THE PAST, PRESENT, AND FUTURE OF ENERGY IN MEXICO: PROSPECTS FOR REFORM UNDER THE PEÑA NIETO ADMINISTRATION

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"Wisdom lies neither in fixity nor in change, but in the dialectic between the two."

"*La sabiduría no está ni en la fijeza, ni en el cambio, sino en la dialéctica entre ellos*."

– Octavio Paz, The Monkey Grammarian

I. INTRODUCTION

Petróleos Mexicanos (Pemex) is Mexico's national oil company.[1] Pemex is simultaneously known as the "cash cow" and "sacred cow" of Mexico.[2] As a cash cow, Pemex is often responsible for more than one-third of the Mexican government's revenues.[3] As a sacred cow, Pemex is a profoundly important symbol of Mexican sovereignty and independence, on par with

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1. *See History of Petroleos Mexicanos*, PEMEX.COM, http://www.pemex.com/index.cfm?action=content&sectionID=123&catID=11682 (last updated June 27, 2011).

2. Geri Smith, *Pemex May Be Turning From Gusher to Black Hole*, BUS. WK. (Dec. 12, 2004), http://www.businessweek.com/magazine/content/04_50/b3912084_mz058.htm (referring to Pemex as a "cash cow"); Dave Graham & Miguel Angel Gutierrez, *Mexican Candidate Sees Possible Pemex Listing*, REUTERS (Dec. 29, 2011), http://af.reuters.com/article/commoditiesNews/idAFN1E7BS0AB20111229 (referring to Pemex as a "sacred cow").

3. *See* Elisabeth Malkin, *In a Change, Mexico Reins In Its Oil Monopoly*, N.Y. TIMES (Apr. 23, 2012), http://www.nytimes.com/2012/04/24/business/energy-environment/mexico-reins-in-oil-monopoly.html ("The government relies on the company's oil revenue for as much as 40 percent of the national budget, taxing it so heavily that last year the company lost $6.5 billion on sales of $111.5 billion."); Symposium, *Energy and International Law: Development, Litigation, and Regulation*, 36 TEX. INT'L L.J. 1, 58 (2001) [hereinafter Symposium] ("The government has a formula in which about sixty-three percent of the gross revenue of [Pemex] goes to the Mexican treasury. That number represents about thirty-three percent of the total fiscal revenue of the country.").

cultural icons like the Virgin of Guadalupe and the Mexican flag.[4] But these dual roles are increasingly at odds. Pemex is burdened by the enormous tax obligations of a cash cow, yet—as a sacred cow—is handcuffed by strict constraints under Mexican law.[5] Pemex is currently struggling to balance these roles while also adapting to a challenging and unfamiliar production environment.[6]

The future of Mexico is closely tied to the future of Pemex. Pemex is the largest oil producer in Latin America and is among the four largest producers in the world.[7] Pemex is wholly owned by the Mexican government and has a monopoly over many facets of the Mexican petroleum industry, including the exploration and production of hydrocarbons.[8] As a fiscal engine of the Mexican state—responsible for thirty to forty percent of the federal government's income—Pemex affects the lives of nearly all Mexicans.[9] Revenue from Pemex funds public spending on everything from education and health care to public infrastructure and poverty alleviation programs.[10] Pemex is also

4. Mica Rosenberg, *Mexico Election Favorite Faces Stiff Test on Oil Reform*, REUTERS (June 12, 2012), http://www.reuters.com/article/2012/06/12/us-mexico-oil-idUSBRE85B16M20120612.

5. *See* Graham & Gutierrez, *supra* note 2 (noting the tension between the need for private investment in Pemex and the company's status as a "sacred cow" in Mexico).

6. *See* Rosenberg, *supra* note 4 (explaining that Pemex lacks the technology and expertise to address current production challenges); Clifford Krauss & Elisabeth Malkin, *Mexico Oil Politics Keeps Riches Just Out of Reach*, N.Y. TIMES (Mar. 8, 2010), http://www.nytimes.com/2010/03/09/business/global/09pemex.html (describing legal restrictions as a "straitjacket" constraining Pemex).

7. Jose Enrique Arrioja & Carlos M. Rodriguez, *Calderon Vows to Renew Drive in Congress to Boost Pemex Output*, BLOOMBERG (May 10, 2011), http://www.bloomberg.com/news/2011-05-10/calderon-may-propose-selling-shares-in-pemex-to-boost-nation-s-oil-output.html; Adam Thomson, *Pemex: Not Cutting the Mustard*, FIN. TIMES (Jan. 3, 2013), http://blogs.ft.com/beyond-brics/2013/01/03/pemex-not-cutting-the-mustard/#axzz2HLAjnkd6.

8. Arrioja & Rodriguez, *supra* note 7.

9. *See Mexican Pemex's Crude Oil Production Flat in Sept.*, REUTERS (Oct. 26, 2012), http://www.reuters.com/article/2012/10/26/mexico-oil-idUSL1E8LQFN720121026 [hereinafter *September Production Flat*]; *see also* James C. McKinley Jr. & Elisabeth Malkin, *Accidents Reveal Troubles at Mexico's Oil Monopoly*, N.Y. TIMES (May 15, 2005), http://www.nytimes.com/2005/05/15/international/americas/15pemex.html.

10. *See* Krauss & Malkin, *supra* note 6 ("Oil money is used for everything from

a major employer of Mexican citizens and is responsible for the country's energy security.[11]

Internationally, the future of Pemex is strategically and commercially significant. Mexico is a key energy partner of the United States.[12] Mexico is not a member of the Organization of the Petroleum Exporting Countries (OPEC), and remains among the top three suppliers of U.S. foreign oil imports, alongside Canada and Saudi Arabia.[13] As important as Pemex is from a supply perspective, the company's role as the financial bedrock of the Mexican government is even more important in the current era of U.S.-Mexico relations. Pemex is critical to the stability of the Mexican government, which affects the United States in many important respects. Finally, the international energy industry—including companies from Asia to Europe, and all over the Americas—is keenly interested in investing in Mexico's energy sector.[14]

Not by coincidence, Mexico's newly elected president, Enrique Peña Nieto, identified energy reform as the "signature

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building schools to fighting the war against drug cartels.").

11. *See Mexico's Move: Times Change and the Country Should Change Oil Policy to Welcome Foreigners*, HOUS. CHRON. (Mar. 18, 2010), http://www.chron.com/opinion/editorials/article/Mexico-s-move-Times-change-and-the-country-1703995.php.

12. *See* Krauss & Malkin, *supra* note 6; ISIDRO MORALES, JAMES A. BAKER III INST. FOR PUB. POL'Y RICE UNIV., THE ENERGY FACTOR IN MEXICO-U.S. RELATIONS 5 (2011), *available at* http://bakerinstitute.org/publications/EF-pub-MoralesFactor-04292011.pdf.

13. MORALES, *supra* note 12, at 19, 29; U.S. ENERGY INFO. ADMIN., PETROLEUM & OTHER LIQUIDS: COMPANY LEVEL IMPORTS 1 (2012), *available at* http://www.eia.gov/petroleum/imports/companylevel/ (last updated Feb. 27, 2013).

14. *See* Christopher Helman, *With Pemex Overhaul, Mexico's New Prez is Set to Become Big Oil's B.F.F.*, FORBES (Nov. 30, 2012), http://www.forbes.com/sites/christopherhelman/2012/11/30/with-pemex-overhaul-mexicos-new-prez-set-to-become-big-oils-pal (suggesting that interest from international oil companies would be "enormous"); Eric Martin & Carlos Manuel Rodriguez, *Mexico May Finally Get a Modern Oil Industry*, BUS. WK. (July 12, 2012), http://www.businessweek.com/articles/2012-07-12/mexico-may-finally-get-a-modern-oil-industry; *see also* Derek Punsalan, *China Chooses Mexico as its Main Foreign Investment Destination*, FINETIK (Oct. 1, 2009), http://blog.finetik.com/2009/10/01/china-chooses-mexico-as-its-main-foreign-investment-destination/ (discussing China's interest in investment); Stephen Brown, *New Mexican Leader Woos German Investors on Pemex*, REUTERS (Oct. 12, 2012), http://www.reuters.com/article/2012/10/12/mexico-germany-energy-idUSL5E8LCJ2P0121012 (discussing Germany's interest in investment).

issue" of his administration.[15] Peña Nieto has committed himself to achieving the meaningful reform that eluded his predecessor.[16] After oil production in Mexico dropped by a quarter in just a few years, then-president Felipe Calderón passed the 2008 Energy Reforms aimed at modernizing Pemex and providing avenues for private participation in the energy sector.[17] Despite many important changes, the 2008 Energy Reforms did not address fundamental obstacles to attracting the foreign investment that Pemex needs.[18] Peña Nieto now stands as the next Mexican president to attempt to solve the Pemex situation.

II. THE PRESENT: PEMEX IN THE TWENTY-FIRST CENTURY

A. *Declining Production Since 2004*

Mexico has experienced a major decline in oil production in

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15. Carlos Manuel Rodriguez & Adriana Lopez Caraveo, *Mexico Oil Opening First Time Since 1938 Shows Revival*, BLOOMBERG (Apr. 26, 2012), http://www.bloomberg.com/news/2012-04-25/mexico-oil-opening-first-time-since-1938-shows-revival-energy.html.

16. *See id.*

17. Ley Reglamentaria del Artículo 27 Constitucional en el Ramo del Petróleo [Petroleum Law of 1958], *as amended*, Diario Oficial de la Federación [DO], 29 de Noviembre de 1958 (Mex.); Ley de Petróleos Mexicanos [Pemex Law] Diario Oficial de la Federación [DO], 28 de Noviembre de 2008 (Mex.); Ley de Obras Públicas y Servicios Relacionados con las Mismas [Public Works Law], *as amended*, Diario Oficial de la Federación [DO], 4 de Enero de 2000 (Mex.); Ley de Adquisiciones Arrendamientos y Servicios del Sector Público [Procurement Law], *as amended*, Diario Oficial de la Federación [DO], 4 de Enero de 2000 (Mex.); Ley de la Comisión Reguladora de Energía [Energy Regulatory Commission Law], *as amended*, Diario Oficial de la Federación [DO], 31 de Octubre de 1995 (Mex.); Ley de la Comisión Nacional de Hidrocarburos [National Hydrocarbons Commission Law], *as amended*, Diario Oficial de la Federación [DO], 28 de Noviembre de 2008 (Mex.); Ley para el Aprovechamiento Sustentable de la Energía [Law on Sustainable Energy Use], *as amended*, Diario Oficial de la Federación [DO], 28 de Noviembre de 2008 (Mex.).

18. *See* Karla Urdaneta, *Transboundary Petroleum Reservoirs: A Recommended Approach for the United States and Mexico in the Deepwaters of the Gulf of Mexico*, 32 HOUS. J. INT'L L. 333, 356–58 (2010) (referring to the 2008 Energy Reform as an "internal reform of Pemex, rather than a comprehensive reform of the energy sector" while assessing the effect of reform on the desirability for private investment); *see also* Tim R Samples & José Luis Vittor, *Energy Reform and the Future of Mexico's Oil Industry: The Pemex Bidding Rounds and Integrated Service Contracts*, 7 TEX. J. OIL, GAS, & ENERGY L. 215, 227 (2012) (describing major legal constraints in the Mexican Constitution and the Petroleum Law of 1958 that remain intact today).

recent years, losing roughly a quarter of gross production while dropping from 3.4 million barrels per day (bpd) in 2004 to 2.5 million bpd in 2011.[19] Roughly eighty percent of Mexico's oil fields are currently in advanced or declining stages of production.[20] In 2012, ninety percent of oil production came from fields that were discovered over twenty years ago.[21]

In recent years, production has stabilized at around 2.5 million bpd.[22] Despite significant declines, Mexico remains the seventh largest producer of crude oil in the world,[23] and among the most important non-OPEC producers.[24] However, Mexico has also become a major consumer of petroleum.[25] Due to falling production and growing consumption, recent studies suggest that Mexico could be a net importer of oil within a decade, an alarming scenario for the Mexican government.[26]

To a large extent, declining production is related to the aging of Mexico's offshore super-giant, the Cantarell field.[27] Discovered in 1976 in the shallow waters of the Bay of Campeche by a local fisherman named Rudesindo Cantarell,

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19. *See* Martin & Rodriguez, *supra* note 14.

20. SECRETARÍA DE ENERGÍA DE MÉXICO, ESTRATEGIA NACIONAL DE ENERGÍA 2013–2027 41 (2013), *available at* http://www.energia.gob.mx/res/PE_y_DT/pub/2013/ENE_2013–2027.pdf.

21. *Id.*

22. *See Mexico: Analysis*, U.S. ENERGY INFO. ADMIN. 2, http://www.eia.gov/countries/analysisbriefs/Mexico/Mexico.pdf (last updated Oct. 17, 2012) [hereinafter EIA].

23. *Mexico Sets Oil Hedge at $86 per Barrel for 2013*, REUTERS (Dec. 21, 2012), http://www.reuters.com/article/2012/12/22/mexico-oil-idUSL1E8NM13U20121222.

24. *See* EIA, *supra* note 22, at 1 ("Mexico is a major non-OPEC oil producer and among the largest sources of U.S. oil imports.").

25. *See Mexico's Oil Output Rises in Oct-Pemex Data*, REUTERS (Nov. 25, 2011), http://www.reuters.com/article/2011/11/25/mexico-oil-idUSWNA444620111125 (stating that the world's seventh-largest oil producer has to import approximately forty percent of its gasoline needs due to its lack of domestic refining capability); *September Production Flat*, *supra* note 9.

26. KENNETH B. MEDLOCK III & RONALD SOLIGO, JAMES A. BAKER III INST. FOR PUB. POL'Y RICE UNIV., SCENARIOS FOR OIL SUPPLY, DEMAND AND NET EXPORTS FOR MEXICO 25 (2011), *available at* http://bakerinstitute.org/publications/EF-pub-MedlockSoligoScenarios-04292011.pdf.

27. *See* MANIK TALWANI, JAMES A. BAKER III INST. FOR PUB. POL'Y RICE UNIV., OIL AND GAS IN MEXICO: GEOLOGY, PRODUCTION RATES AND RESERVES 20–21 (2011) *available at* http://bakerinstitute.org/publications/EF-pub-TalwaniGeology-04292011.pdf.

after whom the field is named, Cantarell is the largest field ever discovered in Mexico and one of the largest in the world.[28] During peak years, production at Cantarell was surpassed only by Saudi Arabia's super-giant Ghawar field.[29] Cantarell has been a boon for Mexico, generating roughly $500 billion in revenue since production began in 1978.[30]

Since 2006, however, production at Cantarell has dropped by seventy-four percent.[31] Cantarell accounted for an amazing sixty-three percent of Mexico's crude oil production in 2004, but fell to just twenty percent by 2010.[32] For decades, Pemex could rely on Cantarell as a huge supply of readily available oil in a familiar geological formation with relatively high rates of recovery.[33] With the aging of Cantarell and with many of Mexico's largest fields in decline, the future of Mexico's oil industry now lies in the complex heavy oil reserves of Chicontepec and costly deepwater reserves in the Gulf of Mexico.[34] As Mexico's Ministry of Energy (SENER) stated in its most recent national strategy plan for 2013–2027, the era of "simple" exploration and production is over.[35]

B. Consequences of Declining Production

Declining production in Mexico has far-reaching domestic

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28. *Id.* at 20; *see also* Martin & Rodriguez, *supra* note 14.

29. TALWANI, *supra* note 27, at 20–21.

30. *See* AMY MYERS JAFFE & LAURENCE WHITEHEAD, JAMES A. BAKER III INST. FOR PUB. POL'Y RICE UNIV., BAKER INSTITUTE POLICY REPORT 48: THE FUTURE OF OIL IN MEXICO 1 (2011), *available at* http://www.bakerinstitute.org/files/pubs/EF-pub-PolicyReport48-English.pdf.

31. Carlos Manuel Rodriguez, *Pemex Oil Production Falls as Cantarell Hits Record Low*, BLOOMBERG (Apr. 30, 2012), http://www.bloomberg.com/news/2012-04-30/pemex-oil-production-falls-as-cantarell-hits-record-low.html.

32. EIA, *supra* note 22, at 4.

33. *See* Jesse Bogan, *With Easy Oil Gone, Pemex Sobers Up*, FORBES (May 7, 2009), http://www.forbes.com/2009/05/07/pemex-petrobras-mexico-business-energy-oil.html (characterizing Cantarell's decline as "the end of an era" for Pemex).

34. *See Mexico's Troubled Oil Industry: How Many Mexicans Does it Take to Drill an Oil Well?*, ECONOMIST (Oct. 1, 2009), http://www.economist.com/node/14548839 [hereinafter *Mexico's Troubled Oil Industry*]; JAFFE & WHITEHEAD, *supra* note 30, at 4 (noting that long-term prospects for Pemex depend on potential in Chicontepec Basin and the deep waters of the Gulf of Mexico).

35. SECRETARÍA DE ENERGÍA DE MÉXICO, *supra* note 20, at 41.

and international consequences. On the domestic level, there are crucial economic and social ramifications.[36] Mexico depends on oil revenues for everything from social assistance programs to counternarcotic operations.[37] Pemex export revenues were even used as collateral for a $48.8 billion multilateral rescue loan package to stem a financial crisis in 1995.[38] The importance of production is evident in the Pemex budget for 2013, which allocates the lion's share of a record $25.3 billion budget to upstream activities.[39]

Although the Mexican economy is less dependent upon oil than during the catastrophic oil shocks of the mid-1980s, the fiscal health of the government is still closely tied to Pemex.[40] Pemex is arguably the most important company in Mexico and—mainly through taxes and direct payments—has historically been responsible for a remarkably large portion of the Mexican government's revenues while compensating for one of Latin America's weakest tax collection regimes.[41] In 2011, even with oil production and exports in decline, the oil industry provided thirty-four percent of the Mexican government's total revenues

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36. *See* JAFFE & WHITEHEAD, *supra* note 30, at 1–2 (naming domestic security and government revenue for social programs as a few of these ramifications).

37. *Id.*; Krauss & Malkin, *supra* note 6.

38. *See* Colin McMahon, *Mexico's Early Loan Repayment Suggests A Return To Stability*, CHI. TRIB. (June 22, 1996), http://articles.chicagotribune.com/1996-06-22/business/9606220205_1_billion-international-package-mexico-bailout-president-ernesto-zedillo-ponce.

39. Anthony Harrup, *Mexico's Pemex Plans Record $25.3 Billion Investment in 2013*, WALL ST. J., Feb. 28, 2013, http://online.wsj.com/article/SB10001424127887323978104578332400579225008.html.

40. *See* JAFFE & WHITEHEAD, *supra* note 30, at 4 (stating that Mexico's present shortage "pales by comparison" with the problems it faced in the mid-1980s); JAIME ROS, JAMES A. BAKER III INST. FOR PUB. POL'Y RICE UNIV., THE MACROECONOMIC CONSEQUENCES OF FALLING OIL REVENUES IN MEXICO 10 (2011), *available at* http://bakerinstitute.org/publications/EF-pub-RosMacroeconomic-04292011.pdf (exploring macroeconomic consequences of Mexican production scenarios for 2010 to 2020).

41. *See* CARLOS ELIZONDO MAYER-SERRA, JAMES A. BAKER III INST. FOR PUB. POL'Y RICE UNIV., STUCK IN THE MUD: THE POLITICS OF CONSTITUTIONAL REFORM IN THE OIL SECTOR IN MEXICO 14 (2011), *available at* http://bakerinstitute.org/publications/stuck-in-the-mud-the-politics-of-constitutional-reform-in-the-oil-sector-in-mexico; *Mexico's Troubled Oil Industry*, *supra* note 34 (noting that taxes from Pemex compensate for Mexico's feeble tax collection regime, which collects just eleven percent of GDP).

and accounted for sixteen percent of Mexico's export earnings.[42]

Mexico's energy industry also has broad implications for U.S.-Mexico relations.[43] As the third largest supplier of foreign oil to the United States and the third largest producer in the Western Hemisphere, Mexico is a key partner in the U.S. energy trade.[44] Yet, from the standpoint of U.S. security interests, the role of Pemex *within* Mexico—as a cornerstone of the government's fiscal stability—has now eclipsed the company's importance as a source of imported oil.[45] That is due to the immense importance of the energy industry to the fiscal health and stability of the Mexican state.[46] In addition to domestic programs, Mexico also relies on Pemex revenue to cooperate with the United States on trade, security, migration, and other international issues.[47]

C. Reasons Behind Declining Production: the "Pemex Situation"

1. A Heavy Tax Burden

Despite being the world's third largest oil-producing company, Pemex has been operating at a loss in recent years.[48]

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42. EIA, *supra* note 22, at 1.

43. *See* Loren Steffy, *Stakes High as Mexico Again Talks of Oil Reform*, HOUS. CHRON. (July 17, 2012), http://www.chron.com/business/steffy/article/Steffy-Stakes-high-as-Mexico-again-talks-of-oil-3714704.php (alluding to both the high stakes involved regarding U.S.-Mexico relations and the "dire implications" for the United States if the status quo remains). *See generally* MORALES, *supra* note 12 (addressing the role of energy in U.S.-Mexico relations).

44. *See* EIA, *supra* note 22, at 1, 7.

45. Though still significant, Mexico's oil production is now five percent of the world total and current declines may be offset with increased production elsewhere. *See* JOE BARNES, JAMES A. BAKER III INST. FOR PUB. POL'Y RICE UNIV., OIL AND U.S.-MEXICO BILATERAL RELATIONS 24–26 (2011), *available at* http://www.bakerinstitute.org/publications/EF-pub-BarnesBilateral-04292011.pdf.

46. *See id.* at 26–27; *see also* JAFFE & WHITEHEAD, *supra* note 30, at 9 (suggesting that the oil industry can succeed in "maintaining stability" if it continues to be reactive and defensive).

47. *See* Andrew Selee & Christopher Wilson, *Mexico, U.S. Ties Ripe for Major Expansion*, CNN (Nov. 27, 2012), http://www.cnn.com/2012/11/27/opinion/selee-wilson-obama-pea-nieto/index.html.

48. *See* Carlos Manuel Rodriguez, *Pemex Reports Biggest Loss Since 2008 on Currency, Taxes*, BUS. WK. (OCT. 28, 2011), http://www.businessweek.com/news/2011-10-28/pemex-reports-biggest-loss-since-2008-on-currency-taxes.html (reporting third-

In 2011, Pemex lost $6.5 billion on sales of $111.5 billion.[49] Pemex is burdened by an immense fiscal obligation to the Mexican state, which typically amounts to well over half of the company's revenues.[50] In 2011, payments from Pemex hit a record high of $62.6 billion, representing 56.2% of the company's total revenues.[51] Pemex investment budgets have been underfunded for decades.[52]

Recent reforms allowed Pemex to prepare its budget without direct supervision from the Ministry of the Treasury, but financial plans remain subject to caps imposed by Congress.[53] Even now, the long-term sustainability of this financial model is increasingly in doubt.[54] Alluding to these issues, a former director of Pemex recently lamented that the company is "horribly run," suffering from an emphasis on immediate returns at the expense of long-term gains.[55] More recently, problems with oil theft have exacerbated the financial picture by costing Pemex more than one billion dollars per year in losses.[56]

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quarter losses of eighty-one million pesos in 2011); *see also* MarketWatch, *Mexico's Pemex Swings to 2nd-Quarter Loss*, WALL ST. J. (July 27, 2012), http://www.marketwatch.com/story/mexicos-pemex-swings-to-2nd-quarter-loss-2012-07-27.

49. Malkin, *supra* note 3.

50. Symposium, *supra* note 3, at 58.

51. *Financial Analysis*, PEMEX, http://www.ri.pemex.com/files/content/01%20Financial%20Analysis1.pdf (last visited Mar. 1, 2013).

52. *Mexico's Troubled Oil Industry*, *supra* note 34 ("From 1983 to 2000 Pemex's annual investment budget was a paltry $3 billion. Until recently Cantarell's bounty disguised this.").

53. *See* Ley de Adquisiciones Arrendamientos y Servicios del Sector Público [Procurement Law], art. 49, Diario Oficial de la Federación [DO], 4 de enero de 2000 (Mex.) (stating entities can supervise their own contracts); Ley de Obras Públicas y Servicios Relacionados con las Mismas [Public Works Law], *as amended*, art. 42, Diario Oficial de la Federación [DO], 4 de Enero de 2000 (Mex.) (stating that agencies do not have to submit to a public bidding process, but the amount cannot exceed the maximum set by the Government); *see also* Krauss & Malkin, *supra* note 6 ("[The Pemex] budget is set by the Congress, so it cannot plan exploration far in advance.").

54. SECRETARÍA DE ENERGÍA DE MÉXICO, DIAGNÓSTICO: SITUACIÓN DE PEMEX 110 (2008), *available at* http://pemex.com/files/content/situacionpemex.pdf.

55. *See Señores, Start Your Engines*, ECONOMIST, Nov. 24, 2012, http://www.economist.com/news/special-report/21566782-cheaper-china-and-credit-and-oil-about-start-flowing-mexico-becoming [hereinafter *Start Your Engines*].

56. *Oil Theft in Mexico: Black Gold on the Black Market*, ECONOMIST, Aug. 4, 2012, http://www.economist.com/node/21559962 ("In 2011 outlaws made off with 3.35 [million]

2. *Technical and Operational Deficiencies*

Pemex is now hobbled by factors beyond financial burdens.[57] Decades of prioritizing short-term revenues have shortchanged spending on exploration, strategic reinvestment, technology, research and development, and infrastructure.[58] For years, Cantarell disguised these deficiencies.[59] In a sense, Cantarell's easily accessible oil has been a mixed blessing by enabling the government to become dependent on high Pemex revenues without heavy reinvestment in technology and exploration.[60] As a result, Pemex now lacks the technical and operational capacities needed to solve the most difficult exploration and production problems facing Mexico today.[61]

3. *Legal and Institutional Factors*

Mexican law simultaneously protects and constrains Pemex.[62] For much of Mexico's modern history, state monopoly over the oil and gas industry has been regarded as a nearly sacrosanct principal.[63] Mexican novelist and former ambassador, Carlos Fuentes, once remarked that any politician who attempted to violate that principal would be hanged in the Zocalo, the central square of Mexico City.[64] Even today, a

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barrels of fuel belonging to Pemex . . . up from 2.16 [million] in 2010."); *see also* Mica Rosenberg, *Pemex Counts 100 Workers Linked to Mexico Fuel Thefts*, REUTERS (July 25, 2011), http://www.reuters.com/article/2011/07/26/us-mexico-oil-idUSTRE76P0BC20110726.

57. *See* SECRETARÍA DE ENERGÍA DE MÉXICO, *supra* note 54, at 7.

58. *See id.* (arguing that Pemex needs to work on its technology and evaluation mechanisms); *see also* TALWANI, *supra* note 27, at 22, 29 (presenting the idea that development of new oil extraction technology also depends on exploration and investment).

59. *Mexico's Troubled Oil Industry*, *supra* note 34.

60. *See id.*

61. *See* Bogan, *supra* note 33; *see also* SECRETARÍA DE ENERGÍA DE MÉXICO, *supra* note 54, at 110.

62. *See* Ewell E. Murphy, Jr., *The Echeverrían Wall: Two Perspectives on Foreign Investment and Licensing in Mexico*, 17 TEX. INT'L L.J. 135, 135–36 (1982) (illustrating, with a brief fairy tale, the difficulty of protecting Mexican national industry); JAFFE & WHITEHEAD, *supra* note 30, at 5.

63. Cyrus Sanati, *Mexican Oil May Not Be Worth It*, CNN MONEY (Dec. 9, 2010), http://money.cnn.com/2010/12/09/news/international/Mexico_oil.fortune/index.htm.

64. Krauss & Malkin, *supra* note 6.

national holiday commemorates the nationalization of the petroleum sector on March 18, 1938.[65] Though enjoying a legally protected monopoly over most phases of the Mexican energy industry, Pemex also operates within one of the most restrictive legal frameworks for oil and gas in the world.[66]

Legal protections constrain the operational abilities of Pemex.[67] Pemex is prohibited from entering into horizontal arrangements with private companies such as concessions, risk-service contracts, and production sharing partnerships—all very common in the industry.[68] Such associations enable companies to pool resources and technology while sharing in the risks and rewards of costly projects.[69] As a result, Mexican law fundamentally limits Pemex's ability to form partnerships and joint ventures with other energy companies.[70] These limitations become all the more critical when projects involve high costs, technical challenges, and significant risks.

Pemex is slowed by administrative and labor issues as well.[71] Pemex has a burdensome corporate governance structure with complex administrative and political relationships with the Mexican state.[72] With more than 140,000 employees, Pemex also

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65. *See* Ewell E. Murphy, Jr., *The Prospect For Further Energy Privatization In Mexico*, 36 TEX. INT'L L.J. 75, 75 (2001) [hereinafter *The Prospect For Further Energy Privatization in Mexico*].

66. MAYER-SERRA, *supra* note 41, at 9.

67. *See* JAFFE & WHITEHEAD, *supra* note 30, at 5 (discussing constraints preventing Pemex from operating under "optimal conditions").

68. *See* Ernest E. Smith & John S. Dzienkowski, *A Fifty-Year Perspective on World Petroleum Arrangements*, 24 TEX. INT'L L.J. 13, 23–24 (1989); Miriam Grunstein, *Unitized We Stand, Divided We Fall: A Mexican Response to Karla Urdaneta's Analysis of Transboundary Petroleum Reservoirs in the Deep Waters of the Gulf of Mexico*, 33 HOUS. J. INT'L L. 345, 350 (2011).

69. Grunstein, *supra* note 68, at 345, 350.

70. *Id.*

71. *See* MAYER-SERRA, *supra* note 41, at 13.

72. *See* SECRETARÍA DE ENERGÍA DE MÉXICO, *supra* note 54, at 119–23 (describing the different internal and governmental obstacles Pemex faces and how Pemex must be flexible to overcome them); LAURENCE WHITEHEAD, JAMES A. BAKER III INST. FOR PUB. POL'Y RICE UNIV., COPING WITH ADVERSITY IN THE MEXICAN OIL INDUSTRY: COMO PEMEX NO HAY DOS 19–24 (2011), *available at* http://www.bakerinstitute.org/publications/EF-pub-WhiteheadAdversity-04292011.pdf (describing the difficulties arising from Pemex's "distinctive institutional status").

has a heavy payroll, which some have suggested is far too large.[73] Exxon Mobil, the largest publicly traded international oil and gas company in the world, employs fewer than 100,000.[74] Pension liabilities are substantial,[75] and the Petroleum Workers Union of Mexico (the Pemex Union) is a powerful force in Mexican politics.[76]

For the reasons discussed above, Pemex performs poorly in comparisons with peer companies.[77] In a 2008 report, SENER addressed Pemex's lackluster performance and identified critical areas—including operations, know-how, capital, and technology—where Pemex has fallen behind.[78] Many leaders in Mexico are well aware of the urgency and the significance of the "Pemex Situation," which was the title of the SENER report.[79] But Mexican law prevents Pemex from accessing capital and technology through partnerships with other international oil companies.[80] As it currently stands, Mexican law keeps many potential solutions out of reach.

D. Solutions to the Production Conundrum

Despite urgent concerns with declining production, Mexico is still home to vast potential in unconventional resources and offshore reserves.[81] The question facing Mexican lawmakers now

73. *Mexico's Troubled Oil Industry*, *supra* note 34; MAYER-SERRA, *supra* note 41, at 35 ("Pemex is paying an estimated 11,000 workers for, literally, doing nothing. Some have estimated that this costs Pemex around 4 billion pesos per year.").

74. Including employees of company-operated retail sites, the number is just over 99,000. *See* EXXON MOBIL, FINANCIAL STATEMENTS AND SUPPLEMENTAL INFORMATION F-3 (2011), *available at* http://ir.exxonmobil.com/phoenix.zhtml?c=115024&p=irol-reportsAnnual. Counting only "regular" employees, as defined by Exxon, the figure is just over 82,000. *Id.*

75. *See* SECRETARÍA DE ENERGÍA DE MÉXICO, *supra* note 54, at 113–15.

76. *See* MAYER-SERRA, *supra* note 41, at 35–36.

77. SECRETARÍA DE ENERGÍA DE MÉXICO, *supra* note 54, at 5; Ognen Stojanovski, *The Void of Governance: An Assessment of Pemex's Performance and Strategy* 5 (Program on Energy and Sustainable Dev., Working Paper No. 73, 2008), *available at* http://iis-db.stanford.edu/pubs/22156/WP_73%2C_Stojanovski%2C_Pemex%2C_12_Apr_08.pdf.

78. SECRETARÍA DE ENERGÍA DE MÉXICO, *supra* note 54, at 7.

79. *Id.*

80. Grunstein, *supra* note 68, at 350.

81. *See* EIA, *supra* note 22, at 1, 5 (noting that a production rebound depends on development of deepwater resources in the Gulf of Mexico and economic access granted

is how to develop this potential.[82] In the short- to medium-term, Pemex will aim to increase production and efficiency through the more effective management of mature resources and existing fields.[83] Some of the less ambitious production goals—for example, reducing declines at mature fields—are largely achievable under the current energy law framework.[84] However, long-term answers for the future of Mexico's oil industry appear to lie in the Chicontepec Basin and the deep waters of the Gulf of Mexico.[85]

Both opportunities present significant challenges for Pemex.[86] Chicontepec is estimated to hold around forty percent of Mexico's total crude reserves.[87] Mexico has already invested billions in the hopes that Chicontepec would reverse lagging production due to declines at Cantarell.[88] However, developing the Chicontepec area has proved a complicated proposition.[89] Recovery rates are low, complicating the economic viability of developing fields.[90] Extracting oil at Chicontepec is expensive and technically demanding because it is spread out in small formations over hundreds of miles.[91] Because of these technical

to foreign investors and operators).

82. *See* Nick Parker, *Mexico Looking at Risky Deep Water Oil*, CNN, (Oct. 24, 2012), http://edition.cnn.com/2012/09/25/business/mexico-deep-water-oil/index.html.

83. *See* SECRETARÍA DE ENERGÍA DE MÉXICO, *supra* note 20, at 41.

84. *See id.* (noting that as a result of recent increases in spending and investments, Pemex has been able to slow the decline rate at the Cantarell field and increased production at KMZ).

85. *Id.* at 4.

86. *See id.* (noting the necessity of "advanced technology and large capital investment").

87. Adriana Barrera & Ana Isabel Martinez, *Mexico's Pemex to Revise its Chicontepec Oil Project*, REUTERS (June 15, 2012), http://www.reuters.com/article/2012/06/15/mexico-oil-idUSL1E8HFHXS20120615.

88. *See* Robert Campbell, *Mexico Gov't Doubts Mount on Chicontepec Oil Project*, REUTERS (Aug. 10, 2009), http://www.reuters.com/article/2009/08/10/mexico-oil-idUSN0739366320090810.

89. Barrera & Martinez, *supra* note 87 ("Chicontepec is difficlt to exploit due to millions of barrels of oil scattered across many small deposits, a geological feature that makes production costly and slow.").

90. TALWANI, *supra* note 27, at 22.

91. *See* EIA, *supra* note 22, at 5.

and economic hurdles, Pemex is currently not in a position to develop Chicontepec as rapidly as needed.[92] Consequently, Pemex has made its exploration and production a priority, and has included portions of Chicontepec in the company's recent bidding rounds.[93]

Mexico's deepwater reserves are believed to be massive—at almost thirty billion barrels—but remain largely undeveloped.[94] Between 2006 and May 2012, Pemex drilled just nineteen wells in deep waters.[95] Petrobras, by comparison, has expanded its fleet of deepwater rigs to forty and has developed sophisticated deepwater capabilities.[96] Pressure on Pemex mounted when Petrobras and its partners—also national oil companies, Ecopetrol of Colombia and Statoil of Norway—announced major deepwater finds in U.S. waters in the Gulf of Mexico.[97] During the past decade, Pemex spent nearly four billion dollars on deepwater exploration efforts, with limited success, until a huge discovery in August 2012.[98] Weeks later, Pemex announced

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92. *See id.* (noting that technological challenges require costly development wells, that recovery rates are low, that decline rates are high, and that "the region does not yet have much of the supporting infrastructure necessary for large-scale oil development").

93. *See* James Fredrick, *Pemex Board Approves Chicontepec Contracts*, BUS. NEWS AMERICAS (Nov. 22, 2012), http://subscriber.bnamericas.com/Subscriber/index.jsp?idioma=I&tipoContenido=detalle&pagina=content&idContenido=601756&tipoDocumento=1#.

94. *See* Parker, *supra* note 82.

95. *See* David Alire Garcia, *Pemex Finds First Deep Water Light Crude: Mexico's Calderon*, REUTERS (Aug. 30, 2012), http://in.reuters.com/article/2012/08/29/us-mexico-oil-idINBRE87S0TF20120829.

96. BRADESCO, BBI EQUITY RESEARCH, FLASH NOTE: PETROBRAS (Dec. 1, 2012), *available at* http://xa.yimg.com/kq/groups/17389986/3214695/name/BRADESCO++PETR4FN+-+20121201.pdf; *see also Petrobras Pushing Edge of Deepwater Frontier*, OIL & GAS J., Apr. 22, 1991, at 42, *available at* http://www.ogj.com/articles/print/volume-89/issue-16/in-this-issue/drilling/petrobras-pushing-edge-of-deepwater-frontier.html (noting that Petrobas's focus on deepwater technology has been "buoyed by a string of successful completions and deepwater production records" including installation of subsea manifolds and wet Christmas trees).

97. *See* Interview by Bus. News Americas with Jeremy Martin, Director-Energy Program, Institute of the Americas (Nov. 11, 2011), *available at* http://www.bnamericas.com/interviews/en/jeremy-martin-institute-of-the-americas.

98. Elisabeth Malkin, *Pemex Finally Strikes Oil in Deep Waters*, N.Y. TIMES (Aug. 29, 2012), http://green.blogs.nytimes.com/2012/08/29/pemex-finally-strikes-oil-in-deep-waters.

another major deepwater discovery, also in the Área Perdida Basin.[99]

Recent deepwater discoveries represent major breakthroughs for Pemex. Opponents of energy reform argued that the recent discoveries show that Pemex is capable of handling deepwater development without partnerships with the private sector.[100] But proponents of reform insist that resources for deepwater development are still lacking.[101] Even Mexico's National Hydrocarbons Commission (CNH), the upstream regulatory agency created by the 2008 Energy Reforms, questioned the capability of Pemex in deepwater projects.[102] Deepwater operations are especially challenging; they are technically demanding, risky, and extremely expensive.[103] The cost of just an exploratory well in deep waters of the Gulf of Mexico can easily exceed $100 million.[104] Operating costs of a deepwater well are measured in hundreds of millions per year.[105] On top of exploratory risks, accidents can turn into environmental disasters and enormous liabilities.[106] For these

99. *See Pemex Finds More Deepwater Oil*, BUS. NEWS AMERICAS (Oct. 5, 2012), http://www.bnamericas.com/news/oilandgas/pemex-finds-more-deepwater-oil (describing 3P reserves estimates at the Supremus-1 discovery between seventy-five and 125 million barrels of oil equivalent (Mboe) and between 250 and 400 Mboe at the Trión-1 well).

100. *See Mexico Oil: Turn of the Tide?*, ECONOMIST INTELLIGENCE UNIT (Sep. 26, 2012), http://viewswire.eiu.com/index.asp?layout=ib3Article&pubtypeid=1142462499&article_id=199596204.

101. *Id.*

102. *See* David Biller, *New CNH Report Uses Figures to Criticize Pemex's Deepwater Exploration*, BUS. NEWS AMERICAS (May 3, 2012), http://www.bnamericas.com/news/oilandgas/new-cnh-report-uses-figures-to-criticize-pemexs-deepwater-exploration.

103. *The Unsung Masters of the Oil Industry*, ECONOMIST, July 21, 2012, http://www.economist.com/node/21559358 (discussing the distinction between the provision of deepwater services versus assuming exploration risks and owning rights to oil reserves).

104. *Repsol: Exploratory Oil Well Off Cuba Comes Up Dry*, ASSOCIATED PRESS, May 18, 2012, *available at* http://www.foxnews.com/world/2012/05/18/repsol-exploratory-oil-well-off-cuba-comes-up-dry/#ixzz2HE0uKPG9.

105. Krauss & Malkin, *supra* note 6.

106. *See* Clifford Krauss & John Schwartz, *BP Will Plead Guilty and Pay Over $4 Billion*, N.Y. TIMES, Nov. 16, 2012, at A1, *available at* http://www.nytimes.com/2012/11/16/business/global/16iht-bp16.html?pagewanted=all&_r=0 (explaining that BP could owe as much as twenty-one billion dollars in pollution fines under the Clean Water Act, that

reasons, exploration in deep and ultra-deep waters has historically been the domain of the so-called oil majors.[107]

III. THE PAST: PETROLEUM LAWS IN MEXICO

A. *The Constitution of 1917*

Among major oil-producing countries, Mexico has one of the most—if not *the* most—restrictive legal frameworks for petroleum investment in the world.[108] Like most jurisdictions, Mexican law restricts ownership of oil and gas to the state.[109] In fact, almost every country in the world applies some form of the state ownership rule to petroleum, with Canada and the United States as the most notable exceptions.[110] However, Mexican law goes further than almost any legal system in prohibiting private activity in the energy sector.[111] Fundamentally, the legal restrictions on private investment in Mexico's oil industry exist in three layers: (a) the Mexican Constitution of 1917;[112] (b) the Petroleum Law,[113] which was amended in 2008 by the Pemex Law; and (c) administrative regulations issued by the executive

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BP will pay four billion dollars in penalties under its deal with the Justice Department, and that BP has agreed to pay $525 million to settle civil charges by the SEC); *see also The Unsung Masters of the Oil Industry*, *supra* note 103 (noting that smaller companies lack the hefty balance sheet required to cover the exploratory risks and potential liabilities associated with deepwater operations).

107. *See The Unsung Masters of the Oil Industry*, *supra* note 103 (explaining that oilfield services (OFS) firms are still a long way short of owning reserves because they lack the "mammoth balance-sheet that oil firms maintain to manage the huge risks in oil exploration").

108. Kenneth S. Culotta, *Recipe for a Tex-Mex Pipeline Project: Considerations in Permitting a Cross-Border Gas Transportation Project*, 39 TEX. INT'L L.J. 287, 306–07 (2004); MAYER-SERRA, *supra* note 41, at 9.

109. Constitución Política de los Estados Unidos Mexicanos [C.P.], *as amended*, art. 27, Diario Oficial de la Federación [DO], 5 de Febrero de 1917 (Mex.).

110. BERNARD TAVERNE, AN INTRODUCTION TO THE REGULATION OF THE PETROLEUM INDUSTRY 11 (1994).

111. MAYER-SERRA, *supra* note 41, at 9.

112. Constitución Política de los Estados Unidos Mexicanos [C.P.] *as amended*, arts. 27–28, Diario Oficial de la Federación [DO], 5 de Febrero de 1917 (Mex.).

113. Ley Reglamentaria del Artículo 27 Constitucional en el Ramo del Petróleo [Petroleum Law of 1958], *as amended*, Diario Oficial de la Federación [DO], 29 de Noviembre de 1958 (Mex.).

branch.[114]

With origins in the Mexican Revolution, the Mexican Constitution acts as the foundation for restrictions on private activity in the energy industry.[115] Article 27 of the Mexican Constitution grants the Mexican state direct ownership over and exclusive rights to exploit and develop hydrocarbons.[116] As a result, concessions and rights to production in oil and other hydrocarbons in Mexico may not be granted to private interests.[117] Furthermore, article 28 classifies "petroleum and other hydrocarbons," "basic petrochemicals," and "electricity" as "strategic areas" and authorizes state monopoly over such areas.[118] The restrictions set in place by the Mexican Constitution set Mexico apart from the vast majority of jurisdictions that maintain state ownership of petroleum but allow private activity through regulated concessions and production sharing arrangements.[119]

B. The Expropriation of 1938 and the Origins of Pemex

Prior to the Mexican Revolution, during the reign of President Porfirio Díaz, foreign investment was a dominant force in Mexico's oil industry.[120] Under Díaz, laws were enacted

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114. *See, e.g.*, Reglamento de la Ley de Petróleos Mexicanos [Regulations to the Pemex Law], intro., arts. 34, 35, Diario Oficial de la Federación [DO], 4 de Septiembre de 2009 (Mex.); Disposiciones Administrativas de Contratación en Materia de Adquisiciones, Arrendamientos, Obras y Servicios de las Actividades Sustantivas de Carácter Productivo de Petróleos Mexicanos y Organismos Subsidiarios [Administrative Guidelines for the Contracting of Services, Leases, Works and Acquisitions of Pemex's Production Activities], *as amended*, Diario Oficial de la Federación [DO], 10 de Marzo de 2010 (Mex.).

115. *See* Constitución Política de los Estados Unidos Mexicanos [C.P.], *as amended*, art. 27, Diario Oficial de la Federación [DO], 5 de Febrero de 1917 (Mex.).

116. *Id.* ("In the case of petroleum, and solid, liquid, or gaseous hydrocarbons 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 law.") (Author's translation).

117. *Id.*

118. *Id.* art. 28.

119. MAYER-SERRA, *supra* note 41, at 9; TAVERNE, *supra* note 110, at 11.

120. *See* WENDELL GORDON, THE EXPROPRIATION OF FOREIGN-OWNED PROPERTY IN MEXICO 3–8 (1941) (discussing the Diaz government's development plan).

to encourage private investment and foreign ownership.[121] Private ownership of hydrocarbon resources was permitted in a civil law concept that resembled fee simple.[122] Even after Díaz was overthrown in 1911, the oil business in Mexico continued almost as it had before.[123] New policies were only loosely enforced and investment in the petroleum industry continued to grow following the Mexican Revolution.[124] Indeed, by 1921, Mexico produced a quarter of the world's oil and was the second-largest producer.[125]

But tensions between foreign-owned oil companies and the Mexican government gradually intensified following the adoption of the Mexican Constitution in 1917.[126] Legal controversy sparked by the implications of Article 27 intensified amid the Mexican government's efforts to exert more control over the oil industry.[127] New taxes, more onerous regulation of concession rights, and disputes with labor unions further divided the parties.[128] Mounting tensions culminated in an intervention by the Mexican government to force negotiations in a labor dispute between oil companies and government-controlled unions.[129] On March 18, 1938, without passing a resolution, President Lázaro Cárdenas finally expropriated foreign interests in the petroleum industry.[130] Shortly thereafter, the Mexican Congress formed Pemex by

121. Jonathan C. Brown, *The Structure of the Foreign-Owned Petroleum Industry in Mexico, 1880–1938*, *in* THE MEXICAN PETROLEUM INDUSTRY IN THE TWENTIETH CENTURY 1, 5 (Jonathan C. Brown & Alan Knight eds., 1992) ("Operating in Mexico was supposed to have been like operating in the United States.").

122. *Id.*; Smith & Dzienkowski, *supra* note 68, at 23.

123. Smith & Dzienkowski, *supra* note 68, at 27.

124. *Id.* at 27 n.95 (citing GUSTAVO ORTEGA, EARLY HISTORY AND DEVELOPMENT OF THE OIL INDUSTRY IN MEXICO 26–29, 40 (1927)).

125. *The Prospect For Future Energy Privatization in Mexico*, *supra* note 65, at 76.

126. *See generally* Alan Knight, *The Politics of the Expropriation*, *in* THE MEXICAN PETROLEUM INDUSTRY IN THE TWENTIETH CENTURY 90, 90–120 (discussing the events leading to the 1938 expropriation and an analysis of the forces at play).

127. Smith & Dzienkowski, *supra* note 68, at 28.

128. *The Prospect For Future Energy Privatization in Mexico*, *supra* note 65, at 76; Smith & Dzienkowski, *supra* note 68, at 28–29.

129. Knight, *supra* note 126, at 91.

130. *Id.* at 92.

decree.[131] From these events came the famous slogan "*El petróleo es nuestro*," or "The petroleum is ours."[132]

C. The Petroleum Law of 1958

Since the expropriation in 1938, lawmakers have broadly applied Article 27.[133] Piece by piece, Mexico has constructed a legal framework for a Pemex monopoly over almost every aspect of the Mexican energy industry.[134] The most significant turning point since expropriation came with the enactment of the Petroleum Law of 1958, which further restricted options available to Pemex for cooperation with the private sector.[135] After 1958, remuneration in service contracts with the private sector was limited by law to cash; compensation based on a percentage of participation or production was expressly disallowed.[136] These limitations ruled out even risk-service contracts, which were permissible under Mexican law prior to the Petroleum Law of 1958.[137]

For decades, Pemex has successfully operated and produced despite these limitations.[138] The fact that Pemex became one of the largest oil companies in the world—largely on its own—speaks to the technical capacity and ingenuity of the personnel at the state-owned company. However, that was

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131. *See* Decreto que Crea la Institución de Petróleos Mexicanos [Decree that Creates the Institution of Petróleos Mexicanos], art. 3, Diario Oficial de la Federación [DO], 20 de Julio de 1938 (Mex.).

132. *Special Report: Mexico*, *Monopoly Money*, ECONOMIST, Nov. 16, 2006, http://www.economist.com/node/8132001.

133. *See The Prospect For Future Energy Privatization in Mexico*, *supra* note 65, at 78 (noting that ambiguities in Article 27 have allowed lawmakers to construe the Mexican Constitution to permit the promulgation of statutes and regulations for the benefit of Pemex's monopoly).

134. *See id.* at 83–96 (providing a timeline of Mexican energy policy from 1884 to 2000).

135. Ley Reglamentaria del Artículo 27 Constitucional en el Ramo del Petróleo [Petroleum Law of 1958], *as amended*, arts. 3, 4, Diario Oficial de la Federación [DO], 29 de Noviembre de 1958 (Mex.).

136. *Id.* art. 6.

137. *The Prospect For Future Energy Privatization in Mexico*, *supra* note 65, at 85.

138. *See* EIA, *supra* note 22, at 1 (discussing Mexico's status as one of the world's largest oil producers).

before the collapse of Cantarell and the waning days of relatively "easy oil" in Mexico.[139] Now equipped with what are essentially fee-based service contracts, Pemex lacks the tools to attract the international partners needed for complex and costly projects such as deepwater development in the Gulf of Mexico.[140]

D. Pemex Since the 2008 Energy Reform

1. The 2008 Energy Reforms

Faced with major declines in oil production, President Felipe Calderón introduced the 2008 Energy Reforms aimed at reviving the energy sector and providing some measures of flexibility to Pemex.[141] For Pemex, the 2008 Energy Reforms offered greater autonomy in operations, budgeting, and contracting.[142] To address the production conundrum, Pemex was granted its own procurement framework (the Bidding Framework) to carry out bidding rounds—through the Pemex exploration and production subsidiary, Pemex Exploración y Producción (PEP)—to solicit services from the private sector for certain exploration and production activities.[143] Important corporate governance,[144] environmental,[145] and regulatory reforms,[146] were also

139. Bogan, *supra* note 33.

140. *See* Parker, *supra* note 82 (noting that Pemex is unable to invest sufficiently in deepwater exploration due in large part to the restrictions on production-sharing agreements and private investment).

141. EIA, *supra* note 22, at 3.

142. Robert Campbell, *Mexico Oil Reform Overly Complicated for Pemex-CEO*, REUTERS (May 12, 2010), http://www.reuters.com/article/2010/05/12/mexico-oil-pemex-idUSN1221739820100512.

143. *See* Ley de Petróleos Mexicanos [Pemex Law], arts. 51–52, Diario Oficial de la Federación [DO], 28 de Noviembre de 2008, arts. 51–52 (Mex.); Lourdes Melgar, *The Future of Pemex: Will Mexico's Incoming Administration Finally End the Iconic State Oil Monopoly?*, AMERICAS Q., Summer 2012, *available at* http://www.americasquarterly.org/node/3781.

144. Corporate governance adjustments included the creation of four independent, professional positions on the board of directors of Pemex. *See* Ley de Petróleos Mexicanos [Pemex Law], art. 8, Diario Oficial de la Federación [DO], 28 de Noviembre de 2008 (Mex.).

145. *See* Ley para el Aprovechamiento de Energías Renovables y el Financiamiento de la Transición Energética [Renewable Energy and Energy Transition Financing Law], Diario Oficial de la Federación [DO], 6 de Junio de 2011 (Mex.); Ley para el

implemented in the 2008 Energy Reforms.

Although the 2008 Energy Reforms included important adjustments to the energy regulatory landscape and internal changes at Pemex, the legislation did not constitute a meaningful liberalization of the petroleum industry.[147] The 2008 Energy Reforms were beset by political backlash and legal controversy throughout the legislative process, which delayed implementation.[148] A legal battle culminated in a Supreme Court decision confirming the constitutionality of the legislation.[149] As illustrated by a sit-in by opposition lawmakers and large protests outside the congressional buildings during key votes, the oil industry remains a politically sensitive subject.[150] Consequently, the substance of the 2008 Energy Reforms was muted relative to the original intentions of Calderón.[151]

Even after the 2008 Energy Reforms, Mexican law prevents Pemex from offering potential partners interests in production that entail upside potential and enable the booking of reserves.[152] Top international energy companies are generally unwilling to assume huge risks without adequate upside

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Aprovechamiento Sustentable de la Energía [Law on Sustainable Energy Use], Diario Oficial de la Federación [DO], 28 de Noviembre de 2008 (Mex.).

146. The CNH (Comisión Nacional de Hidrocarburos) was created to oversee Pemex and the petroleum industry. Ley de la Comisión Nacional de Hidrocarburos [National Hydrocarbons Commission Law], art. 2, Diario Oficial de la Federación [DO], 28 de Noviembre de 2008 (Mex.).

147. Samples & Vittor, *supra* note 18, at 227; Urdaneta, *supra* note 18, at 356–58.

148. Sanati, *supra* note 63 (reporting on legal battle surrounding the constitutionality of the 2008 Energy Reforms).

149. *Id.*

150. *Oil Sit-In Pushes Out Mexican MPs*, BBC (Apr. 16, 2008, 11:47 AM), http://news.bbc.co.uk/2/hi/americas/7350026.stm.

151. *See* Ioan Grillo, *Opening Up Mexico's Oil to Foreigners: A First Step*, TIME (Oct. 31, 2008), http://www.time.com/time/world/article/0,8599,1855621,00.html (describing opposition to the 2008 Energy Reforms and citing an expert opinion that the reforms did not adequately address the problems behind declining production); *see also* Mary Anastasia O'Grady, *Mexico Talks Monopoly Reform*, WALL ST. J. (Nov. 28, 2011), http://online.wsj.com/article/SB10001424052970204452104577060772222754302.html.

152. Ley de Petróleos Mexicanos [Pemex Law], art. 60, Diario Oficial de la Federación [DO], 28 de Noviembre de 2008 (Mex.).

rewards.[153] By limiting international partnerships, the existing legal framework renders the task of adapting Pemex to Mexico's current operating environment even more difficult. However, an unprecedented level of consensus is building on the question of whether or not Pemex needs partnerships or participation from the private sector in order to reverse declines.[154] Though still highly controversial, a taboo has finally been broken.[155]

2. *The PEP Model Contract*

In November 2010, the board of directors of Pemex approved the first model integrated services contract for use by PEP (the PEP Model Contract) in the bidding rounds to procure exploration and production services from the private sector.[156] Since then, the PEP Model Contract has evolved substantially.[157] Pemex has leveraged industry feedback and experience from the bidding rounds to implement significant improvements to the document.[158] Most recently, Pemex adjusted the Chicontepec version of the PEP Model Contract to accommodate the third bidding round by assuming more risk than mature fields had assumed in previous rounds.[159]

At its core, the PEP Model Contract is a service contract with certain performance bonuses for exceeding production

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153. *See, e.g.*, Sanati, *supra* note 63 (discussing uncertainty about returns on investment as a reason major oil companies will decline to drill in Mexico).

154. *See* Rodriguez & Caraveo, *supra* note 15.

155. *Id.* (quoting Hector Moreira, a member of the Pemex board of directors).

156. Santiago Sepulveda & Vanessa Gimenez, *Mexico: Contracts and Black Gold*, INT'L FIN. L. REV. (June 1, 2011), http://www.iflr.com/Article/2855511/Mexico-Contracts-and-black-gold.html.

157. For an analysis of the key differences between the model service contracts used in the first and second PEP bidding rounds, see Samples & Vittor, *supra* note 18, at 227–35.

158. *Id.* at 228, 236.

159. *Modelo de Contrato de Servicios para la Exploración, Desarrollo y Producción de Hidrocarburos* [Model Contract for the Evaluation, Development, and Production of Hydrocarbons], PEMEX (2012), *available at* http://contratos.pemex.com/chicontepec/Paginas/modelo.aspx (noting that PEP will be required to restore or compensate affected parties for any consequences that arose in the Contract Area before the effective date of the contract and will also be required to compensate contractors for drilling any additional wells on already developed or developing fields).

targets.[160] However, since Mexican law prevents contractors from booking reserves and taking any interest in production, the PEP Model Contract offers limited upsides for contractors.[161] In that sense, "the PEP Model Contract was handcuffed with certain unattractive terms before it was ever drafted."[162]

3. The PEP Bidding Rounds

Pemex completed two bidding rounds under the Bidding Framework.[163] Opening with the publication of an inaugural call for bids in March 2011, the first round involved service contracts for three blocks of mature fields in the southern region of Mexico: Santuario, Magallanes, and Carrizo.[164] Winning bids for the Santuario and Magallanes contracts belonged to Petrofac Facilities Management Limited (Petrofac).[165] The Carrizo contract initially went to Administradora en Proyectos de Campos, S.A. de C.V. (APC), but APC was unable to provide required financial security and was replaced by the next lowest bidder, Schlumberger Limited.[166]

The second round included twenty-two fields grouped into six blocks in the northern region of Mexico: Altamira, Pánuco, San Andres, Tierra Blanca, Arenque, and Atún.[167] Interestingly, two of the blocks—Arenque and Atún—were offshore.[168] The

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160. Ley de Petróleos Mexicanos [Pemex Law], art. 61, Diario Oficial de la Federación [DO], 28 de Noviembre de 2008 (Mex.).

161. *Id.* art. 60; *see also* Rodriguez & Caraveo, *supra* note 15.

162. Samples & Vittor, *supra* note 18, at 228–29.

163. Joe Rowley, *Pemex's Second Bidding Round Sees Mixed Results*, LATIN LAW. (June 21, 2012), http://www.latinlawyer.com/news/article/43614/pemexs-second-bidding-round-sees-mixed-results.

164. *See* David Biller, *Pemex Launches Tender for Three E&P Contracts with Incentives*, BUS. NEWS AMERICAS (Mar. 2, 2011), http://www.bnamericas.com/news/oilandgas/pemex-launches-tender-for-three-e-p-contracts-with-incentives.

165. *Projects: Americas, Mexico Production Enhancement Projects*, PETROFAC, http://www.petrofac.com/index.asp?pageid=366 (last visited Feb. 23, 2013).

166. *See* Carlos Manuel Rodriguez, *Schlumberger Wins Field-Production Contract from Pemex*, BLOOMBERG (Oct. 19, 2011, 5:01 PM), http://www.bloomberg.com/news/2011-10-19/schlumberger-gets-carrizo-field-production-contract-from-pemex.html.

167. Noe Torres, *Mexico Awards 2nd Round of Mature Oil Field Contracts*, REUTERS (June 19, 2012, 4:41 PM), http://www.reuters.com/article/2012/06/19/mexico-oil-panuco-idUSL1E8HJ8LC20120619.

168. *Id.*

second round also generated greater interest and participation by major international oil companies, including Repsol and Chevron.[169] In a sign that the Bidding Framework might not be ready for offshore projects, contracts were not initially awarded for the offshore areas,[170] though the Arenque contract was awarded subsequently to Petrofac.[171]

In generally targeting mature fields, the broad purpose of the first and second rounds was to slow declines in marginal fields.[172] The first rounds were successful in making progress towards that goal, which is an important component of Mexico's overall strategy to slow declines, especially in the short- to medium-term.[173] These rounds were widely viewed as a preamble to future rounds involving more complex areas, such as Chicontepec and deepwater fields that Mexico needs to develop in order to boost long-term production.[174] Currently underway, the third bidding round includes Chicontepec fields.[175]

Despite some successes in early bidding rounds, the constraints of Mexican law remain.[176] Competitive bids were not

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169. Rowley, *supra* note 163.

170. *Id.*; Torres, *supra* note 167.

171. *See* David Alire Garcia, *Petrofac wins Mexico Pemex Offshore Arenque Contract*, REUTERS (Aug. 30, 2012, 11:56 AM), http://uk.reuters.com/article/2012/08/30/uk-mexico-oil-petrofac-idUKBRE87T1M420120830.

172. *See* Interview by Business Year with Juan José Suárez Coppel, Director-General, Pemex, *available at* http://www.thebusinessyear.com/publication/article/12/913/mexico-2012/going-deep (discussing Pemex's efforts to reactivate mature fields with the goal of increasing oil production).

173. *Id.*; *see also* JAFFE & WHITEHEAD, *supra* note 30, at 3–4 ("For the short to medium term, the most crucial determinant of Mexico's energy prospects will be whether . . . mature resources can be effectively managed . . . .").

174. *See* Carlos Manuel Rodriguez, *Pemex Seeks Foreign Partners to Develop Offshore Oil Fields for the First Time*, BLOOMBERG (Aug. 20, 2010, 4:39 PM), http://www.bloomberg.com/news/2010-08-20/pemex-seeks-foreign-producers-to-develop-offshore-fields-for-first-time.html (suggesting that the initial rounds are a "prelude to more attractive deepwater contracts"); JAFFE & WHITEHEAD, *supra* note 30, at 4 (noting Mexico's long term options include the Chicontepec Basin as an "important target").

175. *See* Carlos Manuel Rodriguez, *Pemex to Award Third Round of Operational Contracts in July*, BLOOMBERG (Oct. 22, 2012, 4:10 PM), http://www.bloomberg.com/news/2012-10-22/pemex-to-award-third-round-of-operational-contracts-in-july.html.

176. For a more detailed review of successes and practical challenges involved in

submitted by majors and leading independent oil companies during the first two rounds.[177] For the type of projects offered in the first two rounds, the absence of major energy companies has not been a problem.[178] However, partnerships with oil majors and large independents would greatly benefit high-risk, capital-intensive projects such as deepwater development in the Gulf of Mexico.[179] Though Pemex has shown willingness to assume greater risks to attract investors for more complex projects—as observed in the versions of the PEP Model Contract for the third round—the current service contract system is likely insufficient for more challenging and expensive projects, such as deepwater and ultra-deepwater development.[180]

IV. THE FUTURE: CURRENT OUTLOOK FOR ENERGY REFORM

A. *The Elections of 2012*

On July 1, 2012, elections were held at the federal level (both presidential and congressional), and in fourteen of Mexico's thirty-one states.[181] The 2012 election marked a return to power for the Institutional Revolutionary Party (the PRI) after twelve years of rule by the conservative National Action Party (the PAN).[182] Before that, the PRI ran Mexico without interruption from 1929 to 2000.[183] Enrique Peña Nieto—the PRI candidate who was favored throughout the race—won the presidency with 38.2% of the vote, followed by Andrés Manuel López Obrador with 31.6% for the Democratic Revolution Party (the PRD) and Josefina Vázquez Mota with 25.4% for the PAN.[184] Though no other candidate posed a legitimate threat to

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the initial bidding rounds, see Samples & Vittor, *supra* note 18, at 236–37.

177. Rowley, *supra* note 163.

178. *See* Torres, *supra* note 167 (showing that awarding contracts helps reach Mexico's goal to increase crude output, and the major oil companies are interested in more lucrative contracts than what were awarded).

179. Bogan, *supra* note 33.

180. *See* Rowley, *supra* note 163.

181. *See* CLARE RIBANDO SEELKE, CONG. RESEARCH SERV., R42548, MEXICO'S 2012 ELECTIONS 9 (2012), *available at* http://www.fas.org/sgp/crs/row/R42548.pdf.

182. *Id.* at 1.

183. *Id.* at 3.

184. *Id.* at 9–10.

Peña Nieto, a surge by López Obrador towards the end of the campaign cut into the margin that Peña Nieto enjoyed for most of the race.[185] More importantly, because the PRI was denied a majority in Congress, the outcome of legislative initiatives will depend on alliances and concessions.[186] Nonetheless, some of Peña Nieto's most important battles in realizing energy reform exist within his own party, the PRI.[187]

1. *Return of the PRI*

In addition to retaking the presidency, the PRI also gained pluralities in the two chambers of Congress, the Senate and the Chamber of Deputies.[188] All 128 seats in the Senate and all 500 seats in the Chamber of Deputies were up for grabs in this election.[189] In the Chamber of Deputies, the PRI controls 207 seats (41.4%), the PAN controls 114 (22.8%), and the PRD controls 100 (20%).[190] In the Senate, the landscape is similar, with the PRI holding fifty-two seats (40.6%), the PAN holding thirty-eight (29.6%), and the PRD holding twenty-two (17.1%).[191]

Though the PRI holds governorships in twenty-one of Mexico's thirty-one states, without a simple majority in either house of Congress, the PRI will have to rely on political alliances to achieve major reforms.[192] As the *Economist* put it, "Mexico has voted the PRI back to office, but not necessarily to power."[193]

185. López Obrador came within 6.6 percentage points of Peña Nieto, which was less than half of the predicted margin. *See Mexico's Election: The PRI's Qualified Comeback*, ECONOMIST, July 7, 2012 [hereinafter *Mexico's Election*], http://www.economist.com/node/21558285.

186. *Id.*

187. *The PRI's Long Tail*, ECONOMIST (May 11, 2013), http://www.economist.com/news/americas/21577401-battle-brewing-between-enrique-pe-nieto-and-dinosaurs-his-party-pris-long.

188. *See* SEELKE, *supra* note 181, at 1.

189. *Id.* at 11.

190. *Id.* at 12.

191. *Id.*

192. *Mexico's Election*, *supra* note 185.

193. *Id.*

2. *Is "the Taboo" Finally Broken?*

On the topic of energy reform, the presidential election of 2012 was a radical departure from other elections in Mexico's modern history.[194] Energy reform was a top issue in the presidential race, with two of the top three candidates, Peña Nieto and Vázquez Mota, campaigning openly in favor of liberalizing the energy sector.[195] Just years ago, a presidential race featuring private participation in the energy sector as a principal campaign issue—on the platform of two of the top three candidates, no less—was simply unimaginable.[196]

The politics of Pemex and the ownership of Mexico's oil invoke deeply embedded sentiments in Mexico.[197] Even the moderate 2008 Energy Reforms provoked considerable political backlash.[198] For most of Mexico's modern history, these topics have remained taboo.[199] Previously, staking out a position in favor of liberalizing the petroleum sector in a national election would have likely amounted to political suicide.[200] The shift in public discourse on the topic speaks to the urgency and importance of the current situation for the future of Mexico.[201] But campaigning on a platform of energy reform is one thing; getting a meaningful reform bill through Congress may be quite another.

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194. Rodriguez & Caraveo, *supra* note 15.

195. *See* Meghan O'Sullivan, *Mexican Oil Reforms are Vital on Both Sides of the Border*, BLOOMBERG (July 30, 2012, 5:33 PM), http://www.bloomberg.com/news/2012-07-30/mexican-oil-reforms-are-vital-on-both-sides-of-the-border.html.

196. *See* Rodriguez & Caraveo, *supra* note 15.

197. *See* Rosenberg, *supra* note 4 (quoting a high-level PRI official as holding the Mexican flag, the Virgin of Guadalupe, and Pemex at the same level of esteem).

198. *See* Grillo, *supra* note 151. The reforms allowing foreign subcontractors to explore and drill in limited areas of Mexico resulted in protestors rioting in the streets and attempting to invade the Senate floor. *Id.*

199. *See* Rodriguez & Caraveo, *supra* note 15.

200. *See* Vanessa Buendia, *Mexican Oil: Creating Investor Opportunities*, INFRASTRUCTURE J. (Nov. 18, 2011), http://www.ijonline.com/genv2/Secured/DisplayArticle.aspx?articleid=73796.

201. Martin & Rodriguez, *supra* note 14 (noting that popular opinion is turning in favor of changes at Pemex, in light of the possibility that other countries will be able to drill in oil deposits straddling international boundaries in the Gulf before Pemex develops deepwater drilling capabilities).

The Mexican electorate is more receptive than ever to the idea of liberal energy reform. A poll by Mexican research firm Gabinete de Comunicación Estratégica (GCE) in March 2012 measured public opinion on several key questions related to potential energy reform options.[202] Among the most interesting results were the relatively high rates of agreement that private participation should be allowed (a) generally, to compete with Pemex (fifty-nine percent), (b) to invest in areas where Pemex is currently losing money (fifty-two percent), and (c) in areas where Pemex is not interested in investing (fifty-seven percent).[203] While the GCE polls and the electorate's receptiveness to reform platforms indicate a major shift, nationalist sentiment remains strong when it comes to Pemex.[204] Opposition to the liberalization of the energy sector has been historically vehement and steadfast.[205]

3. The Peña Nieto Administration

As a candidate, Peña Nieto declared that reforming the energy sector would be the "signature issue" of his presidency.[206] Post-election, Peña Nieto wasted no time in lobbying for energy reform. On March 18, 2012—not coincidentally, the anniversary of the nationalization of Mexico's oil industry—he authored a blog post confirming his stance in favor of liberalizing the energy sector.[207] In that text, Peña Nieto argues that Pemex could overcome technical and capital deficiencies through stronger associations with the private sector.[208] More recently, Peña

202. *See* GABINETE DE COMUNICACIÓN ESTRATÉGICA, REPORTE PEMEX (2012).

203. *Id.*

204. *See* Tracy Wilkinson & Shan Li, *Mexico Edges Toward Letting Foreign Oil Firms Invest in Pemex*, L.A. TIMES (Mar. 4, 2013), http://articles.latimes.com/2013/mar/04/business/la-fi-mexico-oil-20130305.

205. *See* Grillo, *supra* note 151.

206. *See* Eric Martin & Carlos Manuel Rodriguez, *Pemex Reform Harder as PRI Misses Majority in Congress*, BUS. WK. (July 3, 2012), http://www.businessweek.com/news/2012-07-03/pemex-overhaul-harder-as-pri-misses-mexican-congress-majority [hereinafter *Pemex Reform Harder*].

207. *Más Asociación de Pemex con IP: Peña*, CNN EXPANSIÓN (Mar. 18, 2012, 9:20 PM), http://www.cnnexpansion.com/negocios/2012/03/18/mas-asociacion-de-pemex-con-ip-pena.

208. *Id.*

Nieto published a column in the *Economist*'s "World in 2013" issue, in which he elaborated on his broad goal of enabling Pemex to enter into partnerships with the private sector while maintaining state ownership of oil and gas.[209]

Just before swearing in for a six-year term as president, Peña Nieto appointed close aides to key cabinet positions, featuring a blend of young technocrats and members of the old guard of the PRI.[210] Pedro Joaquín Coldwell left his post as president of the PRI to become secretary of energy in the Peña Nieto administration.[211] A veteran PRI politician, Coldwell will be instrumental to Peña Nieto's ambitious energy reform agenda.[212] Peña Nieto appointed Emilio Lozoya Austín, a young member of the PRI with a background in finance, as the head of Pemex.[213] Since appointing his cabinet, Peña Nieto has turned his focus to coalition building and uniting the PRI behind his energy reform proposals.[214]

4. *The PRI as an Energy Reform Party*

In many ways, it is ironic that a PRI presidency could lead a reform of Pemex.[215] After all, it was the PRI that oversaw the nationalization of Mexico's oil industry and the creation of

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209. *The World In 2013: Mexico's Moment*, ECONOMIST, Nov. 21, 2012, http://www.economist.com/news/21566314-enrique-pe%C3%B1a-nieto-mexicos-newly-elected-president-sets-out-his-priorities-mexicos-moment.

210. *See* Dave Graham, *Mexico's Peña Nieto Picks Close Aides for Top Cabinet Jobs*, REUTERS (Nov. 30, 2012, 8:57 PM), http://www.reuters.com/article/2012/12/01/us-mexico-penanieto-cabinet-idUSBRE8AT1C420121201; *Americas View: Out with the Old, In with the… Old*, ECONOMIST (Dec. 1, 2012), http://www.economist.com/blogs/americasview/2012/12/mexicos-new-cabinet [hereinafter *Americas View*].

211. *Americas View*, *supra* note 210.

212. *Id.*

213. *See* Miguel Angel Vargas, *Emilio Lozoya Austin, el Joven Economista que Dirigirá Pemex*, ADNPOLÍTICO.COM (Nov. 30, 2012), http://www.adnpolitico.com/gobierno/2012/11/30/emilio-lozoya-austin-sera-el-proximo-director-de-pemex.

214. Nacha Cattan & Eric Martin, *Pena Nieto Pushes Mexico's Ruling Party to End Pemex Monopoly*, BLOOMBERG, Mar. 1, 2013, http://www.bloomberg.com/news/2013-03-01/pena-nieto-pushes-mexico-s-ruling-party-to-end-pemex-monopoly.html.

215. *See* Helman, *supra* note 14 ("It strikes many as bizarre that a president from the PRI party would be the one to propose ending the sacrosanct state oil monopoly."); *see also* Rosenberg, *supra* note 4 (reporting that Peña Nieto's energy reform agenda is part of his vision to revamp the PRI's traditional image).

Pemex in 1938.[216] During the decades that followed, the PRI consolidated restrictions on private activity in the energy sector.[217] And the PRI has historically resisted liberalization of Pemex and the petroleum industry.[218] On the other hand, the PRI might be the party most capable of achieving a meaningful reform of the energy sector.[219] Peña Nieto himself suggested that his energy reform could be a "Nixon goes to China" moment for the PRI.[220] Relations are strong between the PRI and the Pemex Union, which is a considerable force in Mexican politics.[221] The head of the Pemex Union is also a PRI senator.[222] In addition to broad political clout, the Pemex Union is also a remarkably strong force in the governance of the company, with five out of fifteen seats on the Pemex board of directors.[223]

B. *Potential Models for Reform in Mexico*

1. *The Brazilian and Colombian Models*

Mexico does not have to look far for potential reform models. Within the last two decades, Brazil and Colombia have both increased petroleum production with reforms that expanded the

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216. *See* Rosenberg, *supra* note 4.

217. *See The Prospect For Further Energy Privatization in Mexico*, *supra* note 65, at 83–96 (providing a timeline of Mexican energy policy from 1884 to 2000).

218. O'Grady, *supra* note 151.

219. *See id.* (quoting Peña Nieto's assertion that the PRI is the party best positioned to reform the energy sector).

220. *Id.*

221. *See* Rosenberg, *supra* note 4 (highlighting the Union's bylaws, which pledge allegiance to the PRI, its success in blocking more requests for access to its accounts than any other institution, and the $141 million paid to it by Pemex in a thirty-one month period for expenses such as worker dues and a May Day parade).

222. *See* Karol García, *Así Votaron los Petroleros*, EL ECONOMISTA (Oct. 21, 2012, 4:42 PM), http://eleconomista.com.mx/sociedad/2012/10/20/romero-deschamps-frente-sindicato-petrolero-hasta-2018.

223. *See* Alejandro López-Velarde, *The New Foreign Participation Rules in Each Sector of the Mexican Oil and Gas Industry: Are the Modifications Enough for Foreign Capitals?*, 3 J. WORLD ENERGY L. & BUS. 71, 76 (2010) ("One thing is true: no place in the world considers having and reserving 5 places out of 11 or today 15 for Union representation in the most important company of a country.").

role of private participation in the energy industry.[224] As hybrid public-private national oil companies, Petrobras and Ecopetrol also embody potential corporate models for Pemex.[225] Neither Brazil nor Colombia ceded control of its national oil company or the energy industry through reforms.[226] Rather, in both cases, the governments retain controlling majority ownership of the companies and exercise oversight of the industry through independent regulatory agencies—all while successfully attracting foreign investment through participation arrangements standard to the international petroleum industry.[227]

Brazil reformed its energy laws in response to massive offshore Pre-Salt discoveries, whereas Mexico has turned to reform in response to declining production.[228] Despite many differences, Pemex and Petrobras share an analogous national significance within their respective political systems. Brazil's path to energy reform required a constitutional amendment, a major legislative reform package, and was complicated by political sensitivities surrounding Petrobras and the oil industry.[229] Another interesting aspect of the Brazilian solution

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224. *See Country Analysis Briefs: Columbia*, U.S. ENERGY INFO. ADMIN., 1, 2 (2012), http://www.eia.gov/EMEU/cabs/Colombia/pdf.pdf [hereinafter EIA: Columbia]; *see also* Peter Millard, *Petrobras Lures Private Equity to Deep Waters*, BLOOMBERG (Aug. 27, 2012, 1:11 PM), http://www.bloomberg.com/news/2012-08-27/petrobras-lures-private-equity-to-deep-waters-corporate-brazil.html (quoting Petrobras as saying that private investment is "very positive" for the company).

225. *See* Steven Brown, *New Mexican Leader Woos German Investors on Pemex*, REUTERS (Oct. 12, 2012, 10:23 AM), http://www.reuters.com/article/2012/10/12/mexico-germany-energy-idUSL5E8LCJ2P20121012 (reporting where Nieto cited Petrobras and Ecopetrol as state oil companies that had boosted their capacity to invest and improve production by teaming up with the private sector).

226. *Country Analysis Briefs: Brazil*, U.S. ENERGY INFO. ADMIN. 2 (2012), http://www.eia.gov/EMEU/cabs/Brazil/pdf.pdf [hereinafter EIA: Brazil]; EIA: Columbia, *supra* note 224, at 2.

227. EIA: Brazil, *supra* note 226, at 3; EIA: Columbia, *supra* note 224, at 2.

228. Because of the distinct size and low exploration risks of the Pre-Salt areas, Brazil designed its production sharing regime specifically for these areas. Bryan W. Blades, *Production, Politics, and Pre-Salt: Transitioning to a PSC Regime*, 7 TEX. J. OF OIL, GAS, & ENERGY L. 31, 32–33 (2012).

229. *See* Alexei Barrionuevo, *Brazil Seeks More Control of Oil Beneath its Seas*, N.Y. TIMES, Aug. 17, 2009, at A1, *available at* http://www.nytimes.com/2009/08/18/world/americas/18brazil.html?pagewanted=all (discussing the political opposition to reform);

was the creation of parallel systems due to the geological uniqueness of the Pre-Salt discoveries.[230] The Brazilian approach left an existing concessions system in place while forming a new production-sharing model for certain "strategic areas," including the Pre-Salt areas.[231]

Similar to Mexico, Colombia reformed its energy sector in response to decreasing investment alongside declining oil production and reserves.[232] Colombia took measures to create an attractive investment climate, lifting restrictions on exploration and production, and providing a flexible operating environment with low taxes and royalties.[233] Colombia does not have the massive reserves of countries like Brazil or Venezuela, but has managed its potential effectively, growing the energy sector and creating value for national interests.[234] After significant reforms in 2003, Colombia's crude output doubled between 2005 and 2011.[235]

In addition to broad energy reforms, Colombia restructured and modernized Ecopetrol, granting the company greater political and fiscal independence.[236] At the same time, Colombia created a more competitive domestic market, lifting requirements that foreign companies had to partner with Ecopetrol in order to operate in Colombia.[237] Ecopetrol has

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George Hawrylyshyn, *Privitization of Brazilian Oil Sector Opportunity for Foreign Participants*, OFFSHORE MAG., 1996, *available at* http://www.offshore-mag.com/articles/print/volume-56/issue-9/news/general-interest/privitization-of-brazilian-oil-sector-opportunity-for-foreign-participants.html (discussing the constitutional amendment ending the forty-three-year old Petrobras monopoly).

230. Blades, *supra* note 228, at 38.

231. *Id.* at 38–41.

232. SILVANA TORDO ET AL., WORLD BANK, NATIONAL OIL COMPANIES AND VALUE CREATION 6 (2011), *available at* http://siteresources.worldbank.org/INTOGMC/Resources/336099-1300396479288/NOC_Vol_II.pdf.

233. *See generally id.* at 4–12 (discussing the governance and regulatory reforms made by Columbia, including the partial privatization of Ecopetrol, which have "largely succeeded in revitalizing its hydrocarbon sector").

234. *Id.* at 9–11.

235. Between 2005 and 2011, the output of crude oil in Colombia increased from 525,000 to 914,000 billion bpd. *Gushers and Guns*, ECONOMIST, Mar. 17, 2012, http://www.economist.com/node/21550304.

236. *See* TORDO ET AL., *supra* note 232, at 5–8.

237. *See id.* at 10 (noting that reforms lifting the requirement that private

thrived since the reforms, taking its place as one of the leading energy companies in Latin America.[238]

2. *Equity Approaches and Legal Structure*

As a means to raise capital, the possibility of offering shares of Pemex in capital markets through public listing has been considered.[239] Both Petrobras and Ecopetrol have employed this strategy.[240] With staged offerings, Ecopetrol sold shares to workers, retirees, pension funds, and Colombian citizens before making equity available to foreign investors.[241] However, the privatization of Pemex equity remains highly unlikely at this stage.[242] The 2008 Energy Reforms authorized Pemex to issue so-called "citizen bonds" to allow domestic fundraising through noncontrolling securities.[243] Thus far, however, the citizen bond mechanism has not taken off.[244] Furthermore, as explained in earlier sections of this article, additional capital is not the panacea for the Pemex production conundrum. Mexico is not

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companies associate with Ecopetrol have resulted in "positive effects on production and growth").

238. Andres Schipani, *Colombia's Ecopetrol: Aiming High*, FIN. TIMES (Dec. 7, 2012), http://blogs.ft.com/beyond-brics/2012/12/17/colombias-ecopetrol-aiming-high/#axzz2HcqAe7l9 ("In the past four years, Ecopetrol has boosted production by 16 per cent a year. It accounts for more than 60 per cent of Colombian oil production. Output has almost doubled from 400,000 boe/d in 2007.").

239. Juan Montes, *Mexico Front-Runner's Aide Seeks Pemex Listing*, WALL ST. J. (Apr. 3, 2012), http://online.wsj.com/article/ SB10001424052702303816504577322352531923644.html.

240. Ecopetrol held its initial public offering in Bogotá in 2007 and in New York a year later. Andres Schipani, *Ecopetrol: Peace and Growth*, FIN. TIMES (Oct. 31, 2012), http://blogs.ft.com/beyond-brics/2012/10/31/ecopetrol-peace-and-growth/#axzz2HAWclHli. Petrobas raised seventy billion dollars in its 2010 initial public offering, the largest share issue ever. Chris V. Nicholson, *Petrobras Raises $70 Billion in Share Issue*, N.Y. TIMES, Sept. 24, 2010, http://dealbook.nytimes.com/2010/09/24/petrobras-raises-70-billion-in-share-issue/.

241. Montes, *supra* note 239.

242. *See Mexico's New President Working Through a Reform Agenda*, ECONOMIST, Apr. 6, 2013, at 44, 45.

243. Ley de Petróleos Mexicanos [Pemex Law], art. 47, Diario Oficial de la Federación [DO], 28 de Noviembre de 2008 (Mex.).

244. David Biller, *Pemex's "Citizen Bonds" Appearing Less Likely to Ever Materialize*, BUS. NEWS AMERICAS (June 13, 2011, 1:30 PM), http://www.bnamericas. com/news/privatization/pemexs-citizen-bonds-appearing-less-likely-to-ever-materialize1.

lacking reform options that would open the energy sector to private investment—without the need to privatize Pemex.[245]

An often overlooked but intermediate step towards a more modern Pemex—short of a public offering—would be to restructure Pemex as a *sociedad anónima* (a limited liability corporation).[246] In this scenario, the Mexican government could remain the sole shareholder of Pemex while granting the company more operational and fiscal independence, allowing Pemex to act more like a corporation and less like an agency of government. As a *sociedad anónima*, Pemex could also be subject to standard independent auditing and best practices in accountability and transparency.[247] Ideally, such an approach would see Pemex focus less on political ends and more on returning value to its equity-holders—the Mexican government and ultimately the Mexican people. If the government intends someday to issue Pemex equity in public markets, many of these steps are inevitable, and the *sociedad anónima* structure could offer benefits as an incremental stage and even as an end in itself.

3. Energy Reform and the Mexican Constitution

Amending the Mexican Constitution requires a two-thirds vote in Congress and ratification by a majority of Mexico's thirty-one state legislatures.[248] Despite having roughly similar procedural requirements, Mexico has amended its constitution far more often than the United States.[249] Since its adoption in

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245. *See Mexico's New President*, *supra* note 242, at 45.

246. *See* Rodriguez & Caraveo, *supra* note 15 (speculating on organizational models). The largest national oil companies in Latin America are formed with the *sociedad anónima* corporate structure, including Petrobas, Ecopetrol, Yacimientos Petrolíferos Fiscales (commonly known as YPF of Argentina), and Petróleos de Venezuela S.A. (PDVSA), to name a few.

247. *See Incorporation of a Mexican Company*, MEXCONNECT, http://www.mexconnect.com/articles/12-incorporation-of-a-mexican-company (last visited Feb. 1, 2013) (discussing the corporate form's requirement that the entity appoint a disinterested third party examiner to supervise operations).

248. Constitución Política de los Estados Unidos Mexicanos [C.P.], *as amended*, art. 135, Diario Oficial de la Federación [DO], 5 de Febrero de 1917 (Mex.).

249. Allan Wall, *Comparing and Contrasting the U.S. and Mexican Constitutions*, BANDERASNEWS (Feb. 2008), http://www.banderasnews.com/0802/edat-constitutionday.

1917, the Mexican Constitution had been amended hundreds of times.[250] The primary reasons for this vast difference are Mexico's *presidencialismo*—the tradition of an authoritarian executive—and the long era of virtual political monopoly enjoyed by the PRI.[251] As a result of these factors, Congress and state legislatures traditionally have been cooperative with amendment projects.[252]

With the shift away from *presidencialismo* since 2000, reforming the Mexican Constitution is not as simple as it used to be.[253] During the era of uninterrupted PRI dominance in federal and state politics, the amendment process was little more than a formality.[254] After the election of Vicente Fox broke seven decades of the PRI's single-party rule, a new chapter in Mexico's constitutional history began.[255] Some constitutional reforms have occurred since then, but none as radical as a meaningful liberalization of the petroleum industry.[256]

C. *Outlook for Reform Under Peña Nieto*

While carefully stopping short of a proposal that Pemex adopt the Petrobras model outright, Peña Nieto has praised the Brazilian approach while charting a position in favor of liberalizing—but not privatizing—the Mexican oil industry.[257] On his first day in office Peña Nieto revealed the *Pacto por México* (Pact for Mexico), a list of nearly one hundred broad policy proposals signed by leaders of the three main political

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250. Stephen Zamora & José Ramón Cossío, *Mexican Constitutionalism After Presidencialismo*, 4 INT'L J. OF CONST. L. 411, 412 (2006).

251. *Id.* at 412.

252. *Id.* at 414–15.

253. *Id.* at 411–12, 416 (noting that *presidencialismo* allowed the president to act more as an authoritarian when applying the Mexican Constitution).

254. *Id.* at 413 ("By the second half of the twentieth century, the Mexican Congress had largely become a rubber stamp for presidential legislative initiatives, including constitutional reforms.").

255. *Id.* at 411–12.

256. *See* MAYER–SERRA, *supra* note 41, at 27, n.52 (noting that no amendment since 1999 has affected the core interests of the PRI).

257. *Pemex Reform Harder*, *supra* note 206.

parties.[258] On energy reform, the Pact for Mexico declares that hydrocarbons "will remain in the hands of the nation" and that the nation will receive all hydrocarbon production.[259] Though state ownership of hydrocarbons certainly does not prevent meaningful reform, the hydrocarbon production requirement could limit reform options, depending on interpretation. Accountability and transparency at Pemex are also justifiably identified as top reform priorities in the Pact for Mexico as well as by experts in Mexico.[260]

Because it reflects broad consensus viewpoints, the Pact for Mexico does not provide substantive policy objectives for a meaningful energy reform.[261] Indeed, broad political consensus on energy reform is in need of consolidation.[262] Though leaders of the PRI and PAN appear to be aligned on energy reform, the PRD remains strongly opposed.[263] On top of that, some members of the PRI's "old guard" remain opposed to a fundamental shake-up of the fiscal-energy status quo[264]. For the foreseeable future, incremental change is the likely outcome of a consensus approach on energy reform.

Significant reforms are possible with an alliance-majority approach. The PRI and the PAN could unite to form the majority required for significant energy reforms, including constitutional

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258. Enrique Peña Nieto et al., PACTO POR MÉXICO (2012), *available at* http://pactopormexico.org/PACTO-POR-MEXICO-25.pdf; *With a Little Help From My Friends*, ECONOMIST, Dec. 8, 2012, http://www.economist.com/news/americas/21567941-new-president-believes-he-has-broad-political-agreement-change-his-country [hereinafter *Help From My Friends*].

259. PACTO POR MÉXICO, *supra* note 258, at 54–55.

260. *See Pemex Reform Harder*, *supra* note 206; *cf*. Gene Bolton, *Evaluating Political Compromise: A "Pact for Mexico,"* COUNCIL ON HEMISPHERIC AFFAIRS (Dec. 19, 2012), http://www.coha.org/pact-for-mexico (supporting Nieto's reform priorities and evaluating the challenges Nieto faces in setting such goals).

261. *Help From My Friends*, *supra* note 258 (characterizing the terms of the Pact for Mexico as "loosely defined proposals").

262. Juan Casillas, *Mexico's Upcoming Energy Reform: Opportunities, Limitations, and Challenges,* JD SUPRA (Jan. 28, 2013), http://www.jdsupra.com/legalnews/mexicos-upcoming-energy-reform-opportu-74350/.

263. *The Debate Over Energy Reform in Mexico Heats Up*, UNIVERSIA KNOWLEDGE WHARTON, http://www.wharton.universia.net/index.cfm?fa=viewfeature&id=1504&language=english (last visited Feb. 23, 2013).

264. *The PRI's Long Tail*, *supra* note 187.

amendments, without support from the PRD. Ultimately, the direction will depend on politics, whether or not Peña Nieto has the votes in Congress and political capital required to pass meaningful reform legislation. That story will soon unfold. Energy reform is scheduled to be addressed in tandem with fiscal reform during the next semester of Mexico's 2013 legislative agenda.[265]

Thus far, Peña Nieto certainly appears committed to serious reform. During the first semester of the 2013 agenda, the Peña Nieto administration demonstrated willingness to confront difficult and politically sensitive reform projects.[266] The administration has already taken on telecommunication and television regulation, labor reform, and Mexico's powerful teachers' union.[267]

Mexico has certainly proven capable of adapting to reform and modernization in other areas. After digesting dramatic economic transformations following reforms in the 1980s and 1990s, and the North American Free Trade Agreement, Mexico has developed a manufacturing powerhouse, on the verge of overcoming China as the leading source of U.S. imports.[268] Mexico's growth has outpaced Brazil's in recent years and Mexico now graduates more engineers each year than Germany.[269] By the end of this decade, Mexico could become one of the world's ten largest economies.[270] If managed wisely, the energy industry could be a new frontier for stable growth with important benefits for the Mexican people. For now, it is up to lawmakers to decide what "*El petróleo es nuestro*" should mean in today's Mexico.

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265. *See Mexico's New President*, *supra* note 242, at 45.
266. *Id.*
267. *Id.* at 44.
268. *Start Your Engines*, *supra* note 55.
269. *Id.*
270. *Id.*