Mexico's New Energy Model

Of Paradigm Shifts and Political Conflict: The History of Mexico's Second Energy Revolution

A Working Paper

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Introduction

The story of Mexico's paradigm shift in energy policy is nothing short of extraordinary. The breadth and depth of the reform, the dramatic break with the past, and the positive long-term impact on Mexico's economy are of course remarkable, but the story of the political process is also worthy of recognition. An issue that had long seemed intractable, one on which the only consensus appeared to be that change was impossible, suddenly moved forward at breakneck speed in 2013, resulting in a constitutional reform in December of that year and secondary or implementing legislation by August 2014. The audacity and pace of the reform process naturally meant that the final legislation was far from perfect. But the reform is astounding as an example of what can happen when political forces and economic imperatives align. For that reason, 2013 will long stand as a watershed in Mexican history.

Yet the year or so of reform debates and decisions do not tell the whole story. Mexico had been struggling with energy reform for decades, and prior to 2013 there had been several abortive or partial attempts to modernize the system. What follows in this chapter is the story of those efforts and how they contributed to the modifications to Mexico's legal framework that came to be known as the "mother of all reforms."

Approval

The expectation had been building for days, ever since President Enrique Peña Nieto and his administration had submitted to Congress the final version of the long-thought impossible proposal to amend the Mexican Constitution to allow private participation in the energy sector. Though it was called an energy reform proposal, the public largely obsessed over the elements aimed at opening the country's oil sector. Indeed, the question of how the constitutional amendments would affect Pemex (Petroleos

Mexicanos), the state-owned petroleum company, soon dominated most if not all of the analysis and debate over the proposed reforms.

Early in the morning of December 16, 2013, all eyes were on the legislature in the state of San Luis Potosi. By that point, 16 of the 32 Mexican states had voted in favor of the constitutional amendments, and one more approval would secure the required majority. After an overnight session that extended from Sunday into early Monday, the San Luis Potosi legislature resoundingly voted in favor of the constitutional amendments and reform measures. The state-level legislative approval was the final hurdle for what many were calling an audacious move by Enrique Peña Nieto's government at its one-year mark.[1] Eventually, 24 of Mexico's 32 states and federal district would ratify the reform.

The Peña Nieto administration had spent the previous weeks successfully shepherding the reform proposal and constitutional amendments through the Federal Congress. Despite expected protests, recriminations, accusations of *vendepatria* (traitor), and legislator theatrics—including chained and padlocked doors and an infuriated congressman who went so far as to strip off his clothes at the rostrum—Peña Nieto and his team had proved far more politically adept than earlier administrations. The energy reform won final approval in Mexico's lower house, or Chamber of Deputies, 353 to 134, having gained overwhelming approval in the Senate 95 to 28 two days prior.[2] The final vote affirmed the convenient coalition of the country's center-right party, the National Action Party (PAN), and Peña Nieto's own Institutional Revolutionary Party (PRI).[3] Leaders from both parties had been negotiating the final terms and extent of the reform since Peña Nieto had taken office in December 2012, but the discussions reached a more expeditious and serious level when the PAN unveiled its own outlines for energy reform in late July 2013 and the PRI and Peña Nieto presented their reform proposal in August. On December 20, 2013, Peña Nieto signed the bill into law and forcefully declared, "We, Mexicans, have decided to overcome myths and taboos in order to take a great step toward the future."[4] But what were these myths and taboos of which Peña Nieto spoke?

Myths and Taboos: The Past is Prologue

There is no mistaking the fact that the energy sector—specifically, oil—has been center stage in various chapters of the modern history of Mexico. For the better part of the past two decades, Mexico's political landscape has been dominated by three major political parties: the PRI, the PAN, and the Party of the Democratic Revolution (PRD). Only recently has the MORENA, or National Regeneration Movement, led by longtime PRD stalwart Andres Manuel Lopez Obrador after splitting with his party in 2012, emerged as a key political actor. The fragmented and predominantly tripartite nature of politics in Mexico has had important legislative ramifications. Since 1997, no president has had a congressional majority, and consequently major reform measures were either blocked or diluted. For decades, nowhere was this deadlock this more evident than the nation's energy sector and efforts to reform the nationally owned Pemex.[5]

Expropriation and the Creation of Pemex

March 18, 2018, marked the 80th anniversary of the expropriation of foreign private oil company operations in Mexico, and the origins of the creation of Pemex. President Lázaro Cárdenas's decision to nationalize Mexico's petroleum sector in 1938 came to represent the country's break with foreign oil companies, most of which were American and British. Pemex, the new national oil company created by President Cárdenas, emerged as a clear sign of Mexican sovereignty, and for many years it was touted as a model for how a nation could take greater control of its natural resources. It also provided a strong sense of Mexican independence.

The historic and political weight given to the nationalization of Mexico's oil industry cannot be understated. March 18 is one of the most important historical dates in 20th-century Mexican history: the day is a Mexican federal holiday, and school books include dissertations on its political certitude. It is not uncommon to hear tales in Mexico of how families responded to President Cárdenas's effort by donating family heirlooms, livestock, and savings as contributions to help fund the early days of Pemex. Further constitutional reforms of 1938 and 1940, and particular amendments in 1960 and 1983, solidified both the core nationalist vision set in motion by Cárdenas and the political desire to reserve for Pemex the exclusive right to manage all oil activities in Mexico.[6]

Indeed, Pemex has become the literal embodiment of that nationalistic fervor. Oil, Pemex and national sovereignty are intricately connected. It has been said that in Mexico, oil is not merely a chemical compound, but rather a fundamental element of sovereignty with "quasi-religious significance." Simply put, in Mexico, oil is part of the national DNA. This fundamental political truism continues to affect the development of the nation's huge oil resource potential and Pemex by restricting private (particularly foreign) investment in the most important aspects of the nation's oil industry.[7] President Cárdenas's historic decision imbued citizens of Mexico with a sense of ownership of the nation's oil and a fervent shared desire to keep Pemex in state hands. For years, oil—and specifically, the constitutional elements associated with it—was a third-rail political issue. No politician dared touch it, and the arrangement had developed quite favorably for the federal coffers.

For years, the legacy of nationalism and constitutional prohibition denied Pemex partnership opportunities with foreign and international firms and prevented it from benefiting from greater access to technology, know-how, and fiscal and management efficiencies. As the shale revolution boomed, unconventional hydrocarbon production flourished in the United States, and new developments sought to exploit the resources available in the deep waters of the Gulf of Mexico, the hindrances of this self-imposed isolation increasingly became apparent. Multinational partnerships from across the world, including several national oil companies, have drilled and discovered significant oil reserves just across the land and maritime border in the United States—and Mexico has been left out.

Given the increasing importance of oil for Mexico in the 1930s, particularly in light of important resource discoveries in the years leading up to the nationalization, historians have pointed out that President Cárdenas's expropriation actions were nationalistic but quite rational. Nationalization was an understandable response to various disagreements with the foreign companies operating in Mexico at the time and the language of Mexico's

1917 constitution with regard to oil. Perhaps just as important, the expropriation also directly linked Pemex to the PRI, solidifying the party's connections with the oil workers' unions and oil-rich states along the Gulf of Mexico. For the better part of the next 75 years, successive PRI governments would place Pemex squarely at the core of their economic development and budget. Though the direct Pemex and PRI linkage can be viewed through a historical lens for its outsized influence in avoiding changes or reform, at the same time it provided PRI candidate Enrique Peña Nieto with a great talking point: only he, the leader of the new and forward-looking PRI, could confront the ghosts of the past and overcome the opposition to reforming the energy sector and overhauling Pemex.

The Easy Oil is Gone: Falling Oil Production and the Cantarell Curse

According to the International Energy Agency (IEA), Mexico is the world's eleventh largest oil producer. However, its market fundamentals have been changing rapidly. Production declines and demand growth have led to major imbalances, driving much of the past decade's reform debates and policy efforts.[8] Furthermore, data released by National Hydrocarbons Commission (Comisión Nacional de Hidrocarburos; CNH) in early 2018 note that the country's oil reserves fell by more than 7 percent over the previous year.[9] Indeed, one of the central promises posited by the Peña reform government is that energy sector reforms aimed at Pemex and allowing private investment would translate to an uptick in oil production of 500,000 barrels per day (bpd) by the end of the administration's six-year term (*sexenio*) in 2018.

What is the reason for this imbalance? In a word, Cantarell. In the early 1970s, a fisherman named Rudesindo Cantarell, operating in the Bay of Campeche in the southern part of the Gulf of Mexico, reported to the local Pemex office that his fishing nets were being ruined by oil. After further investigation in the 1970s, Pemex's Cantarell oil field proved to be the world's third largest oil field, and on the back of the Cantarell output Pemex became one of the world's largest oil exporters. Production at Cantarell boomed until 2004 when it peaked at a remarkable 2.136 million bpd.[10]

The significance of Cantarell's historical impact and legacy is evident in the Mexican petroleum sector even today. Along with the bonanza that the field provided, it served as an important cover for myriad inefficiencies at the state oil giant. Given how prolific the Cantarell field became, for a time Pemex and Mexico were spared the larger questions of their own inadequacies, particularly for Pemex's development of fiscal management and access to know-how and technology that were commonplace in the oil industry. When Cantarell began its decline, it was nothing short of precipitous. By 2008 Cantarell's production had dropped to just over 1 million bpd, and by the time of the energy reform the field's output had fallen to less than 400,000 bpd. The loss of over 1.7 million bpd from one field is a chilling statistic when one considers the implications for overall production and for Pemex and government revenues.

As the IEA's recent assessment of Mexican oil confirms, the problem is not one of resource availability.[11] There is no questioning Mexico's geological potential, particularly in its underexplored deepwater and unconventional oil and gas plays. But the question of accessing those reserves—that is, exploring for, discovering, and producing them commercially—has long been at the heart of the national debate in Mexico over the role of Pemex and the option of opening the oil industry to private and foreign participation.

Oil, Pemex, and the Federal Budget

Thankfully, despite being a major oil exporter, Mexico has not suffered from the prototypical effects of the resource curse.[12] Oil as a share of exports peaked in 1982 at 77 percent and has declined steadily since, falling below 40 percent by 1988 and below 15 percent by 1993; today, oil accounts for around 4 percent of Mexico's total exports.[13] Mexico's aggressive trade and market liberalization has led to important growth in manufacturing and diversification of export earnings. However, these figures do not properly relate the other real effect that oil has had in Mexico—what may be called the "Cantarell curse." Since production began in 1979, the Cantarell field alone is estimated to have generated over half a trillion dollars in revenue for Pemex and Mexico. Mexico's dependency on oil and its state oil company Pemex for the federal budget is quite real; in many ways, oil has been an economic lifeline for the national treasury, allowing successive governments to avoid needed tax and fiscal reform. This dependency extends to states and municipalities, which count on federal transfers to cover their budget.

According to one analysis, 89 percent of state income currently comes from the federal government. As Mexico's oil industry boomed, particularly with the enormous discovery of the Cantarell oil field, the federal budget grew dependent on oil; today, roughly 30 percent of federal budget revenues come from Pemex.

Interpretations of the economic impact and the "curse" that Cantarell has had, both for Mexico's structural development and Pemex, have varied greatly. Those analyses will not be revisited. What is important to note is how the resource dependency wrought by Cantarell in turn led to mismanagement in the field, as well as inefficiencies and ultimately to a stifling fiscal straightjacket placed on Pemex by the federal government.[14] Seeking to maximize what was at first the highly pressurized field at Cantarell, Pemex drilled hundreds of wells, creating a gusher-like production. Cantarell's development ultimately suffered from an almost perfect storm of mismanagement caused by ineffective technology, insufficient capital budgets, and intense pressure to produce as much oil as possible and maximize its rent for the federal treasury.[15]

With the benefit of hindsight, Cantarell seems to have allowed Pemex and Mexico to skirt the challenging issues that other nations faced in their petroleum sectors. These problems include such concerns as attracting and managing international investment and collaborate with international oil companies, dealing with bloated work forces, redressing severe managerial and fiscal inefficiencies, and tackling the most difficult to discuss issue: corruption. A possibly apocryphal story circulating in Mexico for several years concerns a question posed to a senior Mexican government official about the megafield: What if Mexico had never discovered Cantarell? His answer: "Mexico would probably be one of the most developed countries in the world."

For a series of PRI governments, oil emerged as a significant form of hard currency, and in some cases oil earnings were instrumental in efforts to stave off financial crisis, such as the 1994 peso crisis. After the Banco de México devalued the peso in late 1994 in response to a series of political and financial shocks that had left the country's markets in turmoil, Mexico was on the brink of sovereign default. In January 1995, the United States orchestrated an international bailout of roughly $50 billion. Mexican oil sales were used, quite successfully, as collateral for the roughly $20 billion in U.S. credit extended to Mexico, which was actually paid off some three years early.[16]

The brunt of the fiscal dependency has been borne—or perhaps more accurately, has been ascribed—to Pemex. Indeed, because of the onerous fiscal demands placed on it, Pemex has not been able to successfully manage its several years of pretax profits and has not turned a profit since 2006. Through onerous taxes and royalties, for years the federal government has milked the Pemex cash cow; the company is taxed at roughly 60 percent, though in some cases the effective rate can jump to 100 percent.[17] A review of statistics from the 2008 oil price spike underscores the extent of Mexico's fiscal dependency on Pemex. Despite the year's record oil prices, in 2008 Pemex lost $8.1 billion on revenues of $98 billion, and paid the federal government $57 billion in taxes and royalties. As a result of its tax burden, Pemex has been unable to direct adequate investment until only recently, and has borrowed heavily to meet requirements. There may be no more succinct summary of the legacy of the Mexican government and its national oil company than that set forth by the joint ITAM/Wilson Center report *A New Beginning for Mexican Oil*, which noted that "Pemex does not operate under a logic of value generation, but rent extraction."[18]

Beyond oil, the recent broader evolution of the Mexican economy bears discussion. Since a sovereign default in 1982, Mexico has made great strides to open its economy and has pursued an aggressive free trade agenda. It has reduced the role of the state in the economy and embraced global markets. Mexico, Canada and the United States implemented the North American Free Trade Agreement (NAFTA) in 1994. Mexico also has signed free trade agreements with more than 40 other countries, and because of its aggressive trade policies, 90 percent of trade is under free trade agreements.

For many, Mexico's economic reforms over the past two-plus decades have made it an exemplar of the Washington Consensus. Mexico greatly succeeded in lowering inflation, privatized a slew of inefficient state enterprises, increased its fiscal discipline, and reduced the nation's external debt burden as a percentage of gross domestic product (GDP). Nevertheless, economic growth in Mexico has been lagging, if not lackluster. One analysis of per capita GDP growth highlights the challenge facing Mexico: within Latin America, it has kept pace with Argentina but not with Chile or Brazil, and its growth is far below that of Southeast Asia and Eastern and Central Europe. Despite its economic reforms, it has underachieved in terms of growth for a variety of reasons, specifically faulty provision of credit, persistence of informality, control of key input markets by elites, continued ineffectiveness of public education, the role of China as an export goods competitor, and vulnerability to adverse external shocks.

Part of the reason for this lagging competitiveness and productivity is because the revolution in Mexico's trade relations and its manufacturing industry stands in stark contrast to the long-term refusal to do the same for the energy sector. Many in Mexico have commented that until the 2013–14 reforms, Mexico's economy had been only partly modernized, and that the energy sector's failings, both in terms of declining oil production and uncompetitive electricity prices for industrial consumers, were one of the most important handicaps limiting Mexican prosperity. The problem was that consensus on how to resolve these issues was impossible to reach.

Prior Reform Attempts

The Peña Nieto administration was not the first to attempt to reform the Mexican energy sector. Going back to the administration of President Carlos Salinas de Gortari (1988 to 1994), there have been attempts to modernize the sector and to inject higher levels of private participation. Although Salinas failed to open the hydrocarbons sector, he was successful in securing a partial opening of the electricity sector through the 1992 Electric Energy Public Service Law (Ley del Servicio Público de Energía Eléctrica; LSPEE). That legislation made five exemptions to the monopoly position of public power generators, allowing private power generators for the following reasons:

1. For self-supply contracts
2. By cogeneration

3. For sale to the Federal Electricity Commission (Comisión Federal de Electricidad; CFE)
4. As small power producers (less than 30 megawatt (MW) capacity)
5. For import or export.

These five exceptions, in particular the first and the third, later proved to be of critical importance in helping Mexico to meet growing electricity demand and provide access to cheaper electricity and green power for private businesses. Just as important, they highlighted the difference in the level of political sensitivity to electricity versus oil in Mexico.

On February 2, 1999, President Ernesto Zedillo attempted to take the reform further. He proposed a reform of Articles 27 and 28 of the Constitution to allow greater opportunities for private investment in the electricity sector and, critically, private participation in oil exploration, production, and processing. That proposal, which came at a time of deep divisions in Mexican politics, was so roundly rejected by both the PRD and the PAN that Zedillo gave up on his plans.

The PAN administration of Vicente Fox (2000 to 2006) also attempted to open the sector to private investment. Although some in the PRI supported his proposals, Fox similarly backed off from presenting more ambitious proposals for oil and gas liberalization after the PRD and many PRI legislators rejected his attempts to open the electricity sector.

What these three earlier efforts show is that Mexican governments traditionally have regarded attempts to open the electricity sector as a possible back door into the seemingly intractable conversation about opening the hydrocarbons industry to private investment. However, the deep divisions of Mexican party politics and ideology prevented those attempts from moving any further.

Paving the Way: The 2008 Energy Reform

In December 2006, Felipe Calderón, who had served a stint as secretary of energy under his predecessor Vicente Fox, assumed the presidency with a clear understanding of the problems and challenges of Mexico's oil-driven fiscal dependency and the burdensome political legacy at Pemex. He also was well aware of the ominous signs surrounding the national oil company's production and budget figures. By the end of the Fox administration, Pemex's deep-running problems , ranging from technological to financial and from deeply rooted corruption to labor issues, were becoming a matter of national urgency. Energy secretaries Elizondo and Canales both spoke eloquently about the looming crisis facing Pemex and Mexico's oil production. By 2005, there was strong evidence to suggest that if nothing was done to arrest the halt in Mexico's oil production, then Mexico would become a net oil importer by the end of the second decade of the 21st century.

Recognizing these problems, in 2008 President Calderón and his energy team worked with the congressional leadership to formulate both a legislative package and a coalition to pass it. From the beginning, the left-wing PRD party staged spectacular protests, created "resistance brigades" to oppose the reform, and blockaded Congress to prevent a vote. The deep-seated opposition from the PRD, as well as reluctance from the more nationalist elements of the PRI, meant that a constitutional reform vote—requiring a two-thirds majority in both chambers of Congress and a majority of the state-level legislatures—was out of the question. Instead, Calderón and his team decided to put forward a legislative package that focused on reforming Pemex, along with two new laws promoting the use of renewable and sustainable energy. By March, Energy Secretary Georgina Kessel and Pemex CEO Jesús Reyes Heroles had released a 130-page diagnosis of the problems facing the national oil company, and on April 8, 2008, President Calderón presented the legislative package to Congress.

Securing the support of the PRI legislators was critical, and that came thanks to the support of PRI senator Manlio Fabio Beltrones, long considered the intermediary between Calderón and the PRI. Once that support was in place, even massive demonstrations and a nonbinding referendum organized by leftist forces could not stop the legislation from moving forward. However, between the staunch opposition of the PRD and the modifications that the PRI introduced in Congress, the legislation that emerged was a watered-down reform of the energy sector. In the original proposal, Calderón had sought a framework that would have gone much further in opening the country's hydrocarbons to private participation. The proposal included measures that would have allowed Pemex to enter into joint ventures with foreign companies in exploration and production, and permitted private companies to build and operate refineries, pipelines, and storage facilities in Mexico.[19] The proposal also included a twist on opening new sources of capital for Pemex: Citizen Bonds, which were bonds open only to Mexican investors.

In October 2008, Mexico's Congress finally approved a set of measures aimed at reforming the sector, particularly Pemex. A central part of the legislative package focused on the need to create a more modern, agile Pemex, one that would have enhanced and increased autonomy through a major rewrite of many of the statutes governing the company, including revised contractual mechanisms that would allow it to hire outside firms to help produce oil though service contracts—the so-called incentive contracts. The new laws provided for a range of transparency measures and also reorganized Pemex management and allowed for "independent" members of the Board of Directors in an effort to include industry experts on the board. In typical negotiated Mexican political fashion, these new members took their places in May 2009: two were nominated by the PAN, one by the PRI, and the fourth by the PRD.

As part of the efforts aimed at the oil industry and Pemex, the reform also stipulated increased oversight of the national oil company by a new upstream regulator, the National Hydrocarbons Commission (Comisión Nacional de Hidrocarburos; CNH). The CNH's effort to exert its oversight authority initially led to a critical assessment and debate over the development of the Chicontepec oil field, as well as increased scrutiny and mandates for Pemex to reduce gas flaring and for deep water regulation. CNH commissioners were appointed for renewable five-year terms, and the commission's first president, Juan Carlos Zepeda, has had his term renewed since then.

A key element of the 2008 energy reform was the provision to allow Pemex to develop and bid incentive-based contracts, what Pemex has called "Integrated E&P [Exploration and Production] Contracts." In accordance with the reform measures, the new contract model allowed Pemex to make its service contracts more flexible, with higher payments for increased performance. Ultimately, the oil industry inside and outside of Mexico had little interest in this form of contract. Only a few contracts of this nature were signed, largely with service companies and not with traditional upstream market participants. Three particular mature onshore blocks—Magallanes, Santuario, and Carranza—came online in relatively short order, and production from these projects began to increase. However, the investment totals and impact on national oil production have been negligible to date.

The other two parts of the 2008 reform focused on renewable and sustainable energy, creating Mexico's first framework for the renewable energy industry and establishing the bases for a long-term reduction of the country's carbon footprint. Calderón's administration saw an impressive growth in renewables, especially in wind energy investments, and the April 2012 General Climate Change Law committed Mexico to reducing emissions growth by 30 percent by 2030 (50 percent by 2050), obtaining 35 percent of its energy from renewable sources by 2024, and establishing a national mechanism for reporting emissions.[20]

Consensus, Conflict, and Reform

In his book *México, la gran esperanza* (*Mexico, the Great Hope*), prepared in classic U.S. politicking style for his 2012 presidential run, Enrique Peña Nieto set forth a host of economic reform proposals. Among the many notable policy positions was his argument of the need for energy reform, and specifically for reforms aimed at the national oil company, the behemoth state within a state that is Petroleos Mexicanos.[21] In his campaign tome, Peña Nieto pressed for "the transformation of Pemex so that, while maintaining the state ownership of the company, it is allowed greater flexibility to seek partnerships with private investors, make the public finances less dependent on it, invest part of the oil rent in renewable energy so that oil is the source of financing for the ‘inevitable energy transition that Mexico and the world will experience.’”[22]

As president, Peña Nieto added another signpost to the long, winding road of the narrative of Mexico’s oil sector and Pemex. During the campaign, when it came to the energy sector he was even more emphatic than he had been in his book. He asserted in several interviews that he would stake his administration’s success on attracting private investment to Mexico’s oil patch, which could include selling shares in Pemex. Peña Nieto called the theme of Pemex reform as possibly the “signature issue” of his *sexenio.* In a cleverly crafted line, he stressed that it was exactly because of the PRI’s nationalistic legacy with regard to Mexican oil that he would succeed; to reporters, he frequently likened it to the idea of Nixon going to China.[23] Many embraced this supposition, and added that along with the PRI’s historical legacy, its relationship and support within the mighty oil workers’ union was perhaps even more important for the reform efforts. [24]

By the time Peña Nieto took office, Mexico faced a triple threat to its energy sector. First, oil production was declining rapidly because of the inefficiencies and restrictions of a monopolistic oil sector. Second, national economic competitiveness was being severely compromised by the high electricity price being charged to industry. Third, the nation’s two national energy companies, CFE and Pemex, were hamstrung by restrictions placed on their activities and finances. Nothing short of a revolution would be sufficient to drag the national’s energy industry belatedly into the 21st century.

The Pacto por México

Between his election in July 2012 and his assumption of office on December 1, President-elect Peña Nieto, his incoming administration, and the PRI leadership worked closely with Mexico’s other two major parties, the PAN and the PRD, to create a broad economic agenda to reinvigorate the nation’s economy.[25] The Pacto por México (Pact for Mexico) was formalized on December 2, 2012, and in addition to signatories from the PRI, PAN, and PRD, the mayor of Mexico City, the governors of Mexico’s 31 states, and the leaders of the Mexican Senate and Chamber of Deputies also participated in the signing ceremony.[26] The pact, which included 95 initiatives, was designed to gain consensus around a series of structural adjustments that would help Mexico to shake off its sluggish growth of the past several years.

To boost employment opportunities for its citizens, the country had to address its competitiveness and understand why it was falling behind economies such as South Africa, India, and China. During the campaign, Peña Nieto had highlighted many of the reasons he and his economic team blamed for the country's lackluster economic performance. Most notable were the drags on productivity and competitiveness derived from the remnants of the state-led growth strategies and market distortions caused by state monopolies in the energy sector. Juan Pardinas, director of Mexican think tank IMCO, described Mexico's energy sector as "hermetically sealed" and on par with that of North Korea—obviously not a corporate structure that would boost a country's global competitiveness.[27] When it came to energy reform, the pact spelled out the need to "[c]arry out an energy reform to serve as the engine of investment and development . . . that will turn the sector into one of the most powerful engines of economic growth through the attraction of investment, technological development, and the formation of value chains."[28]

Signed the day after Peña Nieto was sworn in as president, the Pacto por México offered the new administration an immediate political and strategic roadmap complete with timelines and goals for translating to policy and delivering fiscal, education, political, and, of course, energy sector reforms. But even with the pact's consensus-building approach and important successes on education, legal and telecom reforms, the energy question proved too divisive. The PRD left the pact in November 2013, effectively rendering it with little to no future.[29] Energy reform thus moved ahead outside the structure of the pact, becoming a PRI-PAN collaborative reform effort in the legislature.

Nonetheless, the agreement provided the political environment in which progress in negotiations could be made and a sufficiently broad coalition constructed to allow ambitious reforms to take place. But the pact was not the only political agreement that was needed to move forward with energy reform. The PRI party constitution itself had a restriction on allowing private participation in the hydrocarbons sector, and so early in 2013, the PRI party congress approved changes to its constitution, permitting the party to support constitutional reforms that would allow private investment.

The PAN Proposal

On July 31, 2013, the PAN submitted its energy reform proposal to the Mexican Senate in an effort to formally begin the debate over the future of the nation's energy sector. This effort, which preceded a formal proposal from the Peña Nieto administration, ramped up the national debate and caused the PRI and Peña Nieto team to advance their efforts as well. But most important, as would become evident as the final reform bill was negotiated, the PAN proposal pushed the potential reform measures beyond what the PRI had been privately discussing and intimating that it was comfortable pursuing.

The PAN proposal called for amending the Mexican Constitution, specifically Articles 25, 27, and 28, with implementing legislation enacted thereafter. It set forth measures to open the country's oil and gas sector (and electricity markets) to private investment and competition. The proposal also outlined the creation of a Mexico Oil Fund to administer oil profits and in so doing redress the country's fiscal dependence on oil revenue. In addition, the PAN set forth a plan to provide Pemex (and Mexico's state-owned power monopoly CFE) with more autonomy, making changes to their corporate governance policies and corporate boards of directors—specifically, eliminating the five union seats on the Pemex board. The proposal also included a focus on sustainability and climate change.[30]

Most notably, the PAN proposal set forth a structure to imbue the CNH, the upstream regulator created during the 2008 reform, with the ability to offer concessions and contracts with private market participants for exploration and production of Mexico's hydrocarbons. In international petroleum contracting terms, a concession was a major departure not only from Mexico's historical legacy, but also from what the country's leaders had previous discussed as possible in energy reform. Some called it a radical departure from the status quo, and it certainly was beyond what the PRI had indicated that they intended to pursue in the legislature.

When it comes to international petroleum contracts, essentially there are two structures. The first is a concessionary system. As David Johnston describes it in his chapter of *Escaping the Resource Curse*, in a concessionary system "the government grants the company the right to take control of the entire process—from exploration to marketing—within a fixed area for a specific amount of time." The second is a contractual-based system that typically falls into one of two subsets: production-sharing contracts and service agreements. Hugely important for Mexico, given its historical legacy and outright prohibition on private ownership of hydrocarbons, was what Johnston calls "the distinguishing characteristic" of each contract modality. The key distinction comes down to where, when, and if hydrocarbons ownership can be transferred to a private company.[31] The PAN proposal presented a clear marker that outlined a contract structure to allow for a form of private ownership of Mexico's hydrocarbon resources.

By setting forth a reform that included a concession-type contract, the PAN proposal diverged strongly from the 2008 measures and directly confronted Mexico's legacy of its complete and entire ownership over its subsoil resources and the wealth those resources could generate. In addition, the measures aimed at Mexico's state-owned energy sector enterprises were a massive shift in how the country managed the sector and the role of the government within that sector.[32]

The PRI Proposal

On August 12, 2013, barely two weeks after the PAN had unveiled its ambitious proposal to reform Mexico's energy sector—a proposal that went further and diverged more from the country's nationalistic oil legacy than had been expected—the PRI and the Peña Nieto administration set forth their party's energy reform outline. In a televised announcement from Los Pinos, the presidential palace, the president declared that his party's and administration's proposal would "make the energy sector one of the most powerful motors of the national economy." He further argued that the reform was the first step toward a 21st-century energy sector for Mexico.[33]

Invoking the spirit of Lázaro Cárdenas, Peña Nieto tiptoed through a political minefield by proposing to restore a clause that had been written into the constitution in 1940 but later had been removed. The clause allowed the government and Pemex to enter into both production- and profit-sharing contracts with foreign firms and private Mexican companies. Peña Nieto cautiously specified that he would only seek legislative approval for profit-sharing deals, thereby preventing private and firms from physically possessing Mexican oil. However, this proposed arrangement also meant that companies would have significantly less incentive to invest in the Mexican energy sector.

Similar to the PAN proposal, the PRI outlined a proposal for the oil and gas sector that had at its center constitutional amendments that would end the Pemex monopoly in the country's upstream and expose the national oil company to competition by allowing it and other new private market participants to enter into profit-sharing contracts with the Mexican federal government. The PRI proposal included measures aimed at reforming Pemex and restructuring it into a commercially oriented entity; the host of proposed structural and fiscal changes for the firm would enable it, for instance, to enter into partnerships and joint ventures with private firms. Secondary, or implementing, legislation would be enacted after the constitutional amendments were approved and utilized to add further detail to the reform.

Distinct from the PAN proposal, the PRI's measures did not include the possibility for concession contracts but instead specifically noted that it would maintain Mexico's historical and constitutional ownership and control of its subsoil and hydrocarbon reserves and the prohibition on private ownership. In an effort to preclude debate over the proposal's relevance for the international oil sector, Enrique Ochoa Reza, then deputy secretary for hydrocarbons, hosted a press conference to discuss the proposal and went to great lengths to reassure potential investors as to the structure of oil contracts under the Peña Nieto reform. He stressed that the model that the government would pursue for the profit-sharing contracts would allow for the critical element and heavily debated concept of booking of reserves in accordance with the relevant regulations of the U.S. Securities and Exchange Commission.[34]

Other Proposals

Although the PRD, through its participation in the Pacto por Mexico, had agreed to the basic outlines for structural energy reform, the party was fractured with regard to the contours for the reform it would support. Indeed, the PRD's presidential candidate, Andrés Manuel López Obrador (often known as "AMLO," from his initials), had resigned from the party in objection to the pact and specifically opposed the efforts aimed at opening Mexico's energy sector to private participation. After leaving the PRD, López Obrador formed a new political movement, MORENA, that ultimately became a political party authorized by Mexican electoral authorities.

Overall, PRD party leaders opposed the market opening that was at the core of both the PAN and PRI proposals, while the MORENA posture was that of pure opposition and outright rejection of any form or opening of Mexico's energy sector to private participation. The most notable element of the López Obrador and MORENA position was the call for a national plebiscite or referendum on energy reform.[35]

Upon seeing the government's proposals, Cuauhtémoc Cárdenas—the son of former president Lázaro, the founder of the PRD, and the party's leading thinker on energy issues—immediately denounced what he saw as the hijacking of his father's name and called on fellow nationalists to protest against the "privatization" of Pemex. Followers of López Obrador joined this faction, and planned and projected massive demonstrations against the proposals. But in Mexico City, where antigovernment protesters regularly take to the streets, the protests against energy reform were overshadowed by those of the national teachers' union, which similarly was opposing the government's education reform. An initial protest called by López Obrador attracted only 25,000 people. A second march along Mexico City's Reforma Avenue in conjunction with the PRD likewise managed to draw only 25,000, and a third attempt by López Obrador a few weeks later saw the numbers drop to 12,500.

The PRD on the whole instead sought to reform Pemex, particularly regarding its fiscal and tax burden, and though the party argued for enhanced budget autonomy and a stronger national oil company to reinvigorate the energy sector it also emphasized the need to confront the massive corruption within the firm. Cuauhtémoc Cárdenas argued for reform centered on three pillars: (1) no need to amend the Constitution's Article 27; (2) a new management autonomy and governance structure for Pemex; and (3) tax reform to redress Pemex's insolvency.[36]

The Push for Energy Reform, 2013-14

Mexican public opinion has long been opposed to opening the energy sector. Perhaps the most stunning manifestation of this opposition came in the contrast of public responses to two questions in a 2006 study conducted by the Mexican think tank CIDE (Centro de Investigación y Docencia Económicas; Center for Economic Research and Teaching). The poll, titled *Mexico and the World 2006*, asked Mexicans about their attitudes to international affairs and foreign countries. The first of the two key questions asked Mexicans if they would agree to "Mexico and the United States becoming a single country if this would mean a better standard of living for you." To the surprise of most analysts, 54 percent of Mexicans agreed with the proposal. Later in the study, another question asked "should the Mexican government permit or not permit foreigners to invest in oil production, exploration, or distribution?" In this case, 76 percent of respondents nationwide answered "No.".[37] When contrasting the response to these two questions, it appears that Mexicans were more likely to sell their country than their oil!

This overwhelming opposition to foreign participation in the oil sector reflects decades of nationalistic rhetoric; the celebration of the oil expropriation; and the close links between the symbols of the flag, Pemex, and sovereignty. Opinion polls consistently showed that Mexicans rejected the option of opening the energy sector to foreign and private investment as had happened in the rest of the economy. This rejection was in part a result of the perception that the privatization of the banking and telecommunications sectors in the 1990s had resulted in an unjust concentration of economic power in the hands of a few individuals and groups.

But the situation in 2013 offered some hope. Although the 2008 reform efforts had been stifled by political realities and had done little to improve the sector's prospects, Mexican public opinion increasingly seemed to be accepting the notion that Pemex and national oil production were in trouble. This was greatly helped by the fact that the PRI was driving the reform efforts and that the initial proposal had been modest. In September 2013, the American firm ViaNovo released a poll that showed some surprising movement on the issue.[38] The poll found that 53 percent of Mexicans supported the government's proposal with only 38 percent opposing. In part this reflected the honeymoon period that the Peña Nieto government was experiencing at the time, and in part it indicated something of Mexicans' ignorance about the content of the reforms. Nonetheless, it showed that the concerns about Pemex had reached a broad section of the public.

This was because there were multiple diagnoses of the problems facing the national oil company. In addition to the studies presented during the 2008 reform attempt, newspapers and television news were full of stories about declining oil production and Pemex's financial and labor problems, along with articles about the success of modernization efforts in other countries.

Civil society played its part, too. The Mexican think tank IMCO (Instituto Mexicano para la Competitividad; Mexican Institute on Competitiveness) dedicated its 2013 international competitiveness report to the oil industry, titled *Nos cambiaron el mapa: México ante la revolución energética del siglo XXI* (*They Changed the Map on Us: Mexico and the 21st-Century Energy Revolution*).[39] In that report, IMCO highlighted the many failings of the Mexican system, including the lack of investment in research and development, the scale of inefficient investment in Pemex, and the astonishing fact that both Cuba and North Korea allowed more foreign investment in their oil industries than Mexico did. At the same time, the IMCO report emphasized Mexico's huge oil and gas potential and argued that the only way to fully exploit that natural endowment was to open the sector to private and foreign investment.

Another report, this time from the Wilson Center's Mexico Institute and ITAM (Instituto Tecnológico Autonomo de México; Autonomous Technological Institute of Mexico), made a different argument. Rather than focus on the diagnostic, *A New Beginning for Mexican Oil* established terms of reference for a successful energy reform process in Mexico, explaining basic terminology and proposing guiding principles. Based on a 2012 series of meetings with energy experts in Mexico City, the report argued for a reform in which "the twin principles of economic pragmatism and operational flexibility should be given a central position," one that is "as simple and straightforward as possible and should open rather than close policy options for the Mexican state." It also stated, "Third party participation is needed in areas where Pemex cannot satisfy the nation's energy needs."[40]

These ideas and many others became part of the policy dialogue surrounding the reform process. Between September and October, the Mexican Senate held forums on the energy reform, inviting expert testimonies from national and international analysts. The forums reinforced the notion that the current status quo was untenable. On October 31, 2013, Secretary of Energy Pedro Joaquín Coldwell, CFE chief executive officer (CEO) Francisco Rojas Gutiérrez, and Pemex CEO Emilio Lozoya gave testimony in the Senate.

Momentum was building, but consensus was difficult to reach. On November 28, interparty negotiations broke down and the PRD left the bargaining table and the pact. From this point on, the negotiations would be dominated by the PRI and the PAN, resulting in a definite shift toward more rather than less liberalization in the new energy model.

Approval

After months of political horse-trading, as well as efforts to build consensus for the final reform measures and constitutional amendments, the Peña Nieto administration submitted its proposal to Congress in early December 2013. As discussed above, the debate in Congress and public response led to expected protests, recriminations, and accusations of *vendepatria*. But the administration's ability to take advantage of converging political factors and to navigate and strike an appropriate balance between its desired proposal and that of the PAN—along with the PRD's begrudging acknowledgment of the desperate need to address a faltering Pemex—allowed for a fairly quick final approval. Mexico's lower house, the Chamber of Deputies, passed the energy overhaul 353 to 134, after an earlier Senate approval of 95 to 28.[41]

As required for the reform's constitutional amendments, 24 of Mexico's 32 states and federal district carried them over the final hurdle by a majority approval in the state legislatures to ratify the reform. Although the final vote reflected an affirmation of the convenient coalition of the center-right PAN and Peña Nieto's own PRI, the final measures have proved to more fully reflect the PAN proposal on oil, particularly for contractual modalities—not least because the PAN withheld its support until the government agreed to adopt a more ambitious approach.

Constitutional Amendments

The cornerstone of the Peña Nieto energy reform, and an element he had discussed since his campaign for president, was the need to amend the Mexican Constitution and overturn the seemingly immutable prohibition of private sector participation and investment in the country's energy sector. Nowhere was this more relevant than for oil and the national icon of Pemex. As Peña Nieto prepared the reform measures and ushered them through Congress, he was able to draw upon important lessons learned from earlier PAN administrations. His predecessors had spoken forcefully about reform, but had proved politically incapable of realizing anything more than marginal and incremental changes in the nation's energy sector, and thus had been ineffective in reversing the ominous trends of plunging oil production, deepening inefficiencies, and a faltering Pemex. As Peña Nieto noted during the signing ceremony on December 20, 2013, to much applause across the global energy business, he had succeeded in confronting an enormous historical legacy of "myths and taboos" about Mexico's energy sector.

The Peña Nieto reform successfully included amendments to Articles 25, 27, and 28 of the Mexican Constitution. These amendments effectively threw open the country's oil sector to private participation and new contractual opportunities for pursuing hydrocarbon development, though the reform measures carefully maintained that the state would maintain ownership of the nation's subsoil.

In selling its reform, the Peña Nieto government established six founding principles for the constitutional reforms. Although these principles have been only partially met at the time of this writing, it is important to note them here:

1. Hydrocarbons continue to be the property of the nation.
2. More competition in the energy sector will bring higher productivity, more competitiveness and better prices.
3. Strong regulatory agencies.
4. Transparency.
5. Clean energy.
6. Strengthening Pemex and CFE.

Although the hydrocarbons reforms attracted almost all of the media and political attention, the reform package went far beyond just oil and gas. In the electricity sector, the CFE's legal status was modified, with structural changes that essentially unbundled the company into smaller units. As with Pemex, CFE would become a state-owned productive company; likewise, the CFE board would be reworked to include independent members. In electricity generation, the reform removed all limitations to private participation remaining after the 1992 LSPEE. For the first time in decades, generation would become a fully competitive activity in Mexico, and private investment would be allowed throughout the value chain. The transmission network was taken out of the hands of CFE and transferred to a new agency known as CENACE (Centro Nacional de Control de Energia; National Energy Control Center). Adequate access to natural gas supplies for generation was made possible by building out cross-border pipelines to the United States and creating a national gas transportation regulatory agency, CENAGAS (Centro Nacional de Control de Gas Natural; National Natural Gas Control Center). Lastly, the renewables industry was promoted by allowing private investment in geothermal generation and through new laws promoting clean energy.

Secondary Legislation

Although the constitutional amendments were an essential cornerstone of the energy reform process in Mexico, they were crafted to be intentionally broad and expansive. Implementing or secondary legislation was required to complement and provide specificity for most aspects of the energy reform and its implementation. This was particularly the case with regard to the structure and parameters for private investment in Mexico's oil sector, as well as the manner in which the reforms sought to transform Pemex. Therefore, soon after the constitutional amendments were signed in December 2013, the Peña Nieto administration began to work with Congress to craft the requisite secondary legislation that would need only a simple majority for approval.

The details of the secondary legislation were debated throughout the first half of 2014. Although there was significant agreement about the overall goal of the reform, the secondary legislation became highly contentious. Industry representatives lobbied hard for legislation that would both expand their freedom of action and strengthen the regulatory framework to give greater certainty. President Peña Nieto submitted a package of 21 laws—9 new laws and 12 amended laws across the entire scope of Mexico's energy sector—implementing the constitutional reforms for review and debate by Congress in April 2014. Although the laws represented literally dozens of changes that would impact the future of the country's energy outlook, they can be summarized in two critical elements: fiscal and governance. Even then, there was drama. In June, for example, the PAN exited the Senate negotiations for three weeks following a breakdown in talks with the PRI. However, on August 6 that year, in an astonishingly short period since the constitutional reform in December, Congress approved the secondary legislation and sent it to the executive to be signed. President Peña Nieto signed the new laws on August 11, 2014.

Final Results

Beyond simply confronting historical ghosts in the sector and opening the possibility of private investment, the constitutional amendments and secondary legislation significantly reordered the country's energy governance and institutional structure. Specifically, the reform ended Pemex's monopoly on oil and gas production and set forth a process by which the national oil company would become a "state productive enterprise" (discussed below). The critical fiscal and governance elements in the amendments and secondary legislation pertained to the changes to the Hydrocarbons Law and Hydrocarbons Revenue Law. Modifications in these laws effectively codified and authorized private investment and participation in Mexico's upstream. They further spelled out the possible contractual modalities by which the government would allow and seek private participation in the development of the country's hydrocarbon resources. They involved four contract types: licenses, production-sharing contracts, profit-sharing contracts, and service agreements. (The last of these had been the less-than-successful key element in the 2008 reform measures.)

Further, the laws assigned the authority and responsibility for regulation of the country's upstream to the National Hydrocarbons Commission (Comisión Nacional de Hidrocarburos; CNH), perhaps the most successful outcome of the 2008 reform effort. The other existing regulatory body, the Energy Regulatory Commission (Comisión Reguladora de Energía) was further strengthened and, like the CNH, saw its autonomy guaranteed by law. A new regulator, the Security, Energy, and Environment Agency (Agencia de Seguridad, Energía y Ambiente; ASEA) was created, with responsibility for industrial safety and environmental protection across the oil value chain. Unfortunately, however, ASEA lacked the institutional independence of CNH and CRE, operating as a dependency of the Secretariat of the Environment. This arrangement would be severely criticized in later years as it left the door open for potential political interference in the regulatory environment.

The laws also created CENAGAS, the new independent operator of the nation's natural gas pipeline network. Additionally, the Hydrocarbons Law also stipulated that the

Secretariat of Energy would retain the authority to grant permits for petroleum treatment and refining; processing of natural gas; import and export of crude oil, natural gas, and petroleum products; and activities that previously were held exclusively by Pemex.[42]

In the electricity sector, the unbundling of the CFE was the most serious challenge to be overcome to achieving a fully competitive sector. Market participants and analysts continued to express doubts and concerns about the CFE's willingness to give up its monopolistic position. However, the subsequent bidding rounds for generating capacity saw huge interest on the part of foreign and national companies, with record low prices for renewable electricity that will benefit Mexico for years to come (see chapters by Peter Nance and Lisa Viscidi).

Importantly, on top of all of the major changes to the country's energy sector, the broader intent of the energy reforms and the subsequent Energy Transition Law, both underscore the Mexican government's desire to build an energy sector that meets the need to shift to a low-carbon growth model. Indeed, Mexico has made a strong commitment to boosting clean energy deployment and set forth ambitious emissions reduction targets and goals as part of its agreement as a signatory to the Paris Agreement on Climate Change.

The drama and intrigue of decades of discussion and debate in Mexico over the need to modernize the energy sector ultimately came to head in a period of less than 13 months. The blistering pace of the reform process was extraordinary when compared with the speed at which energy reform advanced in other countries, and it was testament to the political bargaining skills, expertise, and dedication of the staff of Secretariat of Energy. Of all Mexico's reforms, the changes to the energy sector remain the most significant and far-reaching and will be the most impactful in the long run, if they are allowed to take their course. Politics and the electoral fortunes of the country will determine whether that is indeed the case.

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