

Mexican Federal Economic Competition Commission



THE TRANSITION TO COMPETITIVE RETAIL GASOLINE AND DIESEL MARKETS





COFECE's BOARD OF COMMISSIONERS

Chairwoman

Alejandra Palacios Prieto

Commissioners

Alejandro Ildefonso Castañeda Sabido Benjamín Contreras Astiazarán Eduardo Martínez Chombo Martín Moguel Gloria Jesús Ignacio Navarro Zermeño

TABLE OF CONTENTS

1. Introduction	
2. Prices and Fees	8
2.1 Maximum Sales Price to the Public	8
2.2 First-Hand Sales Prices (VPMs)	13
2.3 Transportation and Storage Fees	16
2.3.1 CRE Regulation	16
2.3.2 The Illicit Market	17
3. Infrastructure and Logistics	19
3.1 Saturation and Lack of Infrastructure	19
3.2 Elements Associated with Saturation	24
3.2.1 Capacity Assignment	24
3.2.2 Mechanisms That Prevent Unduly Discriminatory Dealing	25
3.3 Elements Associated with New Infrastructure Development	26
3.3.1 Guarantee of Supply	26
3.3.2 Steel Tariffs and Countervailing Duties	27
3.3.3 Cross-Holding	28
3.3.4 Last-Resort Alternatives to Guarantee Open Access	29
3.4 Port-Related Infrastructure	30
3.5 Foreign Investment Participation Restrictions	33
3.6 Railroad Transportation	34
4. Quality	35
4.1 Standardizing Fuel Qualities to Imports	35
4.2 Imported Product Compliance Evaluation	36
5. Sale to the Public	38
5.1 Franchise and Supply Contracts	38
5.2 Regional Concentration	40
5.3 Buyers' Alliances	42
5.4 Exclusive ASA Provision	44
5.5 Rights-of-Way	45
5.6 Local Restrictions	45
5.6.1 Minimum Distances	46
5.6.2 Minimum Surface Areas	47
5.7 Access to Consumer Price Information	49

Annex 1. Value-Chain, Production and Domestic Markets	50
Value Chain	50
Fuel Supply and Demand	51
Domestic Fuel Production	52
Fuel Imports	53
Refining-Segment Problems	54
Industry Information	56
Annex 2. Fuel Characteristics as Required by Domestic and	
International Regulation	57
Glossary	59
Recommendations	60

1. INTRODUCTION

Energy-related constitutional and legal reforms fundamentally changed Mexico's hydrocarbons industry through the establishment of that nation's constitutional Articles 25, 27 and 28, as well as its secondary legislation, guidelines, policy objectives and rules, and an institutional design that seeks to migrate from a model of vertically integrated state monopoly into that of competitive markets, all over the course of relatively few years.

As regards retail gasoline and diesel markets, provisional structures in Mexico's Hydrocarbons Act (hereafter known by its acronym in Spanish: LH) stipulate these fuels' retail sales prices will be determined in free-market conditions starting 1 January 2018.

At the same time the abovementioned provisional structure establishes a series of obligations and regulation instruments that various authorities must define and implement in order to gradually create spaces for competition, for example, as regards prices, asymmetrical firsthand-sales regulation (acronym in Spanish: VPM) Petróleos Mexicanos (hereafter Pemex) may make, permits for undertaking regulated activities, open infrastructure access to pipeline transportation and storage terminals, as well as technical specifications on fuel and service-station construction.

One relevant decision was the 23 February 2016 publication in Mexico's Official Federal Gazette of a "Notice informing that as of 1 April 2016 [Mexico's] Ministry of Energy (acronym in Spanish: SENER) will be empowered to grant gasoline and diesel importation permits to any interested party that complies with applicable legal strictures." This executive-branch order sought, among other ends, to expand fuel provision alternatives and incentivize transportation-, storage- and distribution-infrastructure-related physical investment projects.

The transformation of the industry's industrial organizational model should, among other effects, transmit clear price signals, kick off new infrastructure development, spur modernization at Pemex and in general promote efficient market functioning. Similarly, the monopoly's revocation should not give rise to supply problems, unjustified price increases in certain regions of Mexico or the formation of economic agents in dominant positions who might spread anti-competitive practices in these fuels' markets. To that end, public policy and measures applied during this transition period are to create conditions that allow for a transition toward a competitive liquid fuels market.

The goal of the present report is to identify a range of obstacles that might affect the transition to competitive gasoline and diesel markets, as well as to present proposals to authorities at a number of government entities for adopting public policies favoring a competitive environment. The obstacles identified here essentially reside in legal stipulations or in the structural characteristics of incipient Mexican gasoline and diesel markets.

Mexico's Federal Commission for Economic Competition (acronym in Spanish: COFECE) is issuing the present document as part of its work promoting the adoption of free-market-entry and competition principles on the part of public authorities in all government branches and departments, in high-

impact domestic-economy markets and on behalf of consumer wellbeing, in accordance with criteria established in its 2014-2017 Strategic Plan.

The recommendations and proposals contained in the present document deal exclusively with free-market-entry and economic competition and are made without any further consideration of additional public-policy aspects, provided they are not the province of this document's issuing authority. The above does not limit nor prejudice COFECE's mandate to apply the Federal Economic Competition Act (acronym in Spanish: LFCE) by means of actions such as: i) investigating and sanctioning monopolistic practices; ii) guarding against market structures that pose risks to competition; and iii) determining the existence of essential facilities or trade barriers.



2. PRICES AND FEES

Previous to energy reform, Pemex and its subsidiaries enjoyed exclusive gasoline-exploration, -exploitation, -refining and -storage rights as well corresponding to other refined-petroleumderived liquid fuels. Although Mexicans and Mexican companies (with a foreign-party-exclusion clause) are allowed to engage in retail sales, this could only be undertaken in accordance with the Pemex franchise business model. The model impeded market entry and inhibited the development of competitive capacities.

Another implication of that model—given the integrated nature of Pemex's activities and the establishment of a sole, nationwide maximum retail price—was the inexistence of price signals in many parts of the country as well as along different links in the value-chain. As a consequence, there was no way to determine each activity's values and opportunity costs in a way that would reflect the market and its infrastructure's real conditions. Therefore, to migrate from a monopolistic to a competitive market, it is fundamental to transmit proper price signals to gasoline and diesel markets, to support greater participant entry and incentivize investment in the value-chain-links and regions that require it.

2.1 Maximum sales price to the public

With regard to prices, the LH's provisional Article 14 stipulated that until 31 December 2017, gasoline and diesel prices would be subject to maximum price limits. The Federal Executive Department would establish a maximum price by accord by considering: i) the relative transportation cost-differences between regions; ii) various distribution and retail distribution/sales instruments; iii) adjustments congruent with projected economic inflation; and iv) these fuels' international prices.

On 18 November 2015 Mexico's *Federal Gazette* published the decree entitled "*Decreto por el que se reforman, adicionan y derogan diversas disposiciones de la Ley del Impuesto Especial sobre Producción y Servicios (IEPS)*," which modified the maximum-price model in LH's 14th provisional Article stipulated.

Thus for fiscal years 2016 and 2017, Mexico's Ministry of the Treasury and Public Credit (acronym in Spanish: SHCP) will establish a range of floors and ceilings for maximum gasoline and diesel prices. This seeks to assure "[...] maximum prices can begin to fluctuate consistently in relation to international references, as will occur with definitive open pricing starting on 1 January 2018."

In the run-up to open pricing, the strategy with regard to maximum retail price regulation, from the present date until 31 December 2017, should seek to i) incentivize new-competitor entry into the market and ii) immediately facilitate the orderly transition from a nationwide one-price model to a free-market model. To achieve these objectives it will be pertinent to review a number of elements, as will be explained below.

i) Price Range Upper and Lower Limits

By an Agreement¹ on 24 December 2015, the SHCP established the 2016 applicable fuel price range:

Table 1. 2016 fuel price range			
Fuel type	(in pesos p	(in pesos per fuel liter)	
	MAXIMUM	MINIMUM	
Gasoline <92 octane	\$ 13.98	\$ 13.16	
Gasoline > or equal to 92 octane	\$ 14.81	\$ 13.95	
Diesel	\$ 14.63	\$ 13.77	

The fluctuation range ceiling (its upper limit) seeks to protect end-users from sudden price increases, while the range floor (lower limit) seeks to guarantee a certain level of Pemex profitability as well as corresponding margins to the state-owned manufacturing enterprise's trade partners and franchisees.

These maximum fuel-price values (both upper and lower limits) represent a commitment on the part of the federal government that these prices, determined monthly, be fixed within that range (representing 3% above and below the December 2015 price). To establish fixed monthly fuel prices during fiscal years 2016 and 2017, the SHCP will consider the following variables:



1 Accord announcing maximum gasoline and diesel price range, 2016. Available at: <u>http://www.dof.gob.mx/nota_detalle.php?codigo=5421290&fecha=24/12/2015</u>

In cases where gasoline and diesel prices monthly established by the SHCP are out of range, the adjustment mechanism will be applied by means of supplementary IEPS payments. Therefore, endusers would pay supplementary IEPS fees if the monthly price falls below the range's lower limit. Conversely, a lower IEPS fee would be paid if the calculated price exceeds the range upper limit. Fuel price makeup calculations this year have been as follows:





Gasoline > or equal to 92 octane

Source: Agreements published by the SHCP, available at Mexico's *Official Federal Gazette*. Figures may not coincide due to rounding.

As can be seen in the above diagrams, from January to June, monthly prices for lower-octane gasoline and diesel ended up slightly under the range's lower limit, meaning consumers paid complementary IEPS fees. In July, on the other hand, monthly gasoline prices moved above the range's lower limit.

It is also important to point out that the range's upper limit was calculated based on projection- and logistics-costs-related information Pemex provided vis-à-vis the commercial scenario that prevailed in December 2015, making it possible that economic agents other than Pemex (e.g., potential independent importers) deal with cost structures that are different from those of the State-owned producer when it comes to gasoline and diesel commercial activities, everywhere from reference markets to service stations. Therefore the amount of the range's upper limit could be lower than the price those economic agents could offer, based on their costs, in certain parts of Mexico.

Because of this, raising the corresponding the maximum price range's upper limit value would be advisable as a means of allowing possible entrants to estimate values and opportunity-costs free from the restriction the upper limit implies. What's more, lowering the fluctuation range's lower limit could allow consumers in some regions to benefit, in the short term, from lower fuel prices.

SENER reported that as of 24 June 2016 it had issued 74 gasoline- and 105 diesel-importing permits. That said—and despite being legally enabled to do so—there are no reports of any economic actor undertaking importation activities to sell such fuels, and gasoline and diesel provision continues to lie entirely with Pemex. This (among other reasons) could be a sign that the price formula does not allow for fuel to be acquired in the United States and for real logistical costs, plus a sales margin, to be added and then be sold in competitive conditions throughout Mexico. Thus it is important that formula components for establishing prices—as well as the range's upper and lower limits—neither block nor inhibit importation activities, which are the only viable short-term alternative to guaranteeing non-Pemex supply options.

Recommendation: Expanding the values associated with the range's upper and lower limits would allow the maximum public sales price to more faithfully respond to market costs and conditions and as such, would attract more economic agents and better conditions in the run-up to definitive price deregulation.

ii) Updating the formula's "margin" data

Currently, the maximum price model does not reflect real logistic-cost differences amid regions, especially transportation. This is because the data with which the "margin"-related logistical cost (delivery, transportation, handling costs) was calculated to determine fuel prices were arrived at through Pemex-provided information that was not up to date. Updating these data would also help foster greater congruency between formulae determining maximum retail and VPM prices in relation to logistics.

Recommendation: To make the maximum-price calculation, the SHCP should consider costs the CRE has updated and approved for Pemex. To that end, Open-Season outcomes applicable to Pemex infrastructure will provide relevant information.

iii) Abandoning the sole-maximum-price model on the national level

The convenience of maintaining a sole, nationwide maximum price policy during the transition period that does not reflect differences largely based on logistical costs should be evaluated.

Recommendation: Price regulation more appropriate to laying the groundwork toward open pricing scheduled to start on 1 January 2018 should consider the feasibility of establishing different prices by region. The measure would send price signals to the market based on logistical realities, which would favor market entry into retail sales activities and would accustom consumers to price differences that are normal in free-market models.

iv) Containing price increases in certain local or regional markets

The industrial structure previous to energy reform implied a series of conflicting subsidies in different parts of Mexico that will be laid bare with open pricing. At that point, the price will necessarily reflect different logistic realities throughout the nation and as such it could rise or fall, in certain regions, in relation to the current maximum price. As such, prices will perform an essential economic function by drawing attention to scant infrastructure and investment opportunities which in turn will support additional economic agents' participation.

To reduce the scope of these inter-regional fluctuations, it will be essential to guarantee free marketentry and competition along every link of the production chain. To the degree that the obstacles this document mentions—costs, infrastructure access, local regulation, regulatory ambiguities, etc. are removed, the greater the chance that prices reflect competitive conditions. This is a joint effort on the part of several entities in every branch of government.

If due to some special circumstance the Federal Government deemed it necessary to regulate prices in some local markets in some provisional way, as a means of protecting the domestic economy or everyday consumption in terms of the constitution's Article 28, it would have to recur to the protocol that the LFCE's Article 9 establishes for successive intervention on the part of three separate entities:

- a) The executive branch would order by decree the goods and services that would be subject to maximum prices, provided competition conditions did not exist.
- b) Once corresponding research had concluded, COFECE would issue a statement if effective competition conditions were absent in the relevant market(s) in question.
- c) Finally, the Ministry of the Economy, (acronym in Spanish: SE), and not the specialized regulatory agency, would establish prices corresponding to specific goods and services based on criteria that avoid provision shortages.

Therefore consideration should be given to COFECE activating the procedure established in LFCE's Article 96 (the declaration that effective competition conditions do not exist), which—in compliance to protocols indicated by law and which must be legally presented— would last a period of approximately 180 business days². Given the complexity of the procedure and its implications, this

² Once the appropriate request is made, COFECE has ten business days to issue a commencement notice or advise

price-regulatory mechanism should be one of last resort.

2.2 "First-hand" sales prices (ventas de primera mano; acronym: VPM)

In order to: i) prevent abuses arising from the dominant position Pemex, its subsidiaries and any other State productive enterprise enjoy and ii) to reflect open-market conditions, the LH's Thirteenth provisional Article granted the CRE the ability to continue asymmetrically regulating VPMs (i.e., the first monetary transfer on Mexican soil that economic agents make). These sales are to be made at refinery dispatch, at import-product injection-points or at entry pipelines.

The mentioned stipulation states financial considerations, prices and rates the CRE regulates are to consider two elements: i) opportunity costs and ii) the conditions and practices of a more competitive international market. The corresponding methodologies should allow both current and potential participants to understand the business opportunities the logistical chain offers.

i) Logistic component transparency and periodic updates

On 9 February 2016, the CRE published Resolution No. RES/955/2015 in the *Official Federal Gazette*, establishing methodologies for determining maximum gasoline and diesel VPMs.³

the petitioner it must submit additional information; the petitioner will have <u>fifteen business days</u> to comply. The Commission dictates the commencement agreement and publishes an abstract in the *Official Federal Gazette*, so that any party may contribute to the investigation, which is to last no fewer than fifteen nor more than forty-five days (starting with the extract's publication in the *Federal Gazette*). Once the investigation has ended, COFECE has thirty business days (starting from the emission of the investigation-conclusion declaration) to issue a preliminary ruling if it determines that effective competitive conditions do not exist, to be published in the *official Federal Gazette*, such economic agents as evince a stake in the matter have <u>twenty business days</u> to present opinions or evidence. Such evidence is to be admitted or rejected within <u>ten business days</u>. Upon their admission, their evidentiary presentation is to be carried out in a period of not more than <u>twenty business days</u>. Once evidence has been presented or the period for doing so expires, the Commission hands down a resolution in a period not longer than <u>thirty business days</u>. Note that investigation, discovery-of-evidence and resolution-emission periods can be extended one time only, for an identical time period, when duly justified causes may exist.

³ Available at: <u>http://www.dof.gob.mx/nota_detalle.php?codigo=5424775&fecha=09/02/2016</u>

Recommendation: It is crucial that logistical costs required to transport these products from the reference market to VPM points reflect real costs as soon as possible. Apart from this—in complement to that established in the methodologies—the regulatory agency should oblige Pemex to itemize, update and make available to the general public on that business's commercial website, the logistical costs it incurs at every VPM point (i.e., at refinery dispatch, imported product injection points and entry pipelines).⁴

The above would allow disclosure of market and infrastructure conditions at every point-of-sale, which in turn would provide relevant information for investment decision-making. If VPM prices are established based on virtual costs or average Pemex costs (as recognized in "netback"), prices might not precisely reflect the particular market conditions at these petroleum products' every point-of-sale or -delivery. Additionally—given the regulatory agency reserves the right to determine these components in accordance with the best available information—it would be useful for this to be supported by an independent study.

Finally, the current formula contemplates a monthly update and supplemented price information by means of the arithmetic mean. This situation could give rise to strategic behavior on the part of certain buyers or traders, who would buy Pemex only if its prices were lower than that of the reference spot market, and vice-versa. The latter could in turn induce Pemex to implement measures to avoid unfavorable price arbitrage, (e.g., by making it more difficult for its customers to change providers).

⁴ Those methodologies stipulate that Pemex must submit the abovementioned logistical costs to CRE for updating and approval. In the event the CRE does not approve the logistical costs Pemex proposes in a three-month period starting from the entry into effect of resolution RES/955/2015, the regulatory agency will determine the value of applicable logistical costs in accordance with the best available information. However, the methodologies only establish that Pemex is to make gasoline and diesel VPM prices available on its electronic portal, by point-of-sale, as well as their validity timeframes; discounts or different prices that in some cases may apply, and the criteria for their being granted.

Recommendation: At a minimum, projections corresponding to the reference market should be updated more frequently, e.g., weekly, which in turn would give rise to an equally timed VPM price update and an actualization of the maximum public-sale price.

Beside periodicity, a revision of the formula could involve revising the inclusion of other variables that might unduly impact projections used to determine maximum VPM price, such as the "renewable identification number" (RIN), a numerical code corresponding to a certain volume of renewable fuel the United States produces or imports, which producers, mixers and importers must acquire in market to comply with renewable fuel goals the US EPA has established. Parties obliged to acquire RINs are US refineries and importers; the requirement does not apply to exporters. Therefore the reference forecast should not include RIN values in the imported-to-Mexico product price.

ii) Deregulating VPM prices at the northern border

Recommendation: In instances or regions where greater economic actor participation may be achieved—for example, at Mexico's northern border—it is advisable that VPM prices Pemex establishes be an outcome of market dynamics, i.e., that they no longer be subject to a price formula that does not capture opportunity cost dynamically nor in a timely fashion, as stipulated in the LH's thirteenth provisional Article.

Naturally, for that to happen it should be noted that at some point there must be sufficient supply options other than Pemex. According to the previously mentioned LH's thirteenth provisional Article, to arrive at that determination, the CRE does not require a declaration of effective competition in LFCE terms, but rather must verify that "[...] greater participation on the part of economic agents that foment efficient and competitive market development" has been achieved. These deregulated prices, if any, could be a useful reference to determine VPM prices in still-regulated zones.

iii) Considering other reference markets

Houston is the reference market considered for the VPM price formula, chosen for both its degree of maturity and participant numbers as well as for the fact that logistic costs of importation from the United States Gulf coast are competitive. That said, there are regions of Mexico that could be linked to other markets.

Border cities in Baja California and Sonora constitute such an example, given that their proximity to the state of California links them to the Pacific Coast fuels market. Price dynamic as well as infrastructure differ in both of those US markets.

Recommendation: The reference market component in the VPM price formula could vary to the degree that the region may be influenced by one or another reference market.

2.3 Transport and storage fees

2.3.1 CRE regulation

The CRE has issued two resolutions related to fees Pemex Logística will be able to collect from parties seeking to use its pipeline and storage infrastructure:

Table 2. CRE resolutions on fee-related regulation

	Storage RES/157/2016	Pipeline transport RES/224/2016	
Date of issuance	3 March 2016	22 March 2016	
Object	Approval of maximum rates applicable to storage systems.	Approval of rates applicable to Pemex pipeline transport systems.	
Information as presented by Pemex	a) Five-year business plan b) Fee schedule c) Five-year required revenue starting in 2016 d) Support information on countable asset bases e) Operation, maintenance and administration costs f) Taxes g) Depreciation h) Revenue rate		
Additional information	 Pemex Logística submitted a fee model for each storage system: 77 petroleum-product 1 petrochemical 1 crude oil at maritime terminal 1 liquefied petroleum gas at maritime terminal 	 Pemex Logística presented a fee model for each pipeline transport system, in consideration of the following: Fixed-cost allocation The system's by-capacity- fee capacity Variable costs The system's fee-by-use volume Points-of-origin and -destination to determine each pipeline section's rates 	

Infrastructure use-rates have a determinant influence on economic agents' market-entry decisions, as well as on their business models and decisions, for which reason it is fundamental to provide certainty with regard to the way these fees are integrated and adopt more rigorous transparency standards.

An advance in importations brought with it a need to issue both resolutions. Nevertheless, definitive rates are to be determined based on Open-Season outcomes. Therefore it is advisable that the CRE evaluate in an integral fashion and, as may be the case, approve or modify those rates in order to bring them as close as possible to open-market conditions.

A lack of transparency in the methodology used to determine provisional rates impedes any knowledge of the causes behind observed regional variations. Thus, for example, reception, storage and delivery rates for the common-use modality in the three El Paso, Texas-zone terminals oscillate between US\$ 1.14 in Ciudad Juárez, US \$1.62 in Chihuahua and US \$7.20 per barrel, per day in Parral, with no certain knowledge of to what to attribute these variations.

Recommendation: With the goal of sending out proper signals to markets, it is important to have generalized regulation that makes the criteria considered for calculating Pemex-approved transportation and storage fees more transparent.

2.3.2 The illicit market

In 2014, illegal hydrocarbons extraction from Pemex pipelines reached an historic high with a total of 4219 clandestine taps detected throughout Mexico. That same year fuel theft reached a daily average of 4.2 million liters. Considering that the average 2014 gasoline price was 12.8 pesos per liter, daily losses can be estimated at 54.6 million pesos. However, this calculation does not take into account costs associated with repairing crime-damaged infrastructure.⁵

In general, the "Resolución por la que la Comisión Reguladora de Energía expide las disposiciones administrativas de carácter general en materia de acceso abierto y prestación de servicios de transporte por ducto y almacenamiento de petrolíferos y petroquímicos," published in the *Official Federal Gazette's* "Rulings" section on 12 January 2016, establishes the carrier will be responsible for the product from the time of its reception until delivery and contemplates penalization mechanisms to guarantee delivery and reception at planned quantities and quality levels. As a consequence, this obligation must be reflected in Service Provision Terms and Conditions (acronym in Spanish: TCPS).⁶

Nevertheless, it is advisable that rulings explicitly clarify how costs directly attributable to stolen fuel are to be treated. In such a context permit-holders and users' responsibilities should be precisely and homogeneously defined to avoid uncertainty with regard to potential entry costs.

⁵ Etellekt Consultores, 2015. «Situación actual y perspectivas sobre el robo de hidrocarburos en México 2015». Available at: <u>http://www.etellekt.com/reporte/robo-hidrocarburos.html</u>

⁶ The regulations' Article 68 states "the Commission will establish, according to LH article 82 and based on general administrative rulings, the regulation of terms and conditions to which the provision of service must abide, under license of the permissions this order stipulates, in terms of the present regulation's Article 70" and that "the Commission will in each case determine the terms and conditions applicable to permit-holders, that will be included in the respective permit," respectively.

Recommendation: In accordance with international practice, it is recommended that responsibility in case of theft should always fall to the carrier, notwithstanding that the fee model recognizes certain investments carriers have made to improve operational and security conditions for systems licensed to prevent or mitigate that problem.

Additionally, there is a possibility that a number of authorities may help resolve this problem from within their respective competencies. For its part, the CRE's system of transaction tracking and statistical registry will be highly relevant to guaranteeing that all permit holders realize licit operations only.⁷

⁷ Resolution No. RES/818/2015, published in the *Official Federal Gazette* on 28 December 2015, states the CRE issues general administrative strictures that establish the protocol for the statistical registry of commercial transactions and the licit provenance of petroleum products.



3. INFRASTRUCTURE AND LOGISTICS

3.1 Saturation and lack of infrastructure

According to the LH, transportation is the activity surrounding the reception, delivery and, in some cases, conduction of hydrocarbons, petroleum products and petrochemicals from one place to another by means of pipelines or other means that does not imply transfer or sale of those products by the party that does so via pipeline.⁸ Additionally, the Activities Regulation to which LH regulation makes reference in its Third Title states that transport may be made by means of pipelines, tank-trucks and railroad cars, tank trailers, semi-trailers and tankers.⁹

A CRE-issued license is required for hydrocarbon and petroleum product transportation activities.¹⁰ When transport occurs by pipeline, permission is granted for specific stretches within Mexico. Transportation by means other than pipeline is subject to applicable communications and transportation guidelines¹¹ in addition to that stipulated in the LH and regulation.

Storage consists of activities surrounding the reception of third-party-property products, maintaining them as deposits, safeguarding them and returning them to the depositor or its designee at determined delivery points.¹² Each storage license will be granted for a specific installation or compound of installations as well as a predetermined capacity.

Prior to energy reform, transportation and storage activities for refined-petroleum-derived products were realized exclusively as Pemex operations, meaning that all currently existing infrastructure is Pemex property.

In 2014, Pemex held the following transportation and storage infrastructure to satisfy domestic gasoline and diesel demand:

⁸ LH Article 4, section XXXVIII.

⁹ LH regulation Article 30.

¹⁰ Regulation Article 5.

¹¹ Regulation Article 33.

¹² Regulation Article 20.

Figure 3. Pemex transportation and storage infrastructure



* Each TAR is supplied by one of six assigned refineries. Source: PEMEX. *Anuario Estadístico 2014*; SENER. «Diagnóstico de la industria de petrolíferos en México», 2016.

Pipeline transport is generally the most efficient means of transporting fuel over great distances and as such is the most utilized. In fact, the costs associated with pipeline transportation can be up to six times less than those incurred by using tank-trucks/railroad cars and up to 13.5 times less than those associated with tank trailers. Though the costs of transporting fuel in tankers are less than those by tank-truck and tank trailer, the former transportation mode is limited exclusively to coast-adjacent locations.

Owing to saturation conditions and the lack of new infrastructure in Mexico, in recent years, pipeline transportation has gone down in share in comparison to other, more costly means of transportation. At the close of 2012, fuel transportation via means other than pipelines represented some 40% of total transported volume. Additionally, according to SENER, 40% of pipelines are operating at capacity limits.¹³ Similarly, more than half of all TARs re not connected to the pipeline network or are connected to saturated lines.

¹³ SENER. Estrategia Nacional de Energía 2013-2027.

Figure 4. Pemex pipeline coverage and saturation



Source: SENER. Estrategia Nacional de Energía 2013-2027.

¹⁴ Operations costs, exclusive of capital costs.



Source: PEMEX: «Principales elementos del Plan de Negocios de Petróleos Mexicanos y sus Organismos Subsidiarios 2014-2018».

As well, Mexico holds reserves to cover approximately twelve days¹⁵ of domestic gasoline and diesel consumption.¹⁶ This is low in comparison to other countries.¹⁷ The above is reflected in the number of autonomy-days¹⁸ TARs in Mexico possess for both gasoline and diesel, since more than half of these lack sufficient capacity to store more than ten days of average inventory.¹⁹

From this we can gather that a lack of infrastructure to realize transportation and storage activities as well as existing pipeline saturation could constitute a competition barrier because they thwart new participants' ability to transport and store their products throughout Mexico, which raises logistical costs associated with the gasoline and diesel supply chain. Additionally, this situation could limit efficient importation of these products since entry-points are connected to saturated pipelines or, in fact, are linked to no infrastructure whatsoever.

¹⁵ This is a national average that could be exceedingly lower on the regional level.

¹⁶ According to SENER's "*Diagnóstico de la industria de petrolíferos en México*," in 2015 national gasoline demand reached 793.3 mbd and diesel reached 384.7 mbd. For its part, national operative capacity at TARs reached 14,600 mbd.

¹⁷ For example, in other nations, reserves can be as high as 55.12 in Germany; 73.72 in France; 81.19 in Spain; 107.09 in the Netherlands and 145.02 in Switzerland (U.S. Energy Information Administration, 2016). While these levels may respond to a political or geographical context that differs from Mexico's—that they are not petroleum-producing countries, for instance—they are far higher in comparison to Mexican reserves.

¹⁸ This item corresponds to the number of days TARs can satisfy demand without being re-supplied.

¹⁹ COFECE's calculation based on information from Pemex TRI.

Mexico is home to 21 gasoline and diesel importation points, distributed as follows:

- Pacific Ocean: 9 points-of-entry
- Gulf of Mexico: 6 points-of-entry
- Northern border: 6 points-of-entry



Source: SENER (Perspectiva de petróleo crudo y petrolíferos 2015-2029).

An example that illustrates lack of infrastructure and its impact on provision costs is the aircraft-fuel supply system at the Cancún airport, since total aircraft-fuel demand (15 mbd) must be covered by tank-truck/railroad car, every day, from Progreso (350 km away) or Salina Cruz (1400 km away).

In this context of saturation and scant infrastructure, it is key to: i) effectively guarantee newparticipant access to critical Pemex pipeline and storage infrastructure by means of competitive mechanisms and ii) generate incentives that favor new-infrastructure development. While regulation associated with these activities contemplates mechanisms to that effect, there are still core elements yet to be defined, as will be explained below.

3.2 Saturation issues

3.2.1 Capacity Assignment

In accordance with the LH's Article 70, permit holders who provide pipeline transportation and distribution services to third parties, as well as hydrocarbon, petroleum-product and petrochemical storage services, will be obliged to grant not-unduly-discriminatory open access to its facilities and services, subject to their systems' available capacity, in regulatory terms as established by the *"Resolución por la que la Comisión Reguladora de Energía expide las disposiciones administrativas de carácter general en materia de acceso abierto y prestación de servicios de transporte por ducto y almacenamiento de petrolíferos y petroquímicos"* (regulation).²⁰

According to stipulations in the Seventh provisional Regulatory Article,²¹ as of 1 April 2016 until 31 December 2019, Pemex infrastructure will be subject to the following:

a) **Contractual reserve.**²² Capacity can be contracted for up to 90% of systems' operating capacity, by Pemex or by third parties, based on Open-Season outcomes and negotiated timeframes.

Pemex, in its capacity as vendor, will be able to reserve capacity. Nevertheless, when a non-Pemex third-party requires capacity to transport or store VPM gasoline or diesel acquired at a refinery or other domestic-production point-of-origin, Pemex is to cede such capacity.²³

b) Shared-use capacity is available capacity after subtracting contractual-reserve capacity. Such capacity can be contracted for by Pemex or a third party.

On 22 March 2016, the CRE approved Pemex Logística's Open-Season proposals applicable to petroleum, petroleum-product and petrochemical transportation and storage systems by means of Resolutions RES/225/2016²⁴ and RES/226/2016²⁵, respectively, subject to Pemex Logística presenting

²⁰ Published in Mexico's Official Federal Gazette on 12 January 2016.

²¹ It is critical to specify that this guideline was modified by means of the "Resolución por la que la Comisión Reguladora de Energía modifica la disposición séptima transitoria de las Disposiciones Administrativas de carácter general en materia de acceso abierto y prestación de los servicios de transporte por ducto y almacenamiento de petrolíferos y petroquímicos" published in Mexico's Official Federal Gazette on 30 March 2016, as a consequence of the Ministry of Energy's publication of the "Aviso por el que se informa que a partir del 1 de abril de 2016 podrá otorgar permisos de importación de gasolinas y diésel a cualquier interesado que cumpla con las disposiciones jurídicas aplicables" in the same gazette on 23 February 2016.

²² Stipulations Article 2.13 defines Contractual Reserves as a "service modality the permit holder offers by which it commits capacity to a User by means of a service contract."

²³ A resolution was published in the *Official Federal Gazette* on 30 March 2016 through which the CRE modifies the guidelines' seventh item. Previous to its modification, the seventh provisional item established that when a non-Pemex third-party acquired VPM petroleum products, be they Mexican or imported, Pemex must cede the required transportation or storage capacity to that third party.

²⁴ The resolution by which the CRE approves Pemex Logística's Open-Season proposal, applicable to petroleum, petroleum product and petrochemical pipeline transportation systems under license of the permits granted by means of Resolutions RES/863/2015, RES/864/2015 and RES/865/2015. Available at: <u>http://www.cre.gob.mx/resolucion.aspx?id=9879</u>

²⁵ The resolution by which the CRE approves Pemex Logística's Open-Season proposal, applicable to petroleum, petroleum product and petrochemical pipelines under license of the permits granted by means of Resolutions RES/866/2015, RES/888/2015, RES/889/2015, RES/890/2015 and RES/954/2015. Available at: <u>http://www.cre.gob.mx/</u> resolucion.aspx?id=9878

adjustments the CRE indicated in those resolutions.²⁶

Among other tweaks, the CRE requested that, supposing demand indicated in Open-Season were higher than offered capacity, Pemex should establish flexible, transparent, impartial, simple and verifiable mechanisms that promote complete and efficient capacity assignments based on proposals' technical and economic merits and respecting the principle of not-unduly-discriminatory open access. These mechanisms are to additionally contemplate that the State productive enterprise cannot obtain extraordinary revenues from capacity assignment under these conditions.

Nevertheless, the regulatory agency did not define those mechanisms and they have yet to be defined and approved. For that reason, uncertainty prevails with respect to how available capacity in Pemex's systems will be assigned during Open Season should demand exceed the abovementioned capacity.

Recommendation: It will be fundamental that CRE guarantee Pemex establishes competitive, clear and transparent mechanisms that favor the most efficient nominations, as could be the case at by-capacity auctions. Prices should reflect infrastructure value and scarcity.

3.2.2 Mechanisms that prevent unduly discriminatory dealing

In accordance with item 14 in "Lineamientos para la elaboración de los Términos y Condiciones para la prestación de los servicios de Transporte por ducto y Almacenamiento de Petrolíferos y Petroquímicos," TCPSs are to establish proceedings for nomination as well as request-planning and -confirmation, which are to reflect common industry practice and observe principles of uniformity, homogeneity, regularity, safety and continuity in addition to not-undue discrimination when it comes to service provision.

²⁶ The adjustments the CRE requested from Pemex Logística's Open-Season were: a) Available capacity. The Open-Season proposal will establish available capacity that will be made available to interested parties. For storage systems, this capacity is to be enumerated by installation and, where appropriate, by product. In the case of pipeline transportation systems, available capacity is to be enumerated by path, zone or other classification congruent with service-provision modalities. b) Timeframes and public notice. The open call is to establish timeframes for publishing an intent to conduct an open season as well as for submitting and evaluating petitions. Additionally, the instructions, rules and protocols for presenting proposals via the Permit-Holders Auction website are to be established. c) Proposal evaluation. Presuming the demand identified in the Open Season is greater than the capacity on offer, the permit holder is to establish flexible, transparent, impartial, simple and verifiable mechanisms that promote the capacity's complete and efficient assignment based on the proposals' technical and economic merit while respecting the principle of not-unduly discriminatory open access. Such mechanisms are to contemplate that the permit-holder cannot obtain extraordinary revenues from capacity assigned under these conditions. Based on the above, the permit-holder will be able to consider the following criteria: i) assigning the capacity in such a manner as minimalizes the Herfindahl-Hirschman Index value for the pipeline in question; ii) if the above criterion leads to various possible assignments, applying a proration proportional to the requested capacity. d) Unmet demand. The permit-holder is to inform interested parties that have not obtained capacity that season, due to lack of available capacity, that if they evince interest in undertaking an expansion or extension of their systems to respond to that unmet demand, or indeed, offer the possibility that those interested parties enter into investment agreements to carry out those expansions and extensions.

If interested, the permit-holder can submit the systems expansion or extension project to the CRE as a means of attending to unmet demand during the Open Season. If there is no such interest, the permit-holder will publish or broadcast the following in domestic and international media, including, among others, the same media in which the Open Season request for proposals was published or broadcast: i) unmet demand, enumerated by installation; ii) rates; iii) timeframes; and iv) requested volume.

It additionally states these proceedings are to establish specific rules and timeframes that provide assurances to users and include, at a minimum, various informative elements with regard to the nomination.²⁷ In compliance with those guidelines, nomination timeframes and cycles, request scheduling and confirmation as well as product reception and delivery, should evince appropriate, homogenous timeframes with regard to users and their needs.

Recommendation: Additionally, it is advisable that TCPSs applicable to Pemex—in its capacity as gasoline and diesel provider—specify mechanisms that Pemex must implement to guarantee its services will be provided under identical circumstances for all users. It could also be difficult to monitor in reality that open-access obligations are being strictly adhered to.

As well, it is important to realize Pemex has relatively little experience offering gasoline and diesel transportation and storage service to third parties. These services require specific management capacities as well as up-to-date technologies (including hard- and software) necessary to guarantee complex process operations such as: i) oversight transferal; ii) contract management and planning; and iii) third-party volume management, etc. Without the proper technology, open access could undergo severe operational restrictions that could lead to complications or even their application's non-viability. That is why it is imperative that alongside regulatory issues, Pemex should raise its management and service capacities very quickly so that open-access stipulations can be applied effectively.

3.3 Issues associated with new infrastructure development

3.3.1 Guarantee of Supply

According to the LH's Article 80, section II, it falls to SENER to determine energy-related public policy applicable to storage levels as well as guaranteed provision of hydrocarbons and petroleum products in order to safeguard national Mexican interests and security. Additionally, the cited precept states that SENER and the CRE will establish, by means of general guidelines, or indeed, in the corresponding permits, such measures with which permit holders must comply in regard to that public policy. It also stated that SENER or the entity it designates could carry out management of minimal storage levels.

As already mentioned, Mexico's storage capacity can cover approximately twelve days of gasoline and diesel demand, and could be less in some regions of the nation. This means the supply chain, by means of importations and refineries, must be in constant operation since any greater than twelve-day average supply interruption would lead to scarcity.

Establishing the obligation to maintain minimum reserves translates into costs for storage permit holders, related to the needed investment to construct systems that allow compliance at appropriate levels, as well as for other logistics-chain participants (e.g., vendors) who might be obliged to comply with that policy. Therefore, a public policy that contemplates "too elevated" storage levels and provision guarantees might constitute a major entry barrier. Independently, in order not to

²⁷ i) The user's contract number; ii) the number of days the product will be received at the reception point; iii) the delivery and reception times; iv) the quantity of energy to be received at the point-of-reception; v) the amount of time the product will be kept and vi) the order type or service modality.

generate uncertainty about the potential cost of participation in those activities, it will be important to define that policy.

Recommendation: It will be necessary to define as soon as possible the provision guarantee policy referred to in the LH as a means of offering certainty to all economic agents when it comes to required minimum levels and potential costs this implies for participants. To do this, it is indispensable to undertake an analysis that contrasts the energy security goals to be achieved in light of costs defined minimum reserves could give rise to as a means of avoiding the creation of entry barriers. The corresponding rules must be clear and transparent and must accurately identify, among other elements: i) the available supply sources; ii) current infrastructure characteristics and logistical alternatives; iii) different regional markets' needs; and iv) the areas where it will be advisable to expand capacities.

3.3.2 Steel tariffs and countervailing duties

On 14 July 2015,²⁸ Mexico's Ministry of the Economy established a countervailing duty for straightlongitudinal- and helical-seam carbon-steel tubing (tariff sections 7305.11.01, 7305.11.99, 7305.12.01, 7305.12.99, 7305.19.01 and 7305.19.99). The countervailing duty reaches 56.44%²⁹ for the US, 73% for Spain and 55.28% for India. It should be pointed out that imports from those three countries represented approximately 40% of Mexico's domestic consumption.

Additionally, in October 2015, the Executive Branch imposed a unilateral hike on most-favorednation tariffs: 15% corresponding to 97 steel-sector tariff-code sections.³⁰ This increase was to be temporary; lasting six months, so that domestic industry had the space it needs to prepare its defense against possible disloyal practices as defined by the Foreign Trade Act.³¹ That said, once the six-month period expired, the decree was renewed for six additional months on the same terms.³²

While the abovementioned measures have been enacted in a context of reduced steel-product demand,³³ a global production-capacity glut and a generalized outlook for low economic growth

²⁸ In "Resolución preliminar de la investigación antidumping sobre las importaciones de tubería de acero al carbono con costura longitudinal recta y helicoidal, originarias de los Estados Unidos de América, del Reino de España y de la República de la India, independientemente del país de procedencia. Esta mercancía ingresa por las fracciones arancelarias 7305.11.01, 7305.11.99, 7305.12.01, 7305.12.99, 7305.19.01 y 7305.19.99 de la Tarifa de la Ley de los Impuestos Generales de Importación y de Exportación". Available at: http://www.dof.gob.mx/nota_detalle.php?codigo=5400400&fecha=14/07/2015_

²⁹ With the exception of straight-longitudinal seam carbon steel tubing importations, subject to countervailing duties in accordance with that stipulated in the final ruling from the validity hearing and document review published in the *Official Federal Gazette* on 18 November 2011.

³⁰ By means of the "Decreto por el que se modifica la Tarifa de la Ley de los Impuestos Generales de Importación y de Exportación y el Decreto por el que se establecen diversos programas de promoción sectorial," published in the Official Federal Gazette on 7 October 2015. Available at: <u>http://www.dof.gob.mx/nota_detalle.php?codigo=5410812&fecha=07/10/2015</u>

³¹ During Foreign Trade Commission hearings on this measure, COFECE voted against it and expressed the need to consider the negative impacts it could give rise to in a number of production chains.

³² By means of the "Decreto por el que se modifica la Tarifa de la Ley de los Impuestos Generales de Importación y de Exportación y el Decreto por el que se establecen diversos programas de promoción sectorial." Official Federal Gazette, 4 April 2016. Available at: <u>http://www.dof.gob.mx/nota_detalle.php?codigo=5431843&fecha=04/04/2016</u>)

³³ According to information from the Organization for Economic Cooperation and Development (OECD) the price of steel has declined continually thanks to a slump in energy-sector economic activity. In fact, the US import price of seamed steel tube declined to \$909 USD in April 2015, from a 29.8% higher level in August 2011. OECD, *Steel Market Developments*, 2Q 2015.

could at once drive up prices and restrict importation of supplies needed to expand the logistical infrastructure.

Recommendation: It will be advisable for the Ministry of the Economy to identify steel-product tariffs and countervailing duties that might increase the cost of expanding the existing pipeline or storage network and—based on a cost-benefit analysis—re-think their pertinence and ongoing enforcement as a means of not inhibiting the development of a network capable of covering the nation's needs during this early phase of energy-related openness.³⁴

3.3.3 Cross-holding

The hydrocarbons industry is a logistics industry that stretches from the producing well and refineries to the gas pump at the local service station. This organizational structure gives rise to two effects: there are incentives for the market's participating economic agents to integrate themselves vertically, for greater control over contingencies that can emerge from both "upstream" and "downstream" activities. Such a strategy is common in international markets and can generate efficiencies by reducing coordination failures between different links on the value chain at the same time it materializes network economies and economies-of-scale. Nevertheless, that same situation could incentive businesses with market power—common in natural monopolies like pipelines—to undertake anti-competitive practices as a means of blocking rivals, as, for example, through negative or discriminatory dealings when it comes to infrastructure access.

With regard to the above, the LH's Article 83 states that persons who, directly or indirectly, are owners of end-user share capital, producers, or traders, who use pipeline or storage services, may share, directly or indirectly, the share capital of the permit-holders that provide such services only when that cross-holding does not affect competition, market efficiency and effective open entry. Cross-holding must be authorized by the CRE, which must hold a previous, favorable opinion from COFECE.³⁵

Recommendation: Because of efficiencies that can be gained as an outcome of fuel-industry vertical integration, cross-holding ought only to be limited when it gives rise to risks to the free-market-entry and competition process.

³⁴ On previous occasions, this agency has adopted public policy measures such as eliminating the tariff on imported eggs in September 2012, as well as opening a duty-free quota on chicken meat to stabilize those products' domestic supply.

³⁵ On 3 March 2016, the CRE published an Agreement in the *Official Federal Gazette* that interprets for administrative effect the cross-holding to which the second paragraph of the LH's Article 83 refers and establishes protocols for authorizing it. The authority interprets cross-holding as a situation where a person holds a direct or indirect share that constitutes control within two corporations' share-capital, i) one as vendor, producer or end-user and ii) one as a transportation or storage services provider. Available at: http://www.dof.gob.mx/nota_detalle.php?codigo=5428487&fecha=03/03/2016. As well, the COFECE website is home to instructive information related to its "Solicitud de opinión, en relación con la participación cruzada, en términos del artículo 83 de la Ley de Hidrocarburos, y de conformidad con el procedimiento establecido en los artículos 98 de la Ley Federal de Competencia Económica (LFCE), 112 y 113 de las Disposiciones Regulatorias de la LFCE (DRLFCE)." Available at: https://www.cofece.mx/cofece/attachments/article/48/instructivo_parcr_cruzada_gas_lp_150416.docx

Additionally, it is relevant to state that Pemex Logística and Pemex Transformación Industrial, as owners of the gasoline and diesel transportation, storage, distribution, public distribution and sales permits, are to obtain—with a favorable COFECE ruling—CRE authorization with regard to cross-holding as well as compliance with such strictures as CRE may issue regarding licensed-activity legal dissolution, functional, operative and accounting matters.³⁶

3.3.4 Last-resort alternatives for guaranteeing open access

If the to-date issued regulation does not effectively allow Pemex to grant open access to its infrastructure, there are extraordinary measures that can be implemented to do so.

For one, the LH's Article 80, section III establishes that SENER is empowered to:

"Instruct, of its own accord or by request from the Energy Regulatory Commission or the Federal Commission for Economic Competition, in their respective jurisdictions, that State productive enterprises, their subsidiaries and affiliates undertake necessary actions to guarantee their activities and operations do not thwart market competition and efficient market development or energy-related public policy. The Ministry of Energy may undertake such studies as it deems pertinent to determine the viability of unilaterally exercising the power to which the present section refers."

Therefore, SENER could order Pemex to undertake the actions it deems necessary, or additional actions to grant open access to new participants. For example:

The LH's Article 60 establishes that pipeline transportation and petroleum-product storage systems that are interconnected may make up Integrated Systems in order to expand coverage or confer systemic benefits in terms of upgrades to service-provision safety, continuity, quality and efficiency conditions, to be operated by an agent who must have appropriate previous consent as issued by the CRE. To that end, the CRE will approve their creation and decide on incorporating new infrastructure into them.³⁷

Recommendation: The SENER could call for the creation of an integrated pipeline transportation and storage system whose capacity would be administered by an independent agent ("The National Petroleum Products Control Center"). While integrating storage and transportation systems to Integrated Systems is a voluntary matter,³⁸ SENER could exercise the right to which LH Article 80, section III makes reference, specifically to order the integration of Pemex infrastructure. This would allow an independent third-party to take on Pemex pipeline transportation and storage capacity, guaranteeing open access to the abovementioned infrastructure.

³⁶ The Petróleos Mexicanos Act establishes in Articles 59 and 62 that the State productive enterprise will be able to create subsidiary productive enterprises and affiliates with permission from its Board of Directors. In compliance to the above, on 1 and 6 October 2015, declarations of validity corresponding to Creation Agreements for Pemex Logística and Pemex Transformación Industrial, respectively, were published in the *Official Federal Gazette*. According to the "Acuerdo por el que interpreta para efectos administrativos la participación cruzada a la que hace referencia el segundo párrafo del artículo 83 de la Ley de Hidrocarburos y establece el procedimiento para autorizarla," both productive enterprises and their affiliates must, when necessary, request CRE authorization with regard to cross-holding for which—in compliance to the LH's Article 83—they must also hold a favorable COFECE ruling.

³⁷ LH Articles 60 to 62.

³⁸ In conformity to the regulation's Article 61.

Finally, in terms of LFCE's Article 94, COFECE is endowed with the power to initiate "last-resort" investigative proceedings to determine the existence of essential facilities³⁹ or competition barriers. In accordance with that article, when necessary, the definitive COFECE ruling could include: i) recommendations for public authorities; ii) an order to the economic actor to eliminate the barrier affecting competition; iii) determining the existence of an essential facility and contemplating guidelines—modalities, prices or fees—to regulate access to it; and iv) seizure of the involved economic actor's assets, rights, partnerships or shares in proportions needed to eliminate the anticompetitive effects—as a last-resort measure.

3.4 Port-related infrastructure

From 2005 to date, an average of 82% of imported petroleum-product volume has entered Mexico through maritime port installations.⁴⁰ This volume grew 204% from 2005 and 2014 and has stayed at that level since.





³⁹ In accordance with the LFCE's Article 60, to determine the existence of an essential facility, COFECE must consider: i) If the facility is controlled by one or various economic agents with substantial power or that have been declared preponderant by the Federal Communications Institute; ii) if reproduction of the facility is not viable from a technical legal or economic point-of-view on the part of another Economic Actor; iii) if the facility is indispensable to the provision of goods and services in one or more markets and there are no nearby replacements; iv) the circumstances under which the Economic Actor arrived at controlling the facility; and v) all other criteria the regulatory stipulations establish, where applicable.

⁴⁰ According to the Ports Act's Article 2, section VI, port installations are defined as "infrastructure and structure or superstructure constructions erected in or around a port, designed to serve ships, to provide port services or for shipbuilding or repair."

For its maritime operations, Pemex maintains a total of fifteen installations including terminals and stations for maritime hydrocarbon handling and fuel importation. There are five Maritime and Port Operations Terminals (acronym in Spanish: TOMPs)⁴¹ to handle and distribute hydrocarbons:⁴² 1) Madero (Tamaulipas), 2) Pajaritos (Veracruz), 3) Salina Cruz (Oaxaca), 4) Guaymas (Sonora) and 5) Tuxpan (Veracruz); as well as ten Maritime and Port Operations Stations (*residencias*; acronym in Spanish: ROMPs).⁴³ Pemex realizes storage activities at these installations. On average, it uses 83% its storage capacity at these facilities; nevertheless, at Ensenada, Mazatlán, Pajaritos, Progreso and Rosarito, this figure exceeds 85%.⁴⁴

Added to the above, it is worth noting that a number of TARs in Mexico's northwest, center-west and south-southeast are supplied via inter-coastal navigation (*cabotaje*), aboard tankers, between Pemex's maritime terminals and stations.⁴⁵

This speaks in part to the importance Pemex's port installations hold with regard to petroleumproduct importation and their domestic movement and as well, to infrastructure needs that might be in place for new competitors to carry out these activities.

Regulations and public policies authorities issue should guarantee third-party access to maritime and port installations so the former can use the open-access transportation and storage infrastructure that is associated with such installations. Also, authorities must revisit the legal instruments that regulate maritime/port installation growth and expansion as a means of facilitating new-infrastructure development on the part of any economic actor seeking to invest in the hydrocarbons-sector logistical chain.

Open access to Pemex maritime terminals

In the case of maritime terminals, open-access *rules* granting access to petroleum-product transportation and storage infrastructure would not in practice be implemented if there is no access to the port/maritime installations (including Pemex's) that are indispensable to using such infrastructure.

Thus to guarantee effective open, not-unduly-discriminatory access to the pipelines and terminals at Mexico's ports, access to all installations and related services also needs to be stipulated.⁴⁶ These

⁴¹ According to the Ports Act's Article 2, section IV, a (maritime) terminal is the "unit established in or around a port, made up of built area, installations and surfaces, including the aquatic area, that allows for the overall realization of the port-related operations for which it is destined."

⁴² Pemex Refinación, Infraestructura de Plantas de Proceso, Sistema de Ductos y Terminales de Almacenamiento y Reparto 2006-2012. 2013. Available at: <u>http://www.ref.pemex.com/files/content/03transparencia/RC/REF05.pdf</u>

⁴³ According to "Diagnóstico de la industria de petrolíferos en México," the main function of Maritime and Port Stations (called residencias; acronym in Spanish: ROMPs) is the on- and off-loading of tankers for freight movement to TARs. Mexico maintains them in i) La Paz (La Paz, Baja California Sur); ii) Mazatlán (Mazatlán, Sinaloa); iii) Rosarito (Rosarito, Baja California); iv) Topolobampo (Topolobampo, Sinaloa); v) Lázaro Cárdenas (Lázaro Cárdenas, Michoacán); vi) Manzanillo (Manzanillo, Colima); vii) Acapulco (Acapulco, Guerrero); viii) Lerma (Ciudad del Carmen, Campeche); ix) Progreso (Progreso, Yucatán); and x) Veracruz (Veracruz, Veracruz).

⁴⁴ Information gathered from Pemex information-requirement request ST-CFCE-2015-323.

⁴⁵ According to "Diagnóstico de la industria de petrolíferos en México."

⁴⁶ According to Article 2, section VII, port services are "those provided at ports, terminals, marinas and port installations to serve ships as well as for freight transferal and the trans-boarding of persons between ships, to land or to other means of transportation."

ports are largely governed by port-related legislation (the Ports Act and secondary regulation)⁴⁷ as well as the Ministry of Communications and Transportation (acronym in Spanish: SCT) through its General Office of Ports and Merchant Marine.⁴⁸

It is the case that the Ports Act features stipulations that could restrict third-party use of Pemex facilities. For example, the law considers that marine terminals and port installations are classified by use as: i) public, in the case of container and general freight terminals or when there is an obligation to make such ports available to any petitioner; and ii) private, when their owners give them over to their own purposes, as well as to third-parties, contractually, provided the services and the freight in question are of a similar nature to those originally authorized for that terminal.⁴⁹

Recommendation: It will be necessary to guarantee third-party access to port/maritime facilities and services (those of Pemex as well as of any other economic agent) associated with transportation and storage infrastructure and subject to open-access rules, by regulation or other means, as a way to avoid impeding that access while facilitating imports as well as transportation of gasoline and diesel. It would therefore be desirable that the CRE and the SCT work in conjunction to that end. It is also germane to remember that SENER, in accordance with the LH's Article 80, section III, can instruct Pemex to carry out specific measures designed to prevent obstacles to competition.

Port infrastructure development

Mexico's principal gasoline-importation ports are subject to a number of deficiencies. For one, the ports' physical conditions in relation to elements like watershed (depth) and depth in the sense of limits to passage on the part of ships whose own depth extends beyond the sounding line in those places; and as well, wharf, loading bay, storage and evacuation capacities can all complicate operations. Additionally, the installations' capacity for serving ships is limited. At Tuxpan, for instance, three bays make up the loading installations, where two are always in operation and the third is under maintenance or serves to complement the other two.

Given Pemex's limited capacities at their own port installations, it is likely that third parties would be interested in developing new facilities.

According to the terms of the Ports Act, port administrators are governed by a "Port Development Master Program" (the "Master Program") that identifies uses, purposing and operational modes in a port's various zones, as well as the measures and precautions needed to assure port spaces' efficient exploitation and future development. As well, each Master Program should consider—among other issues—port-infrastructure and -equipment construction, expansion and modernization programs⁵⁰

⁴⁷ In terms of the Ports Act's Article 1, this legislation seeks to regulate ports, terminals, marinas and port installations, their construction, use, exploitation, operation, administrative means and port-services provision.

⁴⁸ According to Federal Public Administration Organic Law, Article 36, sections XIX and XX, the SCT is empowered to "adjudicate and award contracts, concessions and permits to establish and exploit services related to shipping lines; as well as to coordinate maritime and port services in river and maritime ports, in addition to the carriers who operate there; their principal and auxiliary services as well as services related to overall communicating routes for their efficient operation and functioning, except those assigned to the Ministry of the Navy" and "to administer centralized ports while coordinating public administration, and granting occupancy concessions and permits for federal zones on port premises," respectively.

⁴⁹ Ports Act, Article 10.

⁵⁰ Ports Act regulations, Article 39, section III.

and is to elaborate a twenty-year outward vision to be revised every five years.⁵¹

Therefore Master Programs—which generally do not contemplate terminals for petroleum product on- and off-loading—could become a barrier to developing new port infrastructure, both as regards petroleum-product imports as well as their maritime movement.

Recommendation: The appropriate SCT authorities should reexamine the Master Plans to allow port installation development, in the short-term, for third-party petroleum-product handling.⁵²

3.5 Restrictions to foreign-investment

Energy reform sought to open up investment areas in each and every link in the value chain. Nevertheless, restrictions related to foreign investment and participation in domestic and intercoastal navigation are still in place and could limit entry into petroleum-product mid-stream transportation activities. These restrictions to foreign investment also apply to shipping, aircraft and railroad-stock fuel and lubricant provision.

Restrictions to domestic and inter-coastal navigation are now relevant because Pemex supplies a number of TARs in Mexico's northwest, center-west and south-southeast by means of inter-coastal tanker navigation. Similarly, inter-coastal navigation is becoming an alternative for importers who move fuel between sundry Mexican ports.

Finally, fuel-provision activities for ships, aircraft and railroad-stock must be undertaken according to the terms of the new hydrocarbons-sector legal framework.

Specifically, the following tenets feature these restrictions:

• The Foreign Investment Act's⁵³ Article 7, section III limits foreign investment share to 49% in port piloting services for domestic navigation (subsection u); shipping companies given over to the commercial exploitation of domestic and inter-coastal navigation (subsection v) as well as fuel-and lubricant-provision activities for ships, aircraft and railroad stock (subsection w).

As well, the Foreign Investment Act establishes restrictions on foreign investment in activities linked to hydrocarbon and petroleum-product non-pipeline land transportation:

• The Foreign Investment Act's Article 6 section I exclusively reserves land freight transportation activities (excluding messenger and parcel-delivery services) to Mexicans or Mexican companies with foreigner-exclusion clauses.

As is the case with maritime means of transportation, the Foreign Investment Act's Article 6, section I limits investment and financing options in a specific service the logistical chain employs, thus affecting the entire sector's efficiency. As has been noted, the use of tank-trucks to transport gasoline

⁵¹ Ports Act Article 42.

⁵² The Ports Act's Article 42 states that "the Ministry, on behalf of the public interest, may modify uses, ends and operative modes as called for in the master development program with respect to different port-zones, port-groups or as yet unutilized terminals."

⁵³ The most recent reform, published in the Official Federal Gazette on 11 August 2014.

and diesel has been unavoidable since pipeline transport capacity is insufficient. As well, in certain markets and chain segments, as for example along the border or in cities/regions that are close to refineries and storage terminals, it can be an economical transportation alternative.

Recommendation: Reform the Foreign Investment Act to permit foreign investment participation in maritime fuel transport as well as its provision for ships, aircraft and railroad stock, alongside investment in freight hauling by truck.⁵⁴

3.6 Railroad transportation

Land transportation of fuels via railway is the third most economical option after pipelines and shipping. Saturation at several sections of the pipeline network, as well as costs associated with fuel theft, situates railroads as a fuel-transportation alternative. Though current use of this means for mobilizing fuel is relatively low (4.7%),⁵⁵ railroad infrastructure use for fuel transport could expand considerably.

Since the Mexican constitution's 1995 amendment recognizing railroads as a priority, and not strategic, area, private enterprises have participated in this market through concessions. The nature and conditions of the industry mean there are few competitors, who operate under conditions of exclusivity along proprietary lines conceded to them. Currently there are two major railroad concessions, the Kansas City Southern de México and Ferromex/Ferrosur, alongside other, smaller carriers.⁵⁶

Reforms to the Railroad Service Regulations Act (2015)⁵⁷ granted the Rail Transport Regulatory Agency power to guarantee conditions of interconnectivity (by means of hauling and passage rights) among carriers as well as to regulate rates, pending COFECE rulings determining the absence of effective competition conditions.

At this point it is still premature to assess the new legal framework's effectiveness (at this writing, both regulatory reforms as well as the agency-creation declaration are still pending publication). In the meantime, given new opportunities and fuel market conditions, public rail transportation concession-holders enjoy a privileged position from which to provide fuel transportation services to a particular user profile. In this context, gasoline and diesel traders can seek out partnerships with large-scale concession-holders, which could incentivize displacing or blocking access to other traders.

Although railroads are not subject to open-access rules as stipulated in the LH, it is important to remember that they are subject to competitiveness laws that punish, among other actions, relative monopolistic practices such as refusal of service, varying price schedules or sales conditions for different buyers in equivalent situations, restrictions to access or discriminatory access to an essential facility.

⁵⁴ On 27 April 2016, Mexican Senator Luis Armando Melgar Bravo presented *Iniciativa con proyecto de Decreto por el que se reforman, adicionan y derogan diversas disposiciones de la Ley de Inversión Extranjera*, which, among other stipulations, calls for modifications to facilitate hydrocarbon transport using foreign capital.

⁵⁵ As stated in SENER's "Diagnóstico de la industria de petrolíferos en México."

^{56 &}quot;Estableciendo la Agencia Reguladora del Transporte Ferroviario en México," OECD, 2016.

⁵⁷ Published in Mexico's Official Federal Gazette on 26 January 2015.



Gasoline and diesel importations that economic agents other than Pemex might make would give rise to strong competitive pressure in Mexican domestic markets that would ultimately translate into better supply options and lower prices, benefitting consumers, above all in light of the fact a large portion of domestic gasoline and diesel consumption depends on importations Pemex realizes, in addition to the fact that all domestic production is carried out by that State productive enterprise.

Nevertheless, imports could be affected if regulation establishes standards or requirements that create undue advantages to Mexico's sole producer or to importers who are the only ones able to meet new requirements. In particular, fuel specifications could be a barrier to importation when they are not equivalent to those in reference markets.

4.1 Standardizing quality with that of imported fuel

Official Mexican Emergency Norm, "NOM-EM- 005-CRE-2015, Especificaciones de calidad de los petrolíferos (Norma de Emergencia),"⁵⁸ was published in Mexico's Official Federal Gazette on 30 October 2015. It seeks to establish quality specifications petroleum products must meet at each stage of the production and distribution chains in Mexico.

The emergency norm will be canceled and nullified as soon as the Definitive Official Mexican Norm— "NOM-016-CRE-2016, Especificaciones de calidad de los petrolíferos (Norma en Consulta Pública),"⁵⁹ currently in the public comment phase, enters into effect. In practical terms, it establishes the same quality specifications and requirements as did the emergency norm.

The gasoline and diesel quality specifications that the emergency norm (as well as the norm currently under public consultation) establish are not entirely harmonized with those applied in the United States and Europe,⁶⁰ making their interchangeability problematic and turning Mexican fuels into specialty products that are harder and more difficult to mix. Fungibility is an important condition for these products' movement, particularly in light of scant infrastructure or ability to measure and supervise quality specifications.

⁵⁸ The emergency norm was modified by means of a resolution published in Mexico's Official Federal Gazette on 20 January 2016; later its validity was extended for an additional six-month period, until the definitive norm is issued, by means of an agreement published on 29 April 2016. The emergency norm replaces "Norma Oficial Mexicana NOM-086-SEMARNAT-SENER-SCFI-2005, Especificaciones de los combustibles fósiles para la protección ambiental," published in the Official Federal Gazette on 30 January 2006.

⁵⁹ On 12 May 2016, the CRE published the Official Mexican Norm project, entitled "*PROY-NOM-016-CRE-2016, Especificaciones de calidad de los petrolíferos*," as a part of the public-commentary process.

⁶⁰ Annex 2 compares gasoline and diesel quality specifications in Mexico, the United States and Europe. This comparison illustrates the current differences between fuel-applicable standards and how in many cases, the applicable Mexico norm is in fact stricter.

The more complex specifications grow in relation to the reference market,⁶¹ the higher the costs associated with their compliance. Therefore it is highly likely refiners and mixers are only willing to offer specialized products as part of long-term contracts or in great volume, which limits participation on the part of smaller providers and in turn reduces the number of market participants.

Recommendation: To favor gasoline and diesel importation as well as new-participant market entry, the characteristics and specifications the Official Mexican Norm establishes for products should be equivalent to international (United States and Europe) reference standards, notwithstanding environmental policy goals.

4.2 Imported-product compliance evaluation

On 1 April 2016, Mexico's Ministry of the Economy issued its "Acuerdo que modifica al diverso por el que la Secretaría de Economía emite reglas y criterios de carácter general en materia de Comercio Exterior" (Acuerdo de Comercio Exterior),⁶² which seeks to subject petroleum-product importation to compliance with the Emergency Norm and establish proceedings to verify that compliance.

To verify compliance with the Emergency Norm, item 5 *BIS* of the Foreign Trade Agreement establishes that importers must:

- a) Annex the results report issued by a laboratory registered with the Ministry of the Economy's General Standards Office to the importation commercial invoice, in compliance with any notices issued based on applicable mutual-recognition agreements in effect, which attest to the outcomes of the tests made.⁶³
- b) State the number of the results report referred to in the above, which authorizes the lot to be imported.

Recommendation: So the protocol that verifies compliance with the Emergency Norm does not inhibit the importation of fuels marketed in Mexico, for one, we recommend the compliance verification take place in other stages of the logistical chain, as for example at the pipeline-injection point, at the TAR or at the end-user point-of-sale. This would additionally allow the importation of fuels that could be mixed in Mexico and be upgraded to stated specifications. As well, the requirement that laboratories to which the Agreement makes reference must be registered with the Ministry of the Economy General Office of Standards should be eliminated. Along these lines, certifications issued from accredited international organizations and laboratories in reference markets should be recognized.

⁶¹ Which in the case of Mexico is the United States.

⁶² Published in Mexico's Official Federal Gazette on 1 April 2016.

⁶³ Additionally, item 5 *BIS* of the Foreign Trade Agreement states that to grant a registry number to foreign laboratories, such laboratories must comply with that stipulated in the notice the subsection refers to, specifically that a) to that end, it is issued by the proper authorities and attests, at a minimum, to the following: i) that the laboratory is accredited by an Accreditation Organization that is a signatory to the Test Laboratory Mutual Recognition Agreement, International Laboratory Accreditation Cooperation, Asia-Pacific Laboratories Accreditation Cooperation or the Inter-American Accreditation Cooperation; ii) that the accreditation to which the above subsection refers concern guideline ISO-IEC-17025, currently in effect; and iii) that the laboratory have sufficient technical capacity with respect to testing methods (ASTM) indicated in norm NOM-EM-005-CRE-2015, which is to be verified by the Mexican Accreditation Entity, by request from the Ministry of the Economy's General Guideline Office in accordance with applicable guidelines.
Additionally, it would be advisable that the CRE—in conjunction with the Ministry of the Economy and ASEA—establish programs to develop accredited-entity and assessor markets to assure the existence of sufficient options to realize corresponding compliance evaluations.



5. RETAIL SALES

In comparison to other countries, Mexico has a low service-station-per-inhabitant density. Opening up to commercial models that are different from that of the Pemex franchise creates an opportunity to establish new service stations in different markets. Competition between stations will benefit consumers through more offerings, and at better quality and price levels. Therein lies the importance of generating conditions where this can happen.

In principle, contracts Pemex signs with current public-sales-activities permit-holders should not obstruct the transition to new business models. As well, it is understandable that in this initial phase, these markets' participants will seek out economies of scale or to generate efficiencies, which should not translate into engaging in anti-competitive practices or other LFCE-sanctioned conduct.

Finally, in addition to expanding transportation and storage systems, it is necessary to eliminate unjustified regulatory barriers and restrictions all levels of government have established, above all at the local level, e.g., eliminating distance requirements or minimum surface areas for service station construction and inauguration.

5.1 Franchise contracts and provision

The LH's Fourteenth provisional Article establishes: i) that the life of provision contracts that Pemex, its productive subsidiaries or affiliates sign cannot extend beyond 31 December 2016; ii) that provision contracts cannot be conditioned on signing franchise contracts nor limit provision contract signatory parties to unilaterally terminating them when in COFECE's judgment effective competition conditions are evident.

On 17 September 2015, by means of Resolution RES/635/2015, the CRE ruled that Pemex and its productive enterprise subsidiaries and affiliates are obliged to guarantee that "[...] valid franchise and gasoline/diesel provision contracts are not conditioned among themselves [...] starting 1 January 2016, when the sales permits issued by this Commission come into effect, to which end it any contractual modification may be made as deemed pertinent." For its part, the resolution's Tenth Consideration states an obligation that Pemex "not condition franchise contracts currently in effect to provision contracts, thus allowing free-choice with regard to brands and contract modalities as of 1 January 2016," in addition to "avoiding conditioning first-hand provision of these petroleum products to signing franchise contracts."

Later, by means of Resolution RES/958/2015, approved 31 December 2015, the CRE deemed that contract models Pemex TRI proposed still contained defined items and clauses that were incompatible with the LH, as well as preferential unilateral considerations. It was also noted that in information Pemex provided, no action was observed that might give notice that, as of 1 January 2016, provision and franchise contracts would no longer be linked.

In the same resolution, the CRE established that Pemex TRI contract models (franchise and provision) should, among other elements, submit to the following:

1) For provision:

- a) Not contemplate a commercial margin.
- b) Contemplate generic—and not just Pemex-branded petroleum product—purchase and sales.
- c) Not condition provision to providing transportation or distribution services.
- d) Not regulate activities after delivery in VPM points-of-sale.
- e) Exclude obligations regarding the submission of sales and inventory information under the acquirer's stewardship.
- f) Remove any clause that makes Pemex TRI a regulatory authority or supervisor.

2) For franchises:

a) Consider the possibility that both Pemex TRI and the franchisee may terminate the contract or, where appropriate, request corresponding adjustments, notwithstanding what COFECE may declare with regard to the matter.

With respect to this last consideration, in COFECE's view, the franchise contract model can restrict the competition and free-market entry process, in particular because it stipulates rigid and limiting grounds for termination,⁶⁴ as well as a 15-year lifespan, renewable for additional five-year periods. This combination could greatly prolong exclusive provision relationships between Pemex and service stations, which takes on special relevance in a climate where non-Pemex fuel-provision alternatives are few, and which, predictably, would mean the great majority of service stations would maintain or be induced to maintain their present relationship with Pemex.

Furthermore, it will be fundamental to prevent any type of discriminatory dealings on Pemex's part with regard to non-franchisee acquirers (both as regards service and in the contracts' clause-language, for example, linking or conditioning a commercial margin—from now until 31 December 2017—to the service station "category").

Recommendation: As this authority sees it, it is necessary to reduce contract life and above all allow franchisees to withdraw from the contractual relationship with no greater requirement than previous written notification.⁶⁵

Responding to CRE observations, Pemex published new franchise and first-hand gasoline and diesel sales contract templates on the Pemex TRI website.⁶⁶ It is necessary to make the following comments regarding them:

⁶⁴ Mutual consent, final judicial or administrative resolution, the franchisee's death and a change in circumstances that significantly affects compliance with contract stipulations (in this last case, however, only Pemex TRI can request a modification or termination).

⁶⁵ See opinion OPN-015-2015 which COFECE issued on the matter: <u>http://www.cofece.mx:8080/cfcresoluciones/docs/</u> <u>Mercados%20Regulados/V9/1/2312874.pdf</u>

^{66 &}lt;u>http://www.comercialrefinacion.pemex.com/portal/menu/controlador?Destino=menu_gral.jsp</u>

- a. These templates would be used for new contractual relationships.
- b. The VPM contract refers solely to delivering fuel at refineries, injection or entry points, meaning a definition of the "commercialization" (what was previously called "provision") contract is pending. The commercialization contract template must be made public as soon as possible, in order to lend transparency to terms and conditions governing the provision of transportation, storage and distribution logistical services or any other value-added service, and which should not contain any preferential criterion whatsoever for Pemex franchisees or business partners.
- c. As has been indicated, the franchise contract restricts acquirer mobility between alternative supply sources.

Independent of the above, there is no evidence that the several thousand contracts currently in effect have been updated in terms of the LH as well as resolutions the CRE has handed down.⁶⁷

Recommendation: So as not to impede this phase of the transition, it will be fundamental for the CRE to commit to completing the contract-replacement process as soon as possible (as it also contemplates approval of the retailing model contract).

5.2 Regional concentration

Despite the fact regional gasoline in Mexico has been stable since 2009⁶⁸ the total number of service stations has grown since then. This has brought on a reduction in the average volume of fuel sold per station, as the following graph portrays:



Source: SENER (Energy Information System); Asociación Mexicana de Empresarios Gasolineros.

⁶⁷ In addition to the obligations stated in the LH's Article 13, it would need to be added that any "foreigner-exclusion clause" or "non-competition" clause—in addition to being incompatible with existing judicial frameworks, is an attack on the free-market-entry and competition process.

⁶⁸ According to the SENER-issued document entitled *Prospectiva de petróleo crudo y petrolíferos 2015-2029* the daily gasoline sales volume between 2009 and 2015 went from 792,000 barrels daily to 793,000. This quantity reached its apex in the 2012 period (803,000 barrels) and its nadir in 2014 (776,000 barrels). In the case of diesel, 2009 sales rose to 359,000 barrels and reached 385,000 in 2015. Although there was growth in diesel demand during the period in question, starting in 2012 trends have been negative with each successive year.

Despite the above, there is international evidence that per-service-station sales in Mexico are still high.



Graph 6. Average per-service-station sales, 2013 (in millions of liters yearly)

Source: SENER (Mexico's Energy Information System); The Mexican Gasoline Businesspersons' Association.

Another way to visualize the supply elements is by identifying the number of vehicles per station in a given region. In an international comparison, one sees there are differences in the number of vehicles served at service stations. Both in the above graph as well as in the graph that follows, it can be noted that there could be a significant space for new-service-station market entry.



Graph 7. Number of vehicles per service station

Source: COFECE elaboration based on data from "Diagnóstico de la industria de petrolíferos en México," SENER, 2016.

Retail gasoline and diesel markets are markets in which demand is defined, alongside other considerations, as a function of travel-times or distance covered by consumers in order to reach a given service station. In other words, stations are interchangeable to the degree they are found within a certain perimeter.

The above model, by guaranteeing revenue for each station and simplifying logistical decisions, limited consolidation or the creation of economies of scale. Therefore, in the context of an open, competitive market, it is understandable that service stations will seek to group together and generate operational efficiencies.

The above notwithstanding, there is a legal competition framework that absolutely must be respected. In LFCE terms, concentration damages the competition and free-market-entry process if:⁶⁹

- It confers or can confer substantial power to the economic actor that emerges from the concentration, or increment that power;
- Has or can have establishing entry barriers, wrongly displacing other actors or impeding their market entry as its object or effect; and,
- The transaction's object or effect is to facilitate engaging in monopolistic practices.

Recommendation: When faced with this service-station consolidation process, it is recommended that transactions or strategic plans to group or consolidate service stations be preventatively disclosed to COFECE, so that economic agents have complete certainty that they are not falling into a legally sanctioned, illegal concentration.⁷⁰ Notwithstanding the above, it will be important for the CRE to require detailed information from commercialization permit-seekers to identify the regional presence of various economic-interest groups.

5.3 Buyers' alliances

From the announcement of the retail market's opening, a number of service station associations have demonstrated interest in jointly purchasing gasoline in large volumes as a means of obtaining better fuel-buying conditions. These actions' implications could be positive if the purchase volume's lower prices are passed on to end-consumers.

Nevertheless, economic agents should be aware that such trade strategies among competitors must not facilitate collusion, price monitoring or strategic actions, nor bring down innovation or differentiation on the part of those alliances' or "buyers clubs" participants.

In this context it is important to note that the LFCE considers any agreement, contract or merger between competing economic agents whose object or effect is price-fixing, supply restriction, market segmentation or information exchange for any of the above objects or effects an absolute monopolistic practice subject to severe sanction. Economic agents are to be fully aware that any pact

⁶⁹ According to the LFCE, a concentration is the merger, acquisition of control or any other action by which corporations, associations, shares, partnerships, trusts or general assets are joined together, undertaken among competitors, providers, purchasers or any other economic agents.

⁷⁰ LFCE's Article 127, section VII calls for fines of up to 8% of revenues corresponding to economic agents' that engage in illegal concentrations.

between competitors whose object goes beyond the acquisition of enhanced shared purchasing conditions may be in violation of the LFCE.

It should be noted that according to COFECE's document entitled "Guía para el intercambio de información entre agentes económicos,"⁷¹ information exchange between competitors may be anticompetitive and in violation of the LFCE, depending on its purpose and exchange mechanisms, the nature of the information itself and market characteristics.

Additionally, the Commission—as part of its preventative powers—analyzes and hands down rulings regarding whether concentrations made known to it by economic agents could give rise to market structures that could in turn confer substantial power on them, restrict supply, increase prices or favor practices that are considered monopolistic. According to the LFCE's Article 61, a *concentration* is understood as "the merger, acquisition of control or any other action by which corporations, associations, shares, partnerships, trusts or general assets are joined together, undertaken among competitors, providers, buyers or any other economic agents."

As such—depending on their particular characteristics—the LFCE can consider alliances between service stations designed to consolidate demand and obtain better purchasing conditions to be concentrations. That law's Article 86 establishes that such concentrations as exceed thresholds as established by that law must be authorized by COFECE before their constitution.⁷² According to the same article, implicated economic agents that do not fall into such categories may voluntarily give COFECE notice of their concentration.

Resolutions handed down with regard to concentrations can authorize, or not, or subject the concentration's authorization to compliance with conditions. Concentrations that do not have as their object of effect to diminish, damage or thwart free market-entry or economic competition will be authorized; otherwise, they will not. The latter could occur, for instance, if "buyers' club" members were in a position to establish discriminatory sales conditions in favor of club members and to the detriment of current or potential competitors. Additionally, concentration authorizations can be subject to compliance with conditions designed to prevent possible contrary effects to the free market-entry and competition process.⁷³

This commission will analyze concentrations brought to its attention based on their merits, on a case-by-case basis, and in consideration of any possible efficiency gain to which the transaction might give rise.

⁷¹ Issued 10 December 2015, available at: https://www.cofece.mx/cofece/index.php/normateca

⁷² Thresholds for reporting concentrations are as follows: i) When the transaction implies an amount in excess of 18 million times the in-effect Mexico City minimum daily wage (acronym in Spanish: SMGDVDF); ii) when the transaction implies an accumulation of 35% or more in assets or stock corresponding to an economic actor whose annual sales or assets in Mexico are greater than 18 million times SMGDVDF; or iii) when the transaction implies an assets or share capital accumulation of more than 8 million 400 thousand times SMGDVDF where the participating economic agents' annual sales jointly or individually exceed more than 48 million times SMGDVDF.

⁷³ To determine if a concentration is to be authorized, the Commission considers the following factors: i) the relevant market in terms of the LFCE; ii) identification of the main economic agents that supply the market in question, an analysis of their power in the relevant market and that market's degree of concentration; iii) concentration's effects in the relevant market with respect to all other competitors and the good or service's purchasers, as well as in other markets or concerning related actors; iv) the involved actors' share in other actors' concentrations and other actors' share in the involved agents' activities; v) elements the economic agents present to accredit that greater market efficiency would be achieved and that the concentration would exert a favorable effect on the competition and free market-entry process, etc.

5.4 ASA's exclusive provision

Since 1979, Airports and Auxiliary Services (acronym in Spanish: ASA) a decentralized, sectorspecific SCT agency, has been charged with providing air carriers with fuel storage, distribution and provision services. In the Ninth provisional Article of Airports Act regulation currently in effect,⁷⁴ that agency is granted exclusive license to offer those services in airports throughout Mexico, according to the following terms:

Stipulations: Airports Act regulations' ninth provisional article.

Ninth Provisional Article.- Aeropuertos y Servicios Auxiliares will continue to provide, in accordance with applicable legislation, fuel storage, distribution and provision services to air carriers and operators. As a consequence, neither concession-holders, permit-holders nor any other third party shall provide fuel storage, distribution or provision services until such time as the Ministry deems otherwise. This with the understanding that when there is an intention that such services be provided by third parties, the Ministry can license as much. Persons who currently perform fuel-provision services are excepted from the above.

Aeropuertos y Servicios Auxiliares is to tailor its programs to growth on the part of aerodromes that serve the public and will be responsible for any damage caused by fuel-provision services; to that end it will enter an agreement with concession- and permit-holders that determines the necessary terms and conditions for those services to be provided securely and efficiently, while specifying the consideration and form of payment corresponding to concession- and permit-holders for access to and use of installations from which to engage in fuel-provision services at each aerodrome. The Ministry will resolve any conflicts that arise from fuel-related service provision.

Although the above article was not explicitly repealed because of energy reform, it is incompatible with that stipulated by the LH, which establishes the possibility that any interested party request a permit from the CRE to engage in this activity (for which reason the article should be understood as tacitly repealed). Nevertheless, airport-related concession titles continue to preserve that monopoly in favor of ASA, impeding entry on the part of new suppliers and affecting aircraft-fuel airport concession conditions to the detriment of air carriers and end-consumers. This in turn could affect gasoline- and diesel-sector businesses seeking to diversify.

Recommendation: Given the above, it is relevant that the Ninth Provisional Article of Airports Act regulation be explicitly repealed at the same time airport concession titles stipulating only ASA may supply fuels are modified. This notwithstanding that the CRE may establish rules for inaugurating an Open Season applicable to that decentralized organization's storage infrastructure, to promote market entry on the part of new competitors through a guarantee of that infrastructure's open and non-discriminatory access.

⁷⁴ Published in Mexico's Official Federal Gazette on 9 September 2003.

5.5 Rights of way

Highways represent a natural market in which to establish service stations. In addition to the permit CRE should issue to undertake public sales, the SCT is the agency charged with granting permits corresponding to the establishment of service stations along both federal toll roads as well as free federal highways, as stipulated by the *Reglamento para el aprovechamiento del derecho de vía de las carreteras federales y zonas aledañas* (published in the *Official Federal Gazette* on 5 February 1992),⁷⁵ among other regulatory orders.

Recommendation: The SCT must make transparent the requirements and criteria for consideration when granting right-of-way permits, in such a way as to promote entry on the part of new competitors along Mexico's federal highways.⁷⁶ Under no circumstances should the policy for granting these permits consider exclusive rights to certain stretches of highway or determined areas of influence. Stipulations of that nature limit supply, restrict available purchase options for users and reduce competition pressure between service stations.

5.6 Local restrictions

Throughout the present transition period to a competitive gasoline and diesel market, it is of particular importance that the regulatory framework offer sufficient flexibility for the establishment of service stations, which does not exclude safeguarding legitimate public goals as, for example, with regard to security or health.

Service stations' location and quantity is an important factor that will influence a determination of fuel prices for sale to end-consumers.⁷⁷ Therefore local (i.e., state and municipal jurisdiction) authorities must assure regulation does not unduly restrict economic agents' free market-entry, not solely to generate sufficient supply but as well to assure the existence of competitive pressure between service stations that imposes discipline on prices and service conditions.

Recommendation: With respect to issues of safety, the environment and civil defense it is necessary to avoid that local guidelines include disproportionate or unjustified regulations compliance to which unduly impedes or restricts market-entry on the part of new economic agents. In any case, local regulations should be limited to the establishment of indispensable security measures that suppress this activity's inherent risks while not contravening ASEA-issued guidelines. Ideally, technical requirements and guidelines applicable to the hydrocarbons industry—including retail fuel sales activities—should be an exclusively federal matter.⁷⁸

⁷⁵ Available at: <u>http://www.sct.gob.mx/fileadmin/DireccionesGrales/DGCC/PDF/REGLAMENTO_APROVECHAMIENTO_</u> DERECHO_DE_VIA.pdf

⁷⁶ Archives corresponding to government transactions SCT-01-001-B "Permiso para paradores" and SCT-08-001-A "Permiso para uso y aprovechamiento del derecho de vía en las autopistas y puentes de cuota," prescribe that among criteria for ruling on private solicitations be included "that the requested construction projects and the petitioner's legal documentation comply with applicable regulations," without further specification. As well, implied refusal applies in both cases.

⁷⁷ Jaureguiberry, F., 2010. «An Analysis of Strategic Price Setting in Retail Gasoline Markets». The Pardee RAND Graduate School.

⁷⁸ The Hydrocarbons Act's Article 95 indicates "the hydrocarbon industry is an exclusively federal jurisdiction. As a consequence only the federal government can dictate its technical, regulatory and regulation stipulations, including those for that industry that are related to sustainable development, ecological equilibrium and environmental

Additionally, this Commission has identified sundry local regulations that could inhibit competitor market-entry by means of regulating minimum distances between service stations or those stations' surface areas, as will be considered below.

5.6.1 Minimum distances

In several instances, COFECE has declared opposition to the establishment of minimum-distance criteria between businesses of the same category since they limit supply and grant zones-of-influence to the benefit of established economic agents. Additionally, Mexico's Supreme Court has on several occasions ruled that legal stipulations that establish distance requirements between businesses of the same category are unconstitutional.⁷⁹

In the case of fuel-vending service stations, at a minimum the following local laws establish minimum distances (note municipal-jurisdiction regulations could also establish such requirements):

State	Minimum established distances	Legal instrument	Article
Baja California	 1,000 m in urban zones 10,000 m along highways	State of Baja California Urban Development Act	117
Chihuahua	 Between 1,200 and 1,700 m in urban zones 	State of Chihuahua Sustainable Urban Development Act	150
Colima	800 m in urban zones3,000 m in rural zones	State of Colima Zoning Regulations	401
Michoacán	 1,000 m in urban zones 10,000 m along highways	State of Michoacán de Ocampo Urban Development Code	281 bis

Table 3. Local legislation that establishes minimum distances between service stations

protection." Additionally, the National Hydrocarbons Sector Industrial Safety and Environmental Protections Act's Article 1 declares that ASEA "seeks to protect persons, the environment and hydrocarbon-sector installations." For its part, that law's Article 3, section XI states the Hydrocarbons Sector includes petroleum-product retail sales activities, among others.

79 See the following legislation and theses: a) Distancia, requisito de. Las leyes que lo fijan son violatorias de los artículos 40 y 28 de la Constitución Federal (Reglamento de expendios de leche en el municipio de Torreón, Coahuila); Registry no. 233443; Location: Seventh Session; Category: Plenary; Source: Semanario Judicial de la Federación; 42 part one; p. 53; Legal matter(s): Administrative; b) Reglamentos que fijan tácitamente el requisito de distancia para establecer comercios. Su inconstitucionalidad (industria de la producción de harina de maíz, masa nixtamalizada y tortillas de maíz); Registry no. 237718; Seventh Session; Category: Second Court; Source: Semanario Judicial de la Federación 151-156 part 3; p. 227; Legal matter(s): Constitutional/Administrative; c) Distancia, requisito de. Inconstitucionalidad. Comercios de una misma especie; Registry No. 805872; Location: Sixth Session; Category: Plenary; Source: Semanario Judicial de la Federación; part 1, CXXXV, p 27; Independent Thesis, matter(s): Constitutional/Administrative; d) Comercios de una misma especie, inconstitucionalidad del requisito de distancia entre los; Registry no. 257737; location: Sixth Session; Category: Plenary; Source: Semanario Judicial de la Federación; part 1, CIII, p. 28. Independent Thesis; matter(s): Administrative/ Constitutional.

State	Minimum established distances	Legal instrument	Article
Nuevo León	 1,500 m along frontage roads and principal thoroughfares 10,000 m along highways and expressways 	State of Nuevo León Urban Development Act	150
San Luis Potosí	• 2,000 m	State of San Luis Potosí Urban Development Act	145
Sinaloa	 1,500 m in urban zones 5,000 m in rural zones 20,000 m along federal highways 5,000 m on local and rural highways 	State of Sinaloa Urban Development Act	105 bis
Sonora	• 1,000 m	State of Sonora Territorial and Urban Development Code	17 bis

As has already been mentioned, stipulations that establish minimum distances between establishments given over to retail fuel sales give rise to already established economic agents by guaranteeing them a specific area of influence and protecting them from competition that news actors who wish to establish themselves within the perimeter the regulation has defined would represent.

Recommendation: Local public authorities should eliminate regulations establishing minimum distances between service stations that unjustifiably limit supply.⁸⁰

5.6.2 Minimum surface areas

Additionally there are local regulations that seek to regulate the establishment of service stations for retail gasoline and diesel sales and, among other actions, impose minimum surface area requirements for the premises where a service station may be established.

Most of these municipal codes adopt thresholds Pemex established in its requirements handbook "Requisitos a cubrir en la solicitud para construir y operar nuevas estaciones de servicio"⁸¹ and in its

⁸⁰ In September 2015, COFECE session issued an opinion regarding an amendment to the State of Coahuila Human Settlements and Urban Development Act, which sought to establish a 1500-meter distance for new service-station installation. In that opinion, the competition agency stated that these kinds of regulations are anti-competitive because they give rise to exclusive advantages favoring already established economic agents and guarantee zones of influence in detriment to consumers by limiting their supplier options (OPN-011-2015) Available at: http://www.cofece.mx:8080/cfcresoluciones/docs/Mercados%20Regulados/V7/1/2135303.pdf

⁸¹ Item 4.3.1 "El predio propuesto debe cumplir con las siguientes características de acuerdo a su ubicación" from the requirements handbook. Available at: <u>http://www.ref.pemex.com/index.cfm?action=content§ionid=11&catid=20</u>

general guide, "Guía para el llenado de la solicitud y documentación requerida en la incorporación a la Franquicia para Estaciones de Servicio."⁸² These norms obey a regulated market logic that Pemex devised, not a free-market logic in which service stations must complete for customer preference in terms of convenience, safety and quality.

Some examples are cited below:

Table 4. Municipal regulations that establish minimum surface areas

State	Municipal jurisdiction	Legal Instrument	Article
Coahuila	Torreón	Torreón Municipal Jurisdiction Regulations for the Establishment of Service Stations for Gasoline and Diesel Storage and Sales and Storage Plants for Liquid Petroleum Sales and Distribution	8
Colima	Colima	Colima Municipal Jurisdiction Regulations for the Establishment and Operation of Gasoline, Diesel and Lubricants Service Stations	19
Durango	Durango	Durango Municipal Jurisdiction Regulations for the Establishment of Gasoline and Service Stations	8
Jalisco	Guadalajara	Guadalajara Municipal Jurisdiction Zone- Specific Regulation for Service or Gasoline Stations	16
Sinaloa	Mazatlán, Sinaloa Municipal Jurisdic Regulations for the Establishment of Gasoline, Liquid-Petroleum Gas and Service Stations		8
Tamaulipas	IlipasReynosa, Tamaulipas Municipal Jurisdiction Regulation for the Establishment of Gasolin Service Stations		10

⁸² Point 4, subsection e), from the guidebook. Available at: <u>http://www.pemex.com/franquicia/incorporacion-operacion/</u> Documents/Gu%C3%ADaIncorp2014.pdf

Recommendation: These codes harbor negative implications for the competition and free marketentry processes since they limit economic agents' freedom to choose the service station configuration that best allows them to approach customers and offer them a variety of service modalities in accordance with conditions in their target markets. As such they restrict the establishment of stations in smaller locations where construction and operation would be feasible (e.g., with fewer pumps) and give rise to advantages for established ones, above all in areas where space is limited. Local public authorities should therefore eliminate them.

It should be pointed out that COFECE issued an opinion with regard to the draft-project corresponding to Official Mexican Norm ANTE-PROY-NOM-005-ASEA-2016, "Diseño, construcción, operación y mantenimiento de estaciones de servicio de fin específico para expendio al público y de estaciones de servicio asociadas a la actividad de expendio en su modalidad de estación para autoconsumo, de diésel y gasolina;" in which it stated that establishing minimum surface areas for service station construction limits economic agents' freedom to choose the most efficient service station configuration, as it relates to the conditions in the target market, notwithstanding necessary safety specifications that must be met. This draft-project is still under public consultation before Mexico's Federal Regulatory Improvement Commission(acronym in Spanish: COFEMER).⁸³

5.7 Access to consumer price information

Until energy reform came into effect, all service stations were Pemex franchises and offered the same fuel prices. The situation meant service stations could not differentiate themselves with consumers through pricing and as such they sought to attract customers through differences in quality, reputation and complementary services.

Though retailers may now compete by price (legal frameworks provisionally anticipate maximum retail prices), it will be after 1 January 2018, when prices will be freely determined, that this variable will take on particular relevance.

To promote competition at the service station level, it will be fundamental for consumers to have access to complete, timely and sufficient information on retail gasoline and diesel prices in such a way as they may compare options, make optimal consumer choices and exert competitive pressure on service stations.

Recommendation: For price to be a competitive variable, it is necessary that the CRE, within its framework of powers, order permit-holders to post prices in plain sight at service stations. This advertising should be carried out homogeneously, so that prices are comparable. As well, it would be practical for the regulatory agency to gather this information on a website that can be accessed remotely so that consumers can compare options via that medium.

⁸³ The opinion can be read at: <u>http://www.cofece.mx:8080/cfcresoluciones/docs/Opiniones/V2/3/3464136.pdf</u>

ANNEX 1. THE VALUE CHAIN, PRODUCTION AND DOMESTIC MARKETS

The value chain

The gasoline and diesel value chain encompasses five stages: 1) production and importation, 2) transport, 3) storage, 4) distribution and 5) sale to the public. Before Mexico's energy reforms, Pemex was responsible for the entire chain's operation as it served all domestic demand. Pemex produced, imported, transported, stored, distributed and marketed (on its own or by means of third party partners) these products throughout Mexico.



Source: COFECE elaboration

Gasoline and diesel industrial transformation activities (production), logistics (importation, transportation, storage and distribution), commercialization and sale to the public will be regulated through a system of permits SENER and the CRE will grant to Pemex and other, private entities.



Source: SENER (2014). Prospectiva de petróleo crudo y petrolíferos 2014-2018.

Fuel supply and demand

During the 2000-2010 period, demand for gasoline in Mexico grew steadily and from 531 to 802 thousand barrels daily. Starting then, Mexican gasoline demand has stabilized. Notably, in the 2010-2015 period, demand for Premium-grade gasoline grew more than 2.5 times greater, in detriment to Magna-grade gasoline.



Diesel demand, on the other hand, also experienced growth during the 2000-2010 period and, as in the case of gasolines, began to decelerate in 2010. While demand for this product evinced 0.7% annual growth during the 2010-2015 period, the last three years have witnessed a decrease.



Graph II. Diesel sales volume (thousands of barrels daily)

Source: SENER (Mexico's Energy Information System, Prospectiva de Petróleo Crudo y Petrolíferos 2015-2029).

Domestic fuel production

To respond to domestic gasoline and diesel demand, Pemex has undertaken crude-oil refinement as well as petroleum-product production at its six refineries. Although Pemex production registered increases during the 2000-2009 period, it began to decline the following year. Gasoline production decreases were 19% while diesel production was reduced by 18%. These data demonstrate that domestic production is not only insufficient to cover fuel demand; as well, the gap grows increasingly wider due to demand stability and reduced domestic supply.



Source: SENER (Mexico's Energy Information System)

Fuel importation

To respond to domestic gasoline and diesel demand, Pemex has resorted to importing those fuels. In the case of gasoline, the most relevant growth in importation rates occurred in the 2004-2007 period, when imports went from representing 17% to 40% of the total domestic supply, a level from which they have not declined. Between 2010 and 2015, imports have covered between 45% and 53% of national gasoline demand. In the case of diesel, imports since 2010 have represented more than a fourth of the total domestic supply.



Graph III. Domestic combined petroleum-product production (thousands of barrels daily)



Graph IV.b: Diesel importation vs. production (thousands of barrels daily)

Refining-segment problems

Mexican oil refineries evince operative and infrastructure-related lags that imply stability and industrial safety problems as well as problems complying with certain environmental norms.⁸⁴ These problems lead to production variations that in turn can give rise to emergency situations when it comes to guaranteeing fuel provision. Operation and production variations at Mexico's refineries require recurrence to high-cost logistical alternatives.⁸⁵



⁸⁴ According to the document entitled "*Diagnóstico de la industria de petrolíferos en México*," issued by Mexico's Ministry of Energy in May 2016, the National Refining System's use-percentage has fallen from 77% in 2010 to 66% in 2015. Compare such percentages with 91% of refinery capacity use by the US Gulf-coast-based refining industry.

⁸⁵ See: <u>http://www.pemex.com/saladeprensa/boletines_regionales/Paginas/2015-018-guadalajara.aspx#.VykXalThCM8</u>

These operative deficiencies have meant that Pemex Refinación, now Pemex Transformación Industrial (Pemex TRI), has reported losses in recent years. During the 2010-2014 period, the subsidiary reported losses in excess of 666.6 billion pesos:⁸⁶

	•) segine.			· ·
	2010	2011	2012	2013	2014	2015
Exploration and production	34.4	28.8	94.0	(42.5)	(153.4)	(667.4)
Basic gas and petrochemicals	3.8	(3.3)	1.6	3.9	15.6	18.1
Petrochemicals	(14.8)	(6.3)	(11.3)	(14.9)	(18.9)	7.8
Refining	(82.7)	(131.9)	(102.1)	(123.0)	(113.8)	(113.1)
Refining operations	(155.3)	(109.0)	(85.9)	(109.0)	(99.1)	(94.0)

Table I. Pemex net profit (loss) by segment (billions of pesos)

Source: Pemex Investors' Report

Refining losses now contravene the mandate the Petróleos Mexicanos Act establishes in its Article 4, which states Pemex is to generate economic value and profitability to its owner, the Mexican State. Added to the provision obligation, Pemex's refinery division has faced investment restrictions and has been subordinated to the crude oil "diet" that Pemex Exploración y Producción provides.

Obliging Pemex to carry on with its refining labors at all costs could have adverse effects on competition and free market-access. Fuel production at an economic loss during a prolonged period could de-incentivize private investment that would revitalize Mexico's petroleum-refining infrastructure. Because of this, faced with a new industrial-organization model and given that an important percentage of fuel still derives from domestic refining, it is important for this activity to be carried out in accordance with notions of economic optimization and not just volumetric maximization.

⁸⁶ See: http://www.pemex.com/ri/herramientas/Documents/PEMEX_Factsheet_e.pdf

Industry information

Information relative to refining-segment participant operations is essential to understanding events and trends that will affect fuel supply. Examples of this information include reports of at-refinery accidents, planned maintenance and unforeseen closures as well as national and by-region reserve levels. This information is in turn needed so that economic agents can make strategic and investment decisions. Since to the present time, only Pemex has undertaken refining activities in Mexico, all industry information belongs to that State productive enterprise. For the healthy development of the overall industry, it will be important for Pemex to share relevant industry information of a public nature, in accordance with such regulation as CRE may issue to that effect.

ANNEX 2. FUEL CHARACTERISTICS AS DEMANDED BY DOMESTIC AND INTERNATIONAL NORMS

	Magna Grade Gasoline														
	U	5A	Europe	Mexi	co City I Area	Metro	Mon	terrey N Area	letro	Guadalajara Metro Area			All other Mexico		
Norm	RBOB 87 (F Colonial, post- ethanol)	CARBOB Regular (A.K. Morgan, post ethanol)	EURO 5	NOM 086	NOM- EM- 005- CRE- 2015	NOM- 016- CRE- 2016	NOM 086	NOM- EM- 005- CRE- 2015	NOM- 016- CRE- 2016	NOM 086	NOM- EM- 005- CRE- 2015	NOM- 016- CRE- 2016	NOM 086	NOM-EM- 005-CRE- 2015	NOM- 016- CRE- 2016
Octane (RON+MON / 2)	Min 87	87	90		Min 87										
RVP psi*	max F3 11.5 F4 13.5 F5 15.0	max A1 5.99 A2 10.5 A3 12.5 A4 14 A5 5.99	8.70 (summer)	min 6.5 – max 7.8	max 7.8	7.8	Mar-Sep 9 10 Oct-Feb 10-11.5	Mar-O Nov-Fel		Min 6.5- max 7.8	max 7.8	7.8	Mar/Apr/Oct 9-10 May/ Sep 7.8-9 and 9-10 Jun-Aug 7.8-9 Nov- Feb 9-10 and 10-11.5	Nov-Feb Mar-May/Se 10 Jun-Aug and 10	ep/Oct max 9
Sulfur	max 80 ppm	21 ppm	10 mg/kg						rg 30 ppn ax 80 ppr					Max 1000 ppm (avg. 30 ppm, max ppm 80 from 31 Jan 2016	Avg 30 ppm max 80 ppm
Aromatics	Max 50%	38.7%	35%		Max 25%)	Max 35%	Max 3	2%	Max 35%	Max	32%		TBD	
Olefins	Max 25%	11.1%	18%		Max 10%)	Max 12.5%	Max 1	1.9%	Max 12.5%				Consult	
Benzene	Max 1.3%	1.22%	1%					Max 1%					Max 3%	Max 2%	Max 2%
Oxygen	Min 1.7% max 4%	3.3/3.7%	2.7%	Max 2.7%		1% 2.7%	Max 2.7%		1% 2.7%	Max 2.7%	Min max 3		N/D	Max 2.7	%

*RVP: Reid Vapor Pressure (volatility); psi: ponds per square inch

Premium Grade Gasoline																
	US	A	Europe	Mexico	o City Me	tro Area	Monte	rrey Meti	ro Area	Guadal	ajara Met	ro Area	All other Mexico		D	
Norm	RBOB 87 (F Colonial, post- ethanol)	CARBOB Regular (A.K. Morgan, post ethanol)	EURO 5	NOM 086	NOM- EM- 005- CRE- 2015	NOM- 016- CRE- 2016	NOM 086	NOM- EM- 005- CRE- 2015	NOM- 016- CRE- 2016	NOM 086	NOM- EM- 005- CRE- 2015	NOM- 016- CRE- 2016	NOM 086	NOM- EM- 005- CRE- 2015	NOM- 016- CRE- 2016	
Ōctane (RON+MON / 2)	min 93	91	90	Min	Min 93 91		141 00		Min 91	Min 92 91		Min 92		Min 91		
RVP psi	H3 11.5 H4 13.5 H5 15.0	B1 5.99 B2 10.5 B3 12.5 B4 14 B5 5.99	8.70	Min 6.5- max 7.8	7	.8	Oct- Feb 10- 11.5, and Mar- Sep 9-10	0- Nov- 5, Feb Min 4 7.8 11.5 6.5- 7.8 - and max 5 Mar- 7.8		Feb 10- 11.5, Nov- Feb Mar/Apr/Oct and 7.8 11.5 6.5- and 7.8 7.8-9 and 9-10 Mar- Sep Mar- Ott 10 7.8 Jun-Aug 7.8-9 Jun-Aug 7.8-9		9-10 May/Sep 7.8-9 and 9-10 Jun-Aug 7.8-9 Nov-Feb 9-10	Nov-Fe Mar-May 10 Jun-Al anc	/Sep/Oct ug max 9		
Sulfur	Max 80 ppm	21 ppm	10					Avg	1 30 ppm l	Max 80 pp	om					
Aromatics	Max 50%	38.7%	35%		Max 25%		Max 35%	May 220/		Max 35%	May 2204		Max 35%	Max	Max 32%	
Olefins	Max 25%	11.1%	18%	Max 10%			Max 12.5%	May 11 00/2		Max 12.5%	May 11 00/2		Max 15% Max 12.5		2.5%	
Benzene	Max 1.3%	1.22%	1%	Max 1% Max 2%					ax 2%							
Oxygen	Min 1.7% max 4%	3.3-3.7%	2.70%	Max 2.7%	Min 1 max 2		Max 2.7%			Max Min 1% 2.7% max 2.7%			Max 2.7%			

Diesel										
		Mexico	USA	Europe						
Norm	NOM 086	NOM-EM-005-CRE-2015	Grade 62 Colonial	EURO 5						
Flash		Min 45	54.4 °C (130 °F)	Min 55°C						
Cetane	Min 45	Min 48	Min 40	Min 51						
Aromatics		Max 30%		Max 31.7%						
Sulfur	Max 15 ppm	Max 15 ppm metro areas, northern border and corridor and max 500 rest of Mexico	Max 15 ppm metro Mexico City, Metro Guadalajara, northern border, metro Monterrey and 500 max rest of Mexico	Max 11 ppm origin/max 14ppm delivery	10 mg/kg					
Conductivity (pS/m)		N/D		250 pSm / at 21 °C						
Lubricity (microns)		Max 520		N/D	460					

GLOSSARY

ASA: The agency known as *Aeropuertos y Servicios Auxiliares*.

ASEA: The National Hydrocarbons Sector Industrial Safety and Environmental Protection Agency (*Agencia Nacional de Seguridad Industrial y de Protección al Medio Ambiente del Sector Hidrocarburos*).

Electronic bulletin: Online platform on which permit-holders make information related to the description of a transportation system, its operative capacities, maximum rates and contracting models is available to the general public and on which users can perform operations that are intrinsic to service provision.

COFECE: Mexico's Federal Economic Competition Commission (*Comisión Federal de Competencia Económica*).

CRE: The Energy Regulatory Commission (*Comisión Reguladora de Energía*).

Days of autonomy: The number of days TARs can satisfy demand without resupplying.

IEPS: Special Tax on Production and Services (Impuesto Especial sobre Producción y Servicios).

LFCE: The Federal Economic Competition Act (Ley Federal de Competencia Económica).

LH: The Hydrocarbons Act (Ley de Hidrocarburos).

Pipeline estimates: Pipeline-transport-based estimates

ROMP (*Residencia de Operación Marítima y Portuaria*, i.e., Maritime and Port Operations **Station**): Units whose principal function is tanker on- and off-loading for product transfer to TARs.

SCT: Mexico's Ministry of Communications and Transport (Secretaría de Comunicaciones y Transporte).

SENER: Mexico's Ministry of Energy (Secretaría de Energía).

SHCP: Mexico's Ministry of the Treasury and Public Credit (Secretaría de Hacienda y Crédito Público).

TAR: Terminal de Almacenamiento y Reparto; i.e., storage and distribution terminal.

TCPS: Service provision terms and conditions (*términos y condiciones para la prestación de los servicios*).

TOMP (*Terminal de Operación Marítima y Portuaria*, i.e., Maritime and Port Operations **Terminal**): A unit established within or around a port, made up of built areas, installations and surfaces, including its aquatic zone, that supports realizing the overall port operation to which it is dedicated.

VPM ("ventas de primera mano," i.e., wholesale or preliminary sales): The first transfer Petróleos Mexicanos, its subsidiaries or divisions or any other State productive enterprise, or company on behalf or at the command of the State, makes on Mexican soil, with or among third-parties. Such sales are to be made at the time of processing plant dispatch, at refineries, imported-product-injection points, entry pipelines or at hydrocarbon-injection points (i.e., directly from production fields).

Waterborne estimates: Maritime-transport based estimates.

RECOMMENDATIONS

PRICES AND RATES

To migrate from a monopolistic to a competitive market, it will be necessary for the price system to send the proper signals to markets and support increased participant market-entry.

Maximum retail price

1. Price ranges

Addressed to: the Ministry of the Treasury and Public Credit as well as to Mexico's Congress

Problematic: In 2016, monthly prices have hovered just below the range's lower limit, meaning consumers have had to pay IEPS complementary fees. Additionally, given its structures and costs, the upper limit could block potential importers or traders other than Pemex from entering these markets. The price range, which represents 3% above and 3% below the December 2015 price, is narrow and not very flexible.

Recommendation: Expand the price range's upper and lower limit values.

2. The formula's "margin" component

Addressed to: the Ministry of the Treasury and Public Credit

Problematic: Currently, the maximum price model does not reflect logistical cost differences between regions, especially with regard to transportation. This is because the data with which the "margin" logistical component was calculated were derived from out-of-date information from Pemex.

Recommendation: Consider costs CRE has updated and approved for Pemex. Pemexinfrastructure-applicable Open Season outcomes will provide relevant information to that effect.

3. Sole nationwide maximum price

Addressed to: the Ministry of the Treasury and Public Credit

Problematic: The nationwide maximum-price model inhibits development of economic agents' competitive abilities as well as new-infrastructure creation in the Mexican regions that need it. A more practical price regulation to lay the groundwork for price deregulation should consider the possibility of establishing different prices by region. Such a model would support market

entry, would incentivize new-infrastructure development and would habituate consumers to price differences that are normal in free-market models.

Recommendation: Establish regional maximum retail prices based on logistical realities.

First-hand (VPM) sales price

4. Logistical components transparency and periodic updates

Addressed to: the Energy Regulatory Commission

Problematic: VPM prices based on virtual logistical costs or average Pemex costs do not precisely reflect market conditions in these petroleum products' every point-of-sale or -delivery. Additionally, the formula calls for a monthly update as well as price-information additions, which do not reflect market conditions.

Recommendation: On its commercial website, oblige Pemex to itemize, update and make available to the general public the real logistical costs per VPM-purchase point. As well, prices corresponding to reference-market projections could be updated weekly, in order to more accurately approximate market conditions and avoid arbitrage situations.

5. VPM prices at the northern border

Addressed to: the Energy Regulatory Commission

Problematic: In instances or regions where increased participation on the part of economic agents can be achieved—for instance, along Mexico's northern border—it is advisable that the VPM prices Pemex devises be the outcome of market dynamics, i.e., that they should no longer be tied to a price formula.

Recommendation: Deregulate the VPM price Pemex establishes solely in areas where the existence of sufficient extra supply options, in addition to those of Pemex, can be observed.

6. Reference markets

Addressed to: the Energy Regulatory Commission

Problematic: There are regions in Mexico that could be linked to international reference markets other than the United States Gulf coast. Border cities in Baja California and Sonora are an example of as much, given that their proximity to the state of California connects them to the US Pacific coast fuel market.

Recommendation: The reference market as a component of the VPM price formula could vary to the degree that a given region might be influenced by one or another market.

7. Transportation and storage rates

Addressed to: the Energy Regulatory Commission

Problematic: Scant transparency in the methodology used to determine provisional pipeline transportation and storage rates impedes an understanding the causes behind several regional variations.

Recommendation: Instigate general stipulations that make transparent the criteria considered for calculating Pemex-approved transportation and storage rates, though separately from Open-Season development.

8. The illicit market

Addressed to: the Energy Regulatory Commission

Problematic: General administrative stipulations that touch on open access as well as pipelinetransportation and storage services provision do not expressly assign official responsibility in cases of fuel theft. This state of affairs can lead to uncertainty with regard to pipelinetransportation infrastructure-development entry costs, or indeed, for those services' users.

Recommendation: Establish that in case of theft, responsibility will be attributable to the carrier. This notwithstanding that the fee model may recognize certain investments carriers make to improve operative and security conditions surrounding licensed systems.



INFRASTRUCTURE AND LOGISTICS

Through competitive mechanisms, regulation should effectively guarantee open and not unduly discriminatory access to critical pipeline and storage infrastructure as well as give rise to incentives that favor new-infrastructure development. Additionally, regulatory barriers need to be eliminated to promote competitive conditions the entire length of these fuels' logistical chain.

9. Capacities assignments

Addressed to: the Energy Regulatory Commission

Problematic: The Open Season has yet to define specific mechanisms to be used to assign Pemex-operated transportation and storage system capacities if demand exceeds supply.

Recommendation: Guarantee Pemex establishes clear, competitive and transparent mechanisms that favor the most efficient candidates, such as by-capacity auctions. Prices should reflect infrastructure value and scarcity.

10. Unduly discriminatory dealing

Addressed to: the Energy Regulatory Commission

Problematic: Pemex enjoys relatively little experience offering gasoline and diesel transportation and storage services to third parties; this sort of third-party service-provision also requires specific management and technological capacities.

Recommendation: That service-provision Terms and Conditions that are applicable to Pemex as a gasoline and diesel provider specify mechanisms that this company must implement to guarantee its services will be provided to all users under similar circumstances. Pemex should additionally enhance its management and service capacities as soon as possible, so that stipulations regarding open access can be effectively applied.

11. Provision guarantees

Addressed to: the Ministry of Energy

Problematic: Maintaining minimum reserves translates into costs for logistical chain participants who must comply with such policies. Therefore requirements should not be excessive, so as not to give rise to unjustified market-entry barriers. In any case, the absence of a public storage and provision guarantee policy generates uncertainty with regard to market-entry and -participation costs.

Recommendation: As soon as possible, define a provision guarantee policy that is suitable and proportional to its objectives.

12. Steel tariffs and countervailing duties

Addressed to: the Ministry of the Economy

Problematic: The imposition of tariffs and countervailing duties on certain steel-product imports could raise the price of materials needed to expand the pipeline and storage network.

Recommendation: Identify steel-product tariffs and countervailing duties that might raise the cost of expanding the existing pipeline and storage network and—as part of a cost-benefit analysis—re-evaluate their appropriateness and continuance.

13. Cross-holding

Addressed to: the COFECE

Problematic: The Hydrocarbons Act's Article 83 states the CRE should authorize cross-holding in conjunction with a favorable COFECE opinion.

Recommendation: Given the efficiencies that could be achieved as the outcome of fuel-industry-activities vertical integration, cross-holding should only be limited when it generates risks to the free market-entry and competition process.

14. Port-related infrastructure

Addressed to: the Energy Regulatory Commission and the Ministry of Communications and Transportation

Problematic: Free-access guarantees should not be thwarted by means of denied access to port and maritime installations associated with petroleum-product transportation and storage infrastructure. Additionally, port regulation does not generate incentives for new-infrastructure development.

Recommendation: By whatever means, guarantee third-party access to transportation and storage associated port- and maritime-services installations, be they Pemex or any other entity's, subject to open-access rules; and facilitate maritime gasoline and diesel imports as well as transportation. As well, the so-called *Programas Maestros* should be re-evaluated so that port installations for third-party petroleum product handling can be developed in the short term.

15. Restrictions to foreign investment share

Addressed to: the Mexican Congress

Problematic: Restrictions related to foreign-investment share in domestic and inter-coastal navigation (*cabotaje*) as well as federal trucking—that could limit free market-entry into midstream petroleum-product transportation activities—prevail. These restrictions to foreign investment also apply to ship, aircraft and railroad-stock fuel and lubricant provision.

Recommendation: Among other statutes, reform the Foreign Investment Act to allow free foreign-investment share in maritime or terrestrial fuel transportation, as well as those products' provision to ships, aircraft and railroad stock.



Specifications associated with fuel quality should not limit economic agents' entry into importation and commercialization activities.

16. Fuel technical specifications

Addressed to: the Energy Regulatory Commission

Problematic: Gasoline and diesel quality specifications the Emergency Norm as well as the Official Mexican Norm (currently subject to public commentary) establish are not fully congruent with those applied in the United States and Europe, making Mexican fuels specialty products that are more expensive and harder to mix. In addition to restricting importation activities, this complicates interchangeability and fungibility in Mexican markets, an important condition for transport systems efficiency.

Recommendation: Make official Mexican norms compatible with international reference standards (principally the United States and Europe), notwithstanding environmental protection policy goals.

17. Imported product compliance evaluations

Addressed to: the Ministry of the Economy

Problematic: In the case of importation activities, the protocol for Official Mexican Norm compliance accreditation demands submission of a results report from a laboratory registered with the Ministry of the Economy's General Guidelines Office. For this reason, compliance with corresponding specifications is accredited at point-of-entry.

Recommendation: Allow for compliance evaluations to take place earlier in the logistical chain. Additionally, the requirement that laboratories must be registered with the Ministry of the Economy's General Guidelines Office should be eliminated; reference-market-accredited certifications that organizations or international laboratories issue should be recognized.



It is necessary to eliminate regulatory barriers and restrictions at all levels of government, to promote establishment of new service stations in various markets.

18. Franchise and supplying contracts

Addressed to: the Energy Regulatory Commission

Problematic: Franchise and provision contracts that Pemex and service stations entered into before energy reform came into effect have not been replaced in accordance with rules and principles now in effect, meaning the great majority of service stations are obliged or induced into maintaining their commercial and provisioning relationship with Pemex.

Recommendation: Conclude the contract-replacement procedure so that such contracts are compatible with both the legal framework now in effect as well as CRE resolutions. Additionally it will be necessary to allow franchisees to abandon contractual relationships with no more onerous requirement than previous written notice. As well, the CRE should approve the Pemex-applicable commercialization contract template.

19. Regional economic concentration

Addressed to: the Energy Regulatory Commission

Problematic: The process of opening the gasoline and diesel markets to unrestricted competition has incentivized concentrating service stations in the hands of relatively few economic agents. Such concentrations could damage the competition and free market-entry process in determined instances the LFCE speaks of.

Recommendation: In light of this phenomenon, it is advisable that transactions or strategic plans that group or consolidate service stations be preventatively submitted to COFECE so that economic agents may enjoy full certainty they are not engaging in an illicit concentration sanctionable by law. As well, it will be important for the CRE to require detailed information from commercialization-permit petitioners as a means of identifying the regional footprint of many such economic interest groups.

20. Purchasers' partnerships

Addressed to: the Energy Regulatory Commission

Problematic: Sundry gas station associations have shown an interest in jointly purchasing large volumes of gasoline as a way of acquiring more favorable fuel-purchasing terms. These arrangements, depending on their individual characteristics, could facilitate engaging in anti-competitive practices or might constitute economic concentrations as understood by the LFCE.

Recommendation: Economic agents should be fully aware that any agreement between competitors whose objective goes beyond obtaining enhanced joint purchasing terms could be in violation of the LFCE. As well, alliances between service stations to agglomerate demand and acquire better purchasing terms, depending on their individual characteristics, could constitute economic concentrations and therefore should be preventively declared before COFECE.

21. Exclusive ASA provision

Addressed to: the Ministry of Communications and Transportation

Problematic: Aeropuertos y Servicios Auxiliares (ASA) is the organization charged with providing fuel storage, distribution and provision services to air carriers. The Airports Act Regulation provisional framework and airport-related concession titles have never been amended, for which reason the monopolistic framework previous to energy-reform still prevails.

Recommendation: Repeal Airport Act Regulations' ninth provisional article and modify airport concession titles because these only allow ASA to provide fuels.

22. Right-of-way

Addressed to: the Ministry of Communications and Transportation

Problematic: The policy that grants permits for rights-of-way exploitation alongside federal highways—if not made transparent and equitable—could limit supply, restrict user purchase options and reduce competitive pressure among service stations.

Recommendation: Make requirements and criteria under consideration for granting rights-of-way permits more transparent.

23. Minimum distances

Addressed to: legislative bodies in the various Mexican states, Mexico City, and to local municipal governments; particularly the state congresses of Baja California, Chihuahua, Colima, Michoacán, Nuevo León, San Luis Potosí, Sinaloa and Sonora

Problematic: Established minimum distance criteria between businesses of the same type limits supply and confers zones of influence that benefit already established economic agents.

Recommendation: Eliminate minimum distance requirements between service stations.

24. Minimum surface areas

Addressed to: the National Hydrocarbons Sector Industrial Safety and Environmental Protection Agency as well as legislative bodies in the various Mexican states, Mexico City, and to local municipal governments; particularly the state congresses of Coahuila, Colima, Durango, Jalisco, Sinaloa and Tamaulipas **Problematic:** There are regulations that impose minimum surface area requirements for the premises upon which a service station is established. These respond to a regulated-market logic, planned by Pemex, and not to a free-market logic, in which service stations must compete for client preference in terms of convenience, safety and quality.

Recommendation: Eliminate minimum surface area requirements that cannot be justified for safety reasons.

25. Consumer-price-information access

Addressed to: the Energy Regulatory Commission

Problematic: For service stations to differentiate themselves by price, consumers need to have access to sufficient information that lets them compare options.

Recommendation: Order permit-holders to prominently post prices in service stations, homogeneously, so that posted prices can be subject to comparison. Similarly, it would be practical for the regulatory agency to gather such information on a remotely accessible website, allowing consumers to compare options via that medium.

DIRECTORY

Alejandra Palacios Prieto Presiding Commissioner

INVESTIGATIVE AUTHORITY

Carlos Mena Labarthe Investigative Authority Head

Brenda Gisela Hernández Ramírez Director General, Coordination Office

Francisco Rodrigo Téllez García General Director, Absolute Monopolistic Practices Investigations

Estanislao Sandoval Bosch General Director, Market Investigations

Octavio Rodolfo Gutiérrez Engelmann Aguirre General Director, Regulated Marketss

TECHNICAL SECRETARIAT

Sergio López Rodríguez Technical Secretary

Fidel Gerardo Sierra Aranda General Director, Legal Affairs

Juan Manuel Espino Bravo General Director, Economic Studies

José Luis Ambriz Villalpa General Director, Economic Concentrations

PLANNING, LIAISONS AND INTERNATIONAL AFFAIRS UNIT

Alejandro Faya Rodríguez Head of the Planning, Liaisons and International Affairs Unit

David Lamb de Valdés General Director, Competition Promotion

José Nery Pérez Trujillo

General Director, Planning and Evaluation

Erika Alejandra Hernández Martínez

General Director, Contentious Matters

Enrique Castolo Mayén General Administrative Director





Mexican Federal Economic Competition Commission

A BETTER MEXICO MEANS COMPETITION FOR ALL— AND IS EVERYONE'S COMPETENCY