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MEXICO: CONSTITUTIONAL AND POLITICAL IMPLICATIONS OF THE 1995 NATURAL GAS REGULATIONS

*Danielle Homant**

For the first time in sixty years, a new implementing regulation to Article 27 of the Mexican Constitution permits foreign investment in natural gas distribution, transmission, and storage. It allows foreign investors to compete for new energy projects triggered by Mexico's energy shortages, impending clean air mandates, and a desire to develop its immense and relatively untapped natural gas reserves. Foreign energy companies are pondering what level of legal certainty exists under the new law, and how new natural gas projects are going to make economic sense in Mexican markets.¹

With power consumption in Mexico growing at over twice the United States rate and its leaders gradually opening up the power sector to foreign investors, Mexico has long been viewed as a promised land for United States energy companies.² Power consumption in Mexico has grown by an average annual rate of five percent in the last ten

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1. Presently, the government subsidizes up to a third of the cost of propane, the favored source of home energy in most of Mexico. See Chris Kraul, *Mexico Now Permits Foreign Investment in Energy*, AUSTIN AM.-STATESMAN, Feb. 11, 1996, available in 1996 WL 3417941.

2. See *id.*

years, compared with two percent growth in the United States.³ By 2005, Mexico will need to add about 12,000 megawatts to its power grid, about eighty-five percent to be fueled with new natural gas-fired combined-cycle technology.⁴ However, the opening of the electric industry three years ago to private foreign investment in Mexico had almost no impact because the regulatory structure discouraged new project development.⁵

Despite the new law, some United States power companies remain skeptical, even as Mexico dangles an estimated US \$5 billion in natural gas pipeline deals before private investors. The more conservative estimates predict the investment value to be about US \$620 to \$800 million.⁶ An international spotlight is now on the first natural gas distribution concession recently awarded under the new regulations to serve the city of Mexicali in the state of Baja California Norte, Mexico. Other projects in Chihuahua and Hermosillo are now in the bidding process.

Part I of this paper considers the historical context of the natural gas industry in Mexico, invoking a parallel examination of both the oil and electricity industries. Part II discusses the legal context enveloping the new Natural Gas Regulations as they interface with existing Mexican laws and international treaties. Part III describes what the Natural Gas Regulations allow and require, together with the newly issued Natural Gas Pricing Regulations.

Part IV explores various political views for and against an originalist interpretation of the Mexican Constitution with regard to natural gas activities. Part IV also provides a case study of the first natural gas distribution concession by Mexico to an American foreign investor and an analysis of the new regulations and weighs Constitutional considerations, concluding that a broader interpretation of the Mexican Constitution has been assumed by the new regulations.

I. HISTORICAL CONTEXT

A. *History of the Oil Industry in Mexico*

Modern foreign investment in natural gas is inevitably influenced by the development and present condition of Mexico's oil industry. To understand the basis on which the Mexican government makes natural gas foreign investment decisions, an understanding of the special relationship between oil, gas and the government is essential.

3. *See id.*

4. *See id.*

5. *See Mexican Senate Approves Gas Pipeline Opening*, LATIN AM. ENERGY ALERT, May 15, 1995, available in 1995 WL 10441329.

6. *See Memorandum from Christopher J. Goncalves, International Energy Director, Crossborder, Inc., Washington, D.C., to author (Jan. 12, 1997) (on file with author).*

It was foreign enterprise, not domestic entities, that began to develop Mexican oil when it was first discovered in 1901. The Mining Law of 1884 gave surface owners the right to own subsurface oil,⁷ the Petroleum Law of 1901 authorized the Mexican government to grant oil concessions in public lands,⁸ and the Mining Law of 1909 reaffirmed the subsoil rights of surface owners.⁹ Protected by these acts, foreign companies (mainly American and British) significantly owned and controlled oil production in Mexico until 1938.

The leaders of the government, after the Mexican Revolution, sought to reduce the influence of foreign investors over Mexico's wealth, through the Constitution of 1917, specifically Article 27, which declared that the Mexican nation owned Mexican subsoil resources.¹⁰ Foreign oil companies attempted to protect their investments through the intervention of their home governments, even though forbidden by Mexico's Petroleum Law of 1925. The United States government insisted that disputes such as labor troubles, tax disputes, resistance to retail price increases, and wasteful drilling practices had to be settled by international arbitration.¹¹

When the foreign oil companies refused to abide by domestic Mexican laws, the Mexican government responded by expropriating the strike-bound companies and creating the government owned *Petróleos Mexicanos* (PEMEX). The 1938 expropriation of foreign owned oil concessions in Mexico was the world's first major expulsion of foreign oil companies from a developing country in the name of national sovereignty.¹² Foreign owned natural gas concessions were also banned. This was a defining moment in Mexican history, that gave rise to national passions strongly held in the hearts of Mexicans today. The resulting "creation of PEMEX has long been a matter of national heritage, pride and wealth."¹³

Mexico has the potential to be a major natural gas and oil player. Over the years, Mexico has exported about half its oil.¹⁴ PEMEX's rising petroleum output has allowed Mexico to overtake Venezuela as Latin America's leading oil-producing nation, making Mexico the sixth-

7. See Ewell E. Murphy Jr., *To Trust a Constitution, or to Constitute a Trust?*, 5 MEX. TRADE & L. REP. 5 (1992).

8. See *id.*

9. See *id.*

10. See *id.*

11. See *id.*

12. See *id.* (citing GEORGE PHILIP, *OIL AND POLITICS IN LATIN AMERICA*, 224 (1982)).

13. Gary B. Conine, *Natural Gas Transactions Between The United States and Mexico: Political and Legal Impediments To Free Trade*, 27 TEX. INT'L L.J. 577, 582 (1992).

14. See Sam Dillon, *Mexico's New Faith in PEMEX Paying Off*, SAN DIEGO TRIB., Oct. 21, 1995, available in LEXIS, Busfin Library, Sdut File.

largest producer in the world, after Saudi Arabia, the United States, Russia, Iran and China.¹⁵ Mexico does not belong to the Organization of Petroleum Exporting Countries (OPEC)¹⁶, and its growing crude oil output is part of a worldwide pattern of production increases by non-members that is dampening OPEC efforts to increase oil prices.¹⁷

In 1995, President Zedillo and PEMEX's Director General announced the sale of sixty-one PEMEX petrochemical plants located mainly in ten petrochemical complexes to domestic and foreign investors. Given Mexico's understandable ongoing fear and mistrust of United States investors, this was a controversial proposal. PEMEX was to take a minority position in each plant for several years, at least until labor conditions and contractual terms had been stabilized to the satisfaction of the new investors, the Mexican government, and the labor union.¹⁸ A total of seventy domestic and foreign companies announced intentions to bid for the petrochemical facilities, which are located mostly in Veracruz and other southeastern states.¹⁹

The private investment initiative was immediately questioned by Mexican workers, and in succeeding months the labor union's opposition grew to include full page ads and rallies. During a rally attended by five thousand PEMEX workers, protestors carried signs that read: "To sell PEMEX is to sell Mexico" and "We reject the sale of our national patrimony."²⁰ The constitutional question has become so significant that some opponents have asked President Zedillo to hold a voter's referendum.

Other Mexican nationals would like to see safeguards added to the Constitution that would ensure foreign interests do not again gain overriding control over Mexico's petrochemical sector. They argue that Mexico's sixty-one petrochemical plants produce primary and strategic chemicals that can not or should not be legally privatized. The Zedillo administration has rejected both the proposal to modify the Constitution and the proposal to hold a referendum, and maintains that the privatization of the petrochemical plants involves the transfer of an operation to a private party and not the direct sale of the state's asset.²¹

15. *See id.*

16. *See Country Fact Sheet: Mexico (U.S.-Mexico Binational Commission Meeting: Mexico City, May 8-9, 1994)*, U.S. DEPT. OF STATE DISPATCH, available in 1994 WL 2848931.

17. *See Dillon, supra* note 14.

18. *See Petrochemical Plant Sales To Kick Off Mexican Petroleum Privatization*, OIL & GAS J., Nov. 6, 1995, available in 1995 WL 7945549.

19. *See Zedillo Administration to Announce First Concessions for Petrochemical Plants in Mid-November*, SOURCEMEX ECON. NEWS & ANALYSIS ON MEX., Nov. 8, 1995, available in 1995 WL 2263477.

20. *Id.*

21. *See id.*

The attempted privatization of Mexico's state-owned petrochemical sector has been a prolonged affair. After months of controversy and public protest, the first sale is still pending. The Energy Ministry is postponing the sale of the first complex, a group of ammonia plants in Veracruz at Cosoleacaque, due to the magnitude of social protests and possible labor union actions.

Additionally, used chemical plants such as the Cosoleacaque complex will sell for only about US \$150 million, which will provide little or no profit to Mexican government.²² Much money has been spent preparing and promoting private foreign investment, and the government does not wish to take a loss after so much publicity.

B. History of the Electrical Industry in Mexico

The history of the electricity industry in Mexico is also inextricably tied to natural gas foreign investment because natural gas fuels the electrical plants. The Mexican government not only owns and operates PEMEX, one of the world's largest oil and gas companies, but also owns and operates the Comisión Federal de Electricidad (CFE). CFE supplies a minimum of twenty million of Mexico's ninety million citizens with electricity through a system whose capacity has grown to about 32,000 megawatts.²³

In 1992 the private sector was allowed to invest in new electrical generation facilities, as long as the energy produced was for self-supply or was sold to the state owned CFE. However, progress was slow because of an ineffective regulatory framework on tariff policy and difficulties resolving disputes between the CFE and suppliers.²⁴

The Mexican government is encouraging the CFE, which operates its own facilities, to move from fuel oil to the more environmentally friendly natural gas. Additionally, more than half the country's industry uses fuel oil, and only a third natural gas.²⁵ By the year 2000 the Mexican government hopes this ratio will be reversed.

In February of 1995, a ten-year Electricity Plan (implementing the revised Electricity Law of December 1992) forecasted electricity annual growth between 2.5 and 4.5 percent.²⁶ The Electricity Plan predicts Mexico will require 14,639 megawatts of new electric generating capacity by the year 2004. CFE has plans to build 6,479 megawatts of

22. See David Shields, *Petrochemical Sale Still In Trouble*, EL FINANCIERO INT'L EDITION, May 20-26, 1996, at 6.

23. See Jeffrey Reyser, *Mexico Hopes its Economy Will Soon be Cooking with Gas*, ELECTRICAL WORLD, May 1, 1996, available in 1996 WL 8695893.

24. See *Mexico: Energy: Crisis Fails To Speed Oil & Energy Reform: Border Reserves Ripe For Joint Development With U.S.*, WEEKLY REPORT, Nov. 2, 1995, at 1.

25. See *id.*

26. See *Infrastructure Power Development Plan*, 5 MEX. TRADE & L. REP. 17 (1995).

generating capacity, leaving a deficit of 8,160 megawatts to be covered by the private sector.²⁷

The nation's supply of electricity is generated mainly by outdated oil-burning power plants that are harmful to the environment.²⁸ Money raised from private investment will be used by the Mexican government to increase the exploration of natural gas and to switch from fuel burning to natural gas generated electrical plants. It is estimated that between US \$28 to \$20 billion is needed over the coming decade for new investment in Mexico's electric power generation, transmission and distribution network.²⁹

The economically and environmentally preferred method to meet the expected growth in the demand for electric energy, and comply with future environmental legislation, is to significantly increase the natural gas-fired electricity generation from twenty to forty percent³⁰ and reduce the other types of generation, according to the Electricity Plan. Combined-cycle, gas-fired power plants are expected to play a major role in satisfying electricity demand in the future.³¹

In May 1996, U.S. and Mexican investors signed a long awaited agreement with the Mexican government to build the first privately funded natural gas generated electrical power plant, which will be fueled by US \$300,000 a day of Texas natural gas.³² The US \$647 million Samalayuca II plant is being built thirty miles south of Ciudad Juarez, across the border from El Paso, Texas. The Samalayuca II plant will play a key role in the continued development of the booming border region, as well as providing jobs in Texas. The Ciudad Juarez region, with a population of more than 1.5 million, continues to grow rapidly and is home to half of Mexico's booming maquiladora³³ assembly plants.³⁴ Construction of the new power plant is expected to be complete by the fall of 1998.

El Paso Energy Corporation, in a consortium with three U.S. partners, is putting up twenty percent of the US \$132 million equity invest-

27. See *id.*

28. See Diane Lindquist, *The Power Broker Mexico Seeks a Surge of Investor Money to Retool Energy*, SAN DIEGO UNION-TRIB., June 20, 1995, available in 1995 WL 5724095.

29. See *Power in Latin America*, BUS. CONF. & MGMT. REP. 6, Oct. 1, 1995, available in 1995 WL 13309838; See also Goncalves, *supra* note 6.

30. See *Power in Latin America*, *supra* note 29; See also Goncalves, *supra* note 6.

31. See *Electric Power Development, The Foreign Investor Perspective*, NORTH AM. FREE TRADE & INV. REP., May 31, 1996, available in 1996 WL 101754147.

32. See Laurence Iloff, *Investors Plan Private Power Plant U.S.-Mexico Venture Priced At \$647 Million*, DALLAS MORNING NEWS, May 4, 1996, available in 1996 WL 219908.

33. Maquiladoras are foreign owned companies operating in Mexico under special provisions which allow them to import, duty free, machinery, equipment and other parts necessary for production.

34. See Iloff, *supra* note 32.

ment and the other US \$515 million will come from debt financing, mostly from the Export-Import Bank of the United States.³⁵ The agreement between the U.S. companies and Mexico is a watershed event in United States participation in the rapidly growing Mexican energy sector.

The complex deal calls for the consortium to lease the plant for twenty years to the CFE, which will operate it. This arrangement is referred to as a "Build-Lease-Transfer (BLT)," which allows foreign investors to be able to own the Mexican electric power plants and earn profits by selling electric power back to CFE for the life of the facility.³⁶

In June, 1996, the Mexican government announced it was awarding permits for three Mexican private companies to build and operate three more electricity-generating complexes in Mexico. Two of the facilities will be powered by natural gas and the third powered by petroleum coke.³⁷

C. *History of the Natural Gas Industry in Mexico*

With PEMEX senior management intensely involved in planning for private foreign investment in petrochemical plants and dealing with prospective electric power investors that want long term natural gas supply contracts, the Mexican government has changed the rules in the area of natural gas transportation and distribution. As a result, foreign investors are considering whether the new Natural Gas Regulations provide enough protection against PEMEX's overwhelming presence in Mexico's industrial fuels market to justify an investment in natural gas pipelines or local distribution. Mexico is the Western Hemisphere's fourth richest country in natural gas reserves.³⁸ Mexico's 68 trillion cubic feet rank fourth after the United States: 162 trillion cubic feet, Venezuela: 129 trillion cubic feet, Canada: 95 trillion cubic feet.³⁹

PEMEX is a potent symbol of national identity: it is Mexico's biggest company and the sixth largest oil company in the world.⁴⁰ Despite PEMEX's size and power, low capital investment has slowed

35. *See id.*

36. *See* William D. Degrandis & Michael L. Owen, *Electric Energy Legal And Regulatory Structure In Mexico And Opportunities After NAFTA*, 3 U.S.-MEX. L.J. 61, 63 (1995).

37. *See* Energy Secretariat Awards Permits for Three Mexican Firms to Construct Private Electricity-Generating Facilities, SOURCEMEX ECON. NEWS & ANALYSIS ON MEX., June 12, 1996, available in 1996 WL 7994055.

38. *See* Chris Kraul, *International Business; Gas Firms Get Ready to Deal with Mexico*, L.A. TIMES, Nov. 23, 1995, available in 1995 WL 9848252.

39. *See id.*

40. *See* Mexico: Energy: Crisis Fails To Speed Oil and Energy Reform: Border Reserves Ripe For Joint Development With U.S., *supra* note 24.

development of new refining facilities and severely reduced natural gas exploration. The Mexican government has taxed PEMEX so onerously over the years that little revenue is left for capital investment to drill new oil or gas wells or maintain old ones.⁴¹ Traditionally, PEMEX has been Mexico's lead employer, as well as a generous civil benefactor. It has often built and operated housing, schools and health clinics in poorer areas with weak and equally poor governments. Reflecting the Mexican government's new efficiency philosophy, in 1994 PEMEX had revenues of US \$31 billion and was required to contribute twenty-eight percent of federal government revenues.⁴²

Until the recent legal changes, PEMEX was solely responsible for natural gas activities. Although the state-owned company developed a barely adequate 6200-mile pipeline network, the concepts of natural gas storage and marketing are virtually unknown in Mexico. Budgetary constraints limit pipeline construction, and the consequent lack of infrastructure has contributed to an underutilization of natural gas in industrial processes, as well as in residential and commercial markets. The private distribution networks are also very concentrated and not responsive to market demands.

However, changes brought about by President Zedillo have resulted in the first significant increase in Mexican crude oil and natural gas production since the early 1980's.⁴³ PEMEX's new Director General persuaded President Zedillo to increase the investment budget by more than twenty percent for the crude oil production.⁴⁴ In 1997 the PEMEX budget was pumped up by sixty-seven percent.⁴⁵ The more PEMEX prospers the better; when United State's President Clinton responded to the peso crisis in early 1995 by arranging US \$13.5 billion in loans to Mexico they were secured with oil revenue as collateral.⁴⁶ Thus, the better PEMEX performs, the more securely the American loans are backed. President Clinton announced in January 1997 that the Mexican government was repaying the final installment three years ahead of schedule.⁴⁷ As a result of the new policies, PEMEX increased its output of natural gas by seventeen percent over a year ago, but it is having pipeline problems in exporting it.⁴⁸

41. See Dillon, *supra* note 14.

42. See *Mexico: Energy: Crisis Fails To Speed Oil And Energy Reform: Border Reserves Ripe For Joint Development With U.S.*, *supra* note 24, at 2.

43. See Dillon, *supra* note 14.

44. See *id.*

45. See Goncalves, *supra* note 6.

46. See Dillon, *supra* note 14; See also, Ron Fournier, *Mexico To Repay U.S. With Final Installment*, SAN DIEGO DAILY TRANSCRIPT, Jan. 16, 1997.

47. See Fournier, *supra* note 46.

48. See David Shields, *Cactus: Yet Another Inferno at PEMEX*, EL FINANCIERO INT'L EDI-

There are two basic problems regarding natural gas and PEMEX. First, eighty-seven percent of Mexico's gas production of approximately 3.6 billion cubic feet per day in 1995 was "associated" with oil.⁴⁹ That is, most of this production is a by-product of oil fields located in Pemex's southern region and offshore in the Bay of Campeche.⁵⁰ Unless non-associated reserves in the north are developed, natural gas production will remain secondary to oil. PEMEX did drill and develop natural gas in the north near Reynosa and Monterrey in the 1980's,⁵¹ but this is inadequate and there is no natural gas service at all in Western and Northwestern Mexico.⁵² About twenty percent of Mexico, including the entire Yucatán and Baja California peninsulas and about twenty cities including Tijuana, Mexicali, Merida, San Luis Potosi and Aguascalientes, have no access to natural gas.⁵³ There is a clear potential for developing gas, but it is an investment-intensive area which also requires the construction of a gas pipeline infrastructure.

Second, "Mexico's gas transmission network has excess capacity in some places and severe bottlenecks in others."⁵⁴ The main 48-inch PEMEX trunkline is carrying only a third of its capacity, while PEMEX imports natural gas from the United States to serve customers in the north.

There is speculation that PEMEX is reluctant to develop natural gas, partly due to the 1992 gas pipeline explosion in Guadalajara which killed more than two hundred people. Additionally, the electrical power plants, which would be the largest market for natural gas, are currently the main purchasers of PEMEX's high sulphur crude oil that is below export quality. In other words, large investments will be required to develop natural gas, with a slow return. PEMEX has relatively easy access to the associated supplies of natural gas in the southeast and Gulf of Mexico, because that natural gas is located alongside reserves of crude oil. Natural gas in the north is located deep in the ground, and

TION, Aug. 5-11, 1996, at 8.

49. See *Power In Latin America*, supra note 29.

50. Almost 70 percent of Mexico's gas production is done in conjunction with oil production. See Andi Spicer, *Increased Prices Could Stimulate Gas Exports*, 199 GAS WORLD INT'L 26, June 1, 1994, available in 1994 WL 13304283.

51. See Memorandum from Steve Ordal, Energy Attache, U.S. Embassy-Mexico City (Jan. 13, 1997)(on file with author).

52. See George Baker, *Mexico's Energy Policies Stand at Crossroads*, THE OIL & GAS J., Nov. 6, 1995, available in 1995 WL 7945550.

53. See Chris Kraul, *Mexico is Ready to Power Up; Latin America: Billions of Dollars in Energy Projects Are Opening Up to Foreign Firms With Lifting of Investment Ban*. L.A. TIMES, Feb. 5, 1996, available in LEXIS, News Library, Busdtl File.

54. *Power in Latin America*, supra note 29 (quoting Quijano, director, Petroleum Finance Co.'s Latin American Energy Consulting Practice).

the extraction of natural gas in the northern states will require a significant commitment of capital.⁵⁵

The changes in the implementing regulation to Article 27 of the Mexican Constitution passed in 1995 allow foreign and domestic private companies to participate in energy related activities previously reserved to PEMEX, like the distribution, storage and transportation of natural gas. PEMEX's two decentralized natural gas distribution companies, Diganamex, which operates in some parts of Mexico City, and Diaqro, in Querétaro, are expected to be privatized within a year. In addition, CFE's natural gas distribution company in Monterrey will be privatized soon.⁵⁶

PEMEX is applying funds obtained from concessions of such activities toward development of the natural gas infrastructure in southeastern Mexico, but in all likelihood, not to the development of the natural gas reserves in northern Mexico.⁵⁷

1. History of Mexico's Natural Gas Demand

Mexico had been a net exporter of natural gas until "economic problems forced it to source gas from the [United States]",⁵⁸ even though Mexico has proven natural gas reserves adequate for supplying domestic requirements over the next seventy-five years.⁵⁹ Mexico only became a net importer of gas from the United States in 1989.⁶⁰ While it is true that natural gas production in Mexico is now rising because of increased oil production, for a brief period beginning in 1994 the floundering Mexican economy cut deeply into the domestic demand for natural gas.⁶¹ Attempts to rescue the economy were not immediately effective, and for a while political instability undermined economic confidence.⁶² In 1995, PEMEX announced plans to begin drilling thirty natural gas wells in northern Mexico.⁶³ During that time, PEMEX was

55. See *Explosion at Processing Plant in Chiapas State Forces Pemex To Import Natural Gas From U.S. Refineries*, SOURCEMEX ECON. NEWS & ANALYSIS ON MEX., Aug. 7, 1996, available in 1996 WL 7994073.

56. See *Mexico Publishes First Tender For Natural Gas Distribution*, LATIN AM. ENERGY ALERT, Mar. 15, 1996, available in LEXIS, Market Library, Iacnws File.

57. See *Explosion At Processing Plant In Chiapas State Forces PEMEX To Import Natural Gas From U.S. Refineries*, *supra* note 55.

58. Spicer, *supra* note 50.

59. See *Natural Gas Imports From U.S.*, SOURCEMEX ECON. NEWS & ANALYSIS ON MEX., July 8, 1992, available in 1992 WL 2396649.

60. See Spicer, *supra* note 50.

61. See *id.*

62. See *id.*

63. See *Congress Moves Quickly with Legislation To Allow Private Investment in Railroad, Civil Aviation, & Gas Distribution*, SOURCEMEX ECON. NEWS & ANALYSIS ON MEX., May 3, 1995, available in 1995 WL 2263395.

providing ninety percent of natural gas used in Mexico. The other ten percent was imported from Texas, California, New Mexico, and other southwestern U.S. states.⁶⁴ Mexican government figures show that the natural gas sector grew by 2.1 percent in 1995, despite a 6.2 percent drop in overall gross domestic product.⁶⁵ During the first three months of 1996, the gas sector grew by 2.9 percent when compared with the first three months of 1995.⁶⁶ Natural gas demand in Mexico is now expected to increase at a rate of five to seven percent a year until 2010.⁶⁷

Currently, only about five percent of Mexican homes burn natural gas, with most dependent on liquid propane gas, a fuel that is in increasingly short supply and must be imported from the United States.⁶⁸ Despite the country's rich natural gas reserves, an estimated eighty five percent of Mexican homes use liquid propane gas for cooking and heating, which is a health and fire hazard.⁶⁹

For example, Mexico City, one of the largest metropolitan areas in the world, has an estimated eighteen million residents, none connected to residential natural gas systems, many of them living in unplanned, poor neighborhoods.⁷⁰ The need for a clean fuel for cooking and heating, given the high levels of air pollution in Mexico City, is acute. Long subsidized by PEMEX, liquid propane gas sells at below market rates, although the subsidy is expected to be phased out by the year 1998.⁷¹

However, most gains in the foreign investor distribution of natural gas would first be made in the industrial, not the residential, sector.⁷² The cost of putting natural gas lines into existing residential areas is too high to justify the investment without a substantial industrial anchor.⁷³ More than fifty-one percent of Mexican industries use fuel oil for power, and only thirty-seven percent use natural gas.⁷⁴ Environmental regulations require the phase-out of highly polluting fuel oil starting in 1998 and reaching fifty percent phase-out by 2005.⁷⁵

64. *See id.*

65. *See Mexico Opens Three More Cities to Privatized Gas Distribution*, INSIDE F.E.R.C. GAS MKT. REP., May 31, 1996, available in 1996 WL 8605865.

66. *See id.*

67. *See Goncalves, supra note 6.*

68. *See Entex Looks For Distribution Opportunities in Mexico*, 23 ENERGY REP. 365 (May 1, 1995).

69. *See Kraul, supra note 38.*

70. *See George Stein, First Play Made for Mexican Gas Role*, PLATT'S OILGRAM NEWS, Nov. 30, 1995, available in LEXIS, News Library, Ponews File.

71. *See Goncalves, supra note 6.*

72. *See Entex Looks For Distribution Opportunities in Mexico, supra note 68.*

73. *See id.*

74. *See Kraul, supra note 38.*

75. *See Edward Hoyt & Mark Stevenson, New Law Permits Private Participation in Natu-*

American and international energy companies are delighted by Mexico's increasing use of natural gas. In 1995, Mexico used about 2.5 trillion cubic feet of natural gas, and the annual consumption is expected to rise to about 3.5 trillion cubic feet by the end of the century.⁷⁶ At 1996 prices, the projected consumption has a value of at least US \$3 billion.⁷⁷ Natural gas is expected to account for fifty three percent of all the energy sources in Mexico by the year 2005, compared with only thirty seven percent in 1994.⁷⁸ The goal is to boost supplies of natural gas in Mexico to replace other fuels that cause greater levels of pollution.

Some Mexican government officials predict Mexico will again be a net exporter of natural gas within four years.⁷⁹ Given the complex history of importing and exporting natural gas, recent natural gas disasters, and infrastructure deficiencies making the transportation of natural gas from southern to northern Mexico difficult, this change is not likely.

2. Recent Natural Gas Accidents in Mexico

Natural gas explosions have been common in Mexico. Thousands died in San Juan Ixhuatepec in 1984, and hundreds more died in Guadalajara in 1992.⁸⁰ In 1995, nine people died in the state of Tabasco, in a gas pipeline explosion.⁸¹ In June 1996, a series of three explosions destroyed two cryogenic gas processing plants, three small power stations, and the major pipelines at PEMEX's Cactus complex in Southeastern Mexico. The complex, Mexico's biggest natural gas processing plant, was completely destroyed, leaving six people dead.⁸² One-third of Mexico's natural gas processing capacity was destroyed; and much of the country's gas production had to be burned off at the wellhead, because it had nowhere to be processed.

The plants lost were covered by international insurance, and are expected to be rebuilt in eighteen months. However, the accident caused major losses in natural gas output and Mexico paid up to US \$2 million

ral Gas Sector, 3 LATIN AM. LAW & BUS. REP., May 31, 1995, available in LEXIS, Marked Library, Iacnws File.

76. See Joel Millman, *First Mexican Gas Concession Awarded*, WALL ST. J., Aug. 13, 1996, at A8.

77. See *id.*

78. See *Explosion At Processing Plant In Chiapas State Forces PEMEX To Import Natural Gas From U.S. Refineries*, *supra* note 55.

79. See *Mexican Gas Regulations Heralded by U.S. Firms Looking to Invest*, INSIDE F.E.R.C.'S GAS MKT. REPORT, Nov. 17, 1995, available in 1995 WL 2363727.

80. See Shields, *supra* note 48, at 8.

81. See *id.*

82. See *id.*

monthly for natural gas imports until natural gas production was normalized in September 1996. PEMEX also halted all exports of natural gas.⁸³ Most observers noted that the Cactus accident would not affect gas supplies nor gas projects in the northern part of Mexico, because imports will be available.⁸⁴ However, PEMEX was relying on the Cactus complex to supply an increasing share of the natural gas needs; the refinery had increased its output by ten percent in 1996.⁸⁵ The explosion left PEMEX in the difficult position of having to pay international market prices to import natural gas to ensure an adequate supply for the Mexican market.

II. LEGAL CONTEXT

A. *Mexico's 1917 Constitution*

Adopted in 1917 during a period of social upheaval and conflict, the Constitution of Mexico creates a system of government similar to that of the United States. Mexico is a presidential federal republic, with a president and a cabinet, a bicameral legislature, and a judiciary. In a manner similar to that of the U.S. Constitution, the Constitution of Mexico expressly divides power at the national level among the three traditional branches of government, represented by the president, the legislature (Chamber of Deputies and Senators), and the courts, which exercise judicial review. Most policy making in Mexico, however, takes place in the executive branch. Although the thirty-two states of Mexico retain all residual powers, as in the United States, the national government in Mexico is more powerful vis-à-vis the states than in the United States. Article 80 provides that "[t]he exercise of the supreme executive power of the Union is vested in a single individual who is designated 'President of the United Mexican States.'"⁸⁶

"Article 29 provides that under certain conditions 'which may place the society in great danger or conflict' the [P]resident, in agreement with other officials and with the approval of the legislature, may suspend guarantees 'which may present an obstacle to a rapid and smooth confrontation of the situation'"⁸⁷ This article gives the Mexican President increased discretion, useful when developing or changing the regulations that implement any of the Articles.

83. See *Explosion At Processing Plant In Chiapas State Forces PEMEX To Import Natural Gas From U.S. Refineries*, *supra* note 55.

84. See Shields, *supra* note 48.

85. See *Explosion At Processing Plant In Chiapas State Forces PEMEX To Import Natural Gas From U.S. Refineries*, *supra* note 55.

86. MEX. CONST. art. 80.

87. ROBERT L. MADDEX, CONSTITUTIONS OF THE WORLD, 171 (1995).

The relevant section of the Mexican Constitution regarding natural gas ownership is the lengthy Article 27,⁸⁸ which deals with land and water ownership: Ownership of the lands and waters within the boundaries of the national territory is vested originally in the Nation, which has had, and has, the right to transfer title thereof to private persons, thereby constituting private property

In the Nation is vested the direct ownership of all natural resources of the continental shelf and the submarine shelf of the islands; of all minerals and substances petroleum and all solid, liquid, and gaseous hydrocarbons

In those cases to which the two preceding paragraphs refer, ownership by the Nation is inalienable and imprescriptible, and the exploitation, use, or appropriation of the resources concerned, by private persons or by companies organized according to Mexican laws, may not be undertaken except through concessions granted by the Federal Executive, in accordance with rules and conditions established by law In the case of petroleum, and solid, liquid, or gaseous hydrocarbons or radioactive minerals, no concessions or contracts will be granted nor may those that have been granted continue, and the Nation shall carry out the exploitation of these products, in accordance with the provisions indicated in the respective regulatory law⁸⁹

Generally, monopolies such as the ones described by Article 27 are prohibited in the United Mexican States under Article 28, except that functions exercised exclusively by the Mexican nation in strategic areas such as petroleum and other hydrocarbons are not considered monopolies.

The hydrocarbon monopoly described by Article 27, first implemented by a 1958 implementing statute,⁹⁰ defined the petroleum industry and provided that it may be operated only by the Mexican Nation, acting through PEMEX. "Although the 1958 statute allowed PEMEX to employ private service contractors, it required them to be paid in cash and prohibited compensation by means of participation or percentages of production" (i.e., no risk contracts).⁹¹ "PEMEX's domination of the Mexican petroleum industry was further assured by regulations which detail its exclusive position in refining and basic petrochemicals."⁹²

If a narrow interpretation of Article 27 is effectuated on the face of the Constitution, no degree of privatization of the oil or gas industry would be allowed. However, for decades the Mexican Congress has circumvented narrow interpretations of many portions of the Constitution, for example by allowing legal title to land and waters to be owned

88. *See id.*

89. MEX. CONST. art. 27.

90. *See* Murphy, *supra* note 7.

91. *Id.*

92. *Id.* (citing PEMEX Organic Act, art. 2, 1971).

by Mexican trustees holding (through trusts) ownership for the economic benefit of foreign beneficiaries. This system is now allowed, through new legislation discussed below, for foreign investment in natural gas distribution systems and pipelines.

The broader interpretation of Article 27 employed by the Mexican Congress, and significant confidence in Mexican trust legislation, has resulted in overwhelming foreign investment in maquiladora plants on the Mexican side of the United States border and resort facilities along the Mexican coasts. The trust system has worked constitutionally, politically and economically for foreign investors in other areas, and is also a strategy for the natural gas sector. The Mexican Congress has not only broadly implemented Article 27 of the Constitution through trust legislation, but many other laws, regulations and treaties as well. The Constitution must be read in conjunction with these interpretive instruments to ascertain the full legal applicability of Article 27 to foreign investment in the natural gas sector.

B. Mexico's Energy Plan for 1995-2000

In February 1996, "the Energy Ministry of Mexico issued a development plan for the energy sector entitled the Programa de Desarrollo y Reestructuración del Sector de la Energía, 1995-2000 (the 'Development Plan')." ⁹³ The Development Plan provides a comprehensive summary of the energy sector in Mexico, including recent developments, a summary of the objectives and priorities of the government of Mexico for the energy sector, and development strategies for the next five years.

The Development Plan claims that increased investment by the private sector in electricity generation will allow the public sector to concentrate its resources on the improvement and expansion of the transmission and distribution system. For now, according to the plan, private participation is expected to be highest in the area of electric power generation.

The Development Plan notes that "Article 27 and 28 of the Constitution of Mexico provide that the rendering of electric public utility services is the exclusive domain of the state and that such function is part of the fundamental sovereignty of the country." ⁹⁴ The plan further states that the Mexican government's role is to ensure the rational development of the energy resources of the country through its energy policy and the management of the entities of the sector.

However, the Development Plan recognizes that the role of the state has evolved from that of a dominant player in the energy sector to

93. *Electric Power Development, The Foreign Investor Perspective*, *supra* note 31.

94. *Id.*

that of a regulator and promoter of the participation of private entities in the areas which the law permits. The plan directs that the regulations defining the legal relationship between private entities and the government must be transparent and effective.

One of the primary objectives for the next five years is the further restructuring of the energy sector and the public entities to ensure continued development and growth. The plan reassures that public entities will maintain ownership of their electric power generation facilities; therefore, CFE nor PEMEX will be privatized. The plan confirms that risk contracts will not be granted for oil exploration and production.⁹⁵ Nevertheless, the plan states that divestment of PEMEX's secondary petrochemical assets will move ahead towards privatization.

The Development Plan sets forth eight specific objectives:

- (1) promoting a rapid and efficient expansion of the energy sector; (2) contributing to the overall competitiveness of Mexican industry; (3) making the most of Mexico's comparative advantages in the energy field; (4) private sector participation in electricity generation is encouraged, including increased public investment in transmission and distribution; (5) providing conditions for the best possible development and performance of state-owned oil and electricity firms; (6) giving priority to energy-saving and efficient use of energy; (7) supporting Mexican suppliers of goods and services, as long as they are prepared to be competitive; and (8) improving labor conditions for workers in the energy sector.⁹⁶

Among other aims, the plan announces greater opportunity for private firms to get involved in natural gas and electricity development. The plan offers further legal certainty in energy related matters, based on Mexican Constitutional Articles 27 and 28, that PEMEX itself will not be privatized, but that certain divestments will be encouraged.

Mexico seems determined to open its energy industry to foreign investors after decades of protection. It has huge natural gas reserves it cannot fully exploit because it does not have the pipeline transportation infrastructure to deliver it.⁹⁷ According to the Development Plan, once the pipeline infrastructure is built, it is hoped by Mexico that natural gas will become a major source of export sales since currently the country is a net importer of gas.⁹⁸ Mexico faces energy shortages unless it can quickly increase its power generating capacity, utilizing natural gas, especially along the United States-Mexico border with California and Texas, where rapid growth of population and the maquiladora industry have stretched capacity to the limit.

95. See David Shields, *A New National Energy Plan*, EL FINANCIERO INT'L EDITION, Feb. 19-25, 1996, at 6.

96. *Id.*

97. See Kraul, *supra* note 53.

98. See *id.*

C. Mexico's 1993 Foreign Investment Law

Mexico's Foreign Investment Law (FIL)⁹⁹ regulates foreign ownership and limits foreign participation in the construction of natural gas pipelines to forty nine percent. A larger participation is allowed (up to 100 percent) upon prior authorization of the Foreign Investment Commission.¹⁰⁰

The PEMEX monopoly is succinctly shielded from foreign investors by Mexico's FIL, which lists "Petroleum and other hydrocarbons" and "Basic petrochemicals" as "strategic areas" in which functions must be reserved exclusively to the state, consistent with Article 27 of the Mexican Constitution.¹⁰¹

While the 1993 FIL was fairly vague in its description of the hydrocarbons monopoly, it was sufficiently specific when it deleted the distribution of natural gas as an activity reserved exclusively to Mexican nationals.¹⁰² Prior to the deletion, the 1989 Foreign Investment Regulations¹⁰³ had defined the state hydrocarbons monopoly as including the extraction of petroleum and natural gas, refining of petroleum, and manufacture of basic petrochemical products (which included the distribution of natural gas).¹⁰⁴ By deleting natural gas distribution from the list of exclusively domestic activities, the 1993 FIL removed an obstacle that previously prevented foreign investors from entering the natural gas sector.

D. North American Free Trade Agreement (NAFTA)

NAFTA¹⁰⁵ establishes a "free trade" area between Mexico, the United States, and Canada; its primary objectives are to break down barriers to trade¹⁰⁶, promote fair competition, and to increase foreign investment opportunities.¹⁰⁷ When NAFTA took effect January 1, 1994, it reaffirmed Mexico's constitutional monopoly on the explora-

99. "Ley de Inversion Extranjera", D.O., Dec. 27, 1993.

100. See *Mexican Gas Regulations Heralded By U.S. Firms Looking To Invest*, *supra* note 79.

101. MEX. CONST. art. 27.

102. See Ewell E. Murphy, Jr., *Making The Most of NAFTA*, 5 MEX. TRADE & L. REP. 11, 14 (1992).

103. "Reglamento de la Ley para Promover la Inversion Mexicana y Regular la Inversion Extranjera," D.O., June 26, 992.

104. See Murphy, *supra* note 7.

105. See *The North American Free Trade Agreement*, 1992, 32 I.L.M. 605 [hereinafter NAFTA].

106. See *id.*, Art. 102(1)(a).

107. See *id.*; See also Michael E. Arruda, *Effect of the North American Free Trade Agreement on Trade Between The United States And Mexico In the Energy And Petrochemical Industries*, 1 TULSA J. COMP. & INT'L L. 191, 192 (1994).

tion, development, transportation and First Hand Sales¹⁰⁸ of natural gas.¹⁰⁹ Article 601(1) of NAFTA provides that "the parties confirm their full respect for their constitutions."¹¹⁰

The most important reservation¹¹¹ in NAFTA's chapter on energy is Annex 602.3, which provides that:

The Mexican State reserves to itself the following strategic activities and investment in such activities: (a) exploration and exploitation of crude oil and natural gas; refining or processing of crude oil and natural gas; and production of artificial gas, basic petrochemicals and their feedstocks; and pipelines; and (b) foreign trade; transportation, storage and distribution, up to and including first hand sales of the following goods: crude oil; natural and artificial gas; goods covered by this Chapter obtained from the refining or processing of crude oil and natural gas; and basic petrochemicals.¹¹²

Although NAFTA affords its signatories the protection of the national treatment principle for investments across the borders of the parties, private investment is not permitted in the activities in which reservations apply.¹¹³ Since the reservation is essentially a unilateral act accepted by the other parties to the Treaty, Mexico is free to modify or withdraw its reservation at any time.¹¹⁴

NAFTA's national treatment obligation requires that the governments of Canada, Mexico and the United States extend to foreign investors the same treatment as domestic investors.¹¹⁵ However, each country has negotiated exceptions for sensitive industries and Mexico has the longest list of exceptions.¹¹⁶ However, Mexico has also agreed to make the most changes in its foreign investment rules, as evidenced by the new Foreign Investment Law enacted in 1993 which followed the general terms of NAFTA.¹¹⁷

There are various reasons why, even though at face value NAFTA appears to discourage foreign investment in natural gas in Mexico, this has not turned out to be the case. The reality of the situation follows

108. First Hand Sales is defined as the first sale of natural gas of national origin by PEMEX to another party.

109. See Arruda, *supra* note 107.

110. NAFTA, art. 601(1).

111. A reservation is a unilateral statement made by a Government to exclude or modify the effect of certain provisions of a treaty. See ROBERT BLEDSOE & BOLESŁAW A. BOCZEK, *INTERNATIONAL LAW DICTIONARY* 264 (1987).

112. NAFTA, annex 602.3(1).

113. See Richard D. English, *Energy In the NAFTA: Free Trade Confronts Mexico's Constitution*, 1 TULSA J. COMP. & INT'L L. 1, 17 (1993).

114. See *id.* at 18.

115. See NAFTA, art. 1102(1).

116. See RALPH H. FOLSOM & MICHAEL W. GORDON, *INTERNATIONAL BUSINESS TRANSACTIONS* 593-94 (Practitioner Treatise Series, 1995).

117. See *id.*

the lead of the Preamble of NAFTA, which states that one of NAFTA's fundamental principles is the sustained and gradual liberalization of trade in energy and basic petrochemical goods.¹¹⁸ For example, NAFTA allows, subject to the approval of the Mexican Foreign Investment Commission, one hundred percent foreign ownership in Mexican companies that provide natural gas well drilling services.¹¹⁹ Up to forty nine percent foreign ownership is permitted without the need for approval.¹²⁰ As to minerals generally, after five years the present forty-nine percent ceiling on foreign ownership will be increased to permit one hundred percent foreign ownership, without Foreign Investment Commission approval, of an enterprise "engaged in extraction or exploitation of any mineral."¹²¹

The United States and other industrialized states have maintained that the most dangerous risk to a foreign investor is the expropriation of "property without compensation or with inadequate compensation."¹²² Article 1110 of the NAFTA Investment Chapter provides for the protection of foreign investments against nationalization, expropriation, and other forms of interference that are "tantamount to nationalization or expropriation."¹²³ This NAFTA provision represents a significant shift from Mexico's longstanding position that it has the right of a sovereign nation to expropriate foreign property in its territory, and establishes a legal regime for protecting foreign nationals.¹²⁴

NAFTA also provides for arbitration of disputes between NAFTA investors and the Mexican government.¹²⁵ The traditional practice in Mexico had been to require foreign investors to pursue all legal claims in Mexico utilizing Mexican law. With NAFTA, however, a foreign investor may bring a judicial action in Mexico or submit the claim to arbitration using applicable rules of international law, according to the rules of Chapter 11 of NAFTA. It represents the first time Mexico has entered into an international agreement providing for investor-state arbitration.¹²⁶

Article 1102 of the Investment Chapter of NAFTA requires Mexico to open up petrochemicals, those not classified as basic, to foreign in-

118. See generally NAFTA, Preamble.

119. Augustin Berdeja-Prieto & Rogelo Lopez-Velarde, *Mexico*, INT'L FINANCIAL LAW R. 41 (1994).

120. See *id.*

121. Murphy, *supra* note 102, at 14 (citing NAFTA Annex I-Mexico).

122. Gloria L. Sandrino, *The NAFTA Investment Chapter And Foreign Direct Investment In Mexico: A Third World Perspective*, 27 VAND. J. TRANSNAT'L L. 259, 315 (1994).

123. NAFTA, art. 110(1).

124. See Sandrino, *supra* note 122.

125. See generally NAFTA, chs. 19-20.

126. See Sandrino, *supra* note 122, at 319-20.

vestment. There are only eight petrochemicals classified as basic petrochemicals by the Mexican government.¹²⁷

The Mexican Energy Ministry had decided it would not have applied a NAFTA clause restricting foreign ownership to only forty nine percent to the Cosoleacaque petrochemical complex, had the sale been completed. It announced, however, it will apply the clause in the sale of other petrochemical complexes to be sold.¹²⁸ Invoking the NAFTA clause would have allowed the government to restrict production of the eight basic petrochemicals to companies that are majority-owned by Mexicans.¹²⁹ The NAFTA clause was not part of the original guidelines released when the privatization of the petrochemical plants were first announced.¹³⁰ Obviously, the government's decision to apply a NAFTA clause to ensure majority Mexican capital in later sales of petrochemical complexes has greatly diminished foreign interest in them.

The government's decision to invoke the NAFTA clause may mean that the petrochemical complexes will not be sold as one massive unit. The plants may need to be privatized individually, ushering in a cumbersome process of breaking the complexes into separate entities for sale.¹³¹ This option is considered impractical, because plants within each complex are connected to each other and share common connections to gas, power, water, and other utilities.¹³² Many observers think the clause will complicate the divestiture and make them virtually unsalable.¹³³ However, others think that foreign investor interest may pick up again, if the Mexican government can somehow offer the necessary legal security. At this point, however, sales of all of the petrochemical complexes are postponed indefinitely.

Another obstacle to foreign investment posed by Article 27's directive is that neither concessions nor contracts regarding oil exploitation may be granted. That directive suggests that, even if PEMEX prefers to hire out hydrocarbon exploitation activity, rather than perform the activ-

127. "Resolucion que clasifica los productos petroquimicos que se indican, dentro de la petroquimica basica o secundaria," D.O. Aug. 15, 1989; "Resolucion que clasifica los productos petroquimicos que se indican, dentro de la petroquimica basica o secundaria," D.O., Aug. 17, 1992. The current PEMEX list of basic petrochemicals includes ethane, propane, butanes, pentanes, hexanes, heptanes, carbon black feedstock, and naphthas. *See id.*

128. *See* Shields, *supra* note 22, at 6.

129. *See* *Natural Gas Concessions Attract Interest by Foreign Firms, Offsetting Delays in Petrochemical Privatization*, SOURCEMEX ECON. NEWS & ANALYSIS ON MEX., Apr. 24, 1996, available in LEXIS, Market Library, Iacnws File.

130. *See id.*

131. *See id.*; *See also* Goncalves, *supra* note 6.

132. *See supra* note 129.

133. *See* Shields, *supra* note 22.

ity itself, PEMEX may not constitutionally do so by means of "concessions" or "contracts."

In the Annex 602.3 reservation to NAFTA, Mexico exempted a broad range of "strategic activities." Mexico also made exceptions to NAFTA which incorporate various legislative restrictions on hydrocarbon operations by foreigners.¹³⁴ Those exceptions declare that foreigners may not have interest in a Mexican enterprise that stores, transports, or sells liquified petroleum gas or installs "fixed deposits," or sells at retail gasoline, diesel, lubricants, oils or additives, and that authorization by the Foreign Investment Commission is required for foreign ownership of more than forty-nine percent of a Mexican enterprise "involved in 'non-risk sharing' contracts for the exploration and drilling works of petroleum and gas wells" or in "construction of means for the transportation of petroleum and its derivatives."¹³⁵

Under NAFTA, Canadian and U.S. enterprises are granted the same access as Mexicans to every award by an "entity" of the Mexican federal government of a construction contract of US \$6.5 million or more and every other goods or services award of US \$50,000 or more.¹³⁶ For PEMEX that burden was eased by "(1) raising those levels to US \$8.0 million and US \$250,000, respectively, for awards by a Mexican government 'enterprise;'" (2) granting "threshold" exemptions to PEMEX awards in aggregate percentages that decline annually from fifty percent in 1994 to zero in 2003; and (3) allowing, in each subsequent year, a permanent exemption of US \$300 million in PEMEX and CFE awards combined.¹³⁷

NAFTA expanded the Mexican state monopoly from the bare exploitation of hydrocarbons products mentioned in the Article 27 amendment to a larger petroleum industry and strategic area. Additionally, NAFTA gives the Mexican government exclusive authority over refining and basic petrochemicals and complete or partial insulation from foreign contractors and suppliers in a broad zone of related transportation, services and retail sales.

In June 1996, U.S. natural gas companies contended that with the Mexican government's opening of the natural gas market, the import

134. See NAFTA, annex 602.3(1).

135. NAFTA, art. 602(3)(incorporating annex 602.3, §§ 1(a), 1(b); Art. 601; I-M-27, 28, 23).

136. See *id.* Article 100.1(c)(i). As between Canada and the United States, NAFTA annex 1001.2c (the more generous Article 1304 of their bilateral Free Trade Agreement, providing access for the most federal procurements above US \$25,000) remains effective. See *id.*

137. Ewell E. Murphy, Jr., *Back To The Future? The Prospects For State Monopoly In Hydrocarbons And Electric Power Under Article 27 Of The Mexican Constitution*, 3 U.S.-MEX. L.J. 49, at 57 (citing NAFTA, Article 100.1(c)(iii), Article 100.2(a); annex 100.2a, §§ 1-5, Article 1001.2(b); annex 1001.2b, Schedule of Mexico, § 3(c)).

duty tax on natural gas should be terminated. NAFTA established a base duty of ten percent on natural gas imported into Mexico with a one percent decrease each year for ten years.¹³⁸ PEMEX's natural gas is cheaper than U.S. imported gas and the U.S. natural gas companies are requesting a more rapid phase-out of the duty tax than NAFTA requires.

In July 1996, the Mexican government denied the United States' request to lower its tariff on natural gas, but offered to consider the issue in exchange for concessions from the U.S. in other areas of NAFTA.¹³⁹ The Mexican government insists that the speeding up or elimination of the now seven percent tariff on natural gas is an issue that should be negotiated in exchange for similar reductions in tariffs on Mexican exports with Canada and the United States.¹⁴⁰ Mexican officials maintain that they are flexible about negotiating a lower gas tariff so as not to jeopardize government plans to promote foreign investment in natural gas storage and transportation. They contend, however, that the era of unilaterally and inappropriately lowering tariffs is over.¹⁴¹

The two basic reservations by which the Mexican hydrocarbons monopoly is excluded from investment has been limited by the term up to and including First Hand Sales.¹⁴² PEMEX, as the extractor and original seller of all Mexican hydrocarbons, can decide at what stage First Hand Sales will occur, which could be at the wellhead.¹⁴³ This would allow transportation, storage and distribution to be done by private enterprise, so long as they are done beyond the point at which PEMEX made First Hand Sales.¹⁴⁴

NAFTA provides extensive assurances to U.S. investors in Mexico.¹⁴⁵ They are promised national and most-favored-nation treatment, international law standards for investment protection and expropriation and impartial arbitration of investment disputes.¹⁴⁶ Today, the massive monopoly of PEMEX is called into question by NAFTA. That Mexico, Canada and the United States can seriously consider a free trade relationship is a tribute to the radical reorientation of economic

138. See *Gas Council Blasts Mexico Import Tax*, GAS DAILY, June 26, 1996, available in LEXIS, Market Library, lacnws File.

139. See *Mexico's Energy Minister Suggests Review of NAFTA Tariffs*, DOW JONES TELERATE ENERGY SERV., July 24, 1996.

140. See *id.*

141. See *id.*

142. See generally Murphy, *supra* note 137.

143. See *id.* at 52.

144. See *id.* at 56.

145. See *id.* at 58.

146. See *id.*

policy accomplished by the last three Mexican presidential administrations.

E. Mexico's Environmental Laws

In 1988, Mexico enacted a comprehensive environmental and regulatory statute translated as the Law of Ecological Equilibrium and Environmental Protection Act (EEPA).¹⁴⁷ "The statute regulates air, water, soil, and the use of natural resources and has been praised for its stringent provisions which are similar to those in the United States."¹⁴⁸ The tightened environmental legislation is scheduled to take effect throughout Mexico in 1998. Environmental legislation designed to alleviate Mexico's chronic air pollution has not been strictly enforced in the past. Moreover, the almost unlimited supply of high sulphur fuel oil on the Mexican market has been a major problem preventing natural gas from taking more of the market share.¹⁴⁹ PEMEX has found few foreign outlets for high sulphur fuel oil and, therefore, sells it on the home market at almost cost price.¹⁵⁰ However, because of the disaster at Guadalajara, when a build-up of fumes exploded in the city's drains, the government is now very sensitive to safety regulations, particularly gas transmission lines.¹⁵¹

Under the environmental standards to take effect in 1998, Mexican industry will have to make natural gas its primary source of fuel. The most logical place to start is among the electrical power plants operated by the CFE, which now mainly burn fuel oil. The environmental legislation is expected to boost demand for natural gas by between five and seven percent annually over the next decade.¹⁵² The new Mexican emissions laws mandate that by January 1, 1998, the use of sulphur heavy fuel oil and liquid propane gas will be restricted.¹⁵³

Natural gas met twenty five percent of CFE's needs in 1995, with much of the balance coming from fuel oil and hydropower and a small proportion from geothermal, nuclear and coal.¹⁵⁴ Thus, the main area of interest by United States investors is the widespread conversion of Mexican power plants to natural gas, and the ability to supply those plants through pipelines.¹⁵⁵ The possibility of further privatization in

147. See Craig Kovarik, *NAFTA and Environmental Conditions on the United States-Mexico Border*, 2 KAN. J.L. & PUB. POL'Y 61, 66 (1993).

148. *Id.*

149. See Spicer, *supra* note 50.

150. See *id.*

151. See *id.*

152. See *Power Projects to Fuel Natural Gas Development*, LATIN AM. ENERGY ALERT, June 5, 1995, available in LEXIS, Market Library, Iacnws File.

153. See *Power In Latin America*, *supra* note 29.

154. See *id.*

155. See *Mexico's Political Troubles Threaten Investment*, U.S. MEXICO FREE TRADE REP.,

the oil and natural gas sectors in response to environmental statutes depends on the political debate within the Mexican government. New refineries will have to be built if Mexico is to meet the deadline for converting seventy percent of the oil industry to natural gas by 1998, as set out in an additional pair of environmental standards approved in 1992.¹⁵⁶

F. Mexico's 1992 PEMEX Organic Law

After the tragic explosion of the sewer line in Guadalajara, PEMEX was re-established by the Mexican Congress as a business through the passage of the 1992 Pemex Organic Law. To increase efficiency and decrease risk of accidents, a restructuring plan for PEMEX was devised in 1992. PEMEX was divided into four subsidiaries consisting of (1) production and exploration, (2) refining, (3) natural gas and basic petrochemicals, and (4) secondary petrochemicals.¹⁵⁷ The plan also included reducing the work force to 53,000 employees.¹⁵⁸ However, the present workforce of PEMEX is still 130,000.¹⁵⁹

Since 1992, PEMEX has aggressively sought private partners for some of its non-energy business units.¹⁶⁰ For example, partners from the private sector undertook majority positions in the areas of air transportation, lubricants, and bunker fuel.¹⁶¹ In addition, PEMEX sought strategic partners in selected areas of its energy business, mainly the joint venture with Shell U.S.A., to construct a new refinery at Deer Park, Texas.¹⁶² However, the 1992 PEMEX Organic Law still did not define the sectors of the oil industry that were constitutionally open to privatization.¹⁶³

June 30, 1995, available in 1995 WL 10425737.

156. See Edward Hoyt & Mark Stevenson, *New Law Permits Private Participation in Natural Gas Sector*, 3 LATIN AM. LAW & BUS. REP., May 31, 1995, available in LEXIS, Market Library, Iacnws File.

157. See *PEMEX Restructuring Plan*, SOURCEMEX ECON. NEWS & ANALYSIS ON MEX., July 1, 1992, available in 1992 WL 2396649.

158. See *id.*

159. See Ordal, *supra* note 51.

160. See *Petrochemical Plant Sales to Kick Off Mexican Petroleum privatization*, 93 THE OIL & GAS J. 15, available in 1995 WL 7945549.

161. See *id.*

162. See generally *id.*

163. *Zedillo Administration to Announce First Concessions for Petrochemical Plants in Mid-November*, *supra* note 19.

III. MEXICO'S NATURAL GAS REGULATIONS

A. Mexico's 1995 Natural Gas Regulations

Mexico has traditionally maintained an exclusive monopoly franchise, PEMEX, for natural gas transportation, storage and distribution. The changing of the implementing regulations to Article 27 of the Constitution, through passage of the 1995 Natural Gas Regulations (NGRs), to allow direct foreign investment in these areas was partly in response to NAFTA.¹⁶⁴ Enactments that privatize natural gas in Mexico are significant because of the hyper-sensitivity of the state hydrocarbons monopoly exercised by PEMEX. To begin the privatization of natural gas, in May 1995 the Mexican Congress amended the 1958 Reglamentary Law¹⁶⁵, the prior implementing instrument, by defining the "strategic area" of the oil industry so that transportation, storage and distribution of natural gas is no longer a state monopoly.¹⁶⁶ The 1958 Reglamentary Law originally defined the hydrocarbons monopoly created by Article 27 of the Mexican Constitution.

Article 27 has been amended fifteen times since its promulgation in the 1917 Constitution, almost twice the number of all amendments of the United States Constitution during the same period.¹⁶⁷ Some of those Article 27 amendments were as revolutionary as the original text itself: effectuating the right of needful communities to have land expropriated for use as communal lands, creating state monopolies in hydrocarbons and electric power, and allowing religious organizations to own land.¹⁶⁸ Thus, it is not unusual to re-interpret the meaning of the words of Article 27 through the use of implementing regulations.

The new Regulatory Law of the Constitutional 27 on Petroleum and the Regulation of Natural Gas passed in May 1995 allows that for natural gas derivatives that are basic petrochemicals, transportation, storage and distribution continue as a state monopoly, but for natural gas those activities do not.¹⁶⁹ The amendment distinguishes between "natural gas derivatives" and "natural gas."

The new language of Article 4 of the 1995 amendment is as follows:

164. See *First Shots Heard In Battle For Mexico's Gas Market*, 23 ENERGY REP. 307 (1996).

165. "Ley Reglamentaria del Artículo 27 Constitucional en el Ramo del Petróleo", D.O., Nov. 29, 1958, as amended, D.O., Dec. 30, 1977, superseding the Reglamentary Law of May 3, 1941, as amended, D.O., Nov. 8, 1995 [hereinafter NGRs].

166. "Decreto por el que se reforman y adicionan diversas disposiciones de la Ley Reglamentaria del Artículo Constitucional en el ramo del petróleo", D.O., May 11, 1995.

167. See Murphy, *supra* note 137.

168. *Id.*

169. See Murphy, *supra* note 102.

With the exception of that provided in Article 3, the transportation, storage and distribution of gas may be carried out, with prior permit, by the social and private sectors who may build, operate and own pipelines, facilities and equipment, under the terms of the governing, technical and regulatory provisions that may be issued.¹⁷⁰

Article 6 of the amendment confirms that risk contracts will continue to be disallowed:

The compensation provided for in said agreements shall always be in cash and in no case product percentages or participation in the results of the exploitations shall be granted for the services rendered or the works performed.¹⁷¹

Article 10 of the amendment directs PEMEX to cooperate with private parties:

The activities of gas pipelines construction are of public benefit. *Petróleos Mexicanos*, its subsidiary bodies and the companies of the social and private sectors shall be compelled to offer gas transportation and distribution services to third parties, through pipelines, in accordance with the terms and conditions set forth in the regulatory provisions.¹⁷²

Article 14 of the amendment includes regulation of First Hand Sales.

The May 1995 enactment called for its own implementing regulations to be issued within 180 days. By November 9, 1995, the Mexican Congress issued those regulations.¹⁷³ Composed of 110 Articles and 10 Transitories, the new Natural Gas Regulations (NGRs) operate as a "transparent and precise framework which gives economic and legal certainty to investors, workers, consumers and users" of natural gas.¹⁷⁴ The NGRs formally codify, in a federal statute, the controversial policies created in this area by the conflicting prior amendments to Article 27 of the Constitution of Mexico.

The major legal components of Mexico's new 1995 Natural Gas Regulations may be summarized as follows:

1. The overall purpose and scope of the regulations are to carry out the Implementing Law of Article 27 of the Mexican Constitution in the Area of Petroleum and to regulate "First Hand Sales"¹⁷⁵ and other

170. "Implementing Law of Article 27 of the Constitution in the Area of Petroleum, and transitory article 3 of the Decree whereby several provisions of said Law are amended and added," D.O., May 11, 1995 (translated by Berdeja y Asociados).

171. *Id.* art. 6.

172. *Id.* art. 10.

173. NGRs, *supra* note 165.

174. *Mexico Puts It's Gas Framework In Place Regulatory Body And Governing Law Introduced*, PLATT'S OILGRAM NEWS, Nov. 9, 1995, available in 1995 WL 8138212, (quoting President Zedillo).

175. First Hand Sales is defined as the first sale of natural gas of national origin by PEMEX to another party for delivery in Mexico. See NGRs, *supra* note 165, art. 2, Sec. XXI.

Natural Gas¹⁷⁶ activities and services not reserved to the Mexican Nation in order to ensure an efficient supply of natural gas.

2. Import and export of gas is to be freely carried out pursuant to the Mexican Law of Foreign Trade.¹⁷⁷

3. Disputes arising between permittees¹⁷⁸ and users¹⁷⁹ who qualify as consumers under the Mexican Federal Consumer Protection Law shall be resolved before the Mexican Consumer Protection Bureau.¹⁸⁰

4. It is unduly discriminatory to deny the same treatment to similar users or purchasers¹⁸¹ in similar conditions.¹⁸²

5. The maximum price of First Hand Sales will be set according to directives issued by the newly created Mexican Energy Regulatory Commission (CRE) utilizing three factors, but this article does not apply to the price of imported natural gas.¹⁸³

6. The CRE may issue permits to private entities for the transportation, storage, and distribution of natural gas.¹⁸⁴ PEMEX is subject to these new regulations, and is granted a provisional permit.¹⁸⁵

7. Permits issued by the CRE will be valid for thirty years and may be renewed.¹⁸⁶ Transportation permits shall not be exclusive¹⁸⁷, but distribution permits for specific geographic zones shall confer exclusivity rights for twelve years on the construction of the distribution system and the receipt, transmission, and delivery of natural gas within a geographic zone.¹⁸⁸

8. Users may enter into natural gas supply contracts with any party.¹⁸⁹

176. Natural gas is defined as a mixture of hydrocarbons consisting principally of methane. See NGRs, *supra* note 165, art. 2, Sec. IX.

177. See NGRs, *supra* note 165, art. 3.

178. A permittee is defined as the holder of a permit for transportation, storage or distribution. See NGRs, *supra* note 165, art. 2, sec. XI.

179. A user is defined as one who uses the services of a permittee. See NGRs, *supra* note 165, art. 2, Sec. XIX.

180. See NGRs, *supra* note 165, art. 5.

181. "Purchaser" is defined as one who contracts for a First Hand Sale. See NGRs, *supra* note 165, art. 2, Sect. I.

182. See NGRs, *supra* note 165, art. 6.

183. See NGRs, *supra* note 165, art. 8.

184. See NGRs, *supra* note 165, art. 14.

185. See NGRs, *supra* note 165, Transitory Article 7.

186. See NGRs, *supra* note 165, art. 19.

187. See NGRs, *supra* note 165, art. 23.

188. See NGRs, *supra* note 165, art. 28.

189. See NGRs, *supra* note 165, art. 30.

9. The permittee is allowed to propose the arbitration procedure to be utilized to resolve controversies arising in connection with the provision of services, but the procedure must be approved by the CRE.¹⁹⁰

10. The CRE shall issue, by directives, the methodology for the calculation of initial rates and for their adjustment.¹⁹¹

11. The granting of permits for the provision of natural gas transportation and distribution services shall imply a declaration of the existence of a public purpose as regards to the laying of pipelines along government, social, and private property pursuant to the Mexican Law of the Energy Regulatory Commission.¹⁹²

12. The Ministry of Energy of Mexico shall publish an annual report on the outlook of the Mexican domestic natural gas market, describing and analyzing Mexico's foreseeable needs for natural gas over a ten-year period.¹⁹³

The new regulations are designed fundamentally to promote development of the natural gas industry while protecting users and limiting market power. Five principal participants operate in the natural gas industry: PEMEX is responsible for First Hand Sales and operation of its existing transportation network; transporters construct, own, and operate new pipelines; storage companies develop storage systems; distributors supply and market natural gas in defined geographic regions; and marketers buy and sell and may act as intermediaries to transportation, storage and distribution services. All of the parties are free to market natural gas.¹⁹⁴

Under the new regulations, PEMEX retains control of natural gas exploration, drilling and refining, but will likely sell off the distribution side of the business hoping that private investors will expand delivery to unserved areas. The NGRs are consistent with NAFTA in that they allow those private investors to hold up to a forty-nine percent stake in transportation, storage and distribution of natural gas.¹⁹⁵ As spelled out in NAFTA, investors can petition the Mexican National Foreign Investment Commission for ownership up to one hundred percent.¹⁹⁶

The regulations also provide that the changes will be administered by the Energy Ministry and a new Energy Regulatory Commission (CRE). Thus, PEMEX is stripped of some of the regulatory functions it had in the past, such as the responsibility for approving supply con-

190. See NGRs, *supra* note 165, art. 62.

191. See NGRs, *supra* note 165, art. 81.

192. See NGRs, *supra* note 165, art. 107.

193. See NGRs, *supra* note 165, art. 109.

194. See *Mexican Gas Regulations Heralded by U.S. Firms Looking to Invest*, *supra* note 79, at 1.

195. See "New Natural Gas Law," D.O., Nov. 11, 1995.

196. See *id.*

tracts for imported natural gas.¹⁹⁷ Thus, the regulatory functions PEMEX previously exercised over natural gas imports, transportation, distribution and marketing will be taken over by those other entities.

The newly created CRE was formed just before the passage of the new legislation, but had little impact until the latest reforms. The CRE, which consists of five presidential appointees and a staff of 40, has gradually established its autonomy from the Energy Ministry.¹⁹⁸ Its primary role is the development and efficient use of electricity and natural gas, including strategies such as introducing competition wherever possible.

CRE officials maintain that the new law clearly states the Energy Ministry and the CRE will regulate private operations in the natural gas industry.¹⁹⁹ The CRE has the authority to set gas prices and transportation tariffs, and has powers similar to its American counterpart, the U.S. Federal Energy Regulatory Commission (FERC).²⁰⁰ Its decisions are expected to have an even greater impact on natural gas markets in Mexico than FERC has in the U.S. because Mexico has no plans to establish regional energy commissions, making it more of a federalist model than the U.S. model.²⁰¹

The CRE will issue permits for transportation, storage and distribution of natural gas, with these functions subjected to many of the same regulatory tenets operative in the United States. Operators may deny access to their facilities only when there is no available capacity or when the access or interconnection is not technically feasible.²⁰²

The CRE also sets regulated prices when competitive conditions are found not to exist in the market, acts as mediator for resolving controversies, and applies administrative sanctions.²⁰³ For example, PEMEX is the leading consumer of natural gas in Mexico, using it for petrochemical feedstock, refinery fuel, gas pipeline compression, and its own power generation operations. Similarly, the Mexican Federal Electricity Commission (CFE) is the second leading consumer of natural gas. The CRE will now act as a mediator in dealings between the two state agencies and foreign private suppliers.²⁰⁴ The Mexican Congress further put limits on PEMEX by attaching an amendment to the new

197. See *Mexican Senate Approves Gas Pipeline Opening*, *supra* note 5.

198. See *Power Projects To Fuel Natural Gas Development*, *supra* note 152.

199. See *id.*

200. See *Mexico Puts Its Gas Framework in Place Regulatory Body and Governing Law Introduced*, *supra* note 174.

201. See *id.*

202. See *Mexican Gas Regulations Heralded by U.S. Firms Looking to Invest*, *supra* note 79.

203. See *Final Draft Of Mexico's Natural Gas Regulations Awaits Executive Approval*, U.S. MEX. FREE TRADE REP., Oct. 15, 1995, available in 1995 WL 10425814.

204. See *Power Projects To Fuel Natural Gas Development*, *supra* note 152.

regulations stating that the price of natural gas supplied by a monopoly supplier may not exceed prevailing international prices.²⁰⁵

In addition to general provisions regarding First Hand Sales and procedures to obtain permits for the transportation, storage and distribution of natural gas, the NGRs contain provisions regarding foreign trade; coordination between local and federal authorities, the protection of consumers; the transfer, modification, cancellation, and revocation of permits; the rendering of services; the sale price for final users; crossings, passes, rights-of-way and expropriation; safety measures, information, and directives; and sanctions.

Both associated natural gas and non-associated natural gas wells are covered by the new law.²⁰⁶ The new law, and resulting foreign investment, will permit Mexican energy policymakers to focus greater attention on the development of the significant reserves of natural gas.

The law does not permit the sale of existing pipelines owned by PEMEX; PEMEX will not be forced to divest or privatize its gas pipeline network.²⁰⁷ PEMEX's existing 12,500 kilometer pipeline network will be kept under state control and present urban distribution of liquefied propane gas should not be affected by the measure.²⁰⁸

Mexico is unlikely to develop an urban underground natural gas network like the United States. Mexico's main interest appears to be in cross-country pipelines to supply industries and power plants. The present natural gas system in Mexico serves only the Gulf coast, central and north-central regions, leaving the entire Northwest, Pacific Coast, and Yucatán without service. Mexican officials are concerned that the western half of the country does not become strategically dependent on the United States, so authorities are more likely to require that United States companies hook up at least partially with existing Mexican gas pipelines rather than import more U.S. gas.²⁰⁹

Under the new legislation, the government will grant concessions to domestic or foreign companies to transport, distribute, and store natural gas. Now, private companies can import gas, bid for and be granted thirty-year permits to construct, own and operate new pipelines and distribution networks, thereby bypassing PEMEX entirely.²¹⁰ An open market is expected to develop in northern Mexico when customers have credible supply options due to their proximity to the United States.

205. *See generally id.*

206. *See Hoyt & Stevenson, supra note 75.*

207. *See Mexican Senate Approves Gas Pipeline Opening, supra note 5.*

208. *See Hoyt & Stevenson, supra note 75.*

209. *See id.*

210. *See Power In Latin America, supra note 29.*

B. Mexico's 1996 Natural Gas Pricing Regulations

When Mexico initially opened the electricity and natural gas sectors, it had not yet defined the price structures for private investors competing against subsidized state-owned enterprises. Energy prices in Mexico are generally indexed to equivalent dollar rates.²¹¹ But the peso devaluation, and subsequent decline in wages, would have put energy prices beyond many Mexicans' ability to pay, if not for continuing federal subsidies.

As required by Article 81 of the NGRs,²¹² the CRE issued a directive outlining the methodology for the calculation of initial natural gas rates called the Directive on the Determination of Prices and Rates for Natural Gas Regulated Activities ("Directive"). The maximum price for First Hand Sales is determined by the CRE Directive under a methodology that takes into account conditions in international markets, conditions where the sale is made, and consumers' supply alternatives.²¹³ PEMEX is required to offer two price quotes to buyers, one at the tailgate of the processing plants and the other at the delivery point specified by the buyer.

Regulated price ceilings are intended to limit the market power of PEMEX as the sole domestic producer of natural gas. They will remain in effect until a separate commission determines that workable competition exists in a relevant market.²¹⁴ Natural gas imports are not subject to price regulation because they come from a competitive market.

The maximum price that transportation and distribution companies may charge provides incentives and increases coverage to customers, as compared with the service cost-based system used in the United States and Canada. The maximum income per unit will be set by CRE at the beginning of the first five years of a company's license and will be allowed to change only according to five variables: inflation in the United States and Mexico, an "efficiency factor" set by CRE, transferable costs such as a change in tax rates, and a correction factor.²¹⁵ The natural gas price formulas are aimed at adjusting prices for the first five years in this new market and then fine-tuning the price thereafter.

Transporters and distributors will present rates for pipeline services as a two-part tariff, with separate charges for capacity and throughput.

211. See Dianne Solis, *Mexico Doesn't Plan to Privatize Pemex*, WALL ST. J. EUROPE, Feb. 21, 1996, available in 1996 WL-WSJE 3336633.

212. NGRs, *supra* note 165, art. 81.

213. See *Mexican Gas Regulations Heralded by U.S. Firms Looking To Invest*, *supra* note 79.

214. See *id.*

215. See *Mexico Sets Formulas, Regulations For Natural Gas Liberalization Plan*, OIL DAILY, Mar. 21, 1996, available in LEXIS, News Library, Oildly File.

Pipelines are required to set rates to recover all fixed costs through capacity rates and all variable costs in throughput rates.²¹⁶ Customers may choose to take service at tariff rates or negotiate contracts directly.²¹⁷

American companies are still in the process of evaluating the natural gas pricing rules to try to anticipate complications. On the whole, the establishment of firm pricing regulations raises the comfort level for United States companies investing in Mexico because, under the rules, prices for the sale of natural gas by PEMEX for gas consumed in Mexico are to be tied to index prices at the Houston Ship Channel.²¹⁸ That price reflects international natural gas prices set in the Texas region.²¹⁹ However, natural gas prices will still be above fuel oil prices in most markets.²²⁰

IV. CONSTITUTIONAL AND POLITICAL IMPLICATIONS OF 1995 NGRS

A. *Mexican Domestic Opposition to the Privatization of Oil*

More than twenty Mexican civic, business, political and labor organizations have filed formal petitions asking the Mexican federal government to reverse its proposal made in 1996 to privatize Mexico's petrochemical plants.²²¹ Leading the opposition to the privatization is the petroleum workers union, which has raised concerns primarily about the potential loss of thousands of jobs in southeastern Mexico, as well as the loss of collective bargaining rights.²²²

Opponents urged President Zedillo to cancel the plan to privatize the ten petrochemical complexes, which include a total of sixty-one plants. The opponents argue that the privatization of the petrochemical complexes violates the Mexican Constitution. In their view, under Article 27 of the Constitution, natural resources such as oil should be designated as the property of all Mexicans, and therefore, cannot be owned by private individuals, whether they are Mexicans or foreigners. This interpretation suggests that Article 27 covers all PEMEX operations, including petrochemical plants.

216. See *Mexico Takes Major Step Toward Open Market*, GAS DAILY, Mar. 21, 1996, available in 1996 WL 8790565.

217. See *id.*

218. See Debra Beachy, *Mexico To Let Foreign Firms Build Own Pipelines*, HOUSTON CHRONICLE, Mar. 22, 1996, available in 1996 WL 5588535.

219. See *id.*

220. See Goncalves, *supra* note 6.

221. See *Opposition Growing To Government's Plan to Privatize 61 Petrochemical Plants*, SOURCEMEX ECON. NEWS & ANALYSIS ON MEX., Feb. 14, 1996, available in 1996 WL 7994017.

222. See *id.*

Government officials insist that the privatization of the petrochemical plants constitute a mere transfer of the operation to a private party, and is not the direct sale of the state's assets. Still, opponents dispute this interpretation, arguing that Mexico's sixty-one petrochemical plants produce basic and strategic chemicals and therefore cannot legally be privatized. The constitutional question was left open to debate following the passage of the 1992 PEMEX Organic Law which restructured PEMEX into four separate subsidiaries. That law did not define the sectors of the oil industry that were constitutionally open to privatization.

In addition to the question of ownership of PEMEX resources, many opponents of the privatization argue that the priority of foreign or Mexican buyers will be to obtain a profit, rather than operate for the benefit of the Mexican economy.²²³ Fears that foreign investment could leave Mexico's petrochemical industry in the hands of foreigners are not totally unfounded. Bidders for the sixty-one plants included companies from the United States, Japan, Germany and Britain. However, at least half of the twenty-two bids received for concessions were submitted by Mexican companies.²²⁴

Government officials are now being asked to specify whether they support a nationalist position or a betrayal of the principles of nationalism and sovereignty.²²⁵ The Zedillo government is accused of bowing to United States interests, and the administration is warned if it proceeds with privatization of the plants, it risks a popular uprising, given the large number of groups that now oppose the privatization.

The United States government has been encouraging the Zedillo administration to sell off the remaining government properties to boost revenues, which go toward payments of foreign debts. Mexico could obtain up to US \$1.2 billion from the concession or sale of state facilities, which could include the petrochemical plants, seaport and airport management, natural gas operations, and railroad operations.²²⁶

One major reason the Zedillo administration is willing to delay the sale of the plants is that the global petrochemical market is predicted to resume its decline. The government is facing the dilemma of whether to sell the petrochemical plants below their book value, or delay the privatization until a more prosperous time. The petrochemical market just

223. *See id.*

224. *See id.*

225. *See Opposition Growing To Government's Plan to Privatize 61 Petrochemical Plants, supra* note 218.

226. *See id.*

completed two relatively strong years, but is about to enter its traditional downward cycle.²²⁷

Public opposition to the sale of the Cosoleacaque, the first public-owned petrochemical complex up for sale, has been fierce. Militants have repeatedly blockaded oil wells and facilities to demonstrate their belief that no one has the right to use the nation's energy resources for personal ends, nor as instruments of pressure or political struggle.²²⁸

Many Mexican business organizations think the expansion of the petrochemical facilities through infusion of private capital would benefit the Mexican economy by increasing the availability of key products needed by industry. On the other hand, some political officials support the position of the unions, that the petrochemical companies should not be sold to private investors, even if the companies are majority Mexican. The unions fear that privatization will result in job loss, while compromising national sovereignty. They see the privatization of the oil plants as creating a precedent that encourages the government to sell other PEMEX properties to foreigners, most importantly, Mexico's supply of crude oil.

Organizers representing the opposition have created five task forces to perform various functions needed to create a single enterprise capable of acquiring the petrochemical facilities. The main purpose of the campaign is to ensure that oil and all of its byproducts remain as Mexican patrimony.²²⁹

Foreign bidders are greatly concerned about the wide-ranging legal and constitutional problems regarding the divestiture which have been mentioned in the Mexican press. They are also worried about the opposition expressed by the Chamber of Deputies' Energy Commission and the Ministry's apparent inability to resolve the legal and procedural complexities regarding the sale of the petrochemical plants. None of the controversies have yet been resolved and bidders have yet to receive answers. Recently, further legal problems have arisen because title research revealed irregularities in land ownership and title deeds at Cosoleacaque.²³⁰ Apparently, some of the land was once expropriated from local peasants in order to build the petrochemical complex and the expropriation decree clearly stated that the land may only be used by PEMEX and not by private interests. Privatization of the PEMEX complexes may be postponed altogether, or at least well into 1997.

227. *See id.*

228. *See* Shields, *supra* note 95.

229. *See* *Natural Gas Concessions Attract Interest by Foreign Firms Offsetting Delays In Petrochemical Privatization*, *supra* note 129.

230. *See* Shields, *supra* note 22.

B. Mexican Opposition to Privatization of Natural Gas

Opposition by the Mexican population to the NGRs has been surprisingly light and dealt with by government officials with impressive finesse.²³¹ The regulations aroused the opposition of the center-left Democratic Revolutionary Party (PRD), while some Deputies for the ruling Institutional Revolutionary Party (PRI), also expressed strong reservations.²³² However, most PRI members of Congress supported the measure, as did the leader of the oil workers union, who is a Mexican Senator.²³³ There seems to have always been majority support within the Mexican Congress for the two priority areas regarding natural gas: construction of pipelines to transport natural gas to industrial parks and low-pressure distribution systems for residential customers in urban areas.²³⁴

Some Mexican legislators opposed the bill because it might open strategic areas of the natural gas industry to up to one hundred percent private investment.²³⁵ The Labor Party joined the opposition, concerned that the opening of the gas and oil industry to private investment was a direct violation of Article 27 of the Mexican Constitution, which designates these natural resources as the national patrimony of all Mexicans. Their position was that any changes or transfers of any function related to the oil or natural gas industries represent a violation of Article 27.²³⁶ The opposition was not successful in defeating the legislation and the natural gas bill was overwhelmingly approved.²³⁷

Nevertheless, to appease the opposition, members of the Zedillo administration emphasized that PEMEX would continue to control the exploration, exploitation, and processing of natural gas reserves, as well as the production of basic petrochemicals.²³⁸

C. Case Study: 1996 Natural Gas Concession in Mexicali

The choice to launch natural gas privatization from Mexicali, President Zedillo's hometown, is symbolic of his commitment to liberalize Mexico's entire energy sector. Since about 1980, the Mexican state of Baja California Norte has been asking Mexico City for natural gas service for its principle cities, Mexicali and Tijuana. A number of international companies have chosen to establish businesses in other Mexi-

231. See Ordal, *supra* note 51.

232. See Mexico Senate Approves Gas Pipeline Opening, *supra* note 5.

233. See *id.*

234. See *id.*

235. See Congress Moves Quickly With Legislation To Allow Private Investment In Railroad, Civil Aviation, & Gas Distribution, *supra* note 63.

236. See *id.*

237. See *id.*

238. See *id.*

can cities because they have access to natural gas service, meanwhile ignoring the cities of Baja California Norte.

Because of extreme weather conditions and accelerated commercial and industrial growth, northern Mexican cities, including those in Baja California Norte, have high levels of energy consumption and are ripe for a natural gas distribution system. In the next five years, natural gas distribution in Baja California Norte could require US \$100 million in capital investments and more than US \$500 million for the construction of power plants.²³⁹

Northwestern Mexico, where the state of Baja California Norte is located, is a natural first area for United States and other foreign gas companies to invest in Mexican energy operations. This part of the country is far removed from Mexico's own developed natural gas reserves in the south. Baja California Norte in particular is a relatively narrow, barren peninsula of 70,000 square kilometers extending eight hundred miles southward from the California border.²⁴⁰ Its industrial development is in the northern portion of the region in the cities of Tijuana, Ensenada, Mexicali and Rosarito Beach where there is a fast growing population and a booming maquiladora industry.²⁴¹

Natural gas is especially needed in Mexicali and Tijuana, cities with more than two million people combined and thousands of maquiladoras. Natural gas is also needed in the power generation plant at Rosarito Beach through construction of a pipeline from the U.S. border to the town twenty minutes away.²⁴²

The Mexican government awarded its first natural gas privatization license in August 1996, about two weeks after the Cactus complex obliteration, to a bi-national partnership composed of two U.S. companies and a Mexican company, called Distribuidora de Gas Natural de Mexicali (DGN). The award was a monumental step for economic progress in Mexico and a milestone for United States companies attempting to move into the Latin American market. The Mexican government indicated during the bidding process that the license would go to the company that offered the lowest distribution rate for customers.²⁴³

American, French, Canadian, Spanish and Mexican companies registered for bidding on the natural gas distribution contract in

239. See *Mexico Puts It's Gas Framework In Place Regulatory Body and Governing Law Introduced*, *supra* note 174.

240. See *Next Target in Mexico: Baja California*, PLATT'S OILGRAM NEWS, July 29, 1996, available in 1996 WL 8706881.

241. See Kraul, *supra* note 38.

242. See *id.*

243. See *Inaugural Contract in Mexico is Only First Hurdle*, GAS DAILY, Aug. 13, 1996, available in 1996 WL 8791511.

Mexicali.²⁴⁴ The winner was ultimately selected on the basis of the lowest natural gas transmission costs and on skills in market analysis and planning.²⁴⁵ DGN's winning bid of US \$1.14 per gigacalorie was the lowest bid.²⁴⁶ Their license allows DGN to build and operate a natural gas distribution system in Mexicali, a city that now relies on propane and fuel oil.

The partnership will initially invest US \$25 million during the first five years, providing service to major commercial and industrial users and 25,000 residents.²⁴⁷ Natural gas is expected to be available in Mexicali by 1997.²⁴⁸ Although the Mexicali project calls for an investment of only US \$25 million, it marks the opening of Mexico's entire energy market. DGN is the first private operation to ship natural gas for retail sale in Mexico. The company will have a thirty-year operating permit that provides exclusive distribution rights for twelve years.

Presently, Mexicali has no natural gas distribution system, relying on bottled propane for space heating and cooking in the residential sector. Mexicali has 2,500 homes already linked to propane gas pipelines, which can easily be switched over to natural gas service.²⁴⁹ The partnership has until the end of the year 2002 to bring 25,000 Mexicali customers on line, approximately one of every four homes in this desert city.²⁵⁰ With temperatures averaging over one hundred degrees during summer months, and residential electric air-conditioning bills sometimes topping US \$1,000 per month, the partnership should find a ready market for an alternative energy source.²⁵¹

The system will have an initial capacity of about ten million cubic feet per day,²⁵² but it would be economically feasible with initial sales of less than half that level.²⁵³ As industrial loads increase, developers will install distribution branches to serve residential and commercial demand. The natural gas supply will come through a pipeline from the

244. See *Energy/Mining: Foreign Firms Bid for Mexico Gas*, MEX. BUS. MONTHLY, May 1, 1996, available in 1996 WL 8155084.

245. See Chris Kraul, *Southland Firms Win Mexican Gas Contract Energy: Pacific Enterprises, Enova Among Foreign Firms Being Brought In As Government Pushes Development of Resource*, L.A. TIMES, Aug. 13, 1996, available in 1996 WL 11258012.

246. See *2 California Utilities Join Local Firm to get First Gas Distribution Concessions in Mexico*, OIL DAILY, Aug. 14, 1996, available in 1996 WL 8319800.

247. See *Southern California Companies Win Bid to Distribute Natural Gas to Mexico*, AP, Aug. 13, 1996, available in 1996 WL 4435684.

248. See *id.*

249. See Millman, *supra* note 76.

250. See *id.*

251. See *id.*

252. See Goncalves, *supra* note 6.

253. See *Ventures Proliferate Intending to Build Mexican Gas Infrastructure*, 3 GAS TRANSACTIONS REPORT, Dec. 1, 1995, available in LEXIS, Market Library, Aicnws File.

United States to Mexicali.²⁵⁴ Initially, the project will provide natural gas to steel, glass, cement, truck, food and maquiladora factories. Eventually, it will also serve the 700,000 residents of the bustling border city nearly a hundred miles southeast of San Diego, California.²⁵⁵ Predictions put the minimum cost of between US \$40 and \$50 million overall to build the fifteen-mile long pipeline from the U.S. border to Mexicali, linking with the United States distribution system.²⁵⁶ The natural gas will come from either Alberta, Canada, Texas, Oklahoma, New Mexico or other U.S. states.²⁵⁷

Until the award was made, Mexico's natural gas distribution was mostly controlled by PEMEX; only a few private domestic operators have been allowed to distribute natural gas to customers. If a foreign company owned a factory and wanted to use natural gas, it would have to pay for the pipeline and give it away to PEMEX because it was not possible to own the pipeline. Under the new award system, PEMEX, which previously had natural gas distribution as an exclusive business, is not eligible to bid on any of these contracts for natural gas concessions.²⁵⁸

There is a concern that in Mexicali, as is the case throughout Mexico, natural gas providers must compete against a tradition of cheap propane fuel. Long subsidized by PEMEX, liquid propane gas sells at below market rates. While that subsidy is expected to be phased out by the year 1998, the partnership has to price its domestic natural gas service cheaply in order to compete now. The exclusive twelve-year concession to serve the border city of Mexicali begins a privatization process that will open the entire country to natural gas providers, creating an estimated US \$3 billion-a-year market for private utilities over the next decade.²⁵⁹ The Mexicali Project is the first of twenty-two natural gas distribution systems being offered to private companies throughout Mexico.²⁶⁰ Ten of the areas to be opened up next are Mexico City, Bajio, Cuernavaca, Hermosillo, La Laguna, Northeast of Baja California, Pachuca, Querétaro, Tampico and Toluca, many of which include urban zones already connected to a network of transportation pipelines or that already have access to imported natural gas.²⁶¹

254. *See id.*

255. *See* Diane Lindquist, *Mexico Opens Energy Market to Outsiders*, SAN DIEGO UNION-TRIB., Apr. 9, 1996, available in LEXIS, Busfin Library, Sdut File.

256. *See id.*

257. *See id.*

258. *See U.S. Firms Seek Mexican Jobs*, WALL ST. J., Apr. 10, 1996.

259. *See* Millman, *supra* note 76.

260. *See* Lindquist, *supra* note 255.

261. *See Regulatory Changes in Mexico Could Spur Foreign Investment*, INSIDE F.E.R.C.'S GAS MKT. REPORT, July 12, 1996, available in LEXIS, Energy Library, Gasmkt File.

Mexico is quickly advancing private foreign investment in an effort to offset the economic difficulties caused by the devaluation of the peso in 1995, causing the legislature to promulgate new laws allowing private companies to build, own or operate power plants, storage facilities and natural gas or electricity distribution systems. The money is needed not only to recover and resume growth, but to prime the flow of money back into the country and to build a market for PEMEX natural gas output.

Mexico's first wave of privatization saw the nation's banks, telephone monopoly and other entities pass from government to private control with little difficulty. Mexico's privatization drive is one of the most ambitious in the world, reducing state-run companies from 1,239 in 1984 to 221 in 1994.²⁶² The privatization of just eight hundred public companies, including Mexico's four main ports, raised US \$21 billion.²⁶³ The creation of the new Comisión Reguladora de Energía (CRE) and the promulgation of the NGRs in 1995 constitute a critical ingredient in Mexico's strategy for promoting the expansion of the use of natural gas and the generation of electricity with natural gas.

This landmark law broke the oligopoly that about fifteen Mexican firms held on Mexico's gas distribution sector.²⁶⁴ The Mexican companies can still make offers for new projects, but under the new legislation, overseas firms also can bid. The legislation also freed the domestic companies from the obligation to buy gas from Mexico's state-owned petroleum monopoly, PEMEX. Under the old rules, the Mexican suppliers had to purchase from PEMEX, but now both they and the foreign competitors can get gas from the cheapest source.²⁶⁵

Most United States gas companies are not concerned that the CRE will favor domestic companies or combinations that include Mexican companies when evaluating proposals.²⁶⁶ However, some potential U.S. investors have noted that the new NGRs may not allow the Mexican regulatory commission to play an independent role in settling disputes between parties; that the regulations lack provisions granting exclusivity to transporters for services for a five-year term; and they lack a grant of exclusivity to distributors for natural gas sales in a specific location.²⁶⁷

Potential foreign investors are also concerned with political stability. A string of assassinations, arrests and scandals rocked Mexican soci-

262. See Spicer, *supra* note 50.

263. See Reyser, *supra* note 23.

264. See Andrew Downie, *Californian-Mexican Group Wins Mexicali Gas Franchise*, HOUSTON CHRON., Aug. 13, 1996, at 3(Bus.), available in LEXIS, Busfin Library, Hchrn File.

265. See *Regulatory Changes In Mexico Could Spur Foreign Investment*, *supra* note 261.

266. See *First Shots Heard In Battle For Mexico's Gas Market*, *supra* note 164.

267. See Stein, *supra* note 80.

ety during 1995, while Mexico was trying to recover from its latest peso devaluation. Even so, the World Bank responded by making a US \$1.5 billion loan to Mexico in 1995.²⁶⁸

In a span of just eight days in June, 1995, four events did little to reassure foreign investors of Mexico's stability. First, Mexico City magistrate Polo Uscanga, who resisted pressure to break the urban bus drivers' union, was killed. The assassination was followed by the denial of an extradition request for former Assistant Attorney General Mario Ruiz Massieu, who charged publicly in a United States courtroom that there was a conspiracy in the assassination of presidential candidate Luis Donaldo Colosio the year before.

A few days later, the Head of Judicial Police in the state of Jalisco, along with thirty of his police officers, were arrested for having protected drug trafficker "El Guero" Palma, accused of involvement in the 1993 killing of Jalisco Archbishop Juan Posadas O'Campo. Finally, left-wing presidential candidate Cuauhtemoc Cardenas called for President Zedillo to resign and allow for a transition government before a crowd of eighteen thousand.²⁶⁹

Some foreign gas companies are still fearful of the volatile political debate within Mexico that still surrounds the decisions to allow foreign companies to reenter the domestic energy market after being removed in the 1930's. They fear the pendulum might swing back toward nationalization. Other foreign gas companies have commented that natural gas distribution in Mexico has traditionally been a low-margin business, as the government has tightly regulated prices to residential and commercial customers.²⁷⁰ They also worry that PEMEX may still have the power to prevent natural gas from displacing its largest single market for heavy fuel oil, CFE's oil-fired electrical power stations.

Mexican officials insist they are committed to an open market, as demonstrated by the new NGRs that loosens PEMEX's stranglehold on the natural gas industry and allowed foreign investors into the energy sector.

V. CONCLUSION

Despite the many changes in Mexico's regulatory framework, and the slowing of the Mexican economy following the peso devaluation, many foreign companies have not been deterred from making plans to enter the natural gas pipeline business. Although Mexico is likely to develop its own natural gas reserves and even become self-sufficient in

268. See Mark Stevenson, *Mexico's Political Troubles Threaten Investment*, 5 U.S. MEXICO FREE TRADE REP., June 30, 1995, available in 1995 WL 10425738.

269. See *id.*

270. See *Power In Latin America*, *supra* note 29.

the fuel, there are significant downstream opportunities now for foreign gas companies. Within North America, the increased use of natural gas in Mexico is probably the greatest new utilization, since much of the oil-based fuels now used in Mexico have a high sulfur content, which the government is trying to get away from for environmental reasons.

The Mexican Government's progress in opening up natural gas distribution to the private sector stands in stark contrast to delays in privatizing the country's petrochemical plants, which in part reflects widespread opposition in Mexico to the sale of those assets. It is almost as if petrochemicals has become a historical and emotional sacrificial lamb for natural gas, since national angst has centered primarily on blocking the privatization of oil.

For the past seven years, U.S. and other foreign natural gas investors who have sought to invest in Mexico have consistently underestimated the economic and legal difficulties associated with energy projects. Mexico's new NGRs are designed to entice foreign capital into its gas sector by limiting future risks. The passage of the NGRs marks a significant development in the natural gas industry in Mexico, and provides foreign and domestic investors with the legal certainty needed to take advantage of opportunities for foreign investment unavailable in Mexico for many decades.

The NGRs were passed and implemented in near record time, quickly followed by pricing and quality regulations. Foreign gas companies will have the edge when it comes to supplying gas in northern Mexico, because Mexico has no widespread network of pipelines running from its plentiful natural gas supplies in the south to consumers in the north. The potential demand for natural gas is there, and in the long term the move from oil to natural gas is inevitable.

The NGRs constitute only one segment of a complex legal regime modernizing policies in the legal, economic and international trade area of natural gas. Mexico has defined the scope of its state monopoly in natural gas through its Constitution, implementing laws of the Constitution, regulations to the implementing laws, foreign investment laws, regulations issued under the foreign laws, and reservations in NAFTA. If Article 27 of the Mexican Constitution is interpreted alone, without the benefit of accompanying laws and regulations, using a narrow construction, all basic hydrocarbon operations (including natural gas) would be considered a monopoly of the state. A direct amendment of the words of Mexico's Constitution, especially Article 27 of the Mexican Constitution, would certainly be an emotionally laden undertaking.

A more flexible interpretation of Article 27 takes into consideration the ramifications of the intricate maze of accompanying rules that retain the Nation as the constitutional subsoil titled owner, but allows beneficial foreign investment, as is being done in the natural gas industry

today. Arguably, without the benefit of foreign investment, the development of Mexican hydrocarbons will be deprived of the vigorous competition, innovative technology and generous exploration budgets of the international oil industry.