation is inalienable and imprescriptible, and concessions will not be granted. In order to raise revenue for the State that contributes to the long-term development of the Nation, shall carry out the exploration and extraction of oil and other hydrocarbons through allotments to productive state entities or through contracts with them or the private sector, under the terms to be established in the corresponding regulatory law. To fulfill the purpose of such allotments or contracts, the productive state entities may contract with [the private sector]. In any case, the hydrocarbons in the subsurface are the property of the Nation and so must be established in the allotments or contracts.

Id. art. 27 ¶¶ 6, 7. See also, Hydrocarbons Law, *supra* note 11, art. 1, 3.

42. Allotments are the administrative legal act by which the Federal Government grants exclusively to Assignee the right to engage in activities of exploration and extraction

or other productive state entities or through exploration and extraction contracts.⁴³

Based on Article 27 of the Constitution, several conclusions can be drawn that are relevant for the private sector participation in the oil and gas industry. First, the private sector will be able to participate in upstream activities through allotments or contracts granted to Productive State Entities such as Pemex. Next, the private sector (either national or foreign) can contract for exploration and extraction, receiving the likely benefits from such contracts as long as the hydrocarbons in the subsoil remain the property of the Mexican State. This ability to contract is a remarkable modification for project finance and stock valuation.⁴⁴ Lastly, the private sector will be able to participate in downstream activities.⁴⁵

B. Protection of Private Investment

In addition to existing treaties such as the Free Trade Agreement for North America⁴⁶ and the Agreement on Trade-Related Matters between Mexico and the European Community,⁴⁷ the Mexican Government is addressing the concerns of foreign participants in Mexico's oil and gas industry.

The Constitution dictates that congressional law will "encourage and protect private sector economic activity and provide conditions for the development of the private sector" with the purpose of contributing to national economic development and promoting competitiveness.⁴⁸ Next, upstream activities are "strategic activities" that are considered important to Mexico's social interest and public order, which take precedence over any other use affecting the surface or subsurface of those

of hydrocarbons in the allotment area, for a specific period of time. *See* Hydrocarbons Law, *supra* note 11, art. 4–5.

43. *See* C.P., *as amended*, DO, arts. 25, 27–28, 5 de Febrero de 1917 (Mex.) *See also*, Hydrocarbons Law, *supra* note 11, arts. 2 (I), 5, Statement of Purpose at 11; FIL, *supra* note 19, art. 5 (I).

44. *See* 2013 Constitutional Modifications, *supra* note 10, Fifth Transitory; *see also* Hydrocarbons Law, *supra* note 11, art. 45; Pemex Law, *supra* note 17, art. 9.

45. *See* Hydrocarbons Law, *supra* note 11, arts. 48 (I)–(II).

46. Decreto de Promulgación del Tratado de América del Norte [Decree of Promulgation of the North American Free Trade Agreement], DO, Dec. 20, 1993. (Mex.) [hereinafter "NAFTA"]

47. Acuerdo Interino sobre Comercio y Cuestiones relacionadas con el Comercio entre la Comunidad Europea, por una parte y los Estados Unidos Mexicanos, por otra [Interim Agreement on Trade and Trade-Related Matters between the European Community and the United Mexican States], DO, Dec. 8, 1997. (Mex.).

48. *See* 2013 Constitutional Modifications, *supra* note 10, art. 25.

lands.⁴⁹ Expropriations may only be made for public purposes, to benefit the general public by increasing government revenue.⁵⁰

Refining, petrochemical processing, transportation, and the distribution and storage of oil and gas are economic activities carried out through a permit granted by the Ministry of Energy (*Secretaría de Energía*—known by its Spanish acronym as “SENER”) or the Energy Regulatory Commission (*Comisión Reguladora de Energía*—known by its Spanish acronym as “CRE”). These activities are all considered public utilities.⁵¹

VI. NEW FOREIGN INVESTMENT PARTICIPATION IN EACH LEVEL OF THE OIL AND GAS INDUSTRY

A. Upstream Activities

The most important modifications of the Constitution were made to exploration and extraction activities. On March 21, 2014, Pemex sent SENER a list of the areas where it could likely operate through allotments to begin new exploration and extraction processes on its own or jointly with private entities.⁵²

Many of the Constitutional modifications are relevant to private sector participation. First, SENER, with the technical assistance of the CNH, will award allotments for exploration and extraction activities to Pemex or any other Productive State Entity.⁵³ Then Pemex, or any Productive State Entity, can request that SENER assign the allotments to the private sector.⁵⁴ Interested private entities can then compete to develop such allotments by bidding for the contracts. In these cases, the CNH will carry out the (i) public tender,⁵⁵ (ii) the technical administration of allotments and contracts, and (iii) regulation of exploration and extraction of hydrocarbons.⁵⁶ The CNH will authorize allottees and contractors to carry out drilling activities in (a) exploratory wells; (b) wells in deep and ultra-deep waters; and (c) prototype wells to be used as design wells

49. See Hydrocarbons Law, *supra* note 11, art. 96; Mining Law, *supra* note 21, art. 6.

50. In general terms, “public purposes” relate to activities that affect or benefit the general public; while “fair compensation” relates to the value of the property according to a commercial appraisal that determines the price of the property. See 2013 Constitutional Modifications, *supra* note 10, art. 27, para. 2.

51. See Hydrocarbons Law, *supra* note 11, art. 58, 96.

52. *Pemex pretende mantener yacimientos donde ya hay inversión*, DINERO EN IMAGEN (28 de Marzo, 2014), www.dineroenimagen.com/2014-03-28/34928.

53. See Hydrocarbons Law, *supra* note 11, art. 6–7.

54. *Id.* at art. 12.

55. See 2013 Constitutional Modifications, *supra* note 10, arts. 9–10 Transitory.

56. *Id.* art. 10(b) Transitory.

models.⁵⁷ Also, CNH will execute contracts with Pemex or the Productive State Entities and the private sector for upstream activities. In the private sector foreign investors will have to incorporate as a Mexican corporation since the Hydrocarbons Law defines corporations (*personas morales*) as those incorporated according with the Mexican law.⁵⁸ With respect to drilling oil and gas wells, Foreign Investment Law allows foreign investment to exceed the former's participation percentage limits through a favorable resolution from the National Commission of Foreign Investment. Therefore, foreign entities can participate on a 100 percent basis.⁵⁹ Consequently, the following contracts will likely be granted by CNH.⁶⁰

1. Service Contracts

In a Service Contract, a foreign company performs a well-defined job for Mexico's national oil company. The duration is often fixed and the foreign company does not receive any of the oil it produces, but normally receives a fixed fee per barrel above reimbursement of the costs it incurs.⁶¹ This type of contract has been used by Pemex and its subsidiaries, but has been unattractive to international investors since aforementioned contracts only allow cash compensation and the oil and gas companies are more interested in participating in the oil and gas production.⁶²

2. Production Sharing Contracts

The main principle of this system is that ownership and control of national resources are entrusted to the state and the private company assumes the status of a risk-taking contractor. The private entity is entitled to reimbursement of its costs plus a share of production to remunerate their efforts only in the event of commercial production.⁶³ Under a Production Sharing Agreement ("PSA"), a foreign oil company carries the most financial risk for exploration and development. However, the

57. See Hydrocarbons Law, *supra* note 11, arts. 36, 47 (I).

58. *Id.* art. 4 (XXV).

59. See FIL *supra* note 19, art. 8.

60. The Constitution expressly prohibits granting Concessions. See 2013 Constitutional Modifications, *supra* note 10, art. IV Transitory; Const., *supra* note 15, art. 27.

61. See Dr. M.H. Nederlof, *Contract Types, CONSULTANCY, SOFTWARE AND EDUCATION FOR OIL AND GAS EXPLORATION*, <http://www.mhnederlof.nl/contracts.html> (last visited Nov. 13, 2014).

62. See Hydrocarbons Revenue Law, *supra* note 18, art. 21.

63. Claude Duval, et al., *International Petroleum Agreements-1: Politics, Oil Prices Steer Evolution of Deal Forms*, OIL AND GAS J. (Sept. 7, 2009), available at <http://www.ogj.com/articles/print/volume-107/issue-33/general-interest/international-petroleum.html>.

state also faces some risk. Often the national oil company joins as an interest holder in the PSA, contributing some of its “share capital” to the consortium that develops the area designated under the PSA. Often the host government has the cost of its initial contribution “carried” by the other companies. This carried cost is repaid to the companies from the host government’s future profits under the PSA.⁶⁴ This contract is compensated with a percentage of the production.

3. Profit Sharing Contracts

Profit Sharing Contracts are similar to Production Sharing Contracts except that companies are compensated with a percentage of income. That is to say, the private sector receives cash payment from the sales of oil and natural gas produced.

Under Profit and Production Sharing Contracts, compensation first goes to the Mexican state, then to the foreign entity. Compensation favors the Mexican State by including: (a) contractual fee for the exploratory phase, (b) royalties, and (c) a percentage of the operating income. Conversely, the Contractor receives: (a) reimbursement of costs and (b) the remnant of operating income after paying the percentage paid in favor of the State.⁶⁵

4. License Agreements

License agreements grant a foreign oil company rights to explore, develop, sell, and export oil or minerals extracted from a specified area for a fixed period of time. Companies compete by offering bids, often coupled with signing bonuses, to license such rights.⁶⁶ These agreements involve the transfer of hydrocarbons from the state to the licensee once they have been extracted from the subsoil. Private licensees have control of the oil and pay royalties and taxes to the government. In general terms, the government owns the hydrocarbons when they are underground up until they exit the wellhead, at which point the licensee takes possession.⁶⁷ Pursuant to the Hydrocarbons Revenue Law, license agreements compensate contracting parties as follows: In favor of the Mexican State: (a) a signing bonus, (b) contractual fee for the exploratory phase, (c) royalties, and (d) a compensation for a particular percentage value of hydrocarbons to be determined in the contract negotiations. Next, the

64. Jenik Radon, *The ABCs of Petroleum Contracts: License-Concession Agreements, Joint Ventures, and Production-Sharing Agreements*, OPEN SOCIETY INSTITUTE AND SOROS FOUNDATIONS NETWORK, COVERING OIL: A REPORTER’S GUIDE TO ENERGY AND DEVELOP, 61 (2005).

65. See Hydrocarbons Revenue Law, *supra* note 18, art. 11.

66. See Jenik Radon, *supra* note 64.

67. See Hydrocarbons Law, *supra* note 18, art. 11.

contractor receives compensation for the onerous transfer of hydrocarbons once extracted from the subsoil, as long as the State has already received the compensation established in the corresponding contract.⁶⁸

5. Any Combination of the Above Contracts

The parties may also enter into contracts that involve a combination of any of the above-mentioned contracts.⁶⁹

B. General Principles Applicable to Contracts in the Upstream and Downstream Sectors

The following general contractual principles apply to contracts executed for upstream and downstream activities:

1. Public Tenders

Article 134 of the Mexican Constitution dictates the general rules applicable for public tenders. As a general rule, contracts between private parties and the Mexican Government and/or Pemex are awarded through a public bidding process, commonly referred to as “Public Calls.” Pursuant to Article 134 of the Mexican Constitution, acquisitions, leases, services and public works shall be awarded by public bidding after a public bid tender. Applicants must submit proposals in sealed envelopes, which shall be opened publicly to insure that the State receives the best available conditions with respect to price, quality, financing, opportunity and any other pertinent circumstances.⁷⁰ However, Pemex may also carry out the process by restricted invitation or direct award⁷¹ for upstream activities. To do so, Pemex must first obtain an opinion from the Antitrust Commission regarding the prequalification criteria of the winner of the contract.⁷² These options are now implemented by the terms and conditions established in the Pemex Law and the Hydrocarbons Law.⁷³

Today, public tenders are no longer subject to the Public Acquisitions, Leases and Service Law, or the Public Works and Related Services Law (jointly referred as the “Procurement Laws”). Allotments and con-

68. See Hydrocarbons Revenue Law, *supra* note 18, art. VI.

69. See Hydrocarbons Law, *supra* note 11, Statement of Purpose at 21.

70. See C.P., *as amended*, art. 134, DO, art. 28, 5 de Febrero de 1917 (Mex.).

71. See Ley de Petróleos Mexicanos [Pemex Law], art. 26(II), DO, 11 de Agosto de 2014 (Mex.).

72. See Hydrocarbons Law art. 24 (III).

73. See 2013 Constitutional Modifications, *supra* note 10, Ninth Transitory; C.P., *as amended*, arts. 134, DO, arts. 28, 5 de Febrero de 1917 (Mex.); Hydrocarbons Law arts. 15, 23; Pemex Law arts. 75–76.

tracts granted to Pemex, a Productive State Entity, or a private entity on behalf of the Nation to conduct upstream or downstream activities will be awarded through public tenders in accordance with the terms and conditions established in the Pemex Law and the Hydrocarbons Law.

2. *Decision of Contractual Model*

The Mexican State shall define the contractual model best suited to maximize national income. However, CNH and Pemex will be able to include flexible commercial terms and conditions in their contracts per the Mercantile and Civil Codes, a practice previously restricted in the Procurement Laws.⁷⁴

3. *Contracts Ruled by Mercantile and Common Laws*

One of the most important modifications is that the contract to be awarded will be governed by mercantile and civil law instead of administrative law, which includes several terms and conditions in favor of public entities such as Pemex.⁷⁵ Now, Pemex and CNH will be able to establish any commercial term or condition most suitable for their contracts. The only restriction remaining is to comply with the public policy dictated in the Pemex Law, the Hydrocarbons Law, and the Hydrocarbons Revenue Law.⁷⁶

4. *Compensation*

Compensation established in the contracts for upstream activities is regulated by the Hydrocarbons Revenue Law.⁷⁷

5. *Taxes*

The Ministry of Treasury and Public Credit (*Secretaria de Hacienda y Credito Publico*) will establish the economic conditions related to the applicable taxes of the contracts granted in upstream activities such as income tax, value added tax, and salary tax, among others.⁷⁸

6. *Choice of Law and Forum*

Regarding the applicable law, Pemex, any Productive State Entity, and the private sector will apply (i) Pemex Law, (ii) Hydrocarbons Law, (iii) Hydrocarbons Revenue Law, and as supplemental law, (iv) Mercan-

74. See Pemex Law art. 7.

75. *Id.*

76. See Hydrocarbons Law arts. 77, 22.

77. See Ley de Ingresos sobre Hidrocarburos [Hydrocarbons Revenue Law], arts. 1, 4, 6, 11–12, 21, 23, 24, DO, 11 de Agosto 2014. (Mex.).

78. *Id.* art. 26.

tile Code and (v) Federal Civil Code.⁷⁹ Contracts involving CNH, a Productive State Entity, or a private entity cannot be subject to foreign law. Therefore, the only applicable laws are the Mexican federal laws.⁸⁰ However, these parties will be able to submit their controversies to arbitration in accordance with Mexican Mercantile Code and international treaties executed by Mexico. Thus, these modifications allow the parties to incorporate arbitration clauses instead of using Mexican courts as the forum for resolving their disputes with Pemex.⁸¹ For contracts or other legal acts executed outside the Mexican Republic that impose legal effects outside the Mexican Republic, Pemex or any Productive State Entity will be able to choose between foreign or domestic law and courts, or foreign or domestic arbitration.⁸²

C. The Refining Industry

The limited reforms and modifications made to the oil and gas industry in November 2008 by President Calderon did not clarify how the private sector could participate in the refining industry. Pemex has secured a monopoly in this sector because the sector was established as a strategic area in Article 28 of the Constitution and in Article 3 of the Petroleum Law. In fact, Article 3 of the Petroleum Law dictates that the petroleum industry—which was in the hand of the State—encompasses (i) the exploration, exploitation, *refining*, transportation, storage, distribution and first-hand sale of petroleum, and its by-products obtained through the refining process; (ii) the exploration, exploitation, production, and first hand sale of gas; and (iii) production, storage, transportation, distribution, and first-hand sale of by-products that can be used as basic industrial materials, as well as those gases that are considered basic petrochemicals.⁸³

There was an urgent need to open up this sector due to the public's interest in increasing the production of refined products and reducing dependence on imports of products such as gasoline. Also, the refining industry was underdeveloped, because Pemex devotes a vast majority of its budget to upstream activities and Pemex-Refining, a subsidiary of Pemex, has reported deficits for the last ten years.⁸⁴

79. See Hydrocarbons Law, *supra* note 11, art 97.

80. *Id.* art. 21.

81. See also Pemex Law, *supra* note 17, art. 115.

82. See Pemex Law, *supra* note 17, art. 115.

83. See, Petroleum Law, *supra* note 30 at art. 3.

84. *Refinación, el lastre de Pemex*, EL UNIVERSAL (May 29, 2010), www.eluniversal.com.mx/primera/35006.html.

On September 22, 2009, the new Regulations in the Petroleum Provisions of Article 27 of the Mexican Constitution were published. This repealed the previous Regulation of the Petroleum Law, which had been in effect since 1959. Articles 24, 31, and 33 of the new Regulation help define the term “refining industry,” since the Petroleum Law did not define this activity and only included it as part of the catalog of oil and gas activities reserved by the State.⁸⁵ Indeed, neither the Constitution nor the congressional laws (especially the Petroleum Law) establish a definition of the “refining industry”.

Although there is no a clear cut definition of the refining industry in the Hydrocarbons law, the new regulations distinguish oil products (*petrolíferos*) from petrochemical products as those obtained from the refining of oil or natural gas and directly derived from hydrocarbons, such as gasoline, diesel, kerosene, fuel oil, liquefied petroleum gas, etc.⁸⁶ Further, the 2013 Constitutional Modifications to the Hydrocarbon Law establish that SENER will grant permits to the private sector for refining oil and hydrocarbons.⁸⁷ Consequently, private investors will be able to participate in the refining industry in several ways.

Despite the strong need for investment in gas stations throughout the Mexican Republic to supply fuel to the Mexican people, the Foreign Investment Law (“FIL”) used to include gas stations as part of its catalog of reserved activities for Mexican Corporations via Foreigners’ Exclusion Clauses. Consequently, foreign investors could not participate directly in the retail trade of gasoline and liquefied petroleum gas.⁸⁸ However, FIL was amended to allow foreign investors to fund private gas stations.⁸⁹ Further, the historic and widely criticized franchise agreement between Pemex-Refining and Mexican private gas stations is no longer required to supply fuels. So, foreign and national gas stations will need only to

85. Nuevo Reglamento de la Ley Reglamentaria del Artículo 27 Constitucional en el Ramo del Petróleo [New Regulation of the Petroleum Provisions of the Regulatory Law of Article 27 of the Mexican Constitution], DO, Sept. 22, 2009 (Mex.). For a better understanding on how the refining industry was regulated before the 2013 Constitutional Modifications, see, Alejandro López-Velarde, *La Industria de la Refinación y su Ineficiente Regulación para la Participación Privada* [The Refining Industry and its Inefficient Regulation for Private Participation], ENERGÍA A DEBATE (Jan-Feb 2013), <http://energiaadebate.com/la-industria-de-la-refinacion-y-su-ineficiente-regulacion-para-la-participacion-privada/>.

86. See Hydrocarbons Law, *supra* note 11, art. 4.

87. See 2013 Constitutional Modifications, *supra* note 10; FIL *supra* note 19, Tenth Transitory; see also Hydrocarbons Law, *supra* note 11, arts. 48 (I), 80(I)(a).

88. See FIL *supra* note 19, arts. 6, Sixth Transitory. For a better understanding as to the regulation of foreign investment in Mexico, see Alejandro López-Velarde, *Some Considerations as to the New Foreign Investment Law*, STATE BAR OF TEX. 27–42 (Feb. 1994), available at <http://www.lvwvb.com/textos/doc5.pdf>.

89. See FIL *supra* note 19, art. 6 (II).

obtain a permit from the CRE beginning January 1, 2015.⁹⁰ Next, foreign investors can participate up to 100 percent in the supply of fuel and lubricants for ships, airplanes, and railroad equipment. The former policy, limiting participation to a maximum of 49 percent, was repealed.⁹¹

Finally, the Hydrocarbon Law now states that the private sector will be able to participate in the sale of Mexican or foreign gasoline and diesel and to import such fuels into the Mexican Republic beginning in 2017.⁹² The maximum price set by the government will be eliminated by 2018, and the price for these fuels will be established according to the market price.⁹³

D. The Petrochemical Industry

The petrochemical industry was historically one of the worst-regulated sectors in the history of the Mexican oil and gas industry,⁹⁴ because the Mexican government divided it into two areas without a practical rationale. One area, and its attendant duties, was to be carried out by the government and the other was carried out by both the government and private sectors.⁹⁵ Most notably, only the government could participate in the Basic Petrochemical Industry (“BPI”), which included the production of ethane, propane, butane, pentane, hexane, heptane, naphtha, raw material for smoke lampblack, and methane. The private sector was only allowed to participate in production of the Secondary Petrochemical Industry (“SPI”), which included all other petrochemical products.⁹⁶

The above-mentioned division was inefficient since one of the fundamental characteristics of the petrochemical industry is its structure of long productive chains, which then supply other economic activities. The division was imposed by the Mexican government in 1986 to reserve part of this industry for the Mexican state.⁹⁷ But the areas are linked be-

90. See Hydrocarbons Law, *supra* note 11, art. 14 (III) Transitory.

91. See FIL, *supra* note 19, art. 7 (IV) (w).

92. See Hydrocarbons Law, *supra* note 11, art. 14 (II) Transitory.

93. *Id.* art. 14 (I) Transitory.

94. For a full description of the background regulation of the petrochemical industry in Mexico, see Alejandro López-Velarde, *Legal Considerations as to the Petrochemical Industry in Mexico*, 8 INT’L ENERGY LAW & TAXATION REV. at 193–98 (Aug. 2002), available at <http://www.lvwahb.com/textos/doc3.pdf>.

95. See also Petroleum Law, *supra* note 5, art. 3.

96. *Id.*

97. Resolution which Classifies Petrochemical Products as Basic or Secondary Petrochemicals, DO, Oct. 13, 1986. (Mex.) The products which were basic petrochemicals are (i) cetaldehyde; (ii) acetonitrile; (iii) acrylonitrile; (iv) alfaolefins; (v) ammonia; (vi) benzene; (vii) cyclohexane; (viii) vinyl chloride; (ix) cumen; (x) dichloroethane; (xi) dodecylbenzene;

cause BPI and SPI products are sometimes produced simultaneously. In order for these chains to function in an efficient manner, adequate information is required from the suppliers of raw materials to set appropriate prices for various secondary products that are used on a daily basis.⁹⁸

In addition to the commercial imbalance in petrochemical products, the Mexican government invested insufficient funds in this sector from the 1980s to mid-1990s. Consequently, on November 14, 1995, Pemex called interested parties of Mexican and foreign origin to participate in a bid (the "Call") to purchase assets located in the petrochemical complex Cosoleacaque (in the State of Veracruz). The Call was intended to bring fresh capital to the sector, produce secondary petrochemicals,

(xii) styrene; (xiii) ethane; (xiv) methyl tertiary butyl ether; (xv) ethyl benzene; (xvi) ethylene; (xvii) heptane; (xviii) hexane; (xix) isopropanol; (xx) raw material for black smoke; (xxi) methanol; (xxii) N-paraffins; (xxiii) internal olefins; (xxiv) ortho-xylene; (xxv) ethylene oxide; (xxvi) paraxylene; (xxvii) pentane; (xxviii) high-density polyethylene; (xxix) low-density polyethylene; (xxx) propylene; (xxxi) propylene tetramer; (xxxii) toluene; and (xxxiii) xylene. *Id.* Then, this Resolution was abrogated by the modifications made to the Petroleum Law in 1996. See *supra* note 5, art. 27.

98. These materials can be found all around us at various times during our daily life such as, for example, in (i) the house, carpet (nylon), curtains, bed sheets, table cloths (terrylene and dacron), light cables and rope (polypropylene), refrigerators (plastic interiors, polyurethane and freon insulators), parts beaters, blenders, pans, teflon covers, furniture made of particle board covered by formica and melamine (made from various types of plastics), articles for cleaning which we use daily (ammonia), detergents (made from phenols etoxilates), in the care of clothes such as dry cleaning (use of solvents), stain removers, soaps (olefin, linears, propylene tetraatryne, benzene, sulfuric acid, glycols, carboic acids, etc., (ii) in restaurants and our food, petrochemical products are a large ally for having meats, fruits, vegetables, corn, wheat, among other grains, on our tables (use of flea poison, medicines, fertilizers, insecticides, herbicides, preparation of food complements and fumigants), in so called processed foods (use of additives and preservatives in order to prepare and conserve said foods, avoiding fat becoming rancid or filled with bacteria, mold or yeast); (iii) in hospitals, with dentists and health care in general, the recipients of medication, apparatus used in operating rooms, laboratories and offices, surgical gloves, oxygen chambers, catheters, radiographic plates, syringes (plastics, resins and rubber derived from petroleum), the preparation of medications such as aspirin or benzocaine, vitamins, suppositories, antibiotics, vaccines, drugs, hormones, steroids, transdermic patches, prosthesis and biomedical apparatus as in the preparation of ears, eyes, hip, knees, skull, bones, valves, veins, etc., the preparation of artificial teeth (use of acrylics resins); (iv) in automobiles or public transportation through various finished plastics, tires (use of elastomers) and in general, in any other place such as the office, workshop, factory, school, we realize that we are surrounded by products which derive from the chemical application which makes petroleum humanized. See Alejandro López-Velarde, *Algunas Consideraciones Legales Sobre la Industria Petroquímica en México* [Some Legal Considerations as to the Petrochemical Industry in Mexico]; *Anuario de Derecho de la Universidad Iberoamericana*. No. 26, 1996, at 427-28.

and increase the production of fertilizers in Mexico.⁹⁹ The Call, however, was cancelled by the federal government since various Mexican corporations announced that they were against the sale of the petrochemical complexes.¹⁰⁰ The cancellation generated legal uncertainty and a lack of investor confidence. As a result, petrochemical products have operated at a loss for more than a decade. Therefore, Pemex will now likely sell off its various assets that produce basic and secondary petrochemicals, which are located at 61 petrochemical plants distributed among 10 complexes owned by Pemex-Petroquímica.

Based on the 2013 modifications to Article 28 of the Constitution and the FIL modifications, the private sector will now be able to participate in the production of both BPI and SPI. BPI is no longer considered a strategic activity reserved by the State;¹⁰¹ however, foreign entities will have to obtain a permit from CRE.¹⁰² Under the modifications, the private sector can now also participate in the commercialization of petrochemical products as long as companies obtain a permit through CRE and provide statistical information requested by the Commission.¹⁰³ Petrochemicals that do not need to be transported by pipeline do not need any kind of authorization permits.¹⁰⁴

E. Transportation, Storage, Distribution, Compression, Liquefaction, Decompression, Regasification and Sale to the Public of Oil Products

One of the largest problems in the oil and gas industry is inefficient transportation of oil and gas products throughout the Mexican Republic due to past restrictions on the management of pipelines. Now, the 2013 Constitutional Modifications and the Hydrocarbons Law create the possibility for the private sector to store, transport, distribute, and sell hydrocarbons, oil, and petrochemicals (when high volume petrochemicals require pipeline transportation) through a permit granted by CRE.¹⁰⁵

99. Secretaría de Energía, *Morelos Petrochemical S.A. DE C.V. National Public Bid CPQ-01* [DO] Sep. 14, 1998, http://www.diario-o.com/dof/1998/09/14/se_14Sep98.htm.

100. See Legal Considerations as to the the Petrochemical Industry in Mexico *supra* note 94, at 445–49.

101. See Constitutional Modifications, *supra* note 10, art. 28; FIL, *supra* note 19, art. 5 (II).

102. See Hydrocarbons Law, *supra* note 11, art. 48 (II).

103. Note that when petrochemical products need to be in storage and/or transported by pipeline, due to their large volume, it will be necessary to obtain a permit from CRE. *Id.* art. 49.

104. *Id.* art. 13.

105. See 2013 Constitutional Modifications, *supra* note 1010, Tenth Transitory (c); Hydrocarbons Law, *supra* note 11, art. 48 (II); Statement of Purpose at 13.

F. Shipping Oil and Gas Products

One of the important modifications made in the upstream activities (mostly related to the offshore activities) is the amendment to the FIL that allows foreign investors to participate up to 100 percent in companies that operate ships to provide services for the exploration and extraction of oil and other hydrocarbons.¹⁰⁶

G. The Gas Industry

1. Natural Gas

The first important modification made in the Natural Gas industry was carried out on May 11, 1995, during the administration of President Ernesto Zedillo. These initial modifications allowed private investment in the transportation, distribution, and storage of natural gas through a permit regime managed by CRE. Nevertheless, these modifications had little impact since the exploration and production of natural gas were reserved to Pemex.¹⁰⁷

Following the 2013 Constitutional modifications, the private sector will be able to extensively participate in the Natural Gas industry. The private sector can participate in transportation, storage, and distribution along with compression, liquefaction, decompression, regasification, and the public sale of natural gas as long as companies first obtain a CRE permit. Next, the private sector can participate in the exploration and production of natural gas through contracts for upstream activities as described in Part V. Foreign investors may construct pipelines for the transportation of oil and derived products. The private sector can participate, in this regard, on a 100 percent basis without obtaining a favorable resolution from the Foreign Investment Commission.¹⁰⁸ Further, the Mexican government will incorporate the National Natural Gas Control Centre (*Centro Nacional de Control del Gas Natural*—the “Gas Center”)¹⁰⁹ no later than August 12, 2015. The Gas Center is responsible for managing the national transportation pipeline and storage systems.¹¹⁰ Pemex will transfer the corresponding assets and contracts executed with the public and private sector to the Gas Center for the purpose of managing pipeline infrastructure and natural gas storage and to provide services to the appropriate users. The Gas Center shall secure the supply of natural gas in the whole Mexican Republic. The Gas Center will also publish and

106. See FIL, *supra* note 19, arts. 7 (III) v), 8 (II).

107. See Petroleum Law, *supra* note 30, arts. 3–4.

108. FIL, *supra* note 19, art. 8 (X).

109. See Hydrocarbons Law, *supra* note 11, a Twelfth Transitory.

110. *Id.* arts. 66–69.

manage the public tenders related to the infrastructure projects associated with the national transportation and storage system.¹¹¹

2. Shale Gas

Horizontal drilling, hydraulic fracturing, and the use of large amounts of water distinguish shale gas production from conventional gas development. Modern shale gas drilling is a recent phenomenon primarily commenced and refined in the United States. Although commercial natural gas production from shale was first discovered in 1821, today's modern shale gas industry only became viable after a recent combination of factors.¹¹²

In the 1970s, the U.S. government and the private sector funded a combination of key technologies such as massive hydraulic fracturing, horizontal drilling, and advanced earth imaging.¹¹³ It came about at a time when there was a short supply of natural gas for U.S. consumption. The U.S. government policy included deregulation of the price of natural gas, opening access to interstate pipelines and providing tax incentives to private industry to develop gas from unconventional sources.¹¹⁴ In addition, the U.S. government provided assistance in research and development for the required technologies. These technologies included horizontal drilling, 3-D seismic imaging, and fracturing technology.¹¹⁵

Fewer than half the states in the United States have shale gas potential.¹¹⁶ Each state in the United States has its own set of laws and regulations. There are no two states that have the identical regulations, although there are common elements in most of these regulatory structures. The American Petroleum Institute ("API") has issued best practices guidelines on most regulated shale gas activities.¹¹⁷ These guidelines are designed to meet or exceed federal standards, while remaining flexible enough to accommodate variations in state regulations and conditions.

111. See 2013 Constitutional Modifications, *supra* note 10.

112. See Daniel J. Soeder & William M. Kappel, WATER RESOURCES AND NATURAL GAS PRODUCTION FROM THE MARCELLUS SHALE (U.S. Geological Survey 2009), <http://pubs.usgs.gov/fs/2009/3032/pdf/FS2009-3032.pdf>.

113. Alex Trembath, et al., *Where the Shale Gas Revolution Came From: Government's Role in the Development of Hydraulic Fracturing in Shale*, BREAKTHROUGH INSTITUTE, (May 2012), http://thebreakthrough.org/blog/Where_the_Shale_Gas_Revolution_Came_From.pdf.

114. *Id.*

115. *Id.*

116. Madeline Gottlieb, et al., *The State of State Shale Gas Regulation: Resources for the Future*, RFF Report (June 2013), http://www.rff.org/rff/documents/RFF-Rpt-StateofStateRegs_Report.pdf.

117. *Id.*

One important factor to shale gas development in the United States is the private ownership of minerals, which occurs almost exclusively in the United States.¹¹⁸ Oil and gas firms can acquire an interest in a deposit or formation by offering a financial stake to the land owners in the resulting production, known as royalties. This allows companies to pay low prices and realize an increase of value in those tracts as the cost of producing gas decreases.¹¹⁹ Of course, private ownership of minerals is not present in most countries, such as Mexico, thus presenting a different set of needs for the development of shale gas in those countries. These countries might consider a different legal mechanism for the use of the land, including purchase of the property, temporary occupancy of the property, and right-of-ways, among others.

The private sector will now be able to participate in Mexico's shale gas industry through a bidding process carried out through CNH for exploration and extraction contracts.¹²⁰ Still, the development of shale gas in Mexico and the possibility of attracting foreign companies that are active in shale gas development will require additional conditions. Contracts executed with Pemex, a Productive State Entity, or with the Mexican government (e.g., CNH) for access to these resources must be lucrative enough to allow for the massive investment required for the adequate exploration and production of shale gas. Massive investment includes expensive technology such as horizontal drilling, hydraulic fracturing, and advanced seismic imaging including 3-D seismic. Next, slick water fracturing, the common method used today in the U.S., requires millions of gallons of water per well.¹²¹ Therefore, adequate water resources are necessary for this type of fracturing.¹²² Developers also need an interconnected pipeline system to transport processed shale gas. Also, Mexico will have to promulgate regulations that provide open access to this pipeline system, which sends the gas to ready markets and helps create a competitive wholesale gas market.¹²³ Incentivizing foreign investment will further require sensible environmental regulations that

118. Zhongmin Wang & Alan Krupnick, *A Retrospective Review of Shale Gas Development in the United States*, 2013 RESOURCES FOR THE FUTURE, RFF DP 13–14.

119. *Id.*

120. See Hydrocarbons Law, *supra* note 11, art. 27.

121. Jesse Jenkins, *Energy Facts: How Much Water Does Fracking for Shale Gas Consume?*, THE ENERGY COLLECTIVE (Apr. 6, 2013), <http://theenergycollective.com/jessejenkins/205481/friday-energy-facts-how-much-water-does-fracking-shale-gas-consume>.

122. As shale gas development spread across the United States, some areas affected by drought expressed resistance to such development. Sally Entrekin, Michelle Evans-White, Brent Johnson & Elisabeth Hagenbuch, *Rapid Expansion of Natural Gas Development Poses a Threat to Surface Waters*, 9 FRONTIERS IN ECOLOGY AND THE ENVIRONMENT 503–11 (2011).

123. See Alan J. Krupnick & Raymond J. Kopp, *Attaining Sustainable Development of Oil and Gas in North America: A Review of the Environmental Landscape*, RFF REPORT (June, 2014),

ensure preservation of the fresh water zones and the environment during every stage of the drilling process, including production, plugging, and abandonment.¹²⁴ Finally, the industry will need unregulated pricing of natural gas for those companies producing shale gas to ensure sufficient incentive for development.

3. *Associated Natural Gas*

Associated Natural Gas (also known in Mexico as “Grisu Gas”) is defined in the Hydrocarbon Law as natural gas dissolved in the oil from a reservoir under the original conditions of pressure and temperature.¹²⁵ Now, mining concessionaries with mineral deposits of coal will be able to explore and exploit associated natural gas without having to enter bidding wars with CNH. The Mining Law dictates that bids are not necessary for the catalog of minerals and other substances found in veins, ledges, masses, or deposits. The catalogue distinguishes the mineral carbon, in all its varieties including the associated natural gas (excluding shale gas) from other components of the land.¹²⁶ In this case, foreign and national investors must have the technical, administrative, and financial capabilities for the work, and execute a contract with CNH within 90 days of the day of publication of the Hydrocarbon Law.¹²⁷

In the event that the associated natural gas is located outside the mine or the extraction premises, or where geological formations contain hydrocarbons not associated with mineral coal (e.g., shale gas), it will be necessary to bid the corresponding administrative contract with CNH.¹²⁸

4. *Liquefied Petroleum Gas*

Before the 2013 Constitutional Modifications, Liquid Petroleum Gas (“LPG”) production was a state monopoly controlled by Pemex; furthermore, foreigners exclusion clauses reserved the distribution and sale

<http://www.goldmansachs.com/our-thinking/our-conferences/north-american-energy-summit/reports/rff-attaining-sustainable-development.pdf>.

124. *Id.*

125. See Hydrocarbons Law, *supra* note 11, art. 4 (XVIII).

126. The Regulation of the Mining Law on Associated Natural Gas in Deposits of Mineral Carbon is abrogated by the modifications of the Mining Law. See Mining Law, *supra* note 21, arts. 4 (VIII), 5 (I), Second Transitory. See also Hydrocarbons Law, *supra* note 11, art. 27.

127. See Hydrocarbons Law, *supra* note 11, Seventh Transitory.

128. The 2013 Constitutional Modifications also dictate that mining concessions that are in force when the Hydrocarbons Law and the Mining Law go into effect and those that are granted afterwards confer no rights for the exploration and extraction of oil and other solid, liquid or gaseous hydrocarbons. Existing concessionaries must allow the new contractors to carry out these activities. See 2013 Constitutional Modifications, *supra* note 10, Eighth Transitory, art. 27; Hydrocarbons Law, *supra* note 11, at 27, Statement of Purpose at 22.

of this fuel exclusively to Mexican individuals or corporations.¹²⁹ Now, foreign companies will be able to participate in the production of LPG through a permit granted by SENER¹³⁰ and participate in the transportation, distribution, and storage of LPG through a permit granted by CRE or SENER.¹³¹

F. Foreign Trade of Oil and Gas Products

Historically, import and export rules for the oil and gas industry were regulated by Foreign Trade Law, with the exception of natural gas.¹³² Generally, the import and export of oil and gas products required prior authorization from the Mexican government, a privilege that was usually withheld from the private sector. Furthermore, importers of petroleum and other hydrocarbons must be recorded in the Importers Registry. Now the import and export of oil and gas products is partially regulated by both the Hydrocarbons Law and the Foreign Trade Law. SENER will now grant permits with the purpose of allowing the private sector participation in the export and import of hydrocarbons, LPG, oil, and petrochemicals.¹³³

VII. CONCLUSION

Throughout the years, Pemex expanded its scope of activities to include a variety of economic activities. Some of the activities were not categorized as strategic areas, nor constitutionally reserved to the Nation, but they were all reserved for Pemex as part of the oil and gas industry under the Petroleum Law. Without question, the 2013 Constitutional modifications represent a historic break in the Mexican oil and gas industry. These modifications ended the monopolistic oil and gas practices of Pemex, one of the largest monopolies in the world, 56 years after they were implemented.

By abrogating Article 3 of the Petroleum Law, Mexico discontinued Pemex's monopolistic practices in every phase of the oil and gas industry. This monopolistic stronghold included (i) the exploration, exploitation, refining, transportation, storage, distribution, and first-hand

129. See FIL, *supra* note 19, art. 6 (II).

130. See Hydrocarbons Law, *supra* note 11, arts. 4 (XVI) (XXVIII), 48 (I).

131. The permits related to the transportation, distribution, and storage not linked to pipelines will still be granted by SENER. Transportation, distribution and storage of LPG through pipelines will be granted by CRE. See Hydrocarbons Law, *supra* note 11, art. 48 (I)–(II); Twenty-Seventh Transitory, Statement of Purpose at 12.

132. See Ley de Comercio Exterior [LCE] [Foreign Commerce Law], DO, 27 de Julio de 1993, arts. 15–16. (Mex.).

133. See Hydrocarbons Law, *supra* note 11, art. 48 (I).

sale of petroleum and its by-products obtained through the refining process; (ii) the exploration, exploitation, production, and first hand sale of gas; and (iii) production, storage, transportation, distribution, and first-hand sale of by-products that can be used as basic industrial materials, as well as those gases that are considered basic petrochemicals.¹³⁴ In the upstream sector, the ownership of natural resources—such as hydrocarbons in the subsoil—still belong to the Nation. But now, exploration and extraction are strategic activities that Mexico can develop through contracts with Productive State Entities, Pemex, or through contracts with the private sector. Downstream activities are no longer considered strategic activities; so, the private sector can participate in them through the permitting system under SENER or CRE.

In addition, the antiquated, restricted, and non-specialized Procurement Laws that include the Public Acquisitions, Leases, Service, Public Works, and Related Services Laws, will no longer be applicable for public tenders in the upstream and downstream sectors. Thus, the private sector will need to review the general bidding rule established in Article 134 of the Constitution, Pemex Law, the Hydrocarbons Law, and the bidding guidelines to be published by the Board of Directors of Pemex. With this change, Mexico is redefining Pemex's participation in the oil and gas industry as a commercial public entity rather than an administrative public entity subject to commercial regulations. Contracts awarded to the private sector will be governed by mercantile and civil law instead of the administrative law, which previously established terms and conditions in favor of public entities such as Pemex.

Though the Constitution, the secondary laws, and the corresponding regulations approved by the Mexican Congress and published by the Executive Branch are now in place, the private sector will need further clarification on the implementation of these dramatic changes, which will be provided by the publication of additional general legal ordinances related to the laws discussed herein. However, the Mexican government has already taken a tremendous step forward in developing its oil and gas industry by opening it to the rest of the world.

134. See Petroleum Law, *supra* note 5, art. 3.

