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Oil and Reform a la Mexicana

John Baker

OIL AND REFORM *A LA MEXICANA*

JOHN BAKER*

ABSTRACT

Mexico's recent Energy Reform sent a shock to upend its seventy-five-year-old petroleum monopoly, hoping to cure the ailing industry with injections of foreign investment. Mexico sought to undo a history of state control overnight, but present challenges show that history cannot be undone so easily. This Note addresses the practical significance of the Reform within the context of Mexico's tumultuous oil history. This context aids in defining the cause and contours of post-Reform challenges to measure future expectations accordingly. The Reform was a necessary step that required herculean efforts to effectuate; however, future growth will require sustained efforts. Long-term economic stability depends on Mexico's ability to minimize investor uncertainty and provide Pemex with the latitude to make strategic business decisions without the hindrance of political influence.

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I. INTRODUCTION

Mexico stands as a prime example of the ironic correlation between abundant resources with massive potential and economic instability. Over the past hundred years, Mexico has had a tumultuous relationship with oil, its chief source of revenue.[1] Early successes brought foreign investment but comparatively inequitable arrangements. Elevated conflict led to the 1938 expropriation of the petroleum industry from foreign investors.[2] The aftermath of the expropriation and subsequent poor decisions created enduring losses from which Mexico is still suffering.[3] In a bold move, President Nieto announced a radical liberalization of the industry.[4] The remaining question, of course, is whether the reforms will be enough to turn the page, especially in light of current economic conditions. Mexico projects significant future growth, but will the Reform[5] be enough to overcome Petróleos Mexicanos (Pemex)'s[6] institutional and historical challenges in the oil industry? The Reform aims to inject foreign investment to heal Mexico's ailing economy, but it might be too little too late. Pemex is struggling with record high debt and Mexico's first post-Reform bidding round failed to attract much interest.[7] Meanwhile, the global oil market remains depressed and recovery is uncertain. The Reform presents the opportunity to reverse declining production and diversify risk to achieve sustainable economic growth; however, successful implementation requires confronting historical challenges and adapting to survive amidst new ones.

This Note will analyze the significance of the Reform and future expectations of implementation. The first two Parts will provide context with a look into Mexico's history and the recent challenges that

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1. Clare Ribando Seelke et al., Cong. Research Serv., R43313, Mexico's Oil and Gas Sector: Background, Reform Efforts, and Implications for the United States 1, 18 (2015).

2. *See infra* Part II.

3. *See infra* Section III.A.

4. *See infra* Part IV.

5. For simplicity's sake, this Note will use "Reform" to refer collectively to President Nieto's energy reforms enacted in the Constitutional Reform and Secondary Legislation.

6. Petróleos Mexicanos is Mexico's state-owned oil and gas company.

7. *See infra* Part V.

precipitated reform efforts. Mexico's last oil revolution left open wounds, which multiplied the growing pains of implementation. Part II will analyze the social dynamics and inequities from which Pemex was born. Early oil agreements brought massive successes but kept wealth in the hands of foreigners. These inequalities aggravated the underlying social tensions that fueled the Mexican Revolution. The Mexican Revolution established a new regime, which attempted to extract greater benefits from the foreign oil companies for Mexico. These attempts were met with extreme resistance and tensions rose until the government enacted the first radical oil reform. The government expropriated the entire industry and established a complete monopoly under the newly formed Pemex.[8]

Pemex was given the enormous task of running the entire oil sector, top to bottom, despite its lack of expertise. Part III will examine how Pemex handled this massive task and the recent events, which created the urgent need for reform. In the aftermath of the 1938 expropriation, Mexico was forced into isolation so Pemex could not benefit from new technologies or the expertise of foreign oil companies.[9] Mexico relied heavily on Pemex to sustain the economy. Pemex was expected to run the entire industry with a crippling tax burden and in an extremely restrictive regulatory environment.[10] Pemex ran like a governmental ministry, and its politically appointed leadership failed to make strategic, long-term investments. Despite brief periods of success, these systemic problems have severely inhibited Pemex's growth. More recently, declining production and a weak market created an immediate need for change.[11]

The status quo was no longer an option. In response to these challenges, President Nieto enacted the Reform in hopes of lifting the Mexican economy. Part IV will examine, in greater detail, the content and structure of the recent Reform. The Reform puts a swift end to the state-run monopoly. The key takeaway from the Reform is its flexibility. The Reform allows for an adaptive approach to generate revenue. Attracting investors requires a balanced consideration of risk and reward. Part V will inquire into Mexico's implementation efforts in pursuit of attracting investors and improving Pemex. Mexico's earliest efforts to attract investors were marked by disappointment; however, recent bidding successes show that Mexico's newly minted regulatory agencies can adapt to the market effectively.[12] Pemex, however, is struggling to adapt. Current economic conditions

8. *See infra* Part II.
9. *See infra* Section III.A.
10. *See infra* Section III.A.
11. *See infra* Section III.B.
12. *See infra* Part V.

and lingering government control exacerbate Pemex's challenges. The stakes could not be much higher, and the short-term prognosis is bleak, but undue focus on short-term gains is what created the urgency for change in the first place. This Note urges for cautious optimism. The Reform takes on many problems that have historically hindered growth, but growing pains should be expected. The Reform gives Pemex and the Ministry of Energy significant flexibility to make strategic, long-term decisions, and escape the inevitable boom and bust associated with the old regime's politically motivated short-term approach. Despite short-term challenges, improvements and a refocused Pemex CEO show indications of future economic growth. Laws can be rewritten overnight, but rewriting history takes longer.

II. PAST TROUBLES

A la Mexicana simply means "the Mexican way." Mexico's history in the oil industry is as unique as it is controversial. Foreign investment sparked Mexico's meteoric rise to the global forefront of the industry, but Mexico hardly partook in the benefits.[13] Inequities aggravated underlying social tensions until revolution consumed the country. Post-revolution reform stripped foreign companies of their rights and placed full industry control in the hands of the state-run oil company, Pemex. Seventy-five years later, Pemex maintained its monopoly and stood as a symbol of Mexican nationalism and triumph.[14] Radical reform has returned to center stage of Mexican history. President Nieto recently broke the monopoly and implemented a host of liberalizing reforms to once again permit foreign oil industry investment within Mexican borders.[15] The "[e]nergy reform is the most important economic change in Mexico in the last 50 years."[16] The recent reforms, President Nieto's "signature issue,"[17] do more than nudge Mexico's petroleum industry towards greater liberalization; they represent a radical departure from the state-run monopoly, finally unlocking the door for competition and foreign investment. This Section

13. JONATHAN C. BROWN, OIL AND REVOLUTION IN MEXICO 225 (1993).

14. *Energy Reform is the Most Important Structural Change in Mexico in the Past Fifty Years: EPN*, MÉXICO: PRESIDENCIA DE LA REPÚBLICA (quoting President Nieto), http://en.presidencia.gob.mx/articles-press/energy-reform-is-the-most-important-structural-change-in-mexico-in-the-past-fifty-years-epn [https://perma.cc/LU43-2PCF] (last updated Mar. 19, 2014).

15. *Id.*

16. *Id.*

17. Carlos Manuel Rodriguez & Adriana Lopez Caraveo, *Mexico Oil Opening First Time Since 1938 Shows Revival: Energy*, BLOOMBERG (Apr. 26, 2012, 10:32 AM), http://www.bloomberg.com/news/articles/2012-04-25/mexico-oil-opening-first-time-since-1938-shows-revival-energy [https://perma.cc/JZ8J-MUH7].

will provide the necessary context to understand President Nieto's statement and the effect of his administration's reforms.

Despite abundant resources, Mexico has had a tumultuous history in the oil market since the discovery of oil at the turn of the twentieth century.[18] At the time, the Mining Laws of 1884 and 1892, enacted during the Porfirio Díaz regime, formed the legal basis of oil companies' ownership rights. The laws held that hydrocarbons were the exclusive property of the owner of the soil,[19] and that ownership shall be irrevocable and perpetual.[20] These expansive rights were essentially equivalent to fee simple ownership and were markedly stronger than those granted through the concessionary systems used in the Middle East.[21] The attractive terms prompted significant foreign investment from Britain and the United States propelling Mexico to center stage in the world market. However, Mexico's status as the world's second-largest oil producer[22] was short-lived.

Díaz brought massive foreign investment to fuel Mexico's rapid development, but his Darwinian approach to rule provoked political and social unrest, watering the seeds of revolution.[23] Díaz's predatory use of public domain laws enabled him to expropriate land from Mexican landowners and concentrate wealth among his supporters and foreign investors.[24] As economic conditions worsened, the foreign oil companies were increasingly perceived as leeches, exploiting Mexican resources and hoarding wealth while the populous suffered.[25] Díaz sought to maintain power by buying off would-be rivals[26] and ruth-

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18. SEELKE ET AL., *supra* note 1, at 2.

19. Código de Minería de 22 de Noviembre de 1884, tit. 1, art. 10, Diario Oficial de la Federación [DOF] 26-11-1884.

20. Ley Minera de 4 de Junio de 1892, tit. 1, arts. 3-5, Diario Oficial de la Federación [DOF] 4-6-1892.

21. Ernest E. Smith & John S. Dzienkowski, *A Fifty-Year Perspective on World Petroleum Arrangements*, 24 TEX. INT'L L.J. 13, 23-24, 27 (1989).

22. SEELKE ET AL., *supra* note 1, at 2.

23. The Díaz regime "engineered the conditions that would lead to the Revolution. . . . [And] opportunistically appropriated from Darwin's recently published theories, in ways that allowed the strong to prosper and the weak to serve." William D. Signet, *Grading a Revolution: 100 Years of Mexican Land Reform*, 16 L. & BUS REV. AM. 481, 493-94 (2010).

24. Public domain laws were used as a tool of oppression to rob Mexican landowners and place eighty-seven percent of private landownership in the hands of one-fifth of one percent of the population. *Id.* at 495.

25. Tomás Clayton, José Díaz-Guerro & José Garcia-Cervantes, *Foreign Investment in Mexico: Mexico Welcomes Foreign Investors*, 12 CHICANO-LATINO L. REV. 13, 13-14 (1992).

26. Charles Wilson Hackett, *The Mexican Revolution and the United States, 1910-1926*, *in* WORLD PEACE FOUNDATION PAMPHLET SERIES 339, 340 (1926).

lessly silencing his opposition,[27] but soon revolution became inevitable.

The Mexican Revolution ended the Díaz regime and sought to establish public order by centralizing power.[28] The government was broke from revolution, and the wealthy oil companies were the most logical targets. Mexico tried to move towards a concessionary system with new petroleum laws to extract greater wealth from the oil industry. Article 27 of the Constitution of 1917 and The Petroleum Law of 1925 vested natural resources ownership with the nation and created a concessionary system, which required oil companies to register their rights in recognition of these principles.[29] Oil companies resisted these changes and refused to pay rising taxes because of their prejudicial retroactive effect.[30] Resentment grew on both sides for decades as the Mexican economy lay prostrate and famine broke out as foreigners thrived.[31] Tensions came to a head in 1938. President Lázaro Cárdenas made the radical decision to oust the foreign oil companies and expropriate the entire petroleum sector.[32] Understandably angered at the outright seizure of long-enjoyed ownership rights, the oil companies boycotted Mexican oil triggering Mexico's rapid fall from grace.[33] After President Cárdenas' decree allocated the expropriated assets to Pemex as the only oil company in the country,[34] Pemex became and remains an iconic national symbol of triumph against foreign intervention.[35] Despite these successes, isolation from international markets and new technologies drove a steady economic decline for the next twenty years.[36]

While still suffering these repercussions long after expropriation, Mexico discovered Cantarell field, which was one of the largest discoveries in the world and remains Mexico's largest discovery in history.[37] Prices for oil more than doubled just as Mexico regained its sta-

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27. Díaz even went so far as to jail one of his rivals during the election. Signet, *supra* note 23, at 497.

28. BROWN, *supra* note 13, at 213.

29. *Id.* at 226.

30. Smith & Dzienkowski, *supra* note 21, at 29.

31. BROWN, *supra* note 13, at 213.

32. Smith & Dzienkowski, *supra* note 21, at 29-30.

33. Esperanza Durán, *Pemex: The Trajectory of a National Oil Policy*, *in* LATIN AMERICAN OIL COMPANIES AND THE POLITICS OF ENERGY 145, 171-72 (John D. Wirth ed., 1985).

34. *Historia de Petróleos Mexicanos*, PEMEX, http://www.pemex.com/en/about-pemex/history/Paginas/default.aspx [https://perma.cc/J3TP-ANJ5].

35. SEELKE ET AL., *supra* note 1, at 2.

36. Christopher C. Joyner, Petróleos Mexicanos *in a Developing Society: The Political Economy of Mexico's National Oil Industry,* 17 GEO. WASH. J. INT'L L. & ECON. 63, 67 (1982).

37. Tim R Samples, *A New Era for Energy in Mexico? The 2013-14 Energy Reform*, 50 TEX. INT'L L.J. 603, 612 (2016).

tus as a major oil producer.[38] Pemex reached the pinnacle of its oil and gas history ushering in a miracle era for Mexico with an exponentially rising GDP averaging 6.5 percent growth annually.[39] Massive profits led to massive growth as Mexico significantly expanded public spending and industrialized rapidly.[40] The gap between the standard of living in Mexico and the United States began to close. Pemex's success became a source of national pride because it was attained without the help or hindrance of foreign investment. The success story of Mexico garnered praise and was internationally hailed as the preeminent model of economic development.[41]

Just as the sun appeared to shine so brightly for Mexico, crashing oil prices focused the light on poor investment decisions and unsustainable financial imbalances. As prices plummeted, Mexico's brief flirtation with petroleum paradise came to a close; "[t]he miracle era passed . . . and growth never recovered."[42] Simply put, Mexico failed to plan for the long term. When oil prices were high, Mexico was able to leverage its assets to borrow funding for development, but rampant overspending led to budget deficits, amplifying the financial imbalances of debt-fueled growth. Massive debt, the focus on short-term production, and a glaring lack of adequate infrastructure investments left Pemex ill-prepared to succeed when the inherently volatile oil prices inevitably fell.[43] Many of these issues still inhibit Pemex's growth even after the monumental reform.

III. PRESENT CHALLENGES ADD URGENCY

Throughout its history, Pemex has been plagued by inefficiencies and underperformance due to poor investment decisions, insufficient infrastructure, exclusion from the world market, criminal activity, and crippling tax burdens.[44] Mexico's economy is closely tied to Pemex, which provides roughly one-third of total government revenues.[45] Since 1998, Pemex has operated at a loss.[46] Declining production and rising domestic consumption add urgency to the plea for change. This Section will give an overview of the challenges Pemex currently faces, some of which it has endured since its creation; oth-

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38. EDUARDO BOLIO ET AL., MCKINSEY GLOBAL INST., A TALE OF TWO MEXICOS: GROWTH AND PROSPERITY IN A TWO-SPEED ECONOMY 23 (2014).

39. *Id.* at 4.

40. *Id.*

41. *See* Samples, *supra* note 37, at 622.

42. BOLIO ET AL., *supra* note 38, at 4.

43. Samples, *supra* note 37, at 614-18.

44. SEELKE ET AL., *supra* note 1, at 2-3.

45. BOLIO ET AL., *supra* note 38, at 23; Samples, *supra* note 37, at 614.

46. SEELKE ET AL., *supra* note 1, at 2.

ers are more recent due to current global and regional economic conditions.

A. Old Problems That Refuse to Go Away

Pemex is often referred to as simultaneously existing as Mexico's "cash cow" and "sacred cow."[47] Cash cow refers to Pemex's crippling tax burden while sacred cow refers to its status as a symbol of nationalism and the corresponding restrictive legislative regime in which it exists.[48] These attributes conflict and have led to heavy losses despite an abundance of potential. Being a cash cow limits Pemex's ability to invest in its own future and this limitation is multiplied by legislative constraints on Pemex's ability to invest.

1. Death by Taxes

The first part of the cash cow/sacred cow irony is the crippling tax burden that bleeds Pemex dry. By comparison, Exxon Mobil is the only energy company with larger pre-tax profits; however, after taxes, Pemex's ranking drastically falls to 86th place.[49] Pemex has historically been subject to high taxes, but more recently the numbers have been astronomically high. Pemex's taxes far surpass the industry average of 35 percent among integrated oil producers.[50] In 2012, "[t]he oil producer paid 99.5 cents for every dollar of the $71 billion in pretax revenue."[51] Even with recent tax cuts, taxes are still overly burdensome. In 2013, Pemex lost $13 billion despite $126 billion in revenues.[52] Mexico is heavily dependent on these taxes, which amount to more than "total government spending on social programs, education, and public health and safety."[53] Notably, without these tax revenues, Mexico's 2013 deficit would have been closer to 9 percent of

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47. Tim R. Samples & José Luis Vittor, *The Past, Present, and Future of Energy in Mexico: Prospects for Reform Under the Peña Nieto Administration*, 35 HOUS. J. INT'L L. 697, 698 (2013); Samples, *supra* note 37, at 614.

48. Samples, *supra* note 37, at 614.

49. *Id.* at 615.

50. Carlos Manuel Rodriguez, *Death of 99% Pemex Tax Soothes Oil Monopoly Fate: Mexico Credit*, BLOOMBERG (Sept. 27, 2013, 1:23 PM), https://www.bloomberg.com/news/articles/2013-09-27/death-of-99-pemex-tax-soothes-oil-monopoly-fate-mexico-credit [https://perma.cc/EV6B-ML3F].

51. *Id.*

52. Samples, *supra* note 37, at 615.

53. Michael D. Plante & Jesus Cañas, *'Reforma Energética': Mexico Takes First Steps to Overhaul Oil Industry*, DALL. FED., https://www.dallasfed.org/assets/documents/research/swe/2014/swe1402g.pdf [https://perma.cc/5GBE-43KF].

GDP instead of 1.7 percent.[54] All major parties have agreed that this overt overdependence has inhibited growth and must change.[55]

2. *Too Big to Win*

The other side of Pemex's dual existence is its role as the sacred cow. Taxes prohibitively limit Pemex's working capital. As Mexico's sacred cow, legislation significantly constrains the use of the remaining revenue crumbs. Private companies often treat underperforming units like tree branches, cutting off dead branches for the overall health of the tree. Mexican legislation took away this option for Pemex: "As a virtual monopoly, Pemex was responsible for covering all of Mexico's hydrocarbon needs—upstream, midstream, and downstream—regardless of expertise or profitability."[56] This burden was made heavier through the Petroleum Law of 1958, which expressly prohibited Pemex from entering into standard risk-sharing horizontal agreements that based compensation on production levels.[57] Thus, Pemex was forced to fully shoulder the burden of risky ventures. Practically, this has led to massive losses and forestalling opportunities to develop infrastructure and learn from corporations with greater experience in a particular area. For example, Pemex does not have adequate refineries or transportation infrastructure so Mexico is forced to import half of its gasoline.[58] Likewise, even with all its reserves, limited pipeline capacity requires Mexico to import one-third of its natural gas and turn to expensive liquefied natural gas imports.[59] Strategic investments have been left by the wayside in favor of short-term production as "Pemex has essentially been run as a ministry of the government."[60] With greater outside foreign investment, Pemex could potentially solve these inadequacies and reduce needlessly expensive imports.

B. *New Problems*

The challenges Pemex faced were remarkable. Pemex managed to keep Mexico afloat for decades without international support despite massive tax burdens and a restrictive legal environment.[61] Unfortunately for Pemex, the problems did not end there. Domestic and glob-

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54. *Id.*

55. Rodriguez, *supra* note 50.

56. Samples, *supra* note 37, at 617.

57. Ley Reglamentaria del artículo 27 Constitucional en el Ramo del Petróleo, Diario Oficial de la Federación [DOF] 11-29-1958.

58. Samples, *supra* note 37, at 618.

59. *Id.* at 618.

60. *Id.* at 639.

61. *See* Samples, *supra* note 37, at 612-17.

al market concerns piled more on Pemex's ever-growing list of challenges. Domestically, rising energy consumption, declining production with elevated production costs, and an overall struggling economy created a significant hurdle for Pemex's future. Internationally, the oversaturation of the oil market and global oil crash created an immediate threat to Pemex's survival. Without reform, Pemex would have inevitably failed and the repercussions for Mexico would have been disastrous.

1. *Domestic Concerns*

Domestic concerns forced Mexico to face facts: the status quo was unacceptable. Without drastic reforms, Mexico's future was bleak. Production has been in rapid decline over the past decade. In 2005, production was 3.3 MMbbl/d (million barrels/day), but, by 2013, production fell to 2.5 MMbbl/d.[62] The Cantarell field, which brought Pemex to the peak of its history, is aging rapidly. In 2013, the Cantarell field accounted for only 17 percent of Mexico's production as compared with 63 percent in 2004.[63] In addition to the Cantarell field, approximately 80 percent of Mexico's oil fields are in advanced stages of production decline.[64] Increasing domestic consumption exacerbates the problem of declining production. Some studies have suggested that Mexico may become a net importer of oil within the next decade.[65] Mexico is already a net importer of petroleum products, importing just about everything except oil.[66] Mexico's economy is heavily dependent on oil revenues. The tax revenues from Pemex account for more than one-third of governmental revenues and 11 percent of Mexico's economy.[67] Replacing this critical revenue stream with a deficit would have disastrous effects on the Mexican economy. Pursuing deepwater resources could turn the tide on declining production, but Pemex simply does not have the resources or expertise to develop

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62. ENERGY INFO. ADMIN., U.S. DEP'T OF ENERGY, REPORT NO. DOE/EIA-0484, INTERNATIONAL ENERGY OUTLOOK 2014: WORLD PETROLEUM AND OTHER LIQUID FUELS 16 (2014), http://www.eia.gov/outlooks/ieo/pdf/0484(2014).pdf [https://perma.cc/AXT9-BNBB].

63. Samples, *supra* note 37, at 612.

64. SECRETARÍA DE ENERGÍA DE MÉXICO, ESTRATEGIA NACIONAL DE ENERGÍA 2013-2027 41 (2013).

65. KENNETH B. MEDLOCK III & RONALD SOLIGO, RICE U. JAMES A. BAKER III INST. FOR PUB. POL'Y, SCENARIOS FOR OIL SUPPLY, DEMAND AND NET EXPORTS FOR MEXICO 25 (2011).

66. Laurence Iliff, *Oil-Rich Mexico Becomes Net Importer of U.S. Petroleum Goods*, WALL ST. J. (May 14, 2014, 6:03 PM), http://www.wsj.com/articles/SB10001424052702304908304579562400748296622.

67. Juan Montes & Laurence Iliff, *Mexico Outlines New Oil Sector Policies for Private Firms*, WALL ST. J. (May 1, 2014, 9:46 AM), http://www.wsj.com/articles/SB10001424052702303948104579533790440136238.

deepwater and other unconventional resources.[68] Furthermore, rising production costs severely limit the viability of pursuing costly deepwater exploration to counterbalance declining production.[69] In light of these factors, reform became critical for Mexico's future.

2. *Global Market*

Foreign investment could bring the necessary resources and expertise to turn the tides on declining production, but attracting foreign investors is complicated by the current economic climate. Overproduction amidst waning demand created a global oil crash. Oil prices are known to go through boom and bust cycles,[70] but this price drop was different. The recent bust was more than a market response to fluctuating demand; it was the outgrowth of a fundamental shift in the supply-demand balance.[71] Oil is a volatile industry, and this volatility has had profound effects on Mexico's economy.[72] Although systemic problems sparked Mexico's growing need for reform, the global oil crisis dictated the timing.

New technologies disrupted the global oil market by unlocking vast United States tight oil resources that were previously unattainable.[73] Domestic oil companies flooded the market to develop the untapped resources and reduce reliance on imported oil.[74] As the United States sprinted towards energy independence, major world oil suppliers scrambled to compete for new buyers in an increasingly saturated market.[75] The United States, however, was not the only country reducing oil imports. Rising domestic production brought new suppliers and altered market shares, but socioeconomic factors reduced the size of the entire market. Emerging economies like China "have entered a new, less oil-intensive stage of development."[76] Likewise, the global economy, in general, has become less fuel dependent due to the globalization of the natural gas market, the development of renewable energies, and climate change concerns that have altered energy poli-

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68. Samples, *supra* note 37, at 613.

69. Jude Webber, *Pemex Rises to the Challenge of Reinventing Itself*, FIN. TIMES (Nov. 12, 2014, 6:50 AM), http://www.ft.com/cms/s/0/973784ea-586a-11e4-a31b-00144feab7de.html #axzz42eSLd6vx.

70. *See, e.g.*, Luke J. Danielson, *Sustainable Development, Natural Resources, and Research,* 19 NAT. RES. & ENV'T 39, 40 (2004); Stephen Sewalk, *Brazil's Energy Policy and Regulation*, 25 FORDHAM ENVTL. L. REV. 652, 658 (2014).

71. DELOITTE, OIL AND GAS REALITY CHECK 2015: A LOOK AT THE TOP ISSUES FACING THE OIL AND GAS SECTOR 1 (2015).

72. *See supra* Part II.

73. INT'L ENERGY AGENCY, OIL MEDIUM-TERM MARKET REPORT 2015, at 10 (2015).

74. *Id.*

75. DELOITTE, *supra* note 71, at 4.

76. INT'L ENERGY AGENCY, *supra* note 73.

cies.[77] Japan, for example, has decreased its oil consumption by 22% since 2000.[78] The International Energy Agency reported that these changed market conditions will impact how prices rebound, which will stabilize "at levels higher than recent lows but substantially below the highs of the last three years."[79] This fundamental shift in global oil trade economics has threatened OPEC's market dominance, forced oil companies to sell off assets, and added a high level of risk for investors.[80] Global suppliers have been forced to adapt. Likewise, Mexico needed to change so Pemex could survive. Even with reform, success was far from guaranteed, but reform was a necessary first step.

IV. THE REFORM

This Part will discuss the major changes and key provisions in the recent Reform of Mexico's oil sector with an analysis of how they may address Pemex's current challenges. The newly increased autonomy will bring both opportunities for success and challenges associated with adjusting to a new legal framework with increased competition. This Part will give a brief explanation of the legal framework and of the Reform; analyze Pemex's new role and how it fits into the new system; and provide an overview of other notable provisions within the Reform. Their future success will heavily depend on Mexico's ability to attract foreign investment and Pemex's ability to adapt to the new environment with the effective implementation of long-term management strategies.

A. Legal Framework

Mexico's recent, dramatic energy Reform took place in two major phases. The first phase amended the constitution to remove the constitutional barriers to investment.[81] Unhindered by constitutional restrictions, the legislature passed a substantial amount of revised legislation in August 2014, collectively known as the Secondary Legislation.[82] The governing instruments relevant to the oil industry are the new Hydrocarbons Law, the Hydrocarbons Revenue Law, the Pemex Act, the Coordinated Regulatory Bodies Act, the Law on the

77. *Id.*

78. DELOITTE, *supra* note 71, at 4.

79. INT'L ENERGY AGENCY, *supra* note 73, at 11.

80. *See* DELOITTE, *supra* note 71, at 4, 9.

81. *See* Constitución Política de los Estados Unidos Mexicanos, CP, art. 27, Diario Oficial de la Federación [DOF] 05-02-1917, últimas reformas DOF 27-01-2016; Samples, *supra* note 37, at 624-25.

82. Antonio Borja Charles & Carlos de Maria y Campos, *Oil & Gas 2015: Mexico*, LATIN LAW. (Mar. 3, 2017), http://latinlawyer.com/jurisdiction/1002906/mexico.

National Agency on Safety and Environmental Protection in Hydrocarbons Matters, and the Foreign Investment Act.[83] These instruments dramatically change the entire energy industry.

Mexico's Secondary Legislation completely reorganizes the petroleum industry with the addition of new regulatory bodies and liberal policies that permit foreign investment.[84] The Secondary Legislation created the National Hydrocarbons Commission (CNH) and the National Agency on Safety and Environmental Protection in Hydrocarbon Matters (ASEA). It also allocates varying levels of regulatory and oversight responsibility between the newly created entities and the Ministry of Energy (SENER), the Ministry of Finance, and the Energy Regulatory Commission (CRE).[85] Broadly speaking, SENER and CNH will approve the grant, transfer, and migration of entitlements, as well as supervise compliance with their terms.[86] They will also negotiate the technical aspects of E&E contracts.[87] SENER and CRE will also establish the permit regime and enforce regulatory compliance with them.[88] The Ministry of Finance will work to negotiate the fiscal terms in these agreements.[89] ASEA will not take a direct part in the formation of agreements; however, ASEA will establish the regulations that govern them.[90] Article 129 of the Hydrocarbons Law gives ASEA authorization to issue regulation for industrial and operational safety, environmental protection, and sustainable development of the energy sector.[91] According to an official statement, their mission is "[t]o guarantee people's safety and the environment integrity with legal, procedural, and cost-effectiveness certainty within the hydrocarbons sector."[92] Together, these entities work to create and oversee production agreements.

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83. *Id.*; *see also* Ley de Hidrocarburos, Diario Oficial de la Federación [DOF] 11-8-2014 [hereinafter Ley de Hidrocarburos]; Ley de Ingresos sobre Hidrocarburos, Diario Oficial de la Federación [DOF] 11-8-2014; Ley de los Órganos Reguladores Coordinados en Materia Energética, Diario Oficial de la Federación [DOF] 11-8-2014; Ley de Petróleos Mexicanos, Diario Oficial de la Federación [DOF] 11-8-2014; Ley de la Agencia Nacional de Seguridad Industrial y de Protección al Medio Ambiente del Sector Hidrocarburos, Diario Oficial de la Federación [DOF] 11-8-2014; Ley de Inversión Extranjera, Diario Oficial de la Federación [DOF] 27-12-1993, últimas reformas DOF 18-12-2015.

84. *See generally* Ley de Hidrocarburos, *supra* note 83 (authorizing foreign investment and detailing the authority of the new regulatory agencies).

85. Charles & Campos, *supra* note 8282.

86. Ley de Hidrocarburos, *supra* note 83, arts. 6-10.

87. *Id.* arts. 32-35.

88. *Id.* arts. 48-50.

89. *Id.* art. 30.

90. *Id.* art. 129.

91. *Id.*

92. *Frequently Asked Questions*, AGENCIA DE SEGURIDAD, ENERGÍA Y AMBIENTE http://www.asea.gob.mx/cms/wp-content/uploads/2014/11/ASEA-ENGLISH-1.2.pdf [https://perma.cc/V2FZ-R25R].

B. What Types of Agreements Can They Authorize?

The rights to conduct particular upstream activities are allocated to state-productive enterprises (SPE) like Pemex and private parties through Entitlements and Exploration and Extraction (E&E) contracts.[93] This is a marked change from the prior regime, which only permitted fee-based service contracts.[94] This Part will discuss the various agreements authorized by the reform as well as important provisions common to every agreement. SENER and CRE allocate rights to conduct upstream activities to both state-productive enterprises and private contractors. Entitlements give exclusive rights to state-productive enterprises in a particular area or for a particular project.[95] E&E contracts give private contractors varying rights to conduct upstream activities.[96] The particular rights depend on which of the four contractual models the regulatory agency chooses. These broad options provide an enabling approach that is well suited to encourage investment in a wide variety of situations. "As a result, Mexico will go from being one of the most limited major jurisdictions for energy investment to being among the more flexible."[97] The regulatory agencies' options, and production agreements in general differ in the ways they allocate risk and reward between the state and investor.

1. Entitlements

The first method of allocating rights in the upstream industry is through Entitlements.[98] An Entitlement is an exclusive right to conduct E&E activities.[99] The Ministry of Energy will grant Entitlements on an exceptional basis to Pemex or any other state-productive entity.[100] In order for SENER to grant an Entitlement, the National Hydrocarbons Commission must submit a favorable technical opinion.[101] Such Entitlements may be renounced or transferred to another SPE, but only with prior authorization from SENER.[102] SPE may not

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93. Ley de Hidrocarburos, *supra* note 83, arts. 11-31.

94. Ley Reglamentaria, *supra* note 57.

95. MAYER BROWN, ANALYSIS OF MEXICO'S NEW HYDROCARBONS LEGAL REGIME 2 (Aug. 14, 2014), https://www.mayerbrown.com/files/Publication/69fe7acd-ca5b-4d1c-a172-31678b13ec06/Presentation/PublicationAttachment/75b0fe83-d4a2-4523-b8e2-3f7ae78102a7/UPDATE-Analysis-of-Mexicos-New-Hydrocarbons-Legal-Regime.pdf.

96. *Id.*

97. Samples, *supra* note 37, at 626.

98. Ley de Hidrocarburos, *supra* note 83, arts. 11-31.

99. *Id.*

100. *Id.* art. 6.

101. *Id.*

102. *Id.* art. 8.

transfer Entitlements to private parties, but these parties are authorized to execute service contracts as long as consideration is cash, not rights to a percentage of in-kind production.[103] SENER will have significant authority to oversee and revoke Entitlements.[104]

Traditionally, Pemex had the right to conduct these activities via Entitlements; however, the new regime establishes more stringent requirements and provides greater oversight. The Reform granted greater autonomy to Pemex, but now Pemex has to deal with competition. In order to level the playing field, Pemex was granted Entitlements through "Round Zero."[105] This internal bidding round was essentially a right of first refusal for areas Pemex was currently producing or actively exploring. Pemex submitted requests to retain E&E rights to these areas. SENER determined which rights Pemex would keep and which rights would be offered for public bidding based on proof of Pemex's financial and technical capacity to develop the resource.[106] SENER granted Pemex Entitlements to "100 percent of PEMEX's producing areas; 83 percent of Mexico's proven and probable reserves (2P Reserves); and . . . 21% of Mexico's prospective resources."[107] In effect, Pemex will still play a dominant role in Mexico's E&E activity, but the door is now open for other players to step into undeveloped areas. The goal is to stem declining production by directing foreign investment towards undeveloped areas that Pemex does not have the resources or technical capacity to develop effectively.[108] Until now, Pemex had to shoulder the burden of the entire oil industry. The Reform presents room to shift some of that burden to foreign investors.

2. *E&E Contracts*

Entitlements are hydrocarbon rights directly granted to state-productive enterprises.[109] Foreign companies will not be given Entitlements. Foreign investors enter the process through E&E contracts.[110] E&E contracts are production agreements that confer rights to either state-productive enterprises or private contractors. These contracts will be negotiated during a competitive bidding process that CNH will conduct.[111] The Reform outlines four contractual model agreements to give the regulatory agencies wide discretion to choose

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103. *Id.* arts. 8-9.
104. *Id.* art. 10.
105. MAYER BROWN, *supra* note 95, at 1.
106. Samples, *supra* note 37, at 639.
107. MAYER BROWN, *supra* note 95, at 1-2.
108. ENERGY INFO. ADMIN., *supra* note 62, at 16.
109. Ley de Hidrocarburos, *supra* note 83, arts. 6-10.
110. *Id.* arts. 6-31.
111. MAYER BROWN, *supra* note 95, at 3.

the appropriate model on a case-by-case basis.[112] This Section will analyze the structure of the agreements and some of their key provisions.

(a) Competitive Bidding

CNH will conduct competitive bidding rounds for E&E contracts according to the technical and fiscal guidelines set by SENER and the Ministry of Finance, respectively.[113] SENER will select the contractual area, either on its own volition or upon recommendation from Pemex or another state productive enterprise. SENER will work with CNH to establish the technical prequalification criteria and technical contract terms.[114] The Ministry of Finance will establish the fiscal terms for the contract and the bidding process.[115] The bidding process will begin when CNH publishes the call for bids in the Federal Official Gazette.[116] The call for bids will detail the bidding requirements, award mechanisms, prequalification criteria, and provide a minimum of 90-days within which to submit bids.[117] The bidding results will then be published in the Federal Official Gazette and CNH will execute the contracts.[118]

(b) Structure of the Agreements

The bidding process will be fairly consistent, but the content and structure of the agreement will differ on a case-by-case basis.[119] The Reform allows for significant flexibility to account for varying levels of risk. Generally speaking, the two main types of production agreements are concessionary agreements and contractual agreements.[120] Concessionary agreements grant the investor title to the hydrocarbons in consideration for a small state royalty.[121] The investor has considerable managerial control over production and carries the majority of production risk and reward. Under contractual agreements, the investor receives a share of production, but the state maintains

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112. *Id.* at 3-6.

113. Ley de Hidrocarburos, *supra* note 83, arts. 11-13.

114. *Id.* art. 29.

115. *Id.* art. 30.

116. *Id.*

117. *Id.* art. 23.

118. *Id.* arts. 23, 31.

119. *Id.* art. 29 (authorizing the Ministry of Energy to select the contract model that, in its discretion, would provide the most economic benefit for Mexico).

120. *See generally* Bryan W. Blades, *Production, Politics, and Pre-Salt: Transitioning to a PSC Regime in Brazil*, 7 TEX. J. OIL GAS & ENERGY L. 31, 33-34 (2011) (explaining the primary features of the concessionary and production sharing contract models).

121. Smith & Dzienkowski, *supra* note 21, at 36-37.

title; production risk is more evenly distributed and the state receives a greater profit share.[122] The government has a larger vested stake in the project and, therefore, is more likely to directly participate and control the project. Article 27 of the Mexican Constitution reaffirms that all hydrocarbons are owned by the state and specifically prohibits concessionary agreements. However, it significantly liberalizes the industry by authorizing contractual agreements with production-based compensation.[123] The Reform creates four E&E contractual models: (1) licenses; (2) production sharing contracts; (3) profit sharing contracts; and (4) service contracts.[124] These options allow for flexibility to encourage significant foreign investment but do not revert to the pre-1938 concessionary regime. This flexibility will be key in attracting investors.

(1) Licenses

While concessionary agreements are explicitly prohibited, licenses are essentially a more balanced, modern version of concessions.[125] The use of the word license instead of concession is reflective of the "[p]olitical sensitivities around concessions [due to] lingering memories of Mexico's early history with foreign oil companies."[126] In fact, this is not uncommon. The word "concession" still carries a negative connotation reminiscent of early inequitable agreements. Bargaining power shifted after the creation of the Organization of the Petroleum Exporting Countries (OPEC), and states started to receive better deals with increasing royalties and more control over operational decisions.[127] As agreements developed greater balance, the word "concession" has often been replaced with the label "license" even though the underlying concessionary structure has remained intact.[128] When Mexico's agencies opt for the licensing structure, the contractor will own the hydrocarbons in-kind at the wellhead in consideration for cash payments in the form of a signing bonus, exploratory phase fees (analogous to United States rental fees), royalties, and a percentage of the contract value of the hydrocarbons.[129] Unlike pre-1938 concessionary agreements with ten percent royalties, Mexican licenses "will likely land near the higher side of the industry standard range of fif-

122. *Id.* at 37-41.
123. Constitución Política de los Estados Unidos Mexicanos, CP, art. 27, Diario Oficial de la Federación [DOF] 05-02-1917, últimas reformas DOF 27-01-2016; Ley de Hidrocarburos, *supra* note 83, art. 11.
124. Ley de Hidrocarburos, *supra* note 83, art. 18.
125. Samples, *supra* note 37, at 627.
126. *Id.*
127. *Id.* at 627-29.
128. *Id.* at 627.
129. MAYER BROWN, *supra* note 95, at 3.

ty to seventy-five percent."[130] Following the modern trend, Mexico will retain more operational control, impose heightened minimum work and investment obligations, and limit duration.[131] Even with better terms, licenses still give far more control to the contractor than alternative agreements. This high-level of risk management allocation will likely be chosen for development in particularly risky projects, like deepwater exploration.

(2) Production and Profit Sharing Agreements

As briefly discussed earlier, production agreements vary in their allocation of risk. Production sharing agreements and profit sharing agreements are similar to licenses in many ways. All three have the same terms regarding exploratory phase fees and royalties and will include similar minimum work and investment obligations.[132] The primary distinctions are the level of state control, national oil company participation, and the division of operating profits.[133] These agreements allocate risk and operational control more evenly than licenses. Due to the greater vested interest, direct state participation is more common in these agreements.[134] As with licenses, exploratory phase fees will be paid in cash, but royalties and operating profits are apportioned differently. Royalties are paid in-kind, meaning Mexico will receive a portion of the actual hydrocarbon production instead of a cash payment.[135] Operating profits are calculated after deducting royalties and cost recovery.[136] Cost recovery is a method of paying the contractor back for the substantial investment and operating costs involved in extracting hydrocarbons.[137] After these costs are subtracted, Mexico will receive a percentage of the operating profits in-kind.

The only real difference between production sharing agreements and profit sharing agreements is the form of payment to the contractor. In production sharing contracts, the contractor retains in-kind production equivalent in value to recoverable costs and its share of operating profits.[138] In profit sharing contracts, Mexico keeps all the production and gives the contractor cash payments for cost recovery and its share of profits made on the sale of hydrocarbons.[139] Produc-

130. Samples, *supra* note 37, at 627.
131. Ley de Hidrocarburos, *supra* note 83, art. 19.
132. MAYER BROWN, *supra* note 95, at 3-6.
133. *Id.*
134. Samples, *supra* note 37, at 629.
135. Ley de Ingresos, *supra* note 83, art. 12.
136. *Id.* arts. 16-19.
137. *Id.*
138. *Id.*
139. *Id.* art. 11(II)(b).

tion sharing agreements are significantly more common in the global oil industry,[140] but the additional profit sharing model adds flexibility that could potentially increase investment.

(3) Service Contracts

The last option available to Mexico's regulatory agencies is a service contract model. Prior to the Reform, the Petroleum Law of 1958 only permitted "pure" service contracts.[141] Under pure service contracts, companies perform a particular service for a fixed fee that is independent of production results.[142] The Reform now allows risk service contracts. Risk service contracts tie compensation with the results of production. The company performs the service and is only compensated if production occurs. The exact terms vary, but compensation may be in-kind, a percentage of profits, or a preferential right to purchase the oil.[143] Depending on the terms, risk service contracts become more or less comparable to production sharing agreements; however, service contracts tend to be more limited in scope and duration.

(c) Key Provisions Applicable to All E&E Contracts

The Reform provides a flexible approach so the regulatory agencies will have wide discretion to choose the type of agreement that is advantageous for Mexico while still attractive enough to draw in foreign investment. Many important contract terms regarding operational control and compensation will vary by the chosen contractual model and particular case; however, key provisions of the Hydrocarbon Law ensure particular advantageous terms will be a part of every E&E contract. These key provisions, "common to almost all international petroleum arrangements around the world. . . . [A]re national content, tax and royalty structures, minimum work obligations, and dispute resolution."[144] This Section will analyze these key provisions in the Reform. The Reform sets required contract terms in these areas that are in line with international standards.[145]

(1) National Content

National content, in petroleum agreements, refers to particular contractual obligations that are designed to "accomplish strategic

140. Samples, *supra* note 37, at 629-32.

141. *Id.* at 632-33.

142. *Id.*

143. ADRIAN LAJOUS, COLUM. UNIV. CTR. ON GLOBAL ENERGY POL'Y, MEXICAN ENERGY REFORM 17 (2014).

144. Samples, *supra* note 37, at 634.

145. *Id.*

goals for domestic industry."[146] The exact methods vary, but typical obligations require a specified minimum percentage of national employees, investment in domestic infrastructure, preferential treatment for national products and services, and local training. The Reform combines all of those obligations into an overall "national content" formula: (National Content Goods + National Content Labor + National Content Services + National Content Training + National Content Technology Transfer + National Content Infrastructure) / (Goods + Labor + Services + Training + Technology Transfer + Infrastructure) * 100 = National Content Percentage.[147] The Hydrocarbon Law requires a minimum national content percentage of 35 percent.[148] The Law requires 35 percent as an average across the industry and provides that individual contractors must progressively achieve a percentage determined by SENER.[149] Additionally, the Hydrocarbon Law explicitly excludes E&E activity in deep and ultra-deep waters from this requirement.[150] This flexible, progressive approach strikes a good balance to provide local benefits without overburdening the contractor. Flexibility is key to avoid chilling investment, as evidenced by the poor results directly attributable to Brazil's onerous national content requirements.[151]

Although perhaps not technically classified as "national content," the Hydrocarbon Law also helps build national expertise and knowledge through required disclosures. The Law expressly states the geological, geophysical, petrophysical, and petrochemical information, and in general the information, which is obtained or has been obtained from surface surveying and exploration, as well as E&E belongs to the nation.[152] Contractors are required to deliver this information to CNH. CNH will use this information to create and manage the National Center of Hydrocarbons Information which will collect, store, analyze, and publish this information subject to certain time-limited confidentiality restrictions.[153] This will help build Mexico's practical knowledge and expertise as a result of each project.

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146. *Id.* at 635.

147. MAYER BROWN, SUMMARY OF MEXICO'S PRODUCTION-SHARING CONTRACT TERMS FOR SHALLOW WATER AREAS 9 (Jan. 13, 2015), https://www.mayerbrown.com/files/Publication/31e8ee04-0bf4-4924-9917-91eb14df2512/Presentation/PublicationAttachment/59dca3bb-3791-4908-b493-067850d4881e/UPDATE-Mexico_Shallow_Waters_2014.pdf.

148. Ley de Hidrocarburos, *supra* note 83, arts. 11-13.

149. *Id.*

150. *Id.*

151. Samples, *supra* note 37, at 635.

152. Ley de Hidrocarburos, *supra* note 83, art. 32.

153. *Id.* art. 35.

(2) Minimum Work and Investment Program

While not listed as a mandatory requirement, the Hydrocarbon Law envisions the likely inclusion of minimum work and investment programs in E&E contracts.[154] Similar obligations are standard in petroleum agreements.[155] Typically, contractors must commit to invest a specified amount of money and meet work benchmarks at particular intervals (e.g., $50 million required investment with at least two exploratory wells completed within four years). The exact terms will vary project-by-project, but the Round One minimum work programs averaged approximately $1 billion for each project.[156] These requirements serve to align the state and contractor's interests to work quickly towards production. This is reflective of risk-bearing shifts as E&E projects develop.[157] Before production, the state bears the risk that the contractor will not efficiently manage resources or drill and drop. As E&E projects get closer to the production stage, the risk begins to shift onto the contractor. Once production has begun, the risk is squarely on the contractor that the state will not honor the contract. The contractor is protected, at least on some level, from illegitimate expropriation because such action would inflict significant reputational damage on the state and the loss of future investment opportunities. Minimum work programs help protect the state in the pre-production phase. If the contractor drills and drops, the contractor will lose a significant amount of money. This heightened consequence serves to mitigate the state's risk.

(3) Royalty and Tax Calculations

Perhaps the most important contractual provisions for the state and contractor are the compensation provisions, which decide how profits will be allocated. As with other provisions, Mexico has opted for a flexible approach. Royalties vary based on market prices. If oil prices are under $48/barrel, the royalty will be 7.5 percent.[158] When oil prices rise above $48/barrel, the royalty will be calculated according to this formula: [(0.125 * Contractual Price for Petroleum) + 1.5] percent.[159] An additional, vaguely worded provision provides Mexico with an "adjustment mechanism" to capture "extraordinary returns."[160] It remains to be seen when and how Mexico may invoke

154. *Id.* art. 19.

155. Samples, *supra* note 37, at 634.

156. *Id.* at 634-35.

157. *See generally* Blades, *supra* note 120, at 38-41 (describing the features of typical production sharing contracts and risk allocation).

158. Ley de Ingresos, *supra* note 83, art. 24(I)(a).

159. *Id.* art. 24(I)(b).

160. *Id.* art. 15.

this provision. The rest of the fiscal terms are fairly straightforward. Rental fees follow a common pattern: they are imposed on a "per-kilometer" basis and increase as the project develops to encourage effective resource management.[161] Signing bonuses ensure that immediate state revenue will be decided on a case-by-case basis.[162] E&E activities are subject to the standard 30 percent corporate tax, which compares favorably to the many countries that charge a higher tax rate for E&E activities.[163] Outside of the vague adjustment mechanism, the fiscal terms are standard for the industry.[164]

(4) Dispute Resolution

Given the significant time and monetary investments for E&E projects, dispute resolution forms a key part of E&E contracts. The Hydrocarbon Law distinguishes between "administrative rescission," which will be handled in Mexican courts, and other disputes that may go to arbitration.[165] Administrative rescission effectively terminates the E&E contract upon the occurrence of "serious" circumstances, such as failure to comply with the minimum work commitment, serious accidents, or other serious breaches.[166] The concern, here, is the extremely broad nature of these serious breaches. It is unclear how "serious" one of the listed occurrences needs to be for Mexico to invoke administrative rescission. Other less serious breaches may be covered by an alternative arbitration agreement. In the model Round One production sharing agreements, arbitration will be conducted in The Hague according to the United Nations Commission on International Trade Law's rules.[167] Notwithstanding UNCITRAL or the chosen arbitral rules, all arbitration agreements are adjusted to the following conditions in every case: (1) the applicable laws shall be Mexican federal laws; (2) they shall be conducted in Spanish; and (3) the award shall be strictly at law and shall be binding and final for both parties.[168] The location and UNCITRAL rules provide some stability and standardization to the arbitration

161. *Id.* art. 55.

162. Samples, *supra* note 37, at 637.

163. *Id.*

164. *See id.* at 636-37 (explaining how the corporate tax rate compares favorable to other countries); *see also* Blades, *supra* note 120, at 38-41 (describing typical fiscal terms in production sharing agreements).

165. Ley de Hidrocarburos, *supra* note 83, art. 20.

166. *Id.*

167. Contrato para la Exploración y Extracción de Hidrocarburos bajo la Modalidad de Producción Compartida, cl. 26.5, Comisión Nacional de Hidrocarburos [CNH-R01-L01/A2/2015] 5-9-2015.

168. Ley de Hidrocarburos, *supra* note 83, art. 21.

process; however, the administrative rescission exception may prove to be extremely disconcerting for potential investors.

The Reform represents a radical departure from the state monopoly system. Some of the contract terms are problematic and their practical application will be discussed in Part V; however, the key takeaway from this analysis is flexibility. Mexico used to have zero flexibility.[169] The Reform is a radical step towards liberalization. The Constitutional Reform created the possibility for foreign investment in the oil sector. The Secondary Legislation gave the Reform some teeth. The Secondary Legislation created new regulatory agencies and expanded the role of others. It created a transparent process, which allows for maximum flexibility so CNH can choose the contractual model best-suited for a particular project. The key provisions, for the most part, are in line with international standards. They will require adjustment to maximize investor attractiveness; however, the Reform is a monumental first step in Mexico's path towards a liberalized energy sector.

V. MEASURED EFFECTS AND FUTURE EXPECTATIONS

The previous Section discussed the text of the Reform. This Section will discuss the realities of post-Reform implementation. Pemex is struggling to adapt to the new environment and rid itself of lingering challenges. In order for Pemex to succeed, the promise of greater autonomy and lower tax burden needs to become reality. Confronting new challenges while remaining shackled with these old problems is too great a task. These are certainly significant short-term concerns, but appear attributable to both bad timing (market-wise) and the natural growing pains of implementing such radical change. Likewise, the Mexican government has faced growing pains in attracting investors. The first oil tender was a major disappointment; however, the government learned from their mistakes and made adjustments in the most recent oil tenders. The improvements had immediately beneficial results in attracting significant investment. Despite recent successes, there is still room for further improvement to minimize investor risk and increase international competitiveness. When evaluating the future, this Note urges for cautious optimism. Many problems exist, but a realistic assessment could not have expected overnight success. On a whole, the Reform has been a success, just not an overnight success. Reforming Pemex and attracting investors requires overcoming hurdles on many fronts to achieve balance. Mexico's recent successes show the fruits of such efforts. These steady improvements are indicative of future growth and telling with regards to the nature of current challenges. They are the growing pains of

169. *See supra* Part III.

Mexico's oil sector rebirth. They are hurdles to be overcome in the short-term; meanwhile, in the long-term, the Reform promises to revitalize an ailing energy sector and provide economic growth.

A. Pemex

Part III of this Note discussed some of the major problems, which historically have inhibited Pemex's growth. The systemic problems are the result of a crippling tax burden and a restrictive regulatory environment. Declining production and a weak global market further strained Pemex's ability to make strategic investments. This Section will discuss how the Reform has fared against these problems. The Reform cannot make global oil prices rebound any faster but aimed to correct Pemex's systemic inefficiencies and turn the tides on declining production. In theory, these changes should help reduce Pemex's substantial burdens and generate higher profits. These changes certainly bring opportunity, but reengineering Pemex is a work in progress. The short-term outlook is negative; however, the Reform should bring long-term gains for Pemex by reducing its historical burdens.

1. Present Effects

Pemex, post-reform, is struggling. Moody's Investor Service has given Pemex a negative outlook rating in the short to medium term because "oil prices remain depressed, production continues to drop, taxes remain high, and the company's capex needs are financed with debt."[170]

Pemex has always been hampered by an enormous tax burden and a restrictive legal environment. The Reform promised lower taxes and greater autonomy so Pemex could make strategic investment decisions and adapt to the new competitive environment. Overall, the Reform has not yet had much of a positive impact on Pemex's growth.

Pemex's tax burden has declined but still remains high. Over the next four or five years, taxes from Pemex are expected to contribute over 20 percent of the government's annual budget.[171] High taxes mean Pemex must use debt to fund capital expenditures. Over the last three years, Pemex has increased its debt but has not achieved

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170. Press Release, Moody's Inv'rs Serv., Rating Action: Moody's de Mexico Confirms PEMEX's ratings at Aaa.mx/MX-1; Changes Outlook to Negative, (Nov. 24, 2015) (quoting Nymia Almeida), http://www.pemex.com/en/investors/debt/Calificacin%20crediticia/Moody's%20press%20release%20November%202015%20NSR_151124.pdf [https://perma.cc/G5Z2-MDXS].

171. *Id.*

sustained growth.[172] Pemex has liquidity problems with record high losses and massive debt.[173] Production is still in decline and a weak global market hinder profitability.[174]

Likewise, Pemex was promised greater autonomy, but the government still exerts too much influence on Pemex's operations. Conceptually, Pemex has been transformed into an entirely different entity. "The productive state enterprise model is a theoretical departure from the 'ministry' approach of past governance: Pemex will have greater latitude to place a greater emphasis on generating profits."[175] Historically, Pemex's board of directors was composed entirely of political appointees so corporate decisions were often politically motivated and unduly focused on short-term gains.[176] The Reform eliminates political appointments altogether, creates stricter requirements to ensure independent directors, and modernizes the board's structure.[177] The Reform gives Pemex significantly more administrative and budgetary autonomy[178] to choose its projects and focus on strategic long-term gains. This is certainly a welcome change but does not go far enough. Pemex's investment decisions are constrained by annual Congressional approval with regards to its maximum borrowing threshold and net financial balance.[179] This control must be lessened for Pemex to be able to focus on long-term gains instead of short-term political goals.

2. *Challenges Present Opportunity*

Lingering systemic problems weigh heavy on Pemex as it adapts to a new regulatory regime in a competitive environment. The timing of these radical changes could not have been much worse.[180] Implementation began just as global oil prices started free falling. Weak

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172. *Id.*

173. Adam Williams, *Pemex Hits 13th Straight Loss with $9.3 Billion Decline*, BLOOMBERG (Feb. 29, 2016, 10:23 AM), http://www.bloomberg.com/news/articles/2016-02-29/pemex-cuts-5-5-billion-in-spending-projects-as-losses-mount [https://perma.cc/97EP-5GHS].

174. Erik Schatzker & Jose Antonio Gonzalez Anaya, *Pemex CEO Says Reform, Transparency May Lead to IPO*, BLOOMBERG (Apr. 20, 2016, 9:23 AM), http://www.bloomberg.com/news/videos/2016-04-20/pemex-ceo-says-reform-transparency-may-lead-to-ipo [https://perma.cc/3GUE-88UE].

175. Samples, *supra* note 37, at 640.

176. *Id.*

177. Ley de Petróleos Mexicanos, arts. 20-21, 40-45, Diario Oficial de la Federación [DOF] 11-8-2014.

178. ENERGY INFO. ADMIN., *supra* note 62, at 16.

179. Press Release, Moody's Inv'rs Serv., *supra* note 170.

180. Adam Williams, *That Didn't Work as Planned: Mexico's Oil Monopoly Ends, Then Oil Tanks*, BLOOMBERG (Feb. 21, 2016), https://www.bloomberg.com/news/articles/2016-02-22/that-didn-t-work-as-planned-pemex-monopoly-ends-then-oil-tanks [https://perma.cc/Q56K-E733].

global demand, depreciation of the Mexican peso, and declining production magnify Pemex's struggles to restructure.[181] Despite significant current challenges, the Reform presents opportunities for increasing Pemex's profitability and long-term growth.

Pemex needs to reckon with the reality of low oil prices and make strategic decisions accordingly. Although the tough economic climate presents a significant challenge, the pressure may turn out to be beneficial in the long-term. Low oil prices are forcing Pemex to make serious budget cuts and drastically improve efficiencies. Learning to thrive in the worst of times will prepare Pemex for future success. In the 1970s, the opposite occurred. Pemex had major success in a high-price environment, but mismanagement left the company in dire straits when the market crashed.[182] Now, Pemex finds itself in the opposite situation by being forced to increase efficiency to survive the low-price environment. The Reform accords Pemex tremendous flexibility to adapt and thrive. Pemex's new CEO, Jose Antonio Gonzalez Anaya, noted how Pemex seeks to take advantage of the Reform's opportunities.[183] Until now, Pemex had to completely shoulder the risk of the entire oil sector. Post-Reform, Pemex has the opportunity to refocus. Anaya explained that Pemex will be selling off assets, particularly non-strategic downstream assets.[184] By selling off non-strategic assets, Pemex can increase revenues and efficiency for long-term, sustainable profitability. Beyond selling assets, Pemex now has the opportunity to make strategic partnerships. Pemex no longer is forced to shoulder the burden of the entire industry. For so long, Pemex was isolated. Now free from this isolation, Pemex needs to use strategic partnerships to build its own expertise and increase efficiency.

Pemex has a tough road ahead. There is a lot of history to overcome and Pemex is struggling to overcome it. Overnight change, simply, was an unreasonable expectation. Despite challenges, the Reform offers Pemex with many ways to adapt and make strategic decisions. Pemex is mired in debt and the global market is weak. With time, a refocused Pemex will be able to increase revenues to fund strategic investments without raising its debt ceiling. Mexico has given some support to help Pemex manage its debt.[185] While this

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181. *See generally* Rodriguez, *supra* note 50 (describing the challenges Pemex faces from Mexico's high debt and depreciation of the peso).

182. *See supra* Part II.

183. Erik Schatzker & Jose Antonio Gonzalez Anaya, *supra* note 174.

184. *Id.*

185. Nacha Cattan, Adam Williams & Eric Martin, *Pemex Gets Tax Break and $1.5 Billion Relief to Tackle Debt*, BLOOMBERG (Apr. 13, 2016, 12:16 PM), http://www.bloomberg.com/news/articles/2016-04-13/pemex-to-get-1-5-billion-from-government-to-reduce-record-debt.

will certainly help in the short-term, Pemex's long-term success will depend on how it uses its newfound flexibility. The new CEO appears prepared to confront these challenges head-on and use the Reform to break ground.

If Pemex can take advantage of the opportunity to reduce risk and refocus on strategic profit-focused decisions, Pemex will be a vastly more profitable and efficient business.

B. Foreign Investment

A basic tenet of economics is investors need to be compensated for their risk.[186] Competitive offers require a sufficiently attractive balance of risk and reward.[187] The oil market, specifically, is an inherently risky business venture. When investors look at an opportunity, they compare the venture-specific risk with the fiscal terms. At its core, venture-specific risk is composed of geographical risks (*will this block produce oil?*), legal risks (*what are my contractual rights, and will I be able to enforce them?*), and country-specific risks (*will political strife, criminality, or other country-specific problems have an effect on this venture?*). Countries increase competitiveness with attractive fiscal terms and risk-minimization. Becoming and staying competitive is a complex balancing act. This Section will analyze Mexico's recent post-Reform attempts at reaching this balance and discuss how Mexico can adapt to minimize risks and maximize benefits.

1. Bidding Results

The first bidding auction after the Reform was marked by disappointment. CNH placed fourteen blocks for bid, but only awarded two blocks.[188] CNH commissioner, Juan Carlos Zepeda, acknowledged the results fell well below expectations of awarding four to five blocks.[189] Prohibitively high minimum bids, tough contract terms, and the low-price oil environment contributed to the poor results. CNH only received six bids but threw out four for not meeting the minimum requirements.[190] Some analysts point to CNH's lack of discretion as a major hindrance in completing deals with the bids. For example, CNH was not allowed to negotiate or accept an offer below the undisclosed minimum government take of 40 percent operating profit.[191] If

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186. *The Reality of Investment Risk*, FINRA, http://www.finra.org/investors/reality-investment-risk [https://perma.cc/B2LK-ZNNE].

187. Id.

188. Velda Addison & Leslie Haines, *Round One in Mexico Disappoints*, OIL & GAS INV'R (July 15, 2015, 4:01 PM), http://www.oilandgasinvestor.com/round-one-mexico-disappoints-810076#p=full [https://perma.cc/3UGH-9GZ7].

189. *Id.*

190. *Id.*

191. *Id.*

CNH had sufficient discretion to negotiate, they may have achieved a deal at a slightly lower profit percentage. This certainly seems preferable to arbitrary rejection.

Although the first bidding auction did not generate the results hoped for, Luis Videgaray Caso showed optimism about the success of the round to establish confidence in Mexico's ability to conduct a transparent bidding process. He explained that this was just a first step and Mexico will have to analyze the market to adapt effectively.[192] The government made good on this promise and made numerous improvements for subsequent rounds. The improvements led to a very successful third auction, which surpassed expectations, particularly in light of continuing low oil prices. The third auction resulted in awards for all twenty-five onshore exploration fields offered for bidding.[193] Altogether, this will bring in an expected $1.1 billion of investment over the next twenty-five years.[194] This is a remarkable change in such a short period. Despite improvements, certain policy choices and country risks, if left unaddressed, may derail future bidding rounds and will not maximize benefits for Mexico.[195]

2. Fiscal Terms

Overall, Mexico has created fiscally attractive terms for investors, as proven by recent successes; however, Mexico could improve fiscal competitiveness in its bidding process.[196] Mexico has demonstrated an "excessive focus on rent collection . . . rather than a focus on broad based development of a wide range of Mexican oil and gas resources."[197] This was quite evident with the strict minimum government take in the first auction. The focus of the bidding formula needs to be expanded to give more consideration to the amount of work to be performed. Otherwise, less promising blocks will go undeveloped. Blocks that are less geographically desirable cannot be expected to fetch the same price as others. When Mexico foreclosed the possibility

192. *See Licitación para Explorar Hidrocarburos Fue Buen Primer Paso: Videgaray*, EL FINANCIERO (July 16, 2015), http://www.elfinanciero.com.mx/economia/licitacion-para-explorar-hidrocarburos-fue-buen-primer-paso-videgaray.html [https://perma.cc/X7CM-FB4R] ("Esta licitación del día de ayer es un paso, es un buen primer paso pero es apenas un primer paso . . . . Habremos de analizar y aprenderde las lecciones de esta primera licitación del día de ayer, escuchar el mensaje que nos está dando el mercado.").

193. Patrick McGee, *Mexican Oilfield Auction Thrives Despite Low Prices*, FIN. TIMES (Dec. 15, 2015), http://www.ft.com/fastft/2015/12/16/mexican-oilfield-auction-thrives-despite-low-prices.

194. *Id.*

195. *See infra* Section V.B.2-4.

196. PEDRO VAN MEURS & J. JAY PARK, PARK ENERGY L., REPORT ON PROPOSED MEXICO MODEL CONTRACT AND BID CONDITIONS FOR THE ONSHORE BID ROUND 17 (2015).

197. *Id.* at 2.

of making a deal based on an undisclosed royalty minimum, Mexico left value on the table. Now those blocks will not be developed. This is an economic waste for both Mexico and investors. Additionally, undue focus on royalty percentage leads to over-bidding, which will create future problems between the government and investor. [198]

3. *Legal Risk*

Legal risk comes from contractual and regulatory uncertainty. Investors want to know what their rights and liabilities are and how those will be enforced. More unknowns mean more risk. Mexico has made significant improvements to the contractual rights, but uncertainty still exists. On the other side of the coin, unclear regulations, inexperienced regulatory agencies, and corruption concerns pose enforcement-related risk.

(a) Contractual Uncertainty

Mexico has made significant improvements to the competitiveness of its contract terms. Mexico appears to be on the right path, but additional changes could improve competitiveness by limiting excessive governmental discretionary decision-making power. Such discretion, particularly in the contract's termination clauses, pose risk to investors and potentially opens the door for corrupt behavior.[199] The termination clauses grant CNH too much power to terminate the contract for specified, relatively non-serious breaches. For example, CNH may terminate the contract after any delay of 180 days in implementing any work program.[200] The termination clauses also permit termination for failure to file proper reports and other administrative violations.[201] Termination is a nuclear remedy, which should be reserved for more serious contract breaches and violations. Additionally, the only recourse is through Mexican courts. As it stands, these clauses give the government too much discretionary power. The potential for abuse poses significant risks, thereby reducing international competitiveness.

(b) Regulatory Uncertainty

Regulatory uncertainty poses additional legal risk to potential investors. The Reform created new regulatory agencies and expanded the roles of others. "Judicial and regulatory authorities lack experi-

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198. *Id.*

199. *Id.* at 19.

200. Contrato para la Exploración y Extracción de Hidrocarburos bajo la Modalidad de Producción Compartida, cl. 22.4, Comisión Nacional de Hidrocarburos [CNH-R01-L01/A2/2015] 5-9-2014.

201. *Id.*

ence in oversight of a competitive energy sector, a factor further complicated by the implementation of a still evolving regulatory regime."[202] Given the new and evolving nature of the Reform and its regulatory authorities, many regulations lack clarity and investors cannot be sure if their rights will be protected or how compliance will be enforced. Massive allegations of fraud in Pemex and consistently low country ratings in Transparency International's Corruption Perceptions Index pose additional enforcement-related risk.[203] Experience and regulatory clarity will come with time as the agencies develop and adapt to the new competitive environment. These are prominent concerns, but they are short-term concerns. Corruption is the more salient long-term issue. Despite anti-corruption measures, corruption is still disconcertingly prevalent.[204]

4. *Country Risk*

Perhaps, the biggest country-specific risk is criminality. Pipeline tapping is a cause of major concern for investors. Pemex provided statistics showing criminal groups tapped pipelines, stealing over $1 billion in hydrocarbons between 2012 and 2013.[205] Carlos Elizondo, a board member at Pemex, explained cartels pose a major source of worry to potential investors: "I'm afraid oil companies coming to Mexico will have to worry about insecurity as much as about drilling."[206] The enormous black market for oil has triggered an exponential rise in pipeline tapping.[207] Pipeline tapping is not the only issue. Kidnapping and extortion have been on the rise as well. "A 2013 survey by the American Chamber of Commerce of Mexico found that on average, foreign investors allocated around 4 percent of operating costs to security . . . ."[208] The offshore oil sector may avoid many of these problems, but the onshore violence will still be a source of concern, particularly for transportation.[209] President Nieto created a new security framework, which has had some notable successes in preventing or-

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202. *Mexico: Security, Corruption Remain Key Threats to Oil and Gas Investment*, PGI INTELLIGENCE (Nov. 25, 2015), https://pgi-intelligence.com/news/getNewsItem/Mexico-Security-corruption-remain-key-threats-to-oil-and-gas-investment/601.

203. *Id.*

204. *Id.*

205. Juan Montes & Dudley Althaus, *Drug Cartels Will Challenge Energy Investors*, WALL ST. J. (Dec. 18, 2014, 4:05 PM), http://www.wsj.com/articles/mexican-drug-cartels-pose-challenge-to-energy-investors-1418936709.

206. *Id.* (quoting Carlos Elizondo).

207. Caryn Livingston, *Mexico: Land of Energy Opportunity, Crime Risk*, OIL & GAS INV. (May 7, 2015, 9:32 AM), http://www.oilandgasinvestor.com/mexico-land-energy-opportunity-crime-risk-794736#p=full [https://perma.cc/37SC-PM2T].

208. PGI INTELLIGENCE, *supra* note 202.

209. *Id.*

ganized crime.[210] Efforts to lower violence are ongoing and have shown some promise, but security will remain a prominent investor concern for the foreseeable future.[211]

Since the Reform, Mexico has shown the competence to implement a transparent bidding process. Early disappointments led to marked improvements. These changes pave the way for a promising future, but significant challenges remain for Mexico to be internationally competitive and best serve its own long-term interests. To increase competitiveness, Mexico needs to be open to better fiscal terms for less geographically desirable blocks and reduce legal risk by limiting opportunities for abuse.[212] Mexico has made great strides to minimize contractual uncertainty but could create more competitive terms by eliminating excessive discretionary agency powers. Inexperienced agencies and evolving regulations pose short-term hurdles, which will likely lessen as Mexico adapts to the newly liberalized market. Corruption, however, poses a greater long-term threat. Previous anti-corruption measures have been relatively fruitless. Eradicating corruption is likely an unrealistic goal (certainly not a short-term goal), but limiting regulatory discretion and establishing clear enforcement guidelines will go a long way in easing investors' concerns. Like corruption, criminality is a long-term problem. Mexico will need to address investors' security concerns to increase competitiveness. Looking towards the future, Mexico appears to be confronting these challenges head-on in efforts to achieve the right balance of risk and reward to attract investors. Recent successes show these efforts are paying dividends. Balance does not come overnight, and Mexico will continue to struggle with growing pains, but the post-Reform future looks promising.

VI. CONCLUSION

Mexico has abundant potential, but years of market isolation left Mexico woefully short from realizing it. The Reform is a radically powerful step towards reaching that potential, but change is not easy. Early bidding rounds have not lived up to expectations; however, credit must be given for the herculean reform efforts that brought Pemex out of its monopolistic entrenchment into the modern oil market. The Reform is "the most important economic change in Mexico in

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210. KATHRYN HAAHR, WILSON CTR., ADDRESSING THE CONCERNS OF THE OIL INDUSTRY: SECURITY CHALLENGES IN NORTHEASTERN MEXICO AND GOVERNMENT RESPONSES 14-15 (2015) (explaining how Nieto's new security strategy has been used to arrest narco-traffickers and disrupt cartel activities).

211. PGI INTELLIGENCE, *supra* note 202.

212. *Cocaine, Guns and Oil Investors Weigh Mexico Risks*, CNBC (Oct. 6, 2014), http://www.cnbc.com/2014/10/06/cocaine-guns-and-oilinvestors-weigh-mexico-risks.html [https://perma.cc/7KDN-QMF7].

the last 50 years."[213] While a necessary change, the Reform, alone, is insufficient. Pemex must disentangle itself from the government's lingering hold, modernize its structure, and adapt to the new market and regulatory environment. Mexico needs to develop its newly created entities to generate income in diverse areas of the industry. Additionally, Mexico needs to encourage investment by minimizing investor uncertainty with clear regulations, attractive contractual terms, and effective action against criminal interference. This is no easy task. Mexico's initial predictions were, perhaps, overreaching. Current predictions are cautiously optimistic. Even with the stated need for reservations, growth is expected as early implementation efforts adapt to the learning curve. The timeframe for this growth is difficult to predict due to the radical nature of the Reform. Pemex's creation through expropriation was equally radical, but decades passed before Pemex brought Mexico back to the forefront of major global oil producers. The landmark Reform was instantaneous, but its effective development took time and it was not all positive. Mexico's radical oil Reform triggered rising tensions that escalated the urgency for more radical change. Perhaps, this second constitutional one-eighty will follow the same pattern. Hopefully, Mexico will learn from the past and tackle present challenges thereby achieving strategic long-term growth. If so, this radical Reform could end the cycle instead of becoming, yet another, piece in the tumultuous history of oil and reform *a la Mexicana*.

213. MÉXICO: PRESIDENCIA DE LA REPÚBLICA, *supra* note 14 (quoting President Nieto).