

## OIL AND OIL PRODUCTS OUTLOOK 2016-2030



# OIL AND OIL-PRODUCTS OUTLOOK 2016-2030



**MEXICO**, 2016

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#### **PRESENTATION**

The advances and results from the Energy Reform have required a process of maturity and adjustment of each segment within the energy sector's value chain. Since its approval, diverse activities concerning hydrocarbons have been terminated, while others are still under process; all of them, in compliance with what is established in the current regulatory frame.

Thanks to the coordination of the Secretariat of Energy with the Coordinated Regulatory Organs in Energy Matters, the regulatory bases have been designed which will rule the Mexican energy market, and which have allowed to provide optimal conditions of competitiveness, transparency, and certainty to the current and potential participants, whether public or private, within the varied energy markets.

Once the market bases were established, the results from the Energy Reform have been reflected on the different links of the value chain, by carrying out calls for tender, allocation of contracts for the exploration and extraction of onshore and shallow-water fields, as well as the fourth tender of Round One, whose bidding along with the one of the Trion Block farmout- will attract investments for 41 billion dollars (USD) and will create approximately 450 thousand employments in Mexico.

Concerning oil derivatives, the liberalization of the oil-products import permits to private parties, and the opening of the gasolines' market are clear signs that will motivate this segment to invest on infrastructure and enable thus, to bring benefits to the consumers.

A fundamental element has been to break the planning paradigm which ruled the energy sector for many years, which has led to adapt to the new conditions and needs of the market and, therefore, redraw the planning. This document is the reflection of a joint effort of different working areas to present an indicative planning regarding oil and oil products.

#### INTRODUCTION

Chapter One points out the legal and regulatory frame to which the permissioned activities concerning hydrocarbons are subjected to. Is by the means of laws and regulations which establish the duties and powers of the Federal Public Administration organs which are involved, the Coordinated Regulatory Organs, and the State Productive Enterprises, as well as the guidelines for the participation of the public and private agents who form the hydrocarbons market.

Chapter Two contains information regarding the oil national supply (reserves, exploration and production activities, distribution) of the National Refining System (capacity for processing oil, oil-products production by refinery, as well as their import, among other). The chapter is supplemented with information about the domestic demand and export of each oil product (gasolines, diesel, jet fuel, fuel oil, and oil coke). Since every oil product is destined to meet the consumption needs for diverse sectors, the information for each sector can be consulted.

Chapter Three was devised under the legal frame ruling the energy sector, along with the joint effort of the Secretariat of Energy, the Hydrocarbons National Commission, the Energy Regulatory Commission, and the Mexican Petroleum Institute, among other institutions of the sector. The chapter presents the results from the methodology used for the two scenarios (maximum and minimum) for oil production within the next 15 years, and the allocation of blocks through bidding rounds. Regarding the expectations for refining crude oil, it shows the growth expectations on the capacity, processing, and production of oil products. The results from the methodology used to define the oil-demand projection by sector, allows to have the figures per each oil product, sector, federal entity, and, in some cases, per branch.

By the end of the document, Annex A supplements the section about motor-carrier sector's demand; Annex B presents different sensitivity exercises for each sector and each oil-product demand, taking into consideration three macroeconomic scenarios (base, high, and moderate). It is important to mention that the estimated demand per fuel and federal entity in the base scenario, does not consider the oil-sector demand, and thus, does no coincides with the demands displayed in the tables of Annex C.

The energy sector requires an indicative planning which enables to have basis for developing infrastructure to produce oil and oil products and, thereby, identify the future needs for the timely and suffice supply of higher quality fuels. In this sense, the Oil and Oil-Products Outlook 2016-2030 is presented as a reference tool for the investment in new projects.

#### EXECUTIVE SUMMARY

#### Chapter One. Regulatory Frame

The new structure and performance of the energy sector requires that its regulatory organs' organization and operation are jointly coordinated to regulate activities derived from the fuels' productive chain, from their primary extraction all along to end users.

The legal frame in which the hydrocarbons' subsector activities are performed, is defined by varied laws and regulations which determine the powers of any federal entity, coordinated regulatory organs, or State Productive Enterprise involved, as well as the guidelines to be followed by public and private agents within the hydrocarbons market, to participate. Based on this, diverse decrees, provisions, agreements, methodologies, and standards were enacted, aiming to give structure to an efficient and competitive market.

#### Chapter Two. Oil Industry and Oil-Products Domestic Market

To January 1st, 2016, Mexico recorded a level of total remnant reserves (3P) of 24,074 million barrels of crude oil equivalent (MMBCOE), less by 35.6% regarding 2015. Proven reserves of crude oil equivalent (1P) reached a volume of 10,243 million barrels (MMB); probable reserves were of 6,400 MMB; 2P reserves (proven + probable), 16,643 MMB; and possible reserves, 7,432 MMB. The fall in the international crude prices had an impact over the fall of Mexico's hydrocarbons reserves. In addition, the budgetary cuts put downward pressure on Pemex development activities, which resulted in the reallocation of resources into more profitable areas. Another factor was, for the first time, the reclassification of reserves as contingent resources, mainly gas discoveries in deep water.

During the last ten years, crude-oil production has shown a downward trend equivalent to an AAGR of -3.8%. In 2015, crude-oil domestic production averaged 2,266.8 thousand barrels per day (MBD), 6.7% less than the previous year. Among other things, the latter is the result of a smaller production from the Assets, the natural decline of the fields, and an increase in the fields' water production. The heavy crude oil production was of 1,152 MBD, 8.9% less than the average production of 2014; light crude oil production reached 838 MBD, 3.0% less than what obtained in 2014; and the ultralight crude oil, 277 MBD, 7.5% below what recorded in 2014.

By region, the Marine ones produced 1,054.9 MBD of heavy crude, and 705.4 MBD of ultralight crude; the South region, produced 362.1 MBD of light and ultra-light crude, and 31.7 MBD of heavy crude; and the North region obtained 65.7 MBD of heavy oil, and 47.0 MBD of light and ultra-light crude altogether.

During 2015, 46.9% of the total crude oil production was destined to domestic consumption, which means that 1,064 MBD were distributed to the Refining National System (SNR, for its Spanish acronym), and 1,177.7 MBD were exported. The distribution of crude oil to refineries decrease by 8.4% regarding 2014, while the crude destined to export terminals increased 2.5%. By quality, in 2015, 55% of light crude oil and 45% of heavy crude oil was destined to refineries. Likewise, 72.1% of heavy crude, 17.4% of light crude, and 10.6% of ultralight crude were sent to export terminals.

In that same year, PEMEX TRI had a capacity for refining crude through atmospheric distillation of 1,640 MBD, and processed a total of 1,064.5 MBD of crude oil, a volume 7.8% smaller than in 2014. This, due to the programmed maintenance of plants, the performance of non-programmed maintenance and restoring works and which were related to the crude's quality received in the productive areas, as well as to a less programmed processing resulted from optimizing the SNR.

Oil-products productions in the SNR was of 921.9 thousand barrels per day of crude oil equivalent (MBDCOE), 7.4% less compared to 2014. This decrease is attributable to a less oil processing (7.8%). From



the total production of oil products, 33.3% (306.8 MBDCOE) corresponded to gasolines, 29.8% of diesel (274.4 MBDCOE), 27.8% of fuel oil (256.0 MBDCEO), 5.0% of jet oil (46.3 MBDCOE), and 4.2% of petroleum coke (38.4 MBDCOE). Regarding fuel-oil production, it decreased 8.4% in 2015, resulting from a better use of residues' upgrading equipment.

In 2015, the total demand for oil products was of 1,351.9 MM, 0.4% more regarding 2014. The transportation sector had the largest demand, 1,209.8 MBD, to cover its consumption necessities, 1.4% more regarding 2014. From the total demand in the transportation sector, 91.8% corresponded to the modality of motor carrier, which demanded 1,110.0 MBD of fuels in 2015, 0.9% more than in the previous year.

Gasolines' consumption recorded 794.6 MBD, 2.1% more regarding 2014, while the consumption of diesel for motor carrier was of 317.2 MBD, 2.0% less than in the previous year. At national level, the regions with the largest demands were the Central and the Central-Eastern, with a share of 29.0% an 22.3%, respectively. To supply the motor-carrier consumption needs, in 2015, 11,210 services stations operated throughout the country, 3.5% more than in 2014.

To cover the aerial sector consumption needs in 2015, 70.8 MBD of jet fuel were needed, 6.4% more than in 2014. Jointly, the South-Southeast and Central regions, concentrated 64.9% of this fuel's demand.

The diesel's average demand in the rail transportation was of 13.4 MBD, 4.7% more regarding 2014. This coincides with the growth rates of the rail freight transportation, which increased by 7.2% during 2013-2015. Likewise, the consumption of diesel for maritime transportation grew 8.3% regarding 2014, reaching 15.2 MBD.

In 2015, the demand for fossil fuels (fuel oil, diesel, petroleum coke, coal, and natural gas) in the electricity public sector was of 897.0 MBDCOE, 4.3% more regarding 2014. Natural gas is the fuel mostly used in this sector, with a share of 69.9% (624.4 MBDCOE) in 2015; this fuel was seconded by fuel oil, though, during the last ten years, it has decreased it share from 38.7% to 12.3%, due to the CFE's program for replacing fuel oil with natural gas in power station. The fuels with the smallest share were coal, petroleum coke, and diesel.

During the last year, the industrial sector increased its fuel's demand (fuel oil, petroleum coke, diesel, LP gas, and natural gas) 4.7%, rising from 330.5 MBDCOE in 2014 to 346.2 MBDCOE in 2015. From all the fuels demanded in this sector, natural gas was the most important, with 228.5 MBDCOE in 2015. On the contrary, oil coke is the most consumed oil product in the intensive industrial branches, mainly cement; from 2005 to 2015 the demand increased 48.6%, summing up 58.5 MBDCOE by the end of 2015, 12.7% more regarding the previous year.

As for the foreign trade of oil and oil products, the volume of crude sent to export terminals increased 2.5% in 2015, rising from 1,149 MBD in 2014 to 1,178 MBD, attributable to the increase on the exports of light crude (52.8%) and ultralight (34.6%). This increase counteracted the drop of heavy crude destined to export terminals, which was of 848.6 MBD in 2015, 8.0% less regarding the average export per day in 2014.

By country of destination, 58.9% Mexican oil exports targeted the U.S. market, 12.8% less compared with 2014. A significant factor for this reduction was an increased activity in the extraction of non-conventional crude by the U.S. During the last ten years, exports to the U.S have fallen at an AAGR of -7.0%.

In 2015, the imports of oil products were of 578.5 MBDCOE, 15.9% more than in 2014; mainly as a consequence of a low production of the SNR refineries. Per oil product, the gasolines' import level in 2015 was of 425.8 MBD, 15.1% more regarding the previous year. In 2015 diesel recorded its highest imports' level, rising from 132.9 MBD in 2014 to 145.3 MBD, an increase of 9.4%.

In that same year, petroleum coke imports rose 16.2% regarding 2014, reaching 2,772.4 thousand tons per year (MTA). Likewise, 32.5% of the domestic demand for jet fuel was supplied through imports, recording a volume of 23.0 MBD. Fuel oil was the only fuel with a share in the fuels' exports with an average of 123.9 MBD, though it decreased 3.8% regarding 2014.

#### Chapter Three. Oil and Oil-Products Outlook, 2016-2030

Prospective resources are the amount of oil estimated, in a given date, to be potentially recovered from non-discovered accumulations. By December 31st, 2015, Mexico had 112.83 billion barrels of crude oil equivalent (BCOE) of prospective resources, from which 53.3% (60.2 BCOE) is found in non-conventional plays, and 46.6% (52.6 BCOE) as conventional prospective resources. Oil is the main hydrocarbon within Mexico's conventional prospective resources, 91.7% from the total prospective resources, while non-conventional prospective resources represent 52.9%.

By December 31, 2015, 2,628 conventional exploratory opportunities have been identified in Mexico. These opportunities have a documented average prospective resource of 32.5 BCOE. From the conventional exploratory opportunities, 37.5% (13.4 BCOE) are allocated to PEMEX; 40.1% are located in shallow water areas; 32.2% in offshore areas; and 27.6% in deep-water areas.

In 2016, the production in the maximum and minimum scenario will be totally extracted by PEMEX (considering Round Zero, Preventive Allocations, and Migrations); none of these scenarios reflect the production from tenders or exploration activity. By 2030, it is estimated that in the maximum scenario, 63.2% of the production will come from exploration, and 36.8% from extraction. For the minimum scenario, 57.8% will come from exploratory activities, and 42.2%, from extraction activities.

During the whole projection period, the hydrocarbons production will be focused in shallow marine water. In 2016, this will account for 78.4% in the maximum scenario, and 78.5% in the minimum scenario. By 2030, its share decrease to 51.8% and 53.0%. In 2016, the production from onshore areas represents 21.6% in the maximum scenario, and 21.5% in the minimum one; this share in the oil total production increases to 30.6% and 30.2% in 2030. Deep marine areas become active in 2024 in the maximum scenario, and in 2027 in the minimum scenario. In 2030, the latter will contribute with 17.6% and 16.8% of the production in both scenarios.

For both scenarios, throughout the period 2016-2030, the oil's accumulated production will concentrate, mainly, in obtaining crude and light oil. In 2016, from the estimated total production for the maximum scenario, 50.8% will come from heavy crude and 29.0% from light crude; by 2030, this share will be of 23.4% y 46.7%, respectively. In the minimum scenario, heavy oil represents 50.8% and light, 29.0%; but for the next fifteen years, this proportion switches and 28.9% of the production will be heavy oil and 44.6%, light oil.

The exercise on oil-products production takes into consideration improvements on operation, yields, and quality of the products (2018-2020), coking in every refinery (2021-2030), and additional refining capacity (2023-2030).

Pursuant to the assumptions considered, between 2015 and 2030, no additional distillation capacity is foreseen in the existing refineries; in these complexes stands out an increase in their hydrodesulfurization capacities from 1,100 to 1,899 MBD, and in their coking capacities from 156 to 432 MBD. The capacity for processing heavier crudes to obtain more valuable distillates is the final result of reconfiguring refineries; the programmed projects would increase their quality for being more competitive in the market.

Obtaining a higher number of distillates, along with producing other industrial fuels, and reducing residue products bring along changes in the production yields, which are the efficiency indicators of crude conversion in the SNR. Strategically, it is expected refineries will have different yields for every oil product, and even if all refineries will try to maximize their gasoline and diesel productions, some will stand out for having high yields for a specific oil product. By the end of the analyzed period, Tula will have the highest yield on gasolines' production, seconded by Minatitlan and Salamanca. Likely, Cadereyta will have the highest yield of diesel, and afterwards, Madero, Minatitlan with identical yields, as well as for the additional capacity considered in the planning horizon. The expected increase is of 53.4% during 2015-2030. The completion of the deep-conversion trains to use residues, and the integration of 250 MBD of capacity into the SNR, will take the crude processing to levels beyond 1,630 MBD from 2023 on.

The oil-products' growth expectation is of 2.9% annual average for the coming 15 years, reaching 1,412.6 MBDCOE. By 2030, the largest production is expected to come from the refineries in Tula (266.0 MBDCOE), Salina Cruz (247.6 MBDCOE), and Cadereyta (213.9 MBDCOE). By 2023, the New Capacity will bring a production of 211.9 MBDCOE. Finally, Minatitlan (159.8 MBDCOE), Salamanca (168.2 MBDCOE), and Salamanca (145.4 MBDCOE). Fuel-oil production will decrease in every refinery; Tula and Salamanca will stop its production by 2021. The main economic indicators of the country were considered in order to devise the estimate of the oil-products' domestic demand for the period 2015–2030, just like the scenario of economic activity by state, sector, and subsector.

Within the next 15 years, the transportation sector is expected to increase its demand for fuels 40.0%, going from 1,096 MBDCOE in 2015 to 1,534 MBDCOE in 2030. From the total demand in the motor-carrier sector, by 2030, gasolines will represent 57.4% and diesel, 34.5%, the result of an intensive use in motor carrier. During the projected period, gasolines remain as the main consumed fuel in the motor-carrier segment. Gasolines' demand is estimated to increase by 34.1%, reaching 1,063.5 MBD by the last year of the period, 270.6 MBD more than in 2015; attributable to the expected growth of the vehicular fleet fueled by gasoline. The domestic demand for diesel in motor carrier represents an increase of 77.4% during the period, rising from 317.2 MBD in 2015 to 493.0 MBD in 2030, due to an increase of the intensive-use vehicle fleet using this fuel.

From 2015 to 2030, the total vehicle fleet will increase 32.8%. The gasoline vehicle fleet is projected to increase 31.8%, growing from 32.3 million units -in its diverse categories-, in 2015, to 42.6 million units in 2030.

Within the next 15 years, jet-fuel demand will rise from 41.7% (70.8 MBD) in 2015 to 100.3 MBD by the end of the period. The projections over the rail transportation consumption of diesel point out an average annual demand of 16.1 MBD. The moderate demand is mainly related to the introduction of more efficient locomotive.

In 2030, the total demand for fuels in the electricity sector is expected to be 0.7% higher than in 2015. The participation rules in the Wholesale Electricity Market, focused on the availability and efficiency of generating technologies, foresee an increase in the use of natural gas, reducing thus the consumption of conventional fuels. The electricity sector's demand for fuels oil is projected to shrink to an AAGR of 24.9%, practically non-existent. The estimation for diesel on electricity-generating processes shows an average consumption of 1.3 MBD. Finally, petroleum coke to generate electricity will only be consumed in activities related to the industry of cement and mining. Between 2015 and 2016, this fuel's average demand is estimated in 1,261 MTA.

Within the industrial sector, natural gas will be the most demanded fuel, with an AAGR of 3.1% for the next 15 years, rising from 66.0% of the total consumption in 2015, to 75.2% in the last prospected year. The high polluting emissions, as well as the restrictions in its use, along with the advantages of natural gas versus fuel oil, indicates that, very likely, the industrial sector will stop using this oil product and replace it with natural gas.

The demand for petroleum coke is related with the cement industry, concentrating 95.6% of the 2015's demand and decreasing to 92.2% in 2030. Its consumption is attributable to its relatively low price compared with natural gas and fuel oil. Regarding the average demand of diesel and LP gas, these are expected to reach 31.7 MBDCOE and 20.5 MBDCOE, respectively, with an AAGR of 1.1% and 1.5% for the studied period. Fuel oil is not expected to be used anymore in the industrial sector by 2019; hence, between 2015 and 2019, its average consumption is expected to be of 4.3 MBDCOE, resulting from being replaces by natural gas.

Even with the investments on the refining capacity, distillates' production will remain short; though, the bridge in the trade balance will be reduced. From 2015 to 2030, oil-products' imports will be reduced by 22.6%, while exports will increase by 40.9%.

As for the gasolines' demand, its deficit is expected to be reduced from 425.8 MBD to 342.8 MBD during 2015-2030. During the estimated period, gasolines' imports will represent 35.8% average of the domestic



demand. For diesel, three moments can be identified regarding its trade balance: 1) during the first seven years of the projection, the internal supply will be inferior to the domestic demand, and it will be necessary to resort to imports. From 2015 to 2022, diesel averages a production of 351.8 MBD; an imports level of 156.5 MBD; a demand of 436.5 MBD; and exports of 69.8 MBD. 2) Starting in 2023, and until 2026, the average production increases to 542.2 MBD; imports are reduced, averaging 65.5 MBD, since the newcapacity is assumed to start up by 2023, increasing exports to 89.9 MBD. 3) Within the last four years of the projection, a commercial deficit will present again, given that its supply will be less than its demand.

In the period 2015-2030, the internal production and demand of jet fuel will have an AAGR of 3.7% and 2.4%, respectively. Though, even if this fuel production increases, it will not be enough to cover the consumption level of the aerial sector.

Regarding petroleum coke production during 2015-2020, it will not suffice to meet the internal demand, which is mainly formed by the cement branch and the electricity sector. Therefore, there will continue a strong dependency on exports to meet such demand; within the next five years, an average 2,409.3 MTA will be imported. Starting in 2021, the new upgrades for deep conversion will enable a better use of residues, in such way, that from 2021 to 2030, petroleum coke production will be larger compared with its consumption needs, resulting in a surplus in this fuel's trade balance.

#### CHAPTER ONE. REGULATORY FRAME

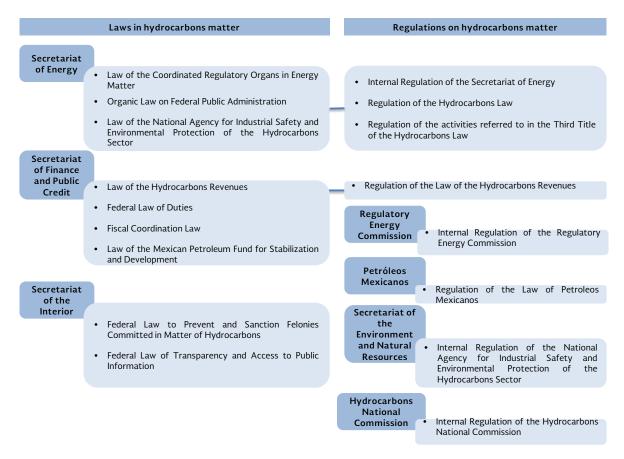
The new structure and functioning of the energy sector requires the organization and coordination of its regulatory organs which, in a coordinated and jointly matter, regulate the activities derived from the fuels' productive chain, starting with their primary extraction up to the end user. Pursuant to this, the Law of the Coordinated Regulatory Organs in Energy Matter (LORCME, for its Spanish acronym) was issued as a Regulatory Law of paragraph eighth of article 28 of the Political Constitution of the United Mexican States (CPEUM, for its Spanish acronym), establishing the necessary competencies for an efficient regulation.

The Law of the National Agency of Industrial Safety and Environmental Protection of the Hydrocarbons Sector (Law ASEA) was enacted to protect the people, environment, and hydrocarbons sector's facilities through the regulation and supervision of its industrial and operational safety. It also regulates dismantling and decommissioning activities of facilities, and the comprehensive control of residues and pollutant emissions.

The legal frame in which the activities of the hydrocarbons subsector are developed, is limited by diverse laws and regulations, which dictate the attributions of the Federal Public Administration entities, coordinated regulatory organs, and state Productive enterprises involved, as well as the guidelines for the participation of the public and private agents who form the hydrocarbons market, (see Figure 1.1). Based on the latter, diverse decrees, provisions, agreements, methodologies, and rules were enacted to give structure to an efficient and competitive market.

In addition, the auditing of the revenues, taxes, fiscal coordination, among other, of the hydrocarbons sector activities are regulated by the Secretariat of Finance and Public Credit (SHCP, for its Spanish acronym). Likely, the Secretariat of the Interior (SEGOB, for its Spanish acronym) is accountable for preventing and sanction any felonies on hydrocarbons matter, as is in charge of the Transparency and Access to Public Information.

#### FIGURE 1. 1 LEGAL FRAME IN HYDROCARBONS MATTER



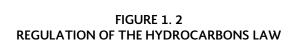
Source: Prepared by SENER with information from CRE.

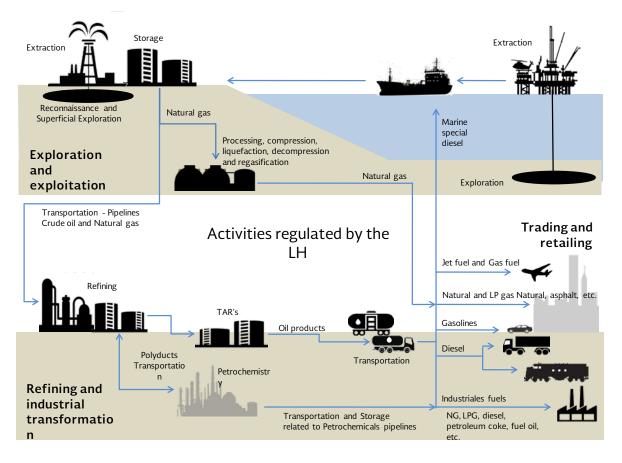
The regulation of the activities related to crude oil, oil products, and to the transportation and storage of petrochemicals through pipelines, is founded on the Hydrocarbons Law (LH, for its Spanish acronym), (see Figure 1.2), which regulates articles 25, fourth paragraph; 27, seventh paragraph; and 28, fourth paragraph of the CPEUM, on hydrocarbons matter, and which aims to regulate the following activities performed in national territory (Art. 2):

- 1. Superficial reconnaissance and exploration, and exploration and extraction of hydrocarbons;
- 2. Treating, refining, alienation, trading, transportation, and storage of oil;
- 3. Processing, compression, liquefaction, decompression, and regasification, as well as the transportation, storage, distribution, trading, and retailing of natural gas;
- 4. Transportation, storage, distribution, trading, and retailing of oil products; and
- 5. Transportation through pipeline, and storage related to pipelines, of petrochemicals.

With the enactment of the LH, the provisions of the Foreign Investment Law, the Mining Law, and the Public-Private Associations Law were amended.







Source: Prepared by SENER.

The different activities within the chain value, have required the implementation of diverse regulating instruments<sup>1</sup> like the General Administrative Provisions (DAGC, for its Spanish acronym), its amendments, and other Technical Provisions issued by the CNH, the CRE, the SENER, the National Agency of Industrial Safety and Environmental Protection (ASEA), among which the following are mentioned:

By the Hydrocarbons National Commission:

- Authorizations for the reconnaissance and superficial exploration of hydrocarbons and its amendments.
- Guidelines for the conformation, implementation, and authorization of the Administrative Systems for Industrial Safety, Operational Safety, and Environmental Protection applicable to all the activities indicated for the Hydrocarbons Sector.
- Technical Provisions for the use of associated natural gas in the exploration and extraction of hydrocarbons.

By the Energy Regulatory Commission:

<sup>&</sup>lt;sup>1</sup> For further information, visit: <a href="http://www.gob.mx/cre/articulos/marco-jurídico-en-materia-de-hidrocarburos?idiom=es">http://www.gob.mx/cre/articulos/marco-jurídico-en-materia-de-hidrocarburos?idiom=es</a>



- Requirements for the submittal of applications for provisional permits related to the transportation, storage, distribution, retailing, and management of integrated systems of oil, oil products, petrochemicals, and biofuels.
- Models for the definite permits' titles for the activities of transportation, storage, distribution, and retailing of oil, unprocessed natural gas, oil products, petrochemicals, and biofuels, as well as for the management of integrated systems.
- Requirements for the submittal of applications for permits to trade natural gas, oil products, and petrochemicals.
- Requirements for the submittal of applications for permits to transport, store, distribute, liquefy, regasify, compress, decompress, retailing, and manage natural gas integrated systems.
- Applicable to the service provision of transportation through pipeline and hydrocarbons' storage.
- Specifications of the requirements (articles 50 and 51 of the LH) of the applications formats for permits and for the models of the permits' titles to carry out activities of storage, transportation, distribution, and retailing of liquefied petroleum gas.
- Measuring specifications applicable to the activity of transportation through pipeline of hydrocarbons, oil products, and petrochemicals.
- Procedures for the statistical record of trade transactions and lawful provenance of oil products.
- Formats for hydrocarbons, oil products, and petrochemicals trading permittees to submit information.
- As for open Access and service provision of oil-products distribution through pipeline.
- On the measuring, the ones applicable to the, oil products, and petrochemicals storage.
- Open access and service provision of transportation through pipeline and storage of oil products and petrochemicals.
- Open access and service provision of transportation through pipeline and storage of natural gas on matter of protection to the low-consumption end user of natural gas.
- Trading of natural gas conditioned upon asymmetric regulation to PEMEX, its subsidiaries, affiliates and divisions, and any other entity controlled by such entities.
- DACG whereby are established the requirements for the submittal of applications for permits to trade natural gas, oil products, and petrochemicals identified with number RES/370/2015, to add the hydrocarbons to the list of products subjected to trading permits.
- First-hand sales and trading of gasoline and diesel conditioned upon asymmetric regulation to PEMEX, its subsidiaries, affiliates and divisions, and any other entity controlled by such entities.
- First-hand sales and trading of oil products and petrochemicals, except for gasoline, conditioned upon asymmetric regulation to PEMEX, its subsidiaries, affiliates and divisions, and any other entity controlled by such entities.
- Which modifies the seventh transitory provision of the DACG on matter of open access and service provision of transportation through pipeline and storage of oil products and petrochemicals.

#### By PEMEX:

- General Contracting Provisions for Petroleos Mexicanos and its subsidiary productive enterprises. By the Secretariat of Energy:
  - Formats and specifications of the LH's requirements (articles 50, 51, and 121) to grant permits for treating and refining oil, as well as for processing natural gas.
  - Models of the titles of the permits for treating and refining oil, as well as for processing natural gas.
  - Requirements to be included in the applications of the title holders of a mining concession who are interested in getting the direct allocation of a Contract for the Exploration and Extraction of Natural Gas associated with the Coal Seam and produced by itself.

During the last year, the regulatory organs issued agreements and resolutions in recognition to the mandates and powers conferred by the LH; these establish some of the provisions mentioned above, and which, in order to provide a simple analysis, will be grouped according to the activity they regulate. Additionally, pursuant to the powers bestowed on the CRE related to the regulation, the catalog of the standards issued and the proposed projects on standards are mentioned to give a wider panorama of the actions on regulation matter.

Hence, the fields into which the Instruments devoted to supervision and regulation can be grouped as follows:

- Reconnaissance, exploration, and extraction of hydrocarbons;
- Transportation, storage, and distribution of hydrocarbons, oil products, petrochemicals, and biofuels;
- Trade, contracts, and first-hand sales (FHS);
- Industrial, operational, and environmental safety.

Below are described the regulatory instruments issued in 2016<sup>2</sup> by the regulatory organs of the hydrocarbons sector.

#### RECONNAISSANCE, EXPLORATION, AND EXTRACTION OF HYDROCARBONS

- Technical provisions for the use of associated natural gas in the exploration and extraction of hydrocarbons (DOF 07/01/2016), which purpose is to establish:
  - o The technical and operational elements to define the Goal<sup>3</sup>, on which the Programs for the Use of Associated Natural Gas<sup>4</sup> will be based. The latter, within the approval process of the Exploration Plans<sup>5</sup> and Developmental Plans for the Extraction of Hydrocarbons;
  - o The procedures, requirements, and criteria to evaluate the compliance with the Goal and the Programs for the Use of Associated Natural Gas; and

<sup>&</sup>lt;sup>2</sup> For agreements and resolutions issued in previous years, visit the website: http://www.gob.mx/cre/articulos/disposiciones-en-materia-de-hidrocarburos?idiom=es

<sup>&</sup>lt;sup>3</sup> Use of Associated Natural Gas to be achieved by the Oil Operator in the activities of Exploration and Extraction of Hydrocarbons, in terms of the Technical Provisions.

<sup>&</sup>lt;sup>4</sup> Document which is part of the Plan for Exploration and the Developmental Plan for Extraction in which the Oil Operator details the planning and the way in which it will be used the Associated Natural Gas produced in the Exploration and Extraction of Hydrocarbons.

<sup>&</sup>lt;sup>5</sup> Document approved by the CNH, in which the Oil Operator sequentially describes the exploratory activities and the programs related to them, in view of an Allocation or Contract to which it is entitled. The latter, according to section XXIV of article 4, 43, and 44 of the LH, as well as on terms of the Guidelines for the approval and supervision of the Plans, issued by the CNH.



o The administrative procedures to supervise the compliance with the Goals and Programs for the Use of Associated Natural Gas, within the development of the exploration and extraction activities.

They stipulate the oil Operator's obligation of using and preserving associated natural gas, pursuant to the means of exploitation, or otherwise, procedures for controlled elimination; they address the regulation for industrial and environmental safety on burning and aeration; and the applicable procedures to follow up, supervise, and sanction.

- Agreement CNH.E.02.001/16, whereby the CNH amends articles 43, section II, and 46, first paragraph, and adds the seventh transitory to the **Technical guidelines in matter of hydrocarbon measuring**, published on September 29, 2015 (DOF 11/02/2016). This amendment consists on the rewording of the phrases mentioned above, and adds criteria and conditions for:
  - o The measuring points to measure the volume and quality of the hydrocarbons extracted in each of the current allocations.
  - o The methodology to devise the balances (volumetric and compositional) and working plans for their adjustments.
- Agreement CHN.E.09.002/16 whereby the CNH amends article 17 and adds the eighth transitory of the Guidelines which regulate the procedure of quantification and certification of the Nation's reserves and the report on the related contingent resources (DOF 15/04/2016). This agreement amends article 17 and adds the EIGHTH transitory of the Guidelines as follows:
  - o Article 17. Classification of the reserves estimated by the end of the contract or allocation. According to PRMS methodology classification of resources, Oil Operators shall quantify their Reserves volume to the termination date of the Assignation Contract, including possible contractual extensions to which the Oil Operator is entitled to in the terms of the Contract or Allocation.
  - o EIGHTH Transitory. For the purpose of the quantification of the Reserves corresponding to the first Certification Cycle, PEMEX will be able to recognize or document the values of Reserves up to the economic limit correspondent to the certified fields related to each Allocation, for categories 1P, 2P, and 3P.
- Agreement CHN.03.005/16, whereby the CNH carries out diverse amendments and additions to the Guidelines which regulate the procedure for the submittal, approval, and assessment of the compliance with the exploration and developmental plans for the extraction of hydrocarbons, as well as its amendments (DOF 21/04/2016). In this amendment, the headlines of Title IV and Chapter I, along with articles 42 and 43, were reworded; and article 42 Bis of the Guidelines above mentioned referred to:
  - o The administration, technical follow-up, and supervision of a Contract or Allocation on the Exploration and Extraction of Hydrocarbons and its Plans.
  - o The administration and annual technical follow-up of a Contract or Allocation on the Exploration and Extraction of Hydrocarbons.
  - o Payment of distributions for providing services of administration and follow up.
  - o Technical follow-up of the plans (plan, provisional plan, and its related programs).
- Agreement whereby the Guidelines and Models of Contracts for the use, usufruct, destination, or, if the
  case, purchase of pieces of land, goods, or obligations to carry out the activities for the exploration and
  extraction of hydrocarbons and transportation through pipeline (SENER) (DOF 02/06/2016). These
  guidelines aim to define the contracts' minimum contents regarding remuneration, and terms and

pipelines, and the contract models that purpose.



conditions, particularly, duties and obligations; and the mechanisms to solve controversies, which are signed for the use, usufruct, destination, or, if the case, purchase of pieces of land, goods, or obligations

to carry out the activities for the exploration and extraction of hydrocarbons and transportation through

#### TRANSPORTATION, STORAGE, AND DISTRIBUTION OF HYDROCARBONS, OIL PRODUCTS, PETROCHEMICALS, AND BIOFUELS

- Resolution whereby the CRE issues the general administrative provisions on open access and service provision of transportation through pipeline and storage of oil products and petrochemicals (RES/899/2015) (DOF 12/01/2016). These provisions are intended to define:
  - The criteria to which the permittees of transportation through pipeline and storage of oil products and petrochemicals shall be subjected regarding:
    - Obligations and conditions to ensure open access<sup>6</sup> and prevent improperly discriminatory to their facilities and services.
    - The modalities of Open Seasons<sup>7</sup>, and
    - The implementation of electronic bulletins when the extension or expansion of the capacity of the infrastructure of Transportation and Storage of Natural Gas is to be funded by the Permittees.

All the terms established in the LH, Chapter IV of the Third Title:

- The modalities for the contracting of services to use the Systems' capacity.
- The criteria to which facilities for Transportation and Storage will be to be considered as own uses, as well as the conditions under which the permittees may use a part or all their systems to transport or store oil products or petrochemicals from their property.

These provisions will be applied differentiated to the activities of Transportation and Storage of Oil Products and Petrochemicals. Specifically, the activity for the Storage of oil products and petrochemicals will be subjected to less regulation<sup>8</sup>, without detriment that some of the provisions established in these DACG are applicable to both type of permittees of distribution through pipeline, which shall adhere to the following.

- Resolution whereby the CRE issues the general administrative provisions on **open access and service** provision of distribution through pipeline of oil products (RES/901/2015) (DOF 06/01/2016). These provisions are aimed to define information requirements and the criteria to which permittees of distribution through pipelines shall be subjected and be adhered to:
  - The principles of improperly discriminatory open access, since under these conditions they do not need CFE's approval regarding contractual conditions, modality of service, conditions to allocate the available capacity, among other.
  - The approval of the remunerations for the service, for which they shall submit a tariff proposal at least 10 weekdays before their application, whether initial tariffs or adjustments.

<sup>&</sup>lt;sup>6</sup> Improperly discriminatory open access is defined as when Permittees are obliged to provide service of Transportation and Storage of oil products and petrochemicals under similar conditions to Users with similar conditions. In case new agents demand the service, the permittee is obliged to provide it whenever it is available.

<sup>&</sup>lt;sup>7</sup> The procedure regulated by the CRE and to be carried out by Permittees of Transportation which, in order to afford equity and transparency to the allocation or purchase of available capacity from third parties of a system, a new project, or due to a permanent resignation of reserved capacity.

<sup>&</sup>lt;sup>8</sup> Under the terms established in Section 6 of such provisions.

o The CRE may establish a more strict regulation, notwithstanding the hereinabove mentioned, if the following take place: a) that a predominant distributor in the service, without any existing technical or economic replacement viable within its area of influence, b) the distribution service were mandatory for the efficient and competitive development of the markets, and c) there exists complaint from the users regarding any refusing of service, against the principle of effective and improperly discriminatory open access.

The permittees of distribution of oil products through pipeline shall be subjected to the DACG issued by the CRE, applicable to the marking or tracing of products which allows to prove the legal provenance of the distributed oil products, as well as the regulations the CRE enacts in matter of the traceability of the transactions, quality of the oil products, among other.

- Resolution whereby the CRE issues the general administrative **provisions in matter of measuring applicable to the activity of storage of oil, oil products, and petrochemicals** (RES/811/2015) (DOF 11/01/2016). These provisions aim to establish general criteria on the design, construction, operation, and maintenance of the measuring systems, and are not restrictive given they are considered as minimum conditions. They are applicable to the configuration of the measuring systems used to determine the amounts, whether volume or mass, of the oil products and petrochemicals received, stored, and transferred in the Storage and Delivery Terminals (TAR, for its Spanish acronym), distribution plants, transportation through pipeline or service station, as appropriate, and of oil in any other storage system within the country, subjected to regulation by the CRE. Within these DACG, the following is considered:
  - o The reception of a product in a TAR can be performed through any of the following means: a) through pipeline, whether conventional or polyduct, 2) by vessel, c) by tanker, or d) by truck tank.
  - o The storage of products in a TAR can be performed through any of the following means: a) vertical tanks, b) horizontal tanks, c) spherical tanks.
  - o The transfer of products from a TAR can be carried out through any of the following means: a) polyduct, b) tanker, c) truck tanker, and d) vessel.
  - o The reception, storage and transfer of oil can be carried out through any other storage system which has been granted the corresponding permit.
  - o The term "fiscal measuring" refers to the service to which the measuring system is destined to, and not to the quality of the measuring itself.
  - o Refers to the International Standards (ISO) as foreign ones (API, AGA, among other), which reflect the good practices of the industry regarding this subject.

These DAGC are addressed to the permittees who have gotten or have applied for a permit for the storage, distribution, transportation through pipelines, or retailing of oil, oil products, and petrochemicals, accordingly, granted by the CRE and who are willing to install a Measuring system, and who, as a subsidiary from a third party and on behalf of a Permittee operating such systems, to which end the corresponding letter(s) of understanding and will be part of the permits, shall be signed.

Resolution whereby the CRE amends the seventh transitory provision of the General Administrative
Provisions in matter of open access and service provision of transportation through pipeline and storage
of oil products and petrochemicals (RES/184/2016) (DOF 30/03/2016). This resolution amends the
seventh transitory provision of the DACG in matter of open access and service provision of
transportation through pipeline and storage of oil products and petrochemicals, published in the
DOF on January 12, 2016. It specifies the dates and conditions in which PEMEX will provide the services
of transportation and storage of automotive gasoline and diesel for:



- o The contractual reserve for transportation and storage capacity, and the common use over the available capacity.
- o The contractual reserve for up to 90% of the operational capacity of the systems (transportation and storage). This capacity may be allocated within the terms and conditions established in the open seasons, in the conditions to transfer capacity from Pemex to third parties, and for the common use.

As for oil products and petrochemicals other than automotive gasolines and diesel, there are changes in the conditions of transportation and storage service provided by PEMEX, specifically about the allocation of capacity under the conditions established for open seasons and the conditions to transfer capacity from PEMEX to third parties.

Agreement whereby the CRE interprets, on administrative purposes, the cross-holding referred to in the second paragraph of article 83 of the LH, and establishes the procedure to authorize it (A/005/2016) (DOF 03/03/2016). This agreement establishes the term and procedure to be followed by permittees for transportation through pipeline, storage, or trading of hydrocarbons, oil products, or petrochemicals, which are under the assumption of cross-holding<sup>9</sup>, and in order to obtain the authorization for such condition from the CRE, with the favorable opinion of the Competence Federal Commission (COFECE, for its Spanish acronym).

#### TRADING, CONTRACTS, AND FIRST-HAND SALES (FHS)

- Resolution whereby the CRE issues the general administrative provisions which establish the **formats for the submittal of the information from the permittees trading hydrocarbons, oil products, and petrochemicals** (RES / 882 / 2015) (DOF 06 / 01 /2016). These provisions establish the formats<sup>10</sup> which the permittees trading hydrocarbons, oil products, and petrochemicals shall consult, download, fill, and submit electronically, in order to comply with their respective obligations, and which are part of Annex 1 of this resolution<sup>11</sup>.
- Resolution whereby the CRE amends the previous resolution which issues the general administrative provisions which establish the requirements for the submittal of the application for the permits to trade natural gas, oil product, and petrochemicals (RES / 370 / 2015) (DOF 11 / 03 / 2016). This amend includes Hydrocarbons in every reference related to the list of products subjected to trading permits, on the understanding that references to natural gas will be replaced with hydrocarbons.
- Resolution whereby the CRE issues the general administrative provisions applicable to first-hand sales and trading of gasoline and diesel, with conditions of asymmetric regulation to PEMEX, its subsidiary organs, its affiliates and divisions, and any other entity controlled by such entities (RES/156/2016) (DOF 22/03/2016). These provisions establish de asymmetric regulation to which FHS of gasoline and diesel shall be subjected, and specify the criteria for the anticipated termination and adaptation of the FHS's and trading contracts, the revision of PEMEX's contract model for trading, and the adaptation of the information to be displayed on the invoices under this item regarding gasoline and diesel. These DACG specify:
  - o The terms and conditions, financial aspects, and the criteria to suspend delivery of the FHS.

<sup>&</sup>lt;sup>9</sup> The second paragraph of the above mentioned article 83 of the LH points out that the persons who, directly or indirectly, own a social capital of final users, producers, or traders of Hydrocarbons, Oil Products, and Petrochemicals who use the services of Transportation through pipeline, or Storage, subjected to open access, will only be able to participate, directly or indirectly, in the social capital of the permittees providing these services, when such crossholding do not affect competency, markets efficiency, and effective open access.

<sup>&</sup>lt;sup>10</sup> There is a new option for an electronic form at: <a href="https://www.gob.mx/cre/acciones-y-programas/solicitudes-de-permisos-de-comercializacion-de-hidrocarburos-petroliferos-y-petroquimicos?idiom=es">https://www.gob.mx/cre/acciones-y-programas/solicitudes-de-permisos-de-comercializacion-de-hidrocarburos-petroliferos-y-petroquimicos?idiom=es</a>

<sup>11</sup> Annex 1 is available at:

https://www.gob.mx/cms/uploads/attachment/file/101358/2\_instrucciones\_informaci\_n\_estad\_stica\_CGMH\_1702\_16.pdf





- o Advertising by PEMEX referring to the terms, general conditions, and relevant information of the FHS established by the CRE, standing out framework agreements, applicable prices and their validity, available volumes of gasoline and diesel by sales point, among other.
- Resolution whereby the CRE issues the general administrative provisions applicable to **first-hand sale and trading of oil products and petrochemicals, except for gasoline, diesel, and liquefied petroleum gas**, with conditions of asymmetric regulation to PEMEX, its subsidiary organs, affiliates and divisions, and any other entity controlled by such entities (RES/071/2016) (DOF 23/03/2016). These provisions establish de asymmetric regulation to which FHS of oil products and petrochemicals other than gasoline and diesel are subjected, and specify the criteria for anticipated termination and adaptation of the FHS's and trading contracts, the revision of PEMEX's contract model for trading, and the adaptation of the information to be displayed on the invoices under this item regarding oil products and petrochemicals other than gasoline and diesel. These DACG specify:
  - o The terms and conditions, financial aspects, and the criteria to suspend delivery of the FHS.
  - o Advertising carried out by PEMEX referring to the terms, general conditions, and relevant information of the FHS established by the CRE, among which stand out framework agreements, applicable prices and their validity, available volumes of oil products and petrochemicals other than gasoline and diesel by sales point, among other.
- Resolution whereby are issued the methodologies to determine the FHS prices of oil products and petrochemicals other than gasoline and diesel, subjected to regulation (RES/047/2016) (DOF 14/03/2016). This resolution approves and issues the methodologies to determine the FHS prices of oil products other than gasoline, diesel, and liquefied petroleum gas, and of petrochemicals subjected to the CRE's regulation; it show the elements to include in the FHS, valid foreign-trade scenarios, principles for PEMEX's asymmetric regulation, and previous methodologies' validity.
- Resolution which explains the previous resolution RES/955/2015 issuing the methodologies to determine FHS prices for gasolines and diesel (RES/241/2016) (DOF 26/05/2016). This resolution amends the Fifteenth Whereas and Annex 1 to afford clarity to the application of such methodology, and states that:
- Petroleos Mexicanos, its subsidiary organs or divisions, and any other State Productive Enterprise, or entity, on behalf and ordered by the State, may apply the methodology referred to in the previous on the FHS of those kinds of diesel with technical specifications similar to the ones included in that methodology, bearing in mind that the differences between those fuels and the specifications of the benchmark market products will be quantified the moment in which the corresponding quality adjustments are determined.
- Notice informing that starting on April 1, 2016, the SENER may grant permits to import gasolines and diesel, to anyone interested complying with the applicable legal provisions (DOF 23/02/2016). Published as follows:
  - o Starting on April 1st, 2016, the Secretariat of Energy may grant permits to import gasolines and diesel to any interested party which complies with the legal applicable provisions, including the ones established in the Agreement whereby is established the classifications and codification of Hydrocarbons and Oil Products whose import and export is subjected to prior authorization from the Secretariat of Energy, published on the DOF on December 29, 2014, and its amendment, published on the DOF on December 30 of 2015.

The issuance of these permits by the SENER, will foster free competitiveness, will establish conditions for accessing better retail prices, will foster transportation and storage infrastructure for better energy safety, will afford supplying alternatives, among other.



#### INDISTRIAL, OPERATIONAL, AND ENVIRONMENTAL SAFETY

• General Administrative Provisions which establish the Guidelines for the establishment, implementation, and authorization of the Managerial Systems for Industrial, Operational, and Environmental Safety applicable to indicated the Hydrocarbons Sector activities (DOF 13/05/2016). They aim to establish the minimal requirements for the formation, implementation, and authorization of the Managerial Systems for Industrial, Operational, and Environmental Safety on the Regulated referred to in Chapter II of the LANSI.

It mentions the features of the establishment documents of the Managerial System which shall describe the policy on industrial safe, identify dangers and risk analysis (evaluation, monitoring, and mitigation); the legal requirements in matter of industrial, operational, and environmental safety; the goals, objectives, and indicators for evaluating the performance in the headlines mentioned above, as well as the implementation of the Managerial System; among other of organizational nature.

• Agreement whereby is afforded validity and effectiveness in the federal scale to the authorizations in matter of special-handling residues from the activities of the Hydrocarbons Sector, issued by the environmental authorities of the federal entities under the terms of the article Ninth Transitory of the Law of the National Agency of Industrial Safety and Environmental Protection of the Hydrocarbons Sector (DOF 02/02/2016). This agreement gives validity and extension over its natural expiration, to the authorizations for special-handling residues valid through March 1st, 2015, until the Agency determine other administrative provisions about such matter.

#### **FUELS PRICES**

Agreement whereby are published the supplementary and definite tariffs of the special tax over production and services applicable to gasolines and diesel, as well as the maximum prices of those fuels, applicable on April 2016 (SHCP) (DOF 25/03/2016). This agreement presents the supplementary tariffs to be added to the reduced tariffs referred to in the article Second of the agreement whereby it is announced the band of maximum prices for gasolines and diesel in 2016, and other measures indicated there, published on December 24, 2015 on the DOF, as well as the tariff for diesel established in article 2<sup>nd</sup>, section I, subsection D) number 1, parenthesis c) of the Law of the Special Tax over Production and Services. Establishing the definite tariffs, which modify the maximum price to April 2016.

The maximum prices applicable by 2016, were determined monthly based on the formula and methodology published by the SHCP in its Monthly Agreement for maximum retail prices, (see Table 1.1).

**TABLE 1. 1** PRICE BAND FOR GASOLINES AND DIESEL APPLICABLE BY 2016

	Values in pesos per liter of fuel					
Type of fuel	December 2015 April 2					
	Minimum	Maximum	Maximum			
Gasoline less than 92 octanes	13.2	14.0	13.2			
Gasoline equal or more than 92 octanes	14.0	14.8	14.0			
Diesel	13.8	14.6	13.8			

Source: SHCP.

The SHCP, published in 2016, agreements announcing the amounts for fiscal stimulus, reduced tariffs, and maximum retail prices for the gasolines alienated in the northern border region, applicable to specific periods.

#### **STANDARDS**



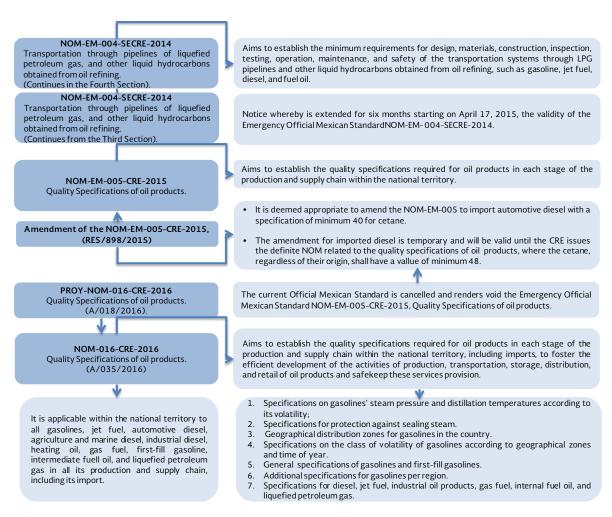


According to what is established in the LH regarding the power of the CRE to issue the Official Mexican Standards (NOM, for its Spanish acronym) and which are related to:

- Specifications on the quality of hydrocarbons, oil products, and petrochemicals. The quality specifications will correspond to commercial uses, national and international, in each stage of the production and supply chain (Art. 78).
- The methods for testing, sampling, and verification applicable to qualitative characteristics, as well as to the volume for Transportation, Storage, Distribution, and, if the case, Retail of Hydrocarbons, Oil Products, and Petrochemicals (Art. 79).

The following, is the catalog of the Standards applicable to the regulation of hydrocarbons and oil products, issued by the SENER and the CRE, (see Figure 1.3).

FIGURE 1. 3
CATALOG OF THE STANDARDS FOR THE REGULATION OF HYDROCARBONS AND OIL PRODUCTS



Source: Prepared by SENER with information from the CRE.

In safety matter, the Agency of Safety, Energy and Environment (ASEA, for its Spanish acronym) published on the DOF the NOM-EM-003-ASEA, which establishes the specifications and technical criteria of industrial safety, operational safety, and environmental protection for the design, construction, pre-startup, and maintenance of the oil-products storage onshore facilities.

This standard is applicable throughout the national territory and is mandatory for all the companies dedicated to the storage, reception, and delivery of oil products. Its objective is to guarantee to the participants in the energy sector, and the public, the handling of hydrocarbons under the maximum safety standards, having facilities which contribute to keep a safe storage of oil products and, thus, giving technical and legal certainty to the existing market and to the new participants of the energy market.

Other Standards issued by the ASEA are the following:

- NOM-EM-001-ASEA-2015, design, construction, maintenance, and operation of special-purpose service stations, and to stations related to the activity of Retail in its modality of Self-Consumption Service Station for diesel and gasoline.
- NOM-005-ASEA-2016, design, construction, maintenance, and operation of Service Stations for the storage and retail of diesel and gasolines.
- NOM-EM-002-ASEA-2016, which establishes the testing methods and parameters for the operation, maintenance, and efficiency of the systems for recovering gasolines vapor in retailing service stations, for emissions control.

#### FOLLOW-UP TO CONTRACTS' ALLOCATION

The allocation of contracts through Round 1, as well as the publication of the call for tender of Round 2 have been carried out, pursuant of the attributions of the CNH regarding the bidding and signing of contracts for the exploration and extraction of hydrocarbons, (see Figure 1.4).

## FIGURE 1. 4 ALLOCATION ROUNDS

#### Round 1

Round 1. Shallow Water First Call.
Production-Sharing Contracts for the Exploration
and Extraction of Hydrocarbons

Bidding of contracts related to 14 areas located in shallow water in off the coasts of Campeche, Tabasco, and Veracruz.

Two contracts were allocataed to the consortium formed by Premier Oil

Two contracts were allocataed to the consortium formed by Premier Oil LLC, Sierra Oil and Gas, and Talos Energy Sierra Oil to explore and extract in shallow-water fields of the contractual areas 2 and 7.

The contracts were granted under the modality of production-sharing contract.

Round 1. Shallow Water Second Call.
Production-Sharing Contracts for the Extraction of Hydrocarbons

Allocation of 6 fields in shallow water of the Gulf of Mexico with three contracts to extract hydrocarbons.

Round 1. Onshore Third Call. Licensing Contracts for the Extraction of Hydrocarbons Allocation of 25 contracts to extract hydrocarons in Chiapas, Nuevo León, Tabasco, Tamaulipas, and Veracruz.

18 contracts were allocated to new Mexican oil-companies.

From the 40 bidders, 26 participated individually, and 14 under consortium. As a result of the process, 25 contracts were allocated. This represents a 100% allocation.

Round1. Deep Water Fourth Call.
Licensing Contracts for the Exploration and
Extraction of Hydrocarbons

The Fourth Call, conformed by 10 areas in deep water of the Gulf of Mexico, within the oil provinces of Cinturón Plegado Perdido and Cuenca Salina, allocated 8 of the 10 areas to global and national companies. Among the winners, 37.5% are Asian companies; 37.54%, European; and 25% are North American, which contributes to diversity, and proves the competitiveness and capacity for attracting investments. Only areas number 2 and 6 of the Cuenca Salina were declared void.

#### Round 2

Round 2. Shallow water First Call.
Production-Sharing Contracts for the Exploration and Extraction of Hydrocarbons

It is conformed by 15 contractual areas in shallow water of the Gulf of Mexico, within the oil provinces Tampico-Misantla (4), Veracruz (1), and Cuencas del Sureste (10).

Round 2. Onshore Second Call. Licensing Contracts for the Exploration and Extraction of Hydrocarbons

It is conformed by 12 contractual areas, 9 of these areas are in the Basin of Burgos, 2 in Cinturon Plegado, and 1 in the Southeast Basins.

#### PEMEX Partnerships Farmouts. Licensing Agreement

Allocations AE-0092-Cinturón Subsalino-10 and AE-0093-Cinturón Subsalino-11. Covering an area of 1,285 square kilometers, withing which the discovery Trion-1 is found.

The Australian company BHP Billiton Petróleo Operaciones de México won the bidding to associate with Pemex, for exploring and extracting hydrocarbons from deep water in the Trion block.

Source: Prepared by SENER with information from the CNH.

### CHAPTER TWO. OIL INDUSTRY AND OIL-PRODUCTS DOMESTIC MARKET

#### 2.1. Oil Domestic Supply

#### 2.1.1. Distribution of hydrocarbons reserves

In compliance with article 43, section II, subsection a and b of the LH, the CNH is in charge of consolidating the national information on the reserves, quantified by assignees and contractors. For that purpose, the CNH issued the Guidelines which regulate the procedure of quantification and certification of the national reserves and the report of the related contingent resources<sup>12</sup>.

By January 1st, 2016, Mexico recorded a level or remnant total reserves (3P)<sup>13</sup> of 24,074 million barrels of crude oil equivalent (MMBCOE), 35.6% less regarding 2015. It is worth mentioning that during the last ten years, the reserves level has had an AAGR of -6.4%, a decrease of 22,343 MMBCOE regarding 2006.

The worldwide fall of oil prices had a negative impact over the domestic reserves; as an example, the benchmark for assessing reserves by January 1st, 2014 was of 102 dollars per barrel (USD/B), the following year -January 1st, 2015- was of 91.1 USD/B, while for the last assessment, the price was of 50.88 USD/B. The latter results in a drop of 40.22 USD/B in a year. In addition, budget cuts pressed downward the developmental activity of PEMEX, which derived in concentrate the resources on more profitable areas.

For the first time, reserves were reclassified as contingent resources, mainly gas discoveries in deep water. The reclassified volume represents 1,766 MMBCOE which are no longer reserves. As for reserves, they had an impact due to the development of the fields, given that in some of the South Region fields, the amount of water increased, which led to the closure of the productive wells in order the keep the quality standards of the product and the subsequent contraction of the region's reserves.

The crude-oil reserves were of 17,510.2 million barrels (MMB), 8,314.9 MMB of oil below its 2015 assessment. According to the type of fluid, oil has the largest contribution, 72.7%; condensate, 0.8%; natural gas liquids (NGLs), 7.4%; and dry gas equivalent, 19.1%, (see Table 2.1).

TABLE 2. 1
HYDROCARBONS TOTAL RESERVES DISTRIBUTION BY TYPE OF FLUID, 2006-2016<sup>1</sup>
(Million barrels of oil equivalent)

Concept					Da	ita per year						Variation			
concept	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016/2015	2006-2016		
Total	46,417.5	45,376.3	44,482.7	43,562.6	43,074.7	43,073.6	43,837.3	44,530.0	42,158.4	37,404.8	24,074.4	-35.6%	-6.4		
Oil	33,093.0	31,908.8	31,211.6	30,929.8	30,497.3	30,559.8	30,612.5	30,816.5	29,327.8	25,825.1	17,510.2	-11.9%	-6.2		
Condensate	863.0	941.2	879.0	561.7	417.3	294.1	367.8	328.1	295.6	260.2	183.7	-12.0%	-14.3		
Plants liquids	3,479.4	3,417.5	3,574.7	3,491.3	3,563.1	3,573.3	3,953.1	4,010.4	3,575.0	2,914.7	1,785.4	-18.5%	-6.5		
Dry gas equivalent	8,982.2	9,108.9	8,817.4	8,579.7	8,597.0	8,646.5	8,903.9	9,375.0	8,960.1	8,404.8	4,595.0	-6.2%	-6.5		

<sup>&</sup>lt;sup>1</sup> Figures by January 1st of each year. Source: National Hydrocarbons Commission.

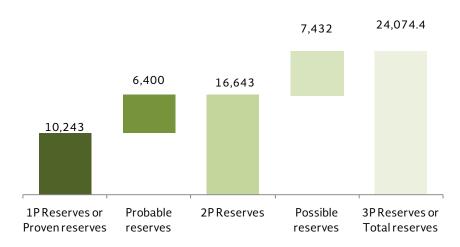
The total remnant reserves 3P were formed by 42.5% of proven reserves, 26.6% of probable reserves, and 30.9% of possible reserves. In this context, the proven reserves of crude oil equivalent (1P) reached a volume

<sup>13</sup> Addition of the proved, probable, and possible hydrocarbons reserves.

 $<sup>^{12}</sup>$  Guidelines regulating the procedure of quantification and certification of the Nation's reserves and the report of the related contingent resources at:  $\frac{\text{http://dof.gob.mx/nota\_detalle.php?codigo=5403797\&fecha=13/08/2015}}{\text{http://dof.gob.mx/nota\_detalle.php?codigo=5403797\&fecha=13/08/2015}}$ 

of 10,243 MMB; probable reserves, 6,400 MMB; 2P reserves (proven + probable), 16,643 MMB; and possible reserves, 7,432 MMB, (see Figure 2.1).

FIGURE 2. 1
HYDROCARBONS REMNANT TOTAL RESERVES IN MEXICO BY JANUARY 1ST, 2015\*
(Million barrels of crude oil equivalent)



<sup>\*</sup> Figures by January 1st of each year. Source: National Hydrocarbons Commission.

In 2015, the SHCP issued the Agreement whereby are issued the general regulations to define the methods to adjust the value of the hydrocarbons from the fee on hydrocarbons, and which establishes the classification of oil according to its API gravity and their content of sulfur, and which is considered to classify the hydrocarbons reserves.

TABLE 2. 2
OIL CLASSIFICATION BY API DEGREES

Classification by API gravity							
Ultralight	39.0 <api< td=""></api<>						
Light	31.1 <api39.0< td=""></api39.0<>						
Medium	22.3 <api31.1< td=""></api31.1<>						
Heavy	10.0 <api22.3< td=""></api22.3<>						
Extra-heavy	API 10.0						

Source: SHCP.

Crude-oil proved reserves reached 7,640.7 MMB in 2016, a decrease of 21.3% regarding 2015. According to its classification by density, heavy oil has the largest contribution, 47.3%; light oil, 20.4%; medium oil, 16.2%; extra-heavy oil, 10.1%; and ultralight oil, 6.0%. Except for extra-heavy oil proven reserves, the rest has displayed an accelerated decline from 2012 to 2016, recording negative AAGR (see Table 2.3).

2P crude-oil reserves, by January 1st, 2016, were of 12,195.1 MMB, a decrease of 26.0% regarding 2015, equivalent to 4,280.3 MBD. From the total 2P reserves, 44.6% is formed by heavy crude, 25.1% light crude, and 19.7% medium crude, 6.9% to ultralight crude, and 3.8% to extra-heavy crude. During the last 10 years, these reserves have decreased 10.0% annual average. As for 3P reserves, the largest reserve corresponds to



heavy crude with 30.0%, medium oil comes second with 24.9%, medium crude with 21.7%, extra-heavy crude 15.8%, and ultralight crude with 7.5%.

TABLE 2.3 COMPOSITION OF OIL REMANENT RESERVES BY TYPE, 2012-20161 (Million barrels)

Data per year AAGR Variation Reserve Type 2012-2016 2016/2015 2012 2013 2014 2015 2016 228.7 222.1 262.5 318.5 772.0 36.5 142.4% Extra-heavy Light 2,004.9 2,008.0 1,932.1 2,025.6 1,559.3 -6.1 -23.0% 1,574.0 1P Medium 1,600.0 1,586.2 1,571.6 1,241.5 -5.8 -21.0% 5,398.0 5,275.9 -29.9% Heavy 5,425.2 5,156.0 3,612.1 -9.6 Ultralight 826.1 755.4 455.8 811.3 639.2 -13.8 -28.7% **Total** 10,025.2 10,073.2 9.812.1 9.711.0 7,640.7 -6.6 -21.3% Extra-heavy 542.0 607.0 625.0 623.4 1,482.3 28.6 137.8% Light 4,459.5 4,605.7 4,350.9 4,136.6 2,682.4 -11.9 -35.2% Medium 3,444.1 3,585.5 3,438.1 3,242.7 2,949.8 -3.8 -9.0% 2P 8,307.1 8,619.9 7,796.1 Heavy 7,340.9 4,375.1 -15.6 -40.4% Ultralight 1,507.7 1,424.9 1,402.2 1,131.8 705.5 -17.3 -37.7% 16,475.5 12,195.1 **Total** 18,573.3 18,530.1 17,612.4 -10.0 -26.0% 1,773.3 Extra-heavy 1,674.0 1,667.1 1,757.9 2,767.6 13.4 57.4% Light 8,258.9 8,276.7 7,562.1 6,584.3 3,801.0 -17.6 -42.3%

Medium

Ultralight

Heavy

3P

Source: Prepared by SENER with information from Las Reservas de Hidrocarburos de México, January 1st, 2015.

6,875.5

11,589.2 11,194.1 10,884.0

2.803.2

6,406.0

2.684.5

From the 7,640.7 MMB of oil proven reserves, 74.5% are in shallow water and 25.5% onshore. Regarding probable reserves, they represent 4,554.5 MMB, having their largest concentration in shallow water (51.2%) and onshore (48.8%). Crude-oil possible reserves recorded a volume of 5,315.0 MBD, 56.4% in shallow water, 38.8% onshore, and 4.9% in deep water. In 2016, the level of possible reserves decreased 43.2%, probable 32.7%, and proved 21.3%, all regarding 2015. By location, in every classification, the largest share of reserves come from shallow water, (see Table 2.4).

6.261.7

2.846.7

30,612.5 30,816.5 29,327.8 25,825.1 17,510.1

5,428.4

9,972.6

2.081.8

4,363.1

5,261.7

1,316.7

-9.2

-17.9

-16.3

-13.0

-19.6%

-47.2%

-36.8%

-32.2%

TABLE 2. 4 **CRUDE RESERVES BY CLASSIFICATION, 2015 Y 2016** 

(Million barrels of crude oil equivalent)

Classification	Poss	ible	Prob	able	Prov	en en	T	otal
Classification	2015	2016	2015	2016	2015	2016	2015	2016
Deep water	552.3	258.1	0.0	0.0	0.0	0.0	552.3	258.1
Shallow water	4,170.4	2,996.9	3,093.5	2,332.6	6,917.4	5,695.8	14,181.3	11,025.3
Onshore	4,626.9	2,059.9	3,671.0	2,221.9	2,793.6	1,944.9	11,091.5	6,226.8
Total	9,349.7	5,315.0	6,764.5	4,554.5	9,711.0	7,640.7	25,825.1	17,510.2

Source: National Hydrocarbons Commission.

**Total** <sup>1</sup> Reserves recorded by January 1st of each year.



# 2.1.2. Exploration and Production

## **Hydrocarbons Exploratory Activity**

During 2015, 312 wells were completed, 41.7% less than in 2014. From these, 26 were for exploration, and 286 developmental ones. This decrease is due to a lesser programming of developmental wells and a change in the strategy, which derived in the reduction of the drilling activity in the Assets. Though, the success in the completion of exploratory wells was of 50.0%, and of 93.0% n productive wells, (see Table 2.5).

**TABLE 2. 5** WELLS DRILLING AND FIELDS EXPLOITATION, 2005-2015

WEELS DIV				-, (,	Da	ita per yea	r				
Concept	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Wells drilled <sup>a</sup>	759.0	672.0	615.0	822.0	1,490.0	994.0	1,000.0	1,290.0	705.0	538.0	278.0
Wells completed	742.0	656.0	659.0	729.0	1,150.0	1,303.0	1,034.0	1,238.0	823.0	535.0	312.0
Exploratory wells	74.0	69.0	49.0	65.0	75.0	39.0	33.0	37.0	38.0	24.0	26.0
Productive	39.0	32.0	26.0	27.0	29.0	23.0	16.0	21.0	23.0	8.0	13.0
% success	0.5	0.5	0.5	0.4	0.4	0.6	0.5	0.6	0.6	33%	50%
Developmental wells	668.0	587.0	610.0	664.0	1,075.0	1,264.0	1,001.0	1,201.0	785.0	511.0	286.0
Productive	612.0	541.0	569.0	612.0	1,014.0	1,200.0	955.0	1,159.0	747.0	484.0	266.0
% success <sup>b</sup>	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.0	95%	93%
Drilling equipment c	116.8	105.1	118.8	147.0	175.9	129.9	127.6	135.7	139.0	106.5	67.1
Onshore	82.8	73.9	82.0	106.8	145.4	102.1	103.0	107.7	80.7	55.3	33.3
Shallow water	33.0	29.2	33.8	36.1	30.0	27.7	23.3	25.8	55.4	48.3	30.6
Deep water	1.0	2.0	3.0	4.0	0.4	0.2	1.2	2.2	2.9	2.9	3.2
Exploratory equipment	28.3	25.4	23.0	34.0	25.6	19.4	16.8	17.0	20.8	14.7	12.0
Onshore	16.3	16.5	14.0	21.0	17.4	13.2	12.0	11.7	12.6	4.3	1.4
Shallow water	11.0	6.9	6.0	9.0	7.8	6.1	3.5	3.1	5.4	7.5	7.3
Deep water	1.0	2.0	3.0	4.0	0.4	0.2	1.2	2.2	2.9	2.9	3.2
Developmental equipment	88.5	79.7	95.7	112.9	150.3	110.5	110.8	118.6	118.2	91.7	55.2
Onshore Shallow water	66.5 22.0	57.4 22.3	68.0 27.8	85.8 27.1	128.0 22.2	88.9 21.6	91.0 19.8	95.9 22.7	68.2 50.1	51.0 40.8	31.8 23.3
Deep water	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kilometers of wells drilled	4,079.7	3,684.0	3,578.6	4,175.3	6,726.7	5,796.8	4,983.3	6,038.4	3,741.6	2,857.8	1,749.6
Exploration	238.0	213.0	173.1	258.7	235.9	179.7	118.4	121.7	145.0	88.1	62.1
Onshore	189.5	174.5	139.7	194.3	178.3	132.2	100.3	93.6	106.4	25.1	16.0
Shallow water	48.5	38.6	33.4	64.4	37.7	40.8	7.1	24.9	24.7	50.4	34.9
Deep water					19.9	6.7	11.0	3.2	13.9	12.5	11.2
Development	1,765.7	1,645.0	1,625.3	1,940.2	3,528.5	2,351.9	2,365.4	2,878.2	1,462.0	1,315.0	714.7
Onshore	1,565.5	1,451.7	1,420.8	1,749.3	3,338.6	2,173.5	2,192.1	2,687.3	1,238.6	1,069.7	488.4
Shallow water	200.2	193.3	204.5	190.9	189.9	178.4	173.3	190.9	223.4	245.3	226.3
Deep water	N/A	N/A	N/A	0.0	0.0	0.0	0.0	0.0	0.0	N/A	0.0
Kilometers of completed wells											
Exploration	214.6	199.2	146.5	190.5	288.3	143.7	144.1	161.1	164.9	99.8	124.2
Onshore	214.6	182.9	133.1	179.8	213.2	111.3	94.1	117.9	109.8	53.7	14.9
Shallow water	0.0	16.4	13.4	10.7	51.6	22.5	32.6	9.7	28.1	23.0	67.1
Deep water Development	1.041.4	1 (2 ( 7	1,633.7	1 705 0	23.5	9.8	17.4	33.6	27.0	23.2	42.2
Onshore	1,861.4	1,626.7		1,785.9 1,532.3	2,674.0	3,121.6	2,355.3	2,877.4	1,969.7	1,354.8 1,125.1	848.7 641.4
Shallow water	1,689.0 172.4	1,397.2 229.5	1,438.8 194.9	253.6	2,505.4 168.7	2,960.1 161.5	2,185.1 170.3	2,691.7 185.7	1,800.6 169.0	229.7	207.3
Deep water	N/A	N/A	N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average depth per well (m) d	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4,061.7
Onshore	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3,383.0
Shallow water	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3,900.0
Ultra-deep water	N/A	N/A	N/A	N/A	N/A	N/A	5,804.0	4,795.0	4,991.0	3,906.0	4,902.0
Discovered fields <sup>e</sup>	24.0	21.0	20.0	19.0	25.0	18.0	12.0	15.0	13.0	7.0	6.0
Oil	8.0	6.0	8.0	9.0	15.0	8.0	7.0	6.0	5.0	4.0	6.0
Gas	16.0	15.0	12.0	10.0	10.0	10.0	5.0	9.0	8.0	3.0	0.0
Wells operating	5,671.0	5,998.0	5,942.0	6,247.0	6,814.0	7,414.0	8,271.0	9,476.0	9,379.0	9,077.0	8,826.0
Producers of crude and associated gas	3,128.0	3,126.0	2,884.0	3,127.0	3,713.0	4,406.0	5,193.0	6,188.0	6,164.0	5,598.0	5,374.0
Onshore	2,738.0	2,716.0	2,459.0	2,681.0	3,263.0	3,942.0	4,694.0	5,655.0	5,613.0	5,038.0	4,840.0
Shallow water	390.0	410.0	425.0	446.0	450.0	464.0	499.0	533.0	551.0	560.0	534.0
Deep water	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Producers of non-associated gas	2,543.0	2,872.0	3,058.0	3,120.0	3,101.0	3,008.0	3,078.0	3,288.0	3,215.0	3,479.0	3,452.0
Onshore	2,543.0	2,872.0	3,058.0	3,120.0	3,101.0	3,008.0	3,078.0	3,288.0	3,215.0	3,479.0	3,452.0
Shallow water	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deep water	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Productive fields	357.0	364.0	352.0	345.0	394.0	405.0	416.0	449.0	454.0	448.0	434.0
Producers of crude and associated gas	214.0	214.0	200.0	191.0	220.0	235.0	251.0	266.0	272.0	262.0	253.0
Onshore	185.0	184.0	170.0	161.0	187.0	201.0	215.0	228.0	230.0	220.0	212.0
Shallow water	29.0	30.0	30.0	30.0	33.0	34.0	36.0	38.0	42.0	42.0	41.0
Deep water	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Producers of non-associated gas	143.0 143.0	150.0	152.0	154.0	174.0	170.0	165.0	183.0	182.0	186.0	181.0
		150.0	152.0	154.0	174.0	170.0	165.0	183.0	182.0	186.0	181.0
Onshore Shallow water	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0





- <sup>a</sup>. Wells drilled up to the objective.
- b. Excludes injection wells.
- <sup>c</sup>. Average number of equipment.
- d. Refers to the wells' average depth up to the objective.
- <sup>e</sup>. Only includes fields with proven reserves. In 2007, the fields Kibo-1 and Lalail-1 were excluded, even if they were productive, they did not add proven reserves.

Source: National Hydrocarbons Commission.

In 2015, there were a total of 434, a decrease of 3.1% regarding 2014. From that total, 58.3% corresponded to oil and associated gas, and 41.7% to non-associated gas fields, (see Figure 2.2).

449 454 448 434 416 405 394 364 357 352 345 182 183 186 181 165 170 174 143 150 152 154 266 272 262 253 251 235 220 214 214 200 191 2012 2005 2006 2007 2008 2009 2010 2011 2013 2014 2015

FIGURE 2. 2 PRODUCTIVE FIELDS CURRENTY OPERATION AND BY TYPE, 2005-2015 (Number)

Source: Prepared by SENER with information from the National Hydrocarbons Commission.

## Investments in the Oil industry and Refining (PEMEX)

■ Crude and associated-gas producers

The Energy Reform avouches PEMEX the power to sign strategic alliances and partnerships to carry out those projects for which it is more competent; thus, PEMEX Exploration and Production (PEP) investment in exploration and development corresponds to the areas allocated to PEMEX in Round Zero, and which are those PEMEX is exploring, operating, and is interested in developing based on its operational capacity.

■ Non-associated gas producers

▲ Productive fields

Hence, in 2015, 90% of the investment exercised by PEP focused on Projects for Oil and Associated Gas, mainly in: a) shallow water in the Assets Ku-Maloob-Zaap (Comprehensive Project Ku-Maloob-Zaap), Litoral de Tabasco (Projects Tsimin Xux and Crudo Ligero Marino) and Cantarell; b) Onshore in the Assets Samaria-Luna (Comprehensive Projects Complex Antonio J. Bermudez and Delta del Grijalva), Bellota-Jujo (Comprehensive Projects Bellota-Chinchorro and Comprehensive El Golpe-Puerto Ceiba), Aceite Terciario del Golfo (Project Aceite Terciario del Golfo), Cinco Presidentes (Project Ogarrio-Sanchez Magallanes) and Poza Rica Altamira (Reingeneering Sec. of the Field Tamaulipas-Constituciones and Comprehensive Poza Rica); and, c) Deep water, where the investment focused on the Asset Exploración de Aguas Profundas Norte (Exploring Project Area Perdido) and on the Asset Exploracion de Aguas Profundas del Sur (Exploring Project Holok). The remaining 10% of the exercised investment was concentrated in Non-Associated Gas Projects, especially in: onshore projects in the Assets in Burgos, Veracruz (Comprehensive Project Veracruz) and Macuspana-Muspac (Comprehensive Project Cuenca de Macuspana).

The investment destined to the refining segment was of 29,646 million pesos, and was mainly destined to give continuity to the quality project of Tula Refinery, the Tuxpan polyduct, and storage and distribution terminals. The investment is majorly oriented to improve the quality of gasolines and diesel to comply with Mexico's new environmental standards, improve the capacity for processing heavy crude and optimize crude's blends in refineries, to increase the production of gasoline and diesel to supply the growing demand of fuels<sup>14</sup>.

## 2.1.3. Oil Production

In 2015, oil domestic production averaged 2,267 MBD, 6.7% less than the previous year, due to a smaller production from the projects of the Production Asset Cantarell, Crudo Ligero Marino, El Golpe-Puerto Ceiba, Complex Antonio J. Bermudez, Cactus-Sitio Grande, Ixtal-Manik, Costero Terrestre, Ek-Balam, and Ku-Maloob-Zaap<sup>15</sup>. It is important to mention that during the past ten years, crude-oil production have had a downward trend with an AAGR of -3.8% from 2005-2015, (see Table 2.6).

Heavy-crude production reached 838 MBD, 3.0% less than the one obtained in 2014, result of the natural decline of the fields in Litoral de Tabasco (Marine regions) and Bellota Jujo (South region), the increase on the water fractional flow in the fields Pijije, Sen, and Terra of the Asset Samaria Luna in the South Region, and in the fields of the Asset Macuspana-Muspac in this same region.

The production of heavy crude was of 1,152 MBD, 8.9% or 113 MD less regarding the 2014 average production. This decrease is attributable to the natural decline of fields and to the increase in the production of water in highly-fractured reservoirs of the Cantarell asset, in the Northeast Marine Region.

Light oil reached 838 MBD, 3.0% less to what was obtained in 2014, due to the natural decline of the fields of Litoral de Tabasco (Marine regions) and Bellota-Jujo (South region), the increase in the fractional flow of water into the fields of the assets Samaria-Luna (South region) and Abkatún-Pol-Chuc (Marine regions), as well as to the production delay in the fields of the asset Abkatún-Pol-Chuc related to the incident in the platform Abkatún-A Permanente.

The production of ultralight crude was of 277 MBD, 7.5% less than the one recorded in 2014, mainly derived from the increase in the fractional flow of water into the fields Pijije, Sen, and Terra of the asset Samaria-Luna in the South region, and the fields of the Macuspana-Muspac asset, and to the natural decline of the fields of the projects Bellota-Jujo and Macuspana-Muspac in this same region.

TABLE 2. 6 CRUDE DOMESTIC PRODUCTION, 2005-2015

(thousand barrels per day)

Consont					Da	ıta per yea	ar					Variation	AAGR
Concept	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2015/2014	2005-2015
Crude Total	3,333.3	3,255.6	3,075.7	2,791.6	2,601.5	2,577.0	2,552.6	2,547.9	2,522.1	2,428.8	2,266.8	-6.7%	-3.8
Heavy	2,387.0	2,243.8	2,039.4	1,765.6	1,520.0	1,464.0	1,417.1	1,385.0	1,365.1	1,265.5	1,152.3	-8.9%	-7.0
Light	802.3	831.5	837.7	815.5	811.8	792.3	798.3	834.0	847.1	864.2	838.0	-3.0%	0.4
Ultralight	144.1	180.4	198.6	210.4	269.7	320.7	337.2	328.9	310.0	299.0	276.5	-7.5%	6.7

 $Source: Information\ provided\ by\ the\ National\ Hydrocarbons\ Commission.$ 

In 2015, 50.8% of PEP's total production was heavy crude, and 49.2% of light and ultralight crudes. On the other hand, Marine regions mainly produce heavy crude (1,054.9 MBD), and meaningful volumes of light crudes (705.4 MBD); the South region mainly produces light and ultralight crudes (362.1 MBD), and, in a smaller volume, heavy crudes (31.7 MBD), while the North region produces heavy crude (65.7 MBD) and light and ultralight crudes (47.0 MBD)<sup>16</sup>.

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<sup>&</sup>lt;sup>14</sup> PEMEX, Annual Report presented in accordance with the General Provisions applicable to issuers of values and to other Market participants for the year ending by December 31st, 2015.

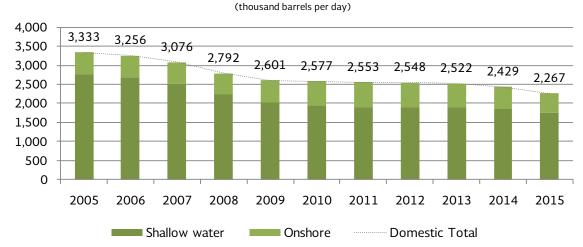
<sup>&</sup>lt;sup>15</sup> PEMEX, Report of the results ruled in favor of PEMEX by December 31st, 2015.

<sup>&</sup>lt;sup>16</sup> PEMEX, Ibidem p. 3.



From the crude production obtained in the Gulf of Mexico, 77.7% came from shallow water (1,760.3 MBD<sup>17</sup>); the fields giving the largest production are located in the Assets Ku-Maloob-Zaap, Litoral de Tabasco, Abkatun-Pol-Chuc, and Cantarell (Marine Regions). 22.3% of crude production came from onshore works (506.5 MBD), specially from the Assets Samaria-Luna, Bellota-Jujo, Cinco Presidentes, and Macuspana-Muspac, located in the South Region and, in a lesser proportion, from Poza Rica-Altamira, Aceite Terciario del Golfo, and Veracruz in the North Region, (see Figure 2. 3).

FIGURE 2. 3 CRUDE PRODUCTION BY LOCATION, 2015



Note: Figures may not coincide due to the rounding up. Source: Prepared by SENER with information from National Hydrocarbons Commission.

In 2015, exploratory works made possible to have a heavy-crude production of 1,054.9 MBD, 705.4 MBD of light and ultralight crude through the activities in shallow water. Likewise, through onshore works, the production was added with 97.4 MBD of heavy crude and 409.1 MBD of light and ultralight crude, jointly, (see Table 2.7).

TABLE 2. 7
CRUDE-OIL DOMESTIC PRODUCTION BY TYPE AND LOCATION, 2005-2015
(thousand barrels per day)

Consont					Da	ita per yea	r					Variation	AAGR
Concept	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2015/2014	2005-2015
National total	3,333.3	3,255.6	3,075.7	2,791.6	2,601.5	2,577.0	2,552.6	2,547.9	2,522.1	2,428.8	2,266.8	-6.7%	-3.8
Shallow water	2,753.3	2,679.8	2,523.6	2,245.8	2,010.4	1,941.6	1,903.3	1,894.6	1,896.4	1,851.4	1,760.3	-4.9%	-4.4
Onshore	580.1	575.8	552.2	545.7	591.1	635.4	649.3	653.3	625.7	577.4	506.5	-12.3%	-1.3
Heavy	2,387.0	2,243.8	2,039.4	1,765.6	1,520.0	1,464.0	1,417.1	1,385.0	1,365.1	1,265.5	1,152.3	-8.9%	-7.0
Shallow water	2,330.8	2,173.6	1,975.7	1,701.8	1,446.1	1,380.5	1,322.8	1,280.2	1,258.3	1,160.1	1,054.9	-9.1%	-7.6
Onshore	56.2	70.1	63.7	63.9	73.9	83.5	94.3	104.8	106.8	105.4	97.4	-7.5%	5.7
Light	802.3	831.5	837.7	815.5	811.8	792.3	798.3	834.0	847.1	864.2	838.0	-3.0%	0.4
Shallow water	370.3	423.7	451.8	460.4	465.6	462.7	487.5	520.4	539.6	577.3	575.0	-0.4%	4.5
Onshore	431.9	407.8	385.9	355.1	346.2	329.6	310.8	313.6	307.5	287.0	263.0	-8.4%	-4.8
Ultralight	144.1	180.4	198.6	210.4	269.7	320.7	337.2	328.9	310.0	299.0	276.5	-7.5%	6.7
Shallow water	52.2	82.5	96.0	83.6	98.7	98.4	93.0	94.0	98.6	114.0	130.4	14.4%	9.6
Onshore	92.0	97.9	102.6	126.8	171.0	222.3	244.2	234.8	211.4	185.0	146.1	-21.0%	4.7

Note: The Comprehensive Asset Integral Terciario del Golfo was created in 2008, and its fields were disincorporated from the Comprehensive Asset Poza Rica-Altamira.

Source: Information provided by National Hydrocarbons Commission.

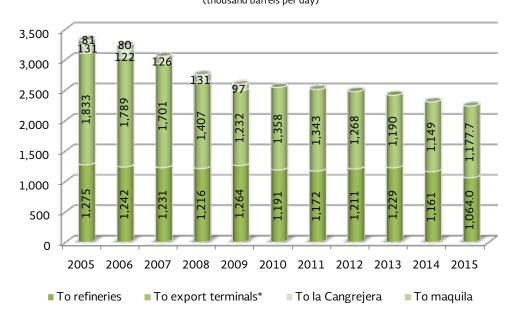
<sup>&</sup>lt;sup>17</sup> Loc. Cit.



## Oil Distribution

In 2015, 46.9% of oil production was destined to domestic consumption, 1,064 MBD of oil were distributed into the National Refining System; the rest of the production, 1,177.7 MBD, were exported<sup>18</sup>. The distribution of crude into refineries decreased 8.4% regarding 2014, while the crude destined to export terminals increased 2.5%, a behavior related to a lesser use of the refineries, where the crude is not processed, mainly in those without a coker, and is destined to export, (see Figure 2.4).

FIGURE 2. 4
OIL DISTRIBUTION BY DESTINY, 2005-2015
(thousand barrels per day)



<sup>\*</sup> Includes heavy crude from Altamira.

Source: Prepared by SENER, with information from PEMEX Institutional Database.

From the total of crude oil destined to refineries, 55% corresponded to light crude and 45% to heavy one. Regarding the type of oil sent to export terminals, 72.1% was heavy crude, 17.4<sup>19</sup>% light crude, and 10.6% ultralight, (see Figure 2. 5).

<sup>&</sup>lt;sup>18</sup> The difference between oil domestic production and its distribution is related to the adjustments in measuring, shrinkage and leaks, naphthas and condensates added to crude oil.

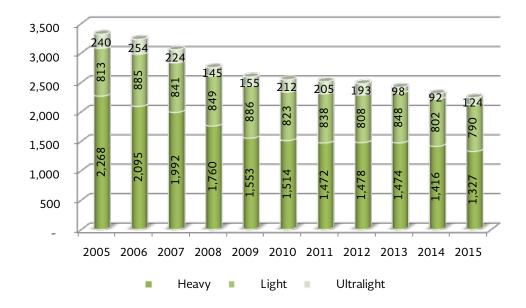
<sup>&</sup>lt;sup>19</sup> Includes heavy crude from the North Region Altamira.





FIGURE 2. 5 OIL DISTRIBUTION BY TYPE, 2005-2015

(thousand barrels per day)



Source: Prepared by SENER, with information from PEMEX Institutional Database.

#### 2.2. **National Refining System**

Before the constitutional amendments to article 27 about the Oil branch, the State, through PEMEX and the decentralized subsidiary organs (Exploration and Production, Refining, Gas and Basic Petrochemistry, and Basic Petrochemistry) was in charge of the main management and strategic leading of all the activities within the state oil industry. Thus, through its subsidiary PEMEX Refining, had the exclusive rights to carry out activities related to refining industrial processes; manufacturing of oil products and oil derivatives; storage, transportation, distribution, and trade of oil products and derivatives.

With the Decree, whereby are amended and added diverse provisions of the Politic Constitution of the Mexican United States, in energy matter, establishes that PEMEX organization, management, and corporate structure shall be in accordance to the best global practices, ensuring its technical and managerial autonomy. Thereby, on April 28, 2015 is published on the DOF the Agreement whereby it is announced the reorganization of the subsidiary organisms PEMEX-Refining, PEMEX-Gas and Basic Petrochemistry, and PEMEX Petrochemistry, into the State Productive Enterprise subsidiary of Petroleos Mexicanos, called PEMEX Industrial Transformation<sup>20</sup> (PEMEX TRI, for its Spanish acronym), which purpose is to be in charge of, among other main activities, the refining, transformation, processing, import, export, trade, retailing, manufacturing, and sale of hydrocarbons and oil products.

According to the latter, PEMEX TRI may carry out operations related, directly or indirectly, to its purpose, and is allowed to sign all kind of acts, or agreements with individuals or entities, national or foreign; thus, the activities performed by the TRI are no longer exclusive to the State, and any other private company can carry them out according to the valid regulation applicable to each activity.

#### **Refining Capacity**

<sup>&</sup>lt;sup>20</sup> On October 6, 2015, the DOF publishes the Declaratory for the entry into force of the Agreement to Create the Subsidiary State Productive Enterprise of Petroleos Mexicanos, called PEMEX Industrial Transformation, issued by Board of Directors Petroleos Mexicanos.



In order to obtain end-consumption products, crude oil shall be subjected to diverse physical and chemical refining procedures. The design and complexity of a refinery (simple or deep conversion) depends on the processes it has. In Mexico, the six refineries forming the SNR has primary processes<sup>21</sup> of atmospheric distillation, vacuum distillation, secondary processes of catalytic and thermal disintegration, viscosity reduction, naphthas reformation, residues hydrotreating, alkylation and isomerization, and three of them, with coking processes.

In 2015, PEMEX TRI, the subsidiary in charge of performing all refining activities, had a refining capacity for the atmospheric distillation of crude of 1,615.0 MBD, from which 490 MBD came from combined plants, 461.4 MBD from vacuum distillation, 422.5 MBD from catalytic disintegration, 91 MBD from viscosity reduction, 279.3 MBD from naphthas reformation, 1,160.5 MBD from hydrotreating, 155.6 MBD from alkylation and isomerization, and 155.8 MBD from coking<sup>22</sup>. From the six refineries in the country, Cadereyta, Madero, and Minatitlan are the only ones with cokers.

## Oil Processing in the SNR

In 2015, the SNR processed a total 1,064.5 MBD of crude oil, 7.8% less regarding 2014, due to the programmed maintenance of plants, the performance of unforeseen maintenance and restoration works related to the quality of the crude received in the productive areas, and to a lesser processing programmed derived from the SNR optimization, (see Table 2.8).

TABLE 2.8 CRUDE PROCESSING BY REFINERY, 2014 AND 2015

(thousand barrels per day)

					Crude	-oil proce	ess by re	finery						
Concept	Cadere	eyta	Mad	dero	Mina	ıtitlán	Salan	nanca	Salin	a Cruz	Т	ula	12	NR
Сопсерс	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
Heavy	95.0	87.4	101.6	122.0	129.8	115.3	28.8	24.9	86.4	80.3	55.9	52.4	497.5	482.3
Light	85.8	71.2	9.8	7.4	37.7	36.4	139.5	123.1	183.3	159.4	195.8	183.7	651.9	581.2
Reconstituted*							2.7	0.9			3.1	0.0	5.8	1.0
Total	180.7	158.5	111.5	129.4	167.6	151.7	171.0	149.0	269.6	239.7	254.7	236.2	1,155.1	1,064.5

<sup>\*</sup> Includes topped oil, penthanes, light naphtha from Cangrejera, light naphtha from Cactus, gasoline from Poza Rica and Madero. Source: PEMEX, Institutional Database.

During 2015, the SNR processed 54.6% of light crude and 45.3% of heavy crude. The latter's share increased 2.2 percentage points, related to the strategy of a better use of the equipment for upgrading residues, which allow to increase the revenues from intermediate distillates 67.2% of the heavy crude processed was concentrated in the refineries of Cadereyta, Madero, and Minatitlan, since their facilities have residues upgrading processes; on the other hand, Salamanca, Tula, and Salina Cruz performed the processing of the largest volume of light crude, which represented 80.2%, jointly.

#### 2.2.1. Oil Products Production

The activity of crude processing is performed in the SNR<sup>23</sup> to produce refined products. In 2015, the SNR production of oil products was of 921.9 MBDCOE<sup>24</sup>, 7.4% less than in 2014. This decrease was mainly due

<sup>&</sup>lt;sup>21</sup> This is the first stage of crude processing, in which primary products like gasoline, kerosenes, jet oil, diesel, gasoil, and heavy residues are obtained.

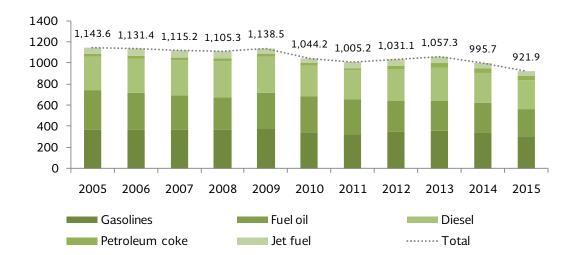
<sup>&</sup>lt;sup>22</sup> PEMEX, Op. Cit. Ref. 4. Combined plants refer to the process of atmospheric distillation plus the process of vacuum distillation.

<sup>&</sup>lt;sup>23</sup> The refining segment, which previously operated as PR, now operates through the new subsidiary state productive enterprise PEMEX TRI.



to a lesser processing of crude (7.8%), to the result of a decrease (8.4%) in the volume of crude oil supplied by productive fields, and to operational problems in SNR's plants because of the quality of the crude received from the productive areas. From the total oil products production, 33.3% focused on obtaining gasolines, 29.8% on diesel, 27.8% on fuel oil, 5.0% on jet fuel, and 4.2% on petroleum coke, (see Figure 2. 6).

FIGURE 2.6 OIL PRODUCTS PRODUCTION IN THE SNR, 2005-2015 (thousand barrels per day of crude oil equivalent)



Source: Prepared by the IMP, with information from ASA, CFE, CRE, DGAC, PEMEX, SE, SENER and private companies.

During 2015, the SNR's six refineries produced 306.8 MBDCOE of gasolines, 9.5% less compared with 2014. The refineries of Tula, Salina Cruz, and Cadereyta produced 60.2% of this fuel. In contrast, Salamanca, Madero, and Minatitlan had the smallest production. It is important to mention the refinery in Madero was the only work center that increased it gasolines production regarding 2014. The production of intermediate distillates, like diesel and jet fuel, had a reduction of 4.2% and 10.4%, respectively, reaching a total of 274.4 MBDCOE of diesel and 46.3 MBDCOE of jet fuel. The refineries of Cadereyta, Minatitlan, and Salina Cruz concentrated 57.8% of the diesel production, while the largest production of jet fuel was recorded in Tula, Salina Cruz, and Salamanca jointly producing 90.3% of the domestic production, (se Figure 2.7).

As for the production of residual fuels, fuel-oil production decreased by 8.4% in 2015, reaching 256.0 MBDCOE, a result of a better use of upgrading residues equipment. The refineries with the largest production were those which do not have upgrading residues equipment, like Tula, Salamanca, and Salina Cruz; consequently, the ones which have not been reconfigured had the smallest production. Regarding petroleum coke, the production was of 38.4 MBDCOE, a reduction of 7.1% compared with the previous year. The refineries of the SNR which have been reconfigured for delayed coking, and where this derivative is produced, are Cadereyta, Madero, and Minatitlan.

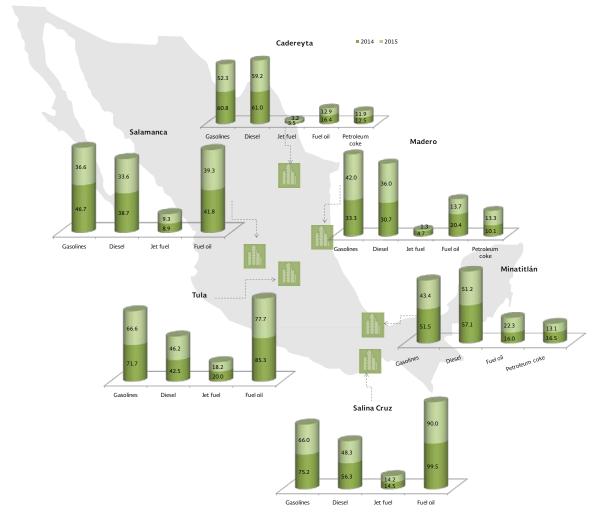
<sup>&</sup>lt;sup>24</sup> Since the measuring unit of some oil products is different, MBD and MTA are expressed in MBDCOE (energy) to make them comparable and avoid volume units.





FIGURE 2.7 **OIL PRODUCTS PRODUCTION BY REFINERY, 2014 AND 2015** 

(thousand barrels of crude oil equivalent)



Source: Prepared by the IMP, with information from ASA, CFE, CRE, DGAC, PEMEX, SE, SENER and private companies.

## **Production Yields**

The yields obtained from crude depend on its quality and the structure and characteristics of the refinery; those refineries with upgrading processes can process a larger volume of heavy crudes and, consequently, have larger yields of light and intermediate distillates. The refineries of Cadereyta, Madero, and Minatitlan, which have a coking process, had better yields of gasolines and diesel during 2015, but the worst yields of fuel oil, (see Figure 2.8).

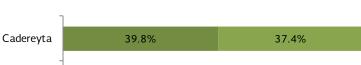
Refineries with no upgrading processes require a larger portion of light crude to obtain high percentages of light and intermediate distillates yields. From the six refineries, Tula, Salina Cruz, and Salamanca process the largest volume of light crude.





FIGURE 2. 8 CRUDE YIELDS IN THE PRODUCTION OF OIL PRODUCTS, 2015 (percentage distribution)

13.2%





Source: Prepared by the IMP, based on information from PEMEX.

#### Service Stations

Up to August 18, 2016, there were 11,442,281 service stations operating throughout, 281 selfconsumption stations, and 20 temporary permits for self-consumption service stations.

According to the current legislation<sup>25</sup>, the CRE is in charge of granting permits for the retailing of gasolines and diesel. The RES/001/2015<sup>26</sup> establishes the requirements for the submittal of applications for provisional permits to transport, store, distribute retailing, and management of integrated systems of oil, oil products, petrochemicals, and biofuels. According to the latter, starting in January 1st, 2016, the franchisers of gas stations, and tankers' operators who transport gasoline and diesel to service stations, shall have a permit from the CRE to perform its operations.

It is worth mentioning the participation of enterprises to settle new service stations with trading models other than the PEMEX franchise. Starting on April 16, 2016, permits to import gasoline and diesel were granted to interested parties complying with the applicable legal provisions. Therefore, franchises owned by third parties may choose to import gas from abroad instead of exclusively depending on PEMEX fuel. By December 12, 2016, there have been granted 154 permits for importing gasolines and 232 for importing diesel

On the other hand, on December 3, 2015, PEMEX announced the opening of five service stations under the Franchise of PEMEX in Houston, Texas, U.S. These franchise's scheme includes third-parties' investment, who are the owners of these service stations and who will determine the retail price of the fuels according to Houston's market<sup>27</sup>.

<sup>27</sup> PEMEX, Op. Cit. Ref. 4.

<sup>&</sup>lt;sup>25</sup> Articles 48, section II, 81, and Transitory Articles Eleventh and Fourth of the Hydrocarbons Law.

<sup>&</sup>lt;sup>26</sup> http://dof.gob.mx/nota\_detalle.php?codigo=5379560&fecha=27/01/2015



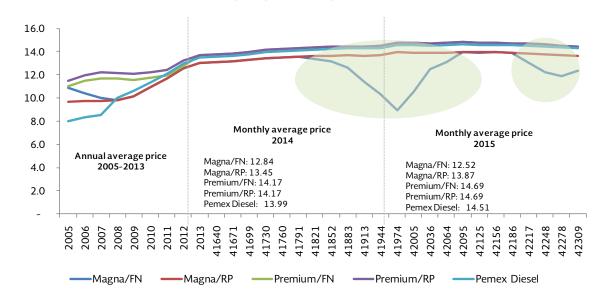


#### Price Scheme for Gasolines and Diesel

During 2013, a monthly increase of 11 cents per liter was established in the prices of gasoline and diesel. In 2014, the increase was of a range of 9 to 11 cents per liter, monthly, in gasolines, and 11 cents per liter of diesel. On the contrary, the Special Tax on Production and Services (IEPS, for its Spanish acronym) was charged on fossil fuels on January 1st, 2014; this tax was approved under the Law of the Special Tax on Production and Services, which increased for just one time, 10 cents per liter for gasolines and 13 cents per liter for diesel.

For 2015, the regular increases were eliminated, and it was established a unique increase in a range of 26 cents per liter for Magna gasoline, of 27 cents per liter for Premium gasoline, and of 26 cents per liter for diesel, (see Figure 2.9). On the other hand, during that same year, the maximum prices for gasolines PEMEX Magna and PEMEX Premium, as well as for diesel, reflected the adjustment of 1.9% regarding the price set on December 2014, except for the border zone, which was subjected to the policy of homologated and escalated prices defined by the SHCP, valid during the 2014 fiscal exercise.

FIGURE 2. 9
PRICE OF GASOLINES AND DIESEL, 2005-2015
(Real price by the end of July 2016 \$/liter)



Source: Prepared by SENER with information from PEMEX, Oil Indicators.

During 2015, prices remained constant. On January 2015, the adjustment was in line with inflation taking the price of December 2014, as a base. Throughout 2015, prices remain constant, even with a reduction of 3% on January 2016 (regarding the fix price of 2015).

The opening of the energy sector to the private sector, derived from the Energy Reform, is regulated by the Hydrocarbons Law. According to Article 2 of this Law, all the activities included in the hydrocarbons industry performed within the national territory are: exploration, production, treatment, refining and processing, transportation, storage, compression and decompression, liquefaction and regasification, distribution and trade of hydrocarbons and their derivatives, such as oil products and petrochemicals.

The participation of the private sector in the distribution and trade of oil products translates into the participation of private brands other than the sole one of PEMEX. In order to afford the necessary conditions towards a transition of a liberalized market, Article Fourteenth Transitory of the LH states that, starting January 1st, 2015 and until December 31st, 2017, at the most, the regulation over the maximum retail

they will be determined by the market conditions.

prices for gasolines and diesel will be established by the Federal Executive, and, starting January 1st, 2018,

The LH establishes that the policy for maximum retail prices to be issued, must foresee adjustments consistent with the economy's expected inflation and, if the international prices of these fuels experience high volatility, the Federal Executive will foresee adjustment mechanisms to review the upward increases of the prices mentioned, consistently with the behavior of the international market.

In this context, starting on January 1st, 2016, a mechanism was established to determine the retail price for gasolines and diesel in accordance with the international market prices, subjected to a price band with minimum and maximum prices, and a fixed IEPS with a supplementary fee.

Given the SHCP is in charge of the administration and setting of retail prices of these fuels, it published the maximum band price for gasolines and diesel in 2016, as well as the methodology to calculate the maximum retail prices according to their octane rating (below, above, or equal to 92 octanes).

Under the new prices scheme, the SHCP fixes the monthly maximum sales price for gasolines, in a range applicable throughout the year. To limit volatility, in 2016, the monthly maximum prices could only fluctuate within a band of +3 percent and -3 percent regarding its 2015 price; that is, if the benchmark price changes, gasolines may rise or lower 3.0%.

Specifically, it was defined that, by 2016, Magna gasoline price (below 92 octanes) would be of 13.16 pesos per liter (41 cents below the price fixed in 2015); Premium gasoline (above or equal to 92 octanes), 13.98 (40 cents below): and for diesel, 13.77 (43 cents below).

On the other hand, starting in 2017, imports will be opened, in such way there will be an availability of fuels other than the ones refined or imported by PEMEX, and by 2018, the market will be completely liberalized.

In the transitory article Twelfth of the LIF for the 2017 Fiscal Exercise, it is defined that during 2017 and 2018, gasolines and diesel retail prices will be defined according to the following<sup>28</sup>.

- The CRE will issue the flexibility agreements or the schedule, established per region, which establishes that the 2017 and 2018 retail prices shall be determined under the market conditions<sup>29</sup>. The CRE may modify such agreements or schedule, based on the behavior of the market conditions and the development of the country's supplying infrastructure, among other factors.
- II. In those regions of the country, where retail prices for gasolines and diesels are not determined under the market conditions, the SHCP will set the maximum retail prices for gasolines and diesel<sup>30</sup>, and will publish the methodology to set them, as well as their validity period, at most on December 31st, 2016.

The objective for setting these maximum prices will be to liberate prices within their corresponding region. Additionally, and when the CRE has determined so, in those regions with a maximum price, the asymmetric regulation shall be applied to access the infrastructure.

The SHCP will issue an agreement to be published in the DOF, in which it will be specified the fuels and the period for applying the prices.

What is established in the transitory article Twelfth of the LIF for the 2017 Fiscal Exercise will be valid through December 31st, 2018.

<sup>28</sup> http://www.gob.mx/nota\_detalle.php?codigo=460968&fecha=15/11/2016

<sup>&</sup>lt;sup>29</sup> Within the regions of the country that, by January 1st, 2017 have not applied retail prices for gasolines and diesel under the market conditions, these retail prices shall be published at most on December 31st, 2016.

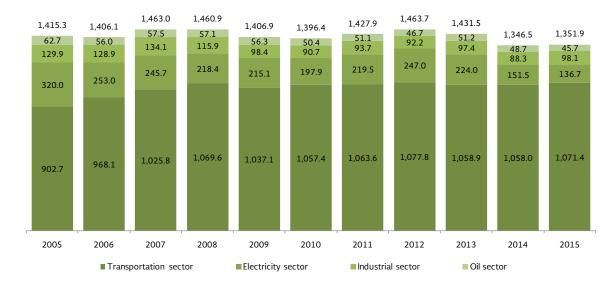
<sup>&</sup>lt;sup>30</sup> It would consider the fuels international benchmark price and, if the case, the differences between their quality, the differences regarding logistics costs, including transportation costs between regions, distribution and trade costs in the consumption centers, and the diverse distribution and retailing modalities.

# 2.3. Oil Products Demand

In 2015, the total demand for oil products was of 1,351.9 MBDCOE, 0.4% more regarding 2014. From this, 79.2% was destined to meet the consumption needs of the transportation sector, which were of 1,071.4 MBCDOE. The behavior of the vehicle fleet, whose trends have remained, is the factor that explains this behavior. The electricity sector consumption represented 10.1% of the total demand for oil products, reaching 136.7 MBDCOE. The strategy to decommission conventional plants for electricity generation is reduced by 9.8% its oil-products demand compared with 2014, mainly fuel oil and diesel, and increased its use of natural gas. The oil-products demand in the industrial sector was of 7.3%, rising from 88.3 MBDCOE IN 2014 to 98.1 MBDCOE in 2015. Nonetheless, this sector consumes, mostly, natural gas. Finally, the oil sector reduced its consumption to 45.7 MBDCOE, (see Figure 2. 10).

FIGURE 2. 10
OIL PRODUCTS DEMAND BY SECTOR, 2005-2015

(thousand barrels per day of crude oil equivalent)



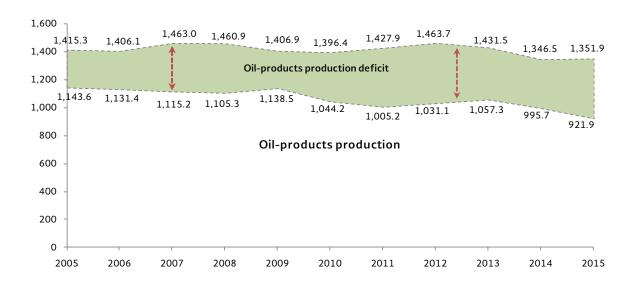
Source: Prepared by SENER, IMP with information from PEMEX, SE and private companies.

The lowest oil products production was recorded during the last ten years; in 2015, it only covered for 68.2% of their domestic demand, reflecting thus, the highest deficit in the national production of oil products between 2005 and 2015 (see Figure 2.11).

FIGURE 2. 11

DEMAND AND PRODUCTION OF OIL PRODUCTS, 2005-2015

(thousand barrels per day of crude oil equivalent)



Source: Prepared by SENER, IMP with information from PEMEX, SE and private companies.

## 2.3.1. Transportation Sector

The Transportation Sector hast the largest demand for oil products; in 2015 it requested 1,209.8 MBD to meet its consumption needs, 1.4% more regarding 2014. From this, 91.8% was destined to motor carrier, 5.8% to aerial, 1.3% to maritime, and 1.1% to railway. The demand for oil products in the motor-carrier sector is strongly linked to the growing behavior of the vehicle fleet fields by gasoline and diesel. The Central and Central-Eastern regions had the largest consumption, 26.5% and 22.4%, respectively, from the national total. On the contrary, the regions with the lowest consumption were the Northeast (19.8%), South-Southeast (18.4%), and Northwest (13.0%), (see Table 2.9).

TABLE 2. 9
REGIONAL SALES OF OIL PRODUCTS TO THE TRANSPORTATION SECTOR, 2015
(thousand barrels per day)

			Fuel			
Region	Gasolines	Diesel	Jet fuel	Intermediate 15	Total	Share
Total	792.9	345.8	70.8	0.4	1209.8	100%
Northwest	97.8	50.8	8.3	-	156.9	13.0%
Northeast	151.0	81.8	6.9	-	239.7	19.8%
Central-Eastern	177.1	83.7	9.7	0.29	270.8	22.4%
Central	230.2	71.6	18.3	-	320.1	26.5%
South-Southeast	136.8	57.8	27.6	0.15	222.4	18.4%

Source: Prepared by the IMP, based on information from ASA, SCT, PEMEX and SENER.

## **Motor Carrier**

From the modalities within the transportation sector, motor carrier is still the preferable one in the country. In 2015, motor carrier demanded 1,110.0 MBD of fuels, 0.9% more than the previous year. The gasolines





consumption grew 2.1% regarding 2014, while diesel's fell 2.0%, (see Table 2.10). Factors, such as a vehicles' higher energy efficiency, related to the demanding environmental regulations, the gasolines and diesel prices' behavior, as well as their illegal sale, has contributed to the low growth of these fuels consumption in the motor-carrier sector. During the past ten years, the consumption of gasolines and diesel has increased from 18.1% to 21.3%, while for that same period, the gasoline vehicle fleet grew 94.0% and the diesel's, 25.2%.

TABLE 2. 10 MOTOR-CARRIER DEMAND FOR FUELS, 2005-2015

(thousand barrels per day)

Fuel					D	ata per yea	ar					AAGR
Fuel	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Total	933.1	1,003.5	1,062.2	1,112.1	1,095.2	1,114.1	1,116.3	1,129.9	1,107.4	1,099.9	1,110.0	1.8
Gasolines	671.5	718.3	760.3	792.0	791.9	801.6	799.1	803.2	786.9	776.3	792.9	1.7
Diesel	261.6	285.2	301.9	320.1	303.3	312.5	317.2	326.7	320.5	323.6	317.2	1.9

Source: Prepared by the IMP, with information from ASA, CFE, CRE, DGAC, PEMEX, SE, SENER and private companies.

At regional level, the territories with the largest demand for gasolines were the Central and Central-Eastern regions, with a share of 29.0% and 22.3%, respectively. From 2014 to 2015, the Central region increased its consumption 2.2%, while the Central-Eastern consumption, barely reached 0.2%. Besides, both regions concentrate the largest gasoline vehicle fleet. From the demand, 19.0% was destined to meet the needs of the Northeast region, which had the largest growth regarding 2014, 6.3%. The rest of the demand came from the South-Southeast region with 17.3%, and the Northwest, with 12.3%. On the other hand, the regions with the largest consumption of diesel were the Central-Eastern, the Northeast, and the Central region. Though, from 2014 to 2015, all the regions decreased their demand for diesel, which coincides with the reduction in the vehicle fleet fueled by the fuel<sup>31</sup>, (see Table 2.11 and Table 2.12).

TABLE 2. 11
MOTOR-CARRIER SECTOR GASOLINES REGIONAL, 2005-2015

(thousand barrels per day)

Region					Da	ata per yea	ır					AAGR
Region	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Total	671.5	718.3	760.3	792.0	791.9	801.6	799.1	803.2	786.9	776.3	792.9	1.7
Northwest	85.6	92.2	98.3	103.9	100.0	100.7	101.6	102.6	98.8	95.3	97.8	1.3
Northeast	129.0	139.4	147.3	153.6	151.4	148.1	142.2	141.7	141.3	142.1	151.0	1.6
Central-Eastern	155.3	165.8	175.8	181.0	183.9	187.3	186.6	187.5	181.5	176.7	177.1	1.3
Central	200.6	210.4	218.6	224.8	223.9	229.3	230.6	230.2	226.7	225.2	230.2	1.4
South-Southeast	101.0	110.5	120.3	128.6	132.6	136.2	138.1	141.2	138.5	137.0	136.8	3.1

Source: Prepared by the IMP, based on information from PEMEX.

<sup>&</sup>lt;sup>31</sup> The DOF published on March 26, 2015 the Decree whereby it is fostered the renewal of the motor-carrier vehicle fleet (http://www.dof.gob.mx/nota\_detalle.php?codigo=5386771&fecha=26/03/2015). The general purpose of the program is to have a modern vehicle fleet which will allow Mexican transporters, specially the "Trucker Man", to become more competitive and productive, contributing to safer roads and to keep the standards committed to environmental protection, through a modernization scheme of the fleet intended to scrap obsolete units. In 2015, through this Program 2,655 vehicles were destroyed (http://www.renovacionvehicular.com.mx/estadística/). Since the federal cargo and passenger transportation public service, urban or suburban, is mostly fueled by diesel, this may translate into a lower consumption of this fuel.

**TABLE 2. 12** REGIONAL DEMAND FOR DIESEL IN THE MOTOR-CARRIER SECTOR, 2005-2015 (thousand barrels per day)

Ragion					D	ata per yea	ır					AAGR
Region	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Total	261.6	285.2	301.9	320.1	303.3	312.5	317.2	326.7	320.5	323.6	317.2	1.9
Northwest	33.0	36.7	39.0	41.2	37.7	38.2	40.7	43.2	42.8	43.1	42.5	2.6
Northeast	60.9	68.6	73.6	80.4	73.7	76.2	76.9	78.5	76.7	78.2	76.2	2.3
Central-Eastern	66.1	69.9	73.2	76.0	75.0	79.1	80.3	81.5	80.8	81.1	79.8	1.9
Central	58.8	62.6	65.9	68.2	65.9	67.8	67.9	68.5	67.0	70.0	69.9	1.7
South-Southeast	42.8	47.4	50.1	54.3	51.0	51.2	51.4	54.9	53.2	51.2	48.8	1.3

Source: Prepared by the IMP, based on information from PEMEX and SCT.

#### Vehicle Fleet

The vehicle fleet is the referred variable to explain the automotive demand for fuels. During the last ten years, it is estimated it grew 89.5%, that is, 15.8 million vehicles were added from 2005-2015 throughout the country; thus, the number of vehicles reached 33.4 million vehicles, 4.9% more than in 2014<sup>32</sup>. Stands out the behavior of the vans, which represent 36.5% of the domestic vehicle fleet, while compact vehicles represent 21.9%, and subcompact ones, 17.7%. Motorbikes have displayed a growing trend and have become a preferred modality due to its benefits<sup>33</sup>; from 2005 to 2015, 2.2 million units have been incorporated into the vehicle fleet, with an AAGR of 16.7% during that period, (see Table 2.13).

**TABLE 2. 13 VEHICLE FLEET STRUCTURE, 2005-2015** 

(million vehicles)

D					Da	ata per yea	ar					AAGR
Region	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Total	17.6	20.1	22.1	24.1	25.1	26.2	27.8	29.4	31.3	31.9	33.4	6.6
Subcompact	4.4	4.7	4.9	5.1	5.2	5.3	5.4	5.5	5.7	5.7	5.9	3.0
Compact	4.2	4.7	5.1	5.5	5.7	5.9	6.3	6.6	7.0	7.0	7.3	5.7
Luxury and sports	1.2	1.5	1.7	1.8	1.9	2.1	2.2	2.4	2.5	2.6	2.6	8.2
Vans	5.1	6.3	7.2	8.2	8.7	9.2	9.9	10.6	11.4	11.7	12.2	9.2
Intensive-use vans	1.4	1.4	1.5	1.6	1.6	1.6	1.7	1.7	1.8	1.7	1.7	1.9
Buses	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.6
Medium-size trucks	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.7
Heavy trucks	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	2.2
Metrobus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.0
Motorbikes	0.6	0.7	0.9	1.1	1.2	1.2	1.3	1.6	1.9	2.3	2.8	16.7

Note: Includes hybrid, Metrobus, and motorbikes; does not include electric vehicles. Source: Prepared by the IMP, based on information from private companies.

In 2015, 96.7% of the vehicle fleet was fueled by gasoline (32.3 million vehicles), 5.2% more compared with 2014. The Central region has the largest amount of gasoline units, 9.8 million, seconded by the Central-Eastern, with 7.7 million vehicles. From this fleet, 72.4% is concentrated in the Central, Central-Eastern, and South-Southeast regions, with a share of 30.2%, 23.9%, and 18.2%, respectively. Even when the South-Southeast region has a gasoline vehicle fleet of 5.9 million units and a higher AAGR, its gasolines consumption fell from 137.6 MBD in 2014 to 136.8 MBD in 2015, a reduction of 0.2% (see Table 2.14).

<sup>&</sup>lt;sup>32</sup> It is worth mention that one of the determiners for purchasing a vehicle is its price, the available consumer's income, technical characteristics, maintenance costs, replacing options, yields per kilometer, etc.

<sup>&</sup>lt;sup>33</sup> To mention some, motorbikes consume less fuel; their purchase cost is lower compared to cars; they are faster; and their maintenance cost is less.

TABLE 2. 14
BEHAVIOR OF THE GASOLINE VEHICLE FLEET, 2005-2015

(million vehicles)

Dagian					Da	ata per yea	ar					AAGR
Region	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Total	16.7	19.2	21.2	23.1	24.2	25.2	26.8	28.4	30.1	30.7	32.3	6.9
Northwest	1.7	2.2	2.5	2.8	2.9	3.1	3.3	3.6	3.7	3.8	3.9	8.8
Northeast	3.0	3.6	4.1	4.6	4.8	5.0	5.4	5.7	6.0	6.1	5.0	5.4
Central-Eastern	3.6	4.1	4.5	4.9	5.2	5.4	5.8	6.2	6.6	6.8	7.7	8.0
Central	6.1	6.6	7.0	7.5	7.8	7.9	8.2	8.6	9.1	9.2	9.8	4.9
South-Southeast	2.4	2.7	3.0	3.3	3.6	3.8	4.1	4.4	4.7	4.9	5.9	9.6

Note: Includes hybrids and motorbikes.

Source: Prepared by the IMP, based on information from private companies.

In 2015, the diesel vehicle fleet recorded 842.0 thousand units, a share of 2.5% from the domestic total. The Central region had largest concentration, 264.6 thousand vehicles, seconded by the Central-Eastern region with 191.9 thousand units, and the Northeast, with 163.3 thousand units Notwithstanding, the South-Southeast region increased its diesel vehicle fleet 29.3%, (see Table 2.15).

TABLE 2. 15
BEHAVIOR OF THE DIESEL VEHICLE FLEET, 2005-2015

(thousand vehicles)

					D	ata per yea	r					AAGR
Region	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2030
Total	672.3	700.9	737.5	773.6	780.4	791.0	799.2	844.9	898.4	854.5	842.0	2.3
Northwest	71.3	74.3	78.9	79.8	77.6	77.5	79.7	80.8	83.3	77.7	74.4	0.4
Northeast	154.4	163.3	175.8	185.4	186.9	190.1	192.8	205.0	218.9	208.5	163.3	0.6
Central-Eastern	156.4	161.8	168.7	176.6	177.8	180.3	180.2	190.7	203.2	192.9	191.9	2.1
Central	197.6	205.6	214.1	227.8	233.0	237.1	238.6	254.5	271.6	261.3	264.6	3.0
South-Southeast	92.6	95.8	100.1	104.0	105.2	106.0	108.0	113.7	121.5	114.0	147.7	4.8

Source: Prepared by the IMP, based on information from private companies.

#### **Aerial Transportation**

To cover the aerial transportation sector's consumption in 2015, 70.8 MBD of jet fuel were required, 6.4% more than in 2014. In 2015, the consumption of jet fuel in the South-Southeast region grew 22.0% regarding 2014, reaching 27.6 MBD, the Central region decreased 13.8%, demanding 18.3 MBD. Though, these two regions jointly concentrated 64.9% of this fuel demand, while the rest corresponded to the Central-Eastern region (13.7%), Northwest region (11.7%), and Northeast region (9.7%), (see Table 2.16).

TABLE 2. 16 JET-FUEL REGIONAL DEMAND, 2005-2015

(thousand barrels per day)

Dogian					Da	ata per yea	ar					AAGR
Region	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Total	58.7	61.2	67.9	65.0	55.0	55.8	56.1	59.3	62.2	66.5	70.8	1.9
Northwest	7.4	7.5	7.6	6.3	6.1	6.6	6.4	6.5	7.1	7.3	8.3	1.1
Northeast	4.3	4.7	9.5	6.7	5.2	4.4	5.2	6.2	5.2	5.9	6.9	4.9
Central-Eastern	12.3	13.1	10.6	10.4	8.6	8.2	7.4	8.2	10.7	9.4	9.7	-2.3
Central	21.6	22.5	23.5	22.5	21.6	22.3	23.0	23.5	22.2	21.3	18.3	-1.6
South-Southeast	13.1	13.5	16.7	19.1	13.5	14.4	14.1	14.9	17.0	22.6	27.6	7.8

Source: Prepared by the IMP, based on information from PEMEX.



In Mexico, Airports and Auxiliary Services (ASA) is the organ in charge of supplying fuel to the service stations located in the national airports<sup>34</sup>. According to its statistics, in 2015, the operations per type of aviation grew 2.3% regarding the previous year, reaching 1,821.6; on the other hand, the passengers transported per type of aviation, increased 12.8%, recording 114.2 million passengers, (see Table 2.17).

**TABLE 2.17 OPERATIONS PER TYPE OF AVIATION, 2005-2015** 

(thousand operations)

T					C	ata per ye	ar					AAGR
Туре	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Total	1,569.2	1,696.6	1,899.4	1,828.5	1,626.6	1,650.3	1,633.5	1,683.3	1,700.2	1,780.6	1,821.6	1.5
Regular commercial <sup>1</sup>	975.6	1,064.5	1,232.1	1,164.9	988.5	960.6	922.7	979.2	1,023.2	1,091.3	1,153.9	1.7
Charter <sup>2</sup>	31.4	30.7	31.2	27.6	20.3	16.6	17.0	13.7	12.7	10.2	11.5	-9.6
Non-regular commercial <sup>3</sup>	215.2	224.5	245.3	247.6	246.5	267.8	262.9	268.3	248.8	259.0	244.9	1.3
General aviation <sup>4</sup>	310.8	336.0	352.9	349.5	335.7	362.4	385.5	374.0	370.1	378.9	373.1	1.8
Freight	36.1	40.9	37.9	38.9	35.6	42.9	45.4	48.1	45.4	41.2	38.2	0.6

<sup>&</sup>lt;sup>1</sup> Refers to aircrafts in airlines with established routes and itineraries.

The airports with the largest demand were the Mexico City International Airport (AICM, for its Spanish acronym), Cancun, Guadalajara, Monterrey, Puerto Vallarta, and Tijuana. The AICM, located in the Central region, perform the largest number of aerial operations in the country, domestic as well as international, and during the last year it increased its connectivity and number of aircrafts in the different airlines.

The jet-fuel domestic production has not been enough to cover the consumption needs of a growing sector, therefore, given the new conditions derived from the Energy Reform, towards the future, it will be possible to buy jet fuel form suppliers other than PEMEX. Furthermore, the aerial industry has incorporated airplanes with more efficient technologies, so the increase in their fleet and the jet-fuel consumption have not grown in the same proportion.

## Sea and Railway Transportation

Railway is still the means to transport goods for industries like the automotive, cement, steel, and agriculture. The dynamism of these industries will be reflected in the behavior of the railway transportation. In 2015, the average demand for diesel in the railway transportation was of 13.4 MBD, 4.7% more regarding 2014 (see Table 2. 18). The latter coincides with the growing rates of railway freight transportation, which increased by 7.2% during 2013-2015<sup>35</sup>.

Ship transportation of cargo offers competitive advantages to the companies which decide to import or export merchandises through that means. Thereby, an increase on the amount of transported merchandises will impact the number and frequency of the vessels and in the demand for diesel, the most used fuel in these transportation means. This fact is reflected in the increase of 8.3% of diesel from 2014 to 2015, reaching 15.2 MBD.

<sup>35</sup> Report on SCT Relevant Actions, January 2013-2016.

<sup>&</sup>lt;sup>2</sup> Refers to commercial aircrafts with non-licensed routes and/or out of itinerary, which operate sporadically.

<sup>&</sup>lt;sup>3</sup> Refers to air taxis.

<sup>&</sup>lt;sup>4</sup> Refers to private, official, military, and general aviation aircrafts with foreign plates.

<sup>34</sup> Since 1979, Airports and Auxiliary Services, a decentralized organ of SCT, is in charge of providing the services of storage, distribution, and supply of fuel to the aerial transporters; nonetheless, the current legislation establishes that any other interested party complying with the requirements may request to the CRE a permit to perform this activity.

**TABLE 2. 18** DEMAND FOR DIESEL AND DEMAND IN DIFFERENT TRANSPORTATION **MODALITIES, 2005-2015** 

(thousand barrels per day)

Fuel	Data per year											AAGR
ruei	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Railway Total	11.8	12.7	12.6	11.9	11.2	12.6	13.5	12.7	12.7	12.8	13.4	1.2
Diesel	11.8	12.7	12.6	11.9	11.2	12.6	13.5	12.7	12.7	12.8	13.4	1.2
Maritime Total	16.3	16.0	15.8	18.7	13.5	14.4	16.8	15.8	13.8	14.3	15.6	-0.4
Diesel	14.7	14.8	14.6	17.8	12.8	13.5	16.1	15.6	13.7	14.0	15.2	0.3
Fuel oil	1.5	1.2	1.2	1.0	0.7	0.8	0.7	0.2	0.0	0.2	0.4	-11.9

Source: Prepared by the IMP, with information from CFE, CRE, PEMEX and SENER.

According to the Organization for Economic Cooperation and Development (OECD), the Mexican railway freight system is productive, competitive, and profitable. It is important to mention the investments made in the railway sector, which have increased the operational efficiency and the productivity in use of the resources. The savings in costs have been channeled to capital formation and the modernization of the capacity. The average energy intensity of the railway transportation went from 330.9 kilojoules per tonkilometer in 2014, to 330.4 kilojoules per ton-kilometer, while railway freight transportation was of 80,683 million tons per kilometer in 2014, and 83,401 million tons per kilometer; the latter means that from one year to another, the consumption of diesel decreased, but the amount of merchandise transported, increased, (see Figure 2. 12).

FIGURE 2.12 FREIGHT TRANSPORTATION AND ENERGY INTENSITY OF THE RAILWAY TRANSPORTATION, 2005-2015



Source: Prepared by the IMP, based on information from SCT.

## 2.3.2. Electricity Sector

With the 2014 Energy Reform, the CFE became a State Productive Enterprise, and ceased to be the enterprise to exclusively provide electricity in Mexico, allowing the participation of private companies (national and foreign) to generate and sell electricity through different technologies.



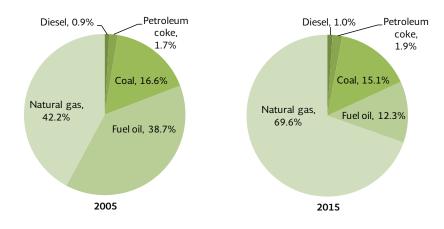
Under this new scheme, nowadays there are generators (offerers) who will install electricity generation plants (CFE, Independent Energy Producers, PEMEX, and private companies) which will compete under the same regulation. The buyers of this energy will be classified as qualified users, who are the large consumers that can buy energy in the private electricity market, and basic-service users, who will be supplied by CFE and will not be able to buy electricity directly from private companies. The National Center for Energy Control (CENACE, for its Spanish acronym) is in charge of reviewing the offers sent daily by the generators to their plants and choose the best ones (according to quantity and price) for buying energy.

Suppliers (private companies) are another important agent in the market who will mediate between the CENACE and the qualified users to trade electricity. Considering that, through constitutional mandate, the distribution of electricity is exclusive to the State, the CFE will be a supplier for qualified and basic-service users.

The previous market model was a monopoly which only allowed the participation of private parties through the modality of Self-Consumption, where companies generated energy for themselves (self-consumption), to sell it to other companies or to CFE, the rest of the participants and users were excluded. On the other hand, Independent Energy Producers (IEPs) sold their energy and electricity to CFE, and it determined how much to generate. In this sense, the restriction on CFE as the only responsible to supply the national electricity consumption, and establishes conditions for the development of the electricity market, where generators, as well as public and private suppliers converge in conditions of competitiveness.

In 2015, the demand for fossil fuels in the public electricity sector reached 897.0 MBDCOE, 4.3% more regarding 2014, and 15.5%, regarding 2005. Natural gas is the most used fuel in this sector, and increased its share from 42.2% in 2005 to 69.9% in 2015. It was seconded by fuel oil, which has decreased it share during the last ten years from 38.7% to 12.3% due to the program implemented by CFE to replace fuel oil with natural gas in generation plants. Coal, petroleum coke, and diesel had the smallest share, (see Figure 2. 13).

FIGURE 2. 13
FOSSIL FUELS SHARE IN THE ELECTRICITY SECTOR 2005 AND 2015
(percentage)



Source: Prepared by SENER with information from the IMP, based on information from CFE, PEMEX and SENER and private companies.

CFE is the largest consumer of fuels in Mexico. In 2015, the main electricity plans had an average demand of 246.5 MBDCOE of natural gas, 108.0 MBDCOE of fuel oil, 135.7 MBDCOE of coal, and 6.6 MBCOE of diesel, (see Table 2. 19). By replacing fuel oil with natural gas, the emissions related to the use of fuels for electricity generation are reduced, which contributes achieving the goals established regarding polluting emissions<sup>36</sup>. The CFE continues its plans for the replacement and decommissioning of fuel-oil and diesel generating plants with other kind of energy sources, like natural gas -mainly-, the implementation of clean

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<sup>&</sup>lt;sup>36</sup> Reduction of GHG emissions by 30 per cent in 2020.



technologies, and the construction of hydroelectricity plants. These represent a lower cost and environmental impact, and entail carrying out actions to improve efficiency and reduce generation costs. In this sense, the requirement of fuel oil for electricity generation processes in 2015 shrank 11.0% regarding 2014, and 62.5% regarding 2005, while the natural-gas demand increased 16.0% regarding 2014, and 94.7% during the last ten years.

As for the IEPs, from 2005 to 2015, natural-gas requirements increased 85.6%. Nonetheless, if only the last year are considered -from 2014 to 2015, these requirements will be reduced 1.5%, going from 298.3 MBDCOE to 293.4 MBDCOE. Natural gas and petroleum coke are the most used fuels by private parties; the behavior of these fuels consumption has had an upward trend in the last ten years, recording a growth from 62.1% and 48.0%, respectively, due to the transformation efficiencies of the combined cycle technologies; while the consumption of fuel oil has decreased. The previous monopoly model of the electricity market only allowed private parties to participate through the modality of Self-Consumption, where companies only generated energy for themselves (self-consumption) and sell it to other companies or to CFE, the rest of the participants and users was excluded. On the other hand, IEPs sold all their power and electricity to CFE, which determined how much they should generate. In this sense, the restriction on CFE as the only responsible to supply the national electricity consumption, and establishes conditions for the development of the electricity market, where generators, as well as public and private suppliers converge in conditions of competitiveness.

TABLE 2. 19
DEMAND FOR FOSSIL FUELS IN THE ELECTRICITY SECTOR, 2005-2015

(thousand barrels per day of crude oil equivalent)

Fuel					D	ata per yea	r					AAGR
ruei	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Total	776.4	764.3	802.2	760.8	806.0	807.1	860.4	889.4	894.1	859.9	897.0	1.5
Fuel oil	300.2	230.5	226.5	197.5	192.5	172.5	193.2	215.6	192.4	124.2	110.0	-9.6
Federal Electricity Commission	288.5	221.3	217.5	192.0	186.6	168.1	190.0	211.9	189.4	121.3	108.0	-9.4
Private	11.8	9.2	9.0	5.5	5.8	4.4	3.2	3.7	3.0	2.9	2.0	-16.4
Diesel	6.9	7.8	4.5	6.8	8.6	8.0	9.5	14.1	13.8	9.5	9.3	3.1
Federal Electricity Commission	5.7	6.8	2.9	4.5	6.7	6.2	7.6	12.2	11.8	6.8	6.6	1.4
Independent Energy Producer	0.3	0.0	0.3	0.6	0.0	0.0	0.0	0.3	0.3	0.6	0.9	14.1
Private	0.9	0.9	1.3	1.7	1.8	1.8	1.8	1.5	1.7	2.2	1.8	7.5
Coal	129.1	127.3	127.4	94.0	118.8	127.7	134.8	133.9	125.8	129.5	135.9	0.5
Federal Electricity Commission	129.0	127.1	126.8	93.5	118.3	127.1	134.2	133.3	125.2	129.0	135.7	0.5
Private	0.1	0.2	0.6	0.5	0.5	0.7	0.6	0.6	0.6	0.6	0.2	9.9
Petroleum coke	12.9	14.8	14.7	14.1	14.1	17.4	16.8	17.4	17.8	17.7	17.4	3.0
Private	12.9	14.8	14.7	14.1	14.1	17.4	16.8	17.4	17.8	17.7	17.4	3.0
Natural gas	327.3	384.0	429.1	448.5	472.0	481.5	506.1	508.5	544.3	579.0	624.4	6.7
Federal Electricity Commission	126.6	142.1	146.2	149.8	164.7	164.7	170.0	182.2	206.0	212.5	246.5	6.9
Luz y Fuerza del Centro <sup>1</sup>	5.0	5.2	9.5	8.3	9.8	8.3	10.6	9.6	10.2	7.0	11.6	8.8
Independent Energy Producer	158.4	197.4	231.8	248.9	255.8	263.5	280.6	271.6	277.1	298.3	293.4	6.4
Private	37.4	39.3	41.7	41.4	41.7	45.0	44.9	45.1	51.0	61.2	72.9	6.9

<sup>&</sup>lt;sup>1</sup> Decentralized organ extinct by the Decree published in the DOF on October 11, 2009. For this document's purpose, they are shown separately since, even if administratively its assets are operated by CFE, they will not be part of the latter. Source: Prepared by the IMP, based on information from CFE, PEMEX and SENER and private companies.

Nowadays, suppliers (CFE or private companies) and qualified users are required to buy Clean Energy Certificates to generate electricity, to foster the use of clean technologies, avoid its cost overrun in the short term, and avoid the dependency on natural gas. Nevertheless, fuel oil is the mostly used fuel for generating electricity, even if it is a highly pollutant fuel.

## 2.3.3. Industrial Sector

During the last year, the industrial sector increased its demand for fuels 4.7% going from 330.5 MBDCOE in 2014 to 346.2 MBDCOE in 2015. From this sector's total demand, natural gas is the most important one; for the last ten years, its consumption grew 41.7%, and reached 228.5 MBDCOE by the end of the period.



On the other hand, petroleum coke is the fuel most used in the industrial intensive branches, mainly in the cement branch; from 2005 to 2015, it increased its demand 48.6%, reaching 58.5 MBDCOE by the end of 2015, 12.7% more than in 2014. During the last ten years, the use of fuel oil has a decreased 84.8%, mainly due to the replacement of this fuel with natural gas. Though, from 2014 to 2015, its consumption increased 42.4% (see Table 2. 20).

**TABLE 2. 20** BEHAVIOR OF THE FUELS DEMAND IN THE INDUSTRIAL SECTOR, 2005-2015

(thousand barrels of crude oil equivalent)

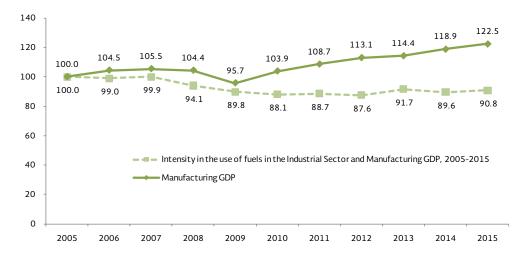
F I					D	ata per yea	r					AAGR
Fuel	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Total	310.1	320.8	327.0	303.9	266.7	283.8	298.8	306.6	325.4	330.5	346.2	1.1
Fuel oil	65.4	52.7	49.2	38.3	32.2	26.0	22.5	15.4	11.8	7.0	10.0	-17.1
Petroleum coke	39.4	51.9	60.1	52.1	43.2	40.2	43.9	45.3	54.7	51.9	58.5	4.0
Diesel	25.1	24.3	24.8	25.5	23.1	24.5	27.3	31.4	30.9	29.4	29.6	1.7
LP gas	18.9	19.9	19.5	18.5	18.2	19.3	18.0	18.3	19.9	19.7	19.5	0.3
Natural gas	161.2	172.0	173.4	169.5	150.0	173.8	187.0	196.1	208.1	222.4	228.5	3.6

Source: Prepared by the IMP, based on information from CRE, PEMEX, SENER and private companies.

The industrial sector is characterized by the energy intensity <sup>37</sup> of its processes. Between 2014 and 2015, its intensity increased 1.3%, which required a larger volume of energy to produce one peso of the manufacturing Gross Domestic Product (GDP) in 2015. Nevertheless, this sector has replaced, through supporting programs, inefficient equipment, contributing to a lesser consumption of fuels (see Figure 2.14).

**FIGURE 2. 14** INTENSITY IN THE USE OF FUELS IN THE INDUSTRIAL SECTOR, AND MANUFACTURING GDP. 2005-2015

(Index, 2005 = 100)



Source: Prepared by the IMP, based on information from CRE, INEGI, PEMEX, SENER and private companies.

## 2.3.4. Oil Sector

In 2015, the consumption of oil products in the oil sector was mainly focused on fuel oil and diesel, representing 96.0%, jointly, for the demand recorded by 44.3 MBD, 6.1% less than in 2014 (see Table 2.21). In some cases, fuel oil is used for cogeneration projects of PEMEX, as well as to generate heat and

<sup>&</sup>lt;sup>37</sup> It measures the necessary power to produce one peso of the Gross Domestic Product of the national economy. That is, the more energy consumed per each unit, the more energy efficiency that system will have; in this case, a country, since it is being related to the GDP.





steam in the auxiliary-services plants of this sector. On the other hand, diesel is required for transportation services and the of back-up power generation.

**TABLE 2.21** TOTAL DEMAND FOR FUELS IN THE OIL SECTOR, 2005-2015

(thousand barrels per day)

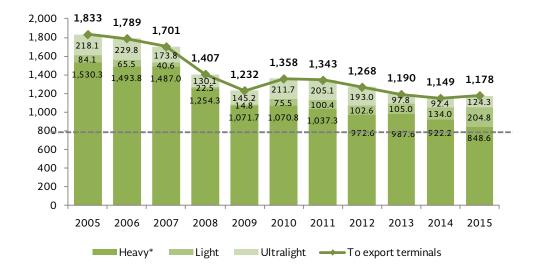
Fuel					Da	ita per yea	ır					AAGR
ruei	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Total	59.5	53.2	54.7	54.3	53.8	48.3	48.8	45.0	49.4	47.2	44.3	-2.9
Gasolines	0.7	0.7	0.7	0.6	0.7	0.7	0.9	1.2	1.3	2.1	1.8	10.6
Diesel	16.4	15.0	17.1	17.6	19.9	19.1	17.6	19.8	22.2	20.8	19.8	1.9
Fuel oil	42.4	37.6	36.9	36.1	33.2	28.5	30.4	24.0	25.9	24.3	22.7	-6.1

Source: Prepared by SENER based on information from PEMEX. Oil and Oil Products Foreign Trade

The volume of crude sent to export terminals increased 2.5% in 2015, from 1,149 MBD in 2014 to 1,178 MBD, a behavior attributable to the increase of light and ultralight crude exports, which was of 52.8% and 34.6%, respectively. This increase counteracted the reduction of the crude oil destined to export terminals, which was of 848.6 MBD in 2015, 8.0% less regarding the daily average export of 2014. It shall be considered that, in 2015, 72.1% of heavy crude was destined to export terminals, since PEP's largest production is under this classification. Though, for the past ten year, this type of crude destined to export terminals has been reduced 44.5%, (see Figure 2. 15).

**FIGURE 2. 15** CRUDE OIL BLENDS TO EXPORT TERMINALS, 2005 Y 2015

(thousand barrels per day)



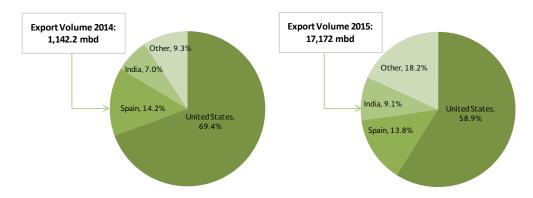
<sup>\*</sup> Includes heavy oil Altamira.

Source: Prepared by SENER with information from CNH.

In 2015, 58.9% of Mexican oil exports were oriented toward the U.S market, 12.8% less compared with 2014. This reduction is the result of the U.S. activities on non-conventional crude extraction have increased, due to discoveries of shale gas and technological advances which have made the extraction of shale gas, viable. During the last ten years, exports to the U.S have fallen at an AAGR of -7.0% and, in 2015, 101.2 MBD were not sent to that country, compared with 2014. Other export markets were Spain (13.8%) and India (9.1%), (see Figure 2.16).

FIGURE 2. 16
DESTINATION OF CRUDE OIL EXPORTS BY COUNTRY\*, 2014 Y 2015

(thousand barrels per day)



<sup>\*</sup> Does not include temporary exports of crude oil for processing. Source: PEMEX Institutional Database.

In 2015, oil products imports accounted for 578.5 MBDCOE, a rise of 15.9% regarding 2014; mainly, due to a smaller production in the SNR's refineries, which are working below their capacity, and producing a lesser volume of oil products to supply the domestic market, mainly the one of gasolines and diesel, (see Table 2. 22).

TABLE 2. 22
BEHAVIOR OF OIL-PRODUCTS IMPORTS, 2005-2015

(thousand barrels per day of crude oil equivalent)

Fuel					D	ata per ye	ar					AAGR
Fuel	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Total	278.5	329.3	379.4	434.9	393.6	474.7	547.8	557.5	483.0	499.2	578.5	7.6
Fuel oil	28.5	15.4	18.3	35.5	42.3	11.9	27.0	48.1	33.8	14.0	18.3	-4.3
Diesel	24.8	41.2	52.7	68.0	47.6	107.9	135.6	132.7	107.0	132.8	145.2	19.3
Gasolines	192.0	226.8	256.7	281.7	272.7	313.4	335.3	326.9	296.9	306.6	352.8	6.3
Petroleum coke	33.1	45.6	51.6	49.7	31.1	41.5	49.9	46.8	42.2	34.4	40.0	1.9
Jet fuel	-	0.1	-	-	-	0.1	-	3.0	3.1	11.3	22.2	n.a.

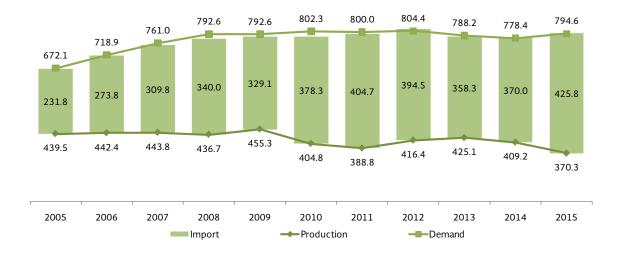
n.a.: not applicable.

 $Source: Prepared \ by \ the \ IMP, \ based \ on \ information \ from \ PEMEX, \ SE, \ SENER \ and \ private \ companies.$ 

Gasolines' import level in 2015 was of 425.8 MBD, 15.1% more than in the previous year, resulting from a combination of a smaller production (9.5%) and a rise in the consumption (2.1%) of is oil product, (see Figure 2.17).

**FIGURE 2.17** PRODUCTION, DEMAND, AND IMPORT OF GASOLINES, 2005-2015

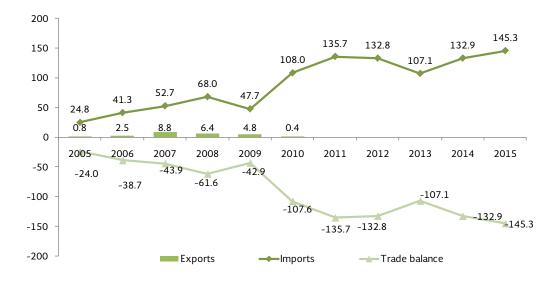
(thousand barrels per day)



Note. Import includes the component methyl tert butyl ether (MTBE). Source: Prepared by the IMP, based on information from PEMEX.

In 2015, diesel recorded its highest import level, rising from 132.9 MBD in 2014 to 145.3 MBD, an increase of 9.4%. Starting in 2011, this oil product has not been exported, having a negative trade balance. The clean-fuels' specifications for diesel used in transportation in Mexico were established in 2007. From that date on, it has been needed to resort to import low-sulfur diesel to meet the national demand, (see Figure 2. 18).

**FIGURE 2. 18** DIESEL IMPORTS AND EXPORTS, 2005-2015 (thousand barrels per day)



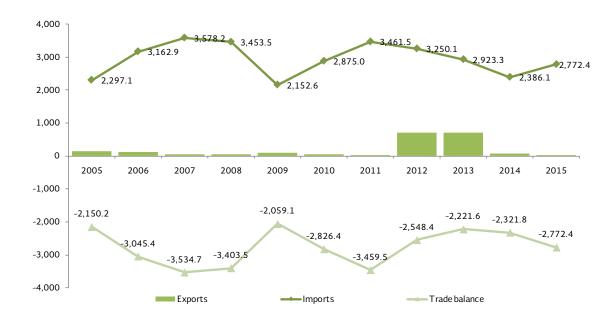
Source: Prepared by the IMP, based on information from PEMEX.





Likely, the volume of petroleum coked produced in 2015 did not suffice domestic consumption needs, resulting in a rise of 16.2% for imports regarding 2014, reaching 2,772.4 MTA and showing a negative trade balance, (see Figure 2. 19).

FIGURE 2.19 PETROLEUM COKE IMPORTS AND EXPORTS, 2005-2015 (thousand tons per year)



Source: Prepared by the IMP, based on information from PEMEX, SE, SENER and private companies.

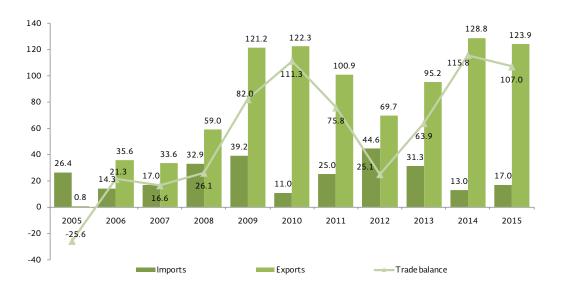
Fuel oil was the only fuel with a share on oil products exports, recording an average of 123.9 MBD in 2015; though, it as a decrease of 3.8% regarding 2014. The implementation of policies intended to reduce GHG emissions, such as CFE and PEMEX replacing fuel oil with natural gas, decrease its use and increase its inventories for foreign markets. On the other hand, fuel oil imports increased 30.4%, going from 13.0 MBD to 17.0 MBD in 2015, (see Figure 2. 20).





FIGURE 2. 20 **FUEL OIL IMPORTS AND EXPORTS, 2005-2015** 

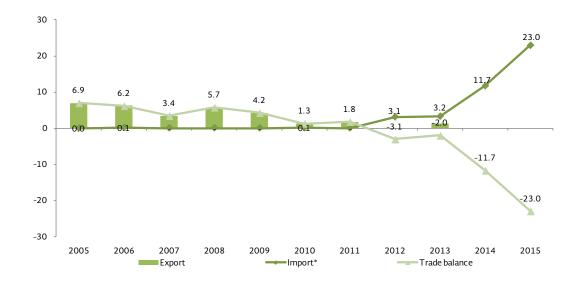
(thousand barrels per day)



Source: Prepared by the IMP, with information from PEMEX and SENER.

In 2015, 32.5% of the domestic demand for jet fuel was supplied through imports, which accounted for a 23.0 MBD volume. Since 2010, jet-fuel domestic consumption overpasses its production capacity, having to resort to imports, (see Figure 2. 21).

FIGURE 2.21 JET FUEL IMPORTS AND EXPORTS, 2005-2015 (thousand barrels per day)



\*Includes maquila.

Source: Prepared by the IMP, with information from PEMEX and SENER.

# CHAPTER THREE. OIL AND OIL PRODUCTS OUTLOOK, 2016-2030

In order to comply with what is established in the Interior Regulation of the Secretariat of Energy, this section displays the estimate of crude oil production for the next 15 years, from different types of activities, locations, and hydrocarbons quality. The General Directorate of Statistics and Economic Evaluation (DGEE, for its Spanish acronym) of the Hydrocarbons National Commission made an estimate based on the methodology here described:

The estimated production has two main components:

1. **Extraction**, which corresponds to fields with discovered reserves, and thereby, there is certainty about the existence of resources in the subsoil. Nonetheless, there is still an uncertainty related to the exact volume of resources to be found. Thereby, these fields are assigned profiles on production and investment for different certainty levels. The production and investment profiles are generated per the volume of proven, probable, and possible reserves, presented to the CNH, from each of the fields.

Two scenarios are being considered, minimum and maximum, which are defined based on the profiles of 2P and 3P reserves, respectively. The classification of the extraction fields was considered as follows:

- Fields allocated to PEMEX
  - o Allocation of fields under production;
  - o Allocation of fields under production with planes of contracts migration;
  - o Allocation of safeguarding areas (AR Allocations);
  - o Allocation of exploration areas in which hydrocarbons reserves have been discovered (AE Allocations)
- Fields belonging to the State
  - o Extraction fields put out to tender;
  - o Extraction fields to be put out to tender (safeguarded by PEMEX).
- 2. **Exploration,** which refers to exploratory prospects not yet discovered with the potential of becoming production fields; it has information on exploratory opportunities which could be discovered and developed. These opportunities are associated to a level of risk and a level of uncertainty, and there is no prior knowledge of the existence of hydrocarbons, or its volume.

To determine the estimated production for the exploratory component, it is necessary to turn to the opportunities identified in the Database of Exploratory Opportunities devised by PEMEX. This database highlights the geographic points for which the seismic information and the studies performed have shown the possibility of finding hydrocarbons.

In the estimate of the minimum and maximum scenarios it was determined which exploratory opportunities have a high probability to been successfully developed within the next 15 years, under the legal frame that regulates the Mexican energy sector, and the allocating and awarding scheme for blocks through bidding rounds (blocks of gas and oil for onshore areas, shallow-water marine areas, and deep-water marine areas).



The universe of opportunities is distributed in three sections: those allocated to PEMEX in Round Zero; those considered within the Quinquennial Plan to be put out to tender during 2015-2019; and the ones allocated to PEMEX and are not included in the Quinguennial Plan, but may be put out to tender afterwards.

Once it has been determined which opportunities will be active in each scenario, a typical profile on production and investment is applied for each type of field (onshore, shallow water, deep water).

#### **Hydrocarbons Prospective Resources** 3.1.

Prospective resources are those amounts of oil estimated, to a defined date, to be potentially recovered from undiscovered accumulations. By December 31, 2015, Mexico had prospective resources for 112.83 billion barrels of crude oil equivalent (BBCOE), from which 53% are in non-conventional plays. From the median total prospective resources, 71.1% correspond to oil.

The oil basin Tampico-Misantla is the main one in the country, with 33.0% of the median total prospective oil resources, seconded by the oil basin of Gulf of Mexico-Deep Water with 24.7%, and which mainly contains conventional resources, while the basin Tampico-Misantla mainly contains non-conventional resources. The basins of Southeast, Sabinas, and Burgos contain 12,8%, 12.7%, and 12.4%, respectively, of the prospective resources, (see Table 3. 1).

**TABLE 3.1** MEDIAN PROSPECTIVE RESOURCES

(Billion barrels of crude oil equivalent)

Oil basin	M	edian Prospe	ctive Resour	ces
Oli basili	Oil	Wet gas	Dry gas	Total
Tampico – Misantla	32.4	4.9	0.0	37.3
Golfo de México – Deep water	27.8	0.0	0.0	27.8
Cuencas del Sureste	13.7	0.7	0.0	14.5
Sabinas	0.6	1.3	12.5	14.4
Burgos	0.8	1.9	11.3	14.0
Veracruz	1.9	0.1	0.0	2.0
Plataforma de Yucatán	1.8	0.0	0.0	1.8
Cinturón Plegado de Chiapas	1.2	0.0	0.0	1.2
Total	80.2	8.9	23.8	112.8

Source: National Hydrocarbons Commission, Prospective Resources Database, December 31st, 2015.

Currently, Mexico has 52.6 BBCOE of conventional prospective resources. The oil basins of the Gulf of Mexico-Deep Water and Southeast Basins, sum up 80.4% of the conventional prospective resources of the country. Oil is the main type of hydrocarbons within the convention prospective resources of Mexico, 91.7% from the total conventional prospective resources, (see Table 3. 2).

TABLE 3. 2
CONVENTIONAL PROSPECTIVE RESOURCES

(Billion barrels of crude oil equivalent)

Oil basin		Prospective	e resources	
Oil basin	Oil	Wet gas	Dry gas	Total
Golfo de México – Deep water	27.8	0.0	0.0	27.8
Cuencas del Sureste	13.7	0.7	0.0	14.5
Burgos	0.8	0.0	2.4	3.2
Tampico – Misantla	1.6	0.8	0.0	2.4
Plataforma de Yucatán	1.8	0.0	0.0	1.8
Veracruz	1.4	0.1	0.0	1.4
Cinturón Plegado de Chiapas	1.2	0.0	0.0	1.2
Sabinas	0.0	0.0	0.4	0.4
Total	48.3	1.6	2.8	52.6

Source: National Hydrocarbons Commission, Prospective Resources Database, December 31st, 2015.

By December 31st, 2015, Mexico has non-conventional prospective resources accounting for 60.2 BBCOE; 58.0% is concentrated in the oil basin Tampico-Misantla, which concentrates 96.5% of non-conventional oil. The basins of Sabinas and Burgos, jointly, sum up 41.1% of non-conventional hydrocarbons reserves, and concentrate all the reserves of non-conventional dry gas, (see Table 3. 3).

TABLE 3. 3
NON-CONVENTIONAL PROSPECTIVE RESOURCES (OIL AND SHALE GAS)

(Billion barrels of crude oil equivalent)

Oil Province		Prospective	e resources	
On Frounce	Oil	Wet gas	Dry gas	Total
Cuenca Tampico – Misantla	30.8	4.1	0.0	34.9
Cuenca de Sabinas	0.6	1.3	12.1	14.0
Cuenca de Burgos	0.0	1.9	8.9	10.8
Cuenca de Veracruz	0.6	0.0	0.0	0.6
Total	31.9	7.4	20.9	60.2

 $Source: National\ Hydrocarbons\ Commission,\ Prospective\ Resources\ Database,\ December\ 31st,\ 2015.$ 

Non-conventional prospective resources correspond to projects of oil and shale gas. 53% of non-conventional prospective resources correspond to oil, which is mainly accumulated in the basin Tampico-Misantla, in the plays of Agua Nueva, with 40.8% of oil total prospective reserves; and Pimienta, with 55.7%. Shale gas prospective reserves account for 141,494.13 billion of cubic feet. The oil basins of Sabinas and Burgos concentrate 85.4% of shale gas prospective resources, distributed in the plays Pimienta, Eagle Ford, and La Casita.

TABLE 3. 4
NON-CONVENTIONAL PROSPECTIVE RESOURCES BY DECEMBER 31ST, 2015

Oil basin / Play	Oil (MMB)	Gas (BCF)	Total (MMBCFE)
Total	31,905.4	141,494.1	60,204.2
Tampico – Misantla	30,784.9	20,683.4	34,921.6
Agua Nueva	13,021.6	7,567.1	14,535.0
Pimienta	17,763.3	13,116.3	20,386.5
Sabinas	557.7	66,962.4	13,950.2
Eagle Ford	557.7	32,911.7	7,140.1
La Casita	0.0	34,050.7	6,810.1
Burgos	0.0	53,848.4	10,769.7
Eagle Ford	0.0	9,517.6	1,903.5
Pimienta	0.0	44,330.8	8,866.2
Veracruz	562.8	0.0	562.8
Maltrata	562.8	0.0	562.8

Source: National Hydrocarbons Commission, Prospective Resources Database, December 31st, 2015.

# 3.2. Portfolio for Exploration and Extraction Projects

By December 31st, 2015, a total of 2,628 conventional exploratory opportunities were identified in Mexico. These opportunities have a median prospective resource documented for 32.5 BCFE (see Table 3.5).

From these, 37.5% are assigned to PEMEX, accounting for 13.4 BCFE, and are mainly located in shallow marine areas (40.1%), seconded by region of onshore areas (32.2%), and deep marine area (27.6%). From these opportunities, 21 are part of the blocks allocated during the biddings 1, 2, and 3 of Round 1.

TABLE 3. 5
CONVENTIONAL PROSPECTIVE RESOURCES

(Billion barrels of crude oil equivalent)

Region	Number of	Median pr resou	•
	opportunities	Unrisky	Risky
Total	2,628.0	123.5	32.5
Allocated to Pemex	985.0	36.5	13.4
Onshore areas	600.0	13.6	4.3
Shallow marine areas	318.0	12.8	5.4
Deep marine areas	67.0	10.1	3.7
Not allocated	1,622.0	86.3	18.9
Onshore areas	802.0	9.7	2.5
Shallow marine areas	424.0	19.0	4.4
Deep marine areas	396.0	57.7	12.1
Allocated by bidding	21.0	0.7	0.2
Onshore areas	11.0	0.3	0.1
Shallow marine areas	10.0	0.4	0.1
Deep marine areas	0.0	0.0	0.0

Source: National Hydrocarbons Commission, Dirección General de Evaluación de Potencial Petrolero (*General Directorate for the Evaluation of Oil Potential*), Exploratory Opportunities Database, December 31st, 2015.

The identified conventional exploratory opportunities have a probability of geologic success of 29%, average, for onshore areas; 30% for shallow marine areas; and 24% for deep marine ones. Nonetheless, the possibility of commercial success is adjusted downwardly: 9% for deep marine areas; 21% for shallow marine; and 25% for onshore areas, (see Table 3. 6).

As for oil, these exploratory opportunities have a recovery factor of 34%, average, for onshore areas; 31% for shallow marine areas; and 35% for deep marine ones. Gas represents an average recovery factor in deep marine areas of 75%, 76% for shallow marine areas, and 73% for onshore areas.

TABLE 3. 6
AVERAGE CHARACTERISTICS OF EXPLORATION PROSPECTIVE
(percentage)

Region	Prob	ability	Recovery factor		
Region	Geologic success	Commercial succes	Oil	Gas	
Onshore areas	0.3	0.3	0.3	0.7	
Shallow marine areas	0.3	0.2	0.3	0.8	
Deep marine areas	0.2	0.1	0.4	0.8	

Source: Dirección General de Evaluación de Potencial Petrolero (General Directorate for the Evaluation of Oil Potential), Exploratory Opportunities Database, December 31st, 2015.



#### Crude-Oil Production 2016-2030 3.3.

Worldwide, the low profits obtained from oil companies have reduced the prospective for capital investment in the development of projects on reserves, which have been delayed or even cancelled. These measures are expected to have an impact when the demand for oil increases, and the current producers, which supply 90% of the oil in the world, will not have the capacity to meet this demand; nevertheless, many investment projects on development, which were already programmed, will be completed within the coming years. In general terms, oil rises are expected to gain back values of 80 dollars per barrel in next decade.

To display an estimate for the crude-oil production platform in Mexico, two scenarios -minimum and maximum- have been considered according to the following classification:

#### Minimum:

Extraction component: 2P reserves Exploration component: median

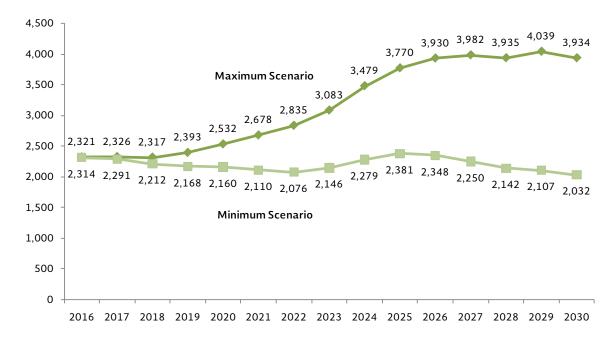
#### Maximum:

Extraction component: 3P reserves

Exploration component: P10 (possible reserves)

The maximum scenario considers an oil-production platform estimated in 2,321 MBD in 2016, reaching 3,934 MBD in 2030. Between 2016 and 2020, the oil production will rise 69.5%, having a production volume of 4,039 MBD in 2029. On the other hand, the minimum scenario considers a production of 2,314 MBD in 2016, and it is reduced 12.2% in 2030, recording a volume of 2,032 MBD, (see Figure 3. 1).

FIGURE 3.1 **OIL ESTIMATED PRODUCTION: MINIMUM AND MAXIMUM SCENARIOS** (thousand barrels per day)



Source: National Hydrocarbons Commission.

The projects' portfolio used to define the production and investment estimates is formed by 229 active fields in 2016 for both scenarios. The maximum scenario reaches its largest number of fields/opportunities





in 2027, with 342, while the minimum scenario reaches it in 2025, with 297. Towards the last year of the estimate, the number of fields/opportunities in production in the maximum scenario will be of 331 and 276 in the minimum one. In both scenarios, about 64% is found in onshore areas; 31% in shallow marine areas; and 5% in deep marine areas, (see Table 3. 7 y Table 3. 8).

**TABLE 3.7** NUMBER OF ACTIVE FIELDS/OPPORTUNITIES, 2016-2030 **MAXIMUM SCENARIO** 

Region/Activity	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total	229	232	247	264	262	270	295	319	334	340	338	342	341	338	331
Onshore areas	179	177	180	184	179	186	200	217	227	231	229	226	222	215	213
Exploration	0	0	0	7	11	30	43	64	78	86	93	97	98	101	105
Extraction	179	177	180	177	168	156	157	153	149	145	136	129	124	114	108
Shallow marine areas	50	54	66	79	82	83	93	100	104	106	106	109	109	110	104
Exploration	0	0	0	0	2	4	16	23	30	36	37	43	43	45	45
Extraction	50	54	66	79	80	79	77	77	74	70	69	66	66	65	59
Deep marine areas	0	1	1	1	1	1	2	2	3	3	3	7	10	13	14
Exploration	0	0	0	0	0	0	0	0	0	0	0	5	8	11	12
Extraction	0	1	1	1	1	1	2	2	3	3	3	2	2	2	2

Source: National Hydrocarbons Commission.

TABLE 3.8 NUMBER OF ACTIVE FIELDS/OPPORTUNITIES, 2016/2030 MINIMUM SCENARIO

Region/Activity	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total	229	232	244	258	251	255	269	287	296	297	292	291	285	281	276
Onshore areas	179	177	179	180	170	173	180	192	197	196	194	189	183	177	176
Exploration	0	0	0	7	10	27	38	56	67	73	78	80	81	85	89
Extraction	179	177	179	173	160	146	142	136	130	123	116	109	102	92	87
Shallow marine areas	50	54	64	77	80	81	88	94	98	100	97	97	94	93	88
Exploration	0	0	0	0	2	4	14	21	27	33	34	38	38	40	40
Extraction	50	54	64	77	78	77	74	73	71	67	63	59	56	53	48
Deep marine areas	0	1	1	1	1	1	1	1	1	1	1	5	8	11	12
Exploration	0	0	0	0	0	0	0	0	0	0	0	5	8	11	12
Extraction	0	1	1	1	1	1	1	1	1	1	1	-	-	-	-

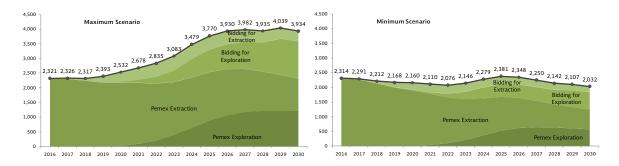
Source: National Hydrocarbons Commission.

# 3.3.1. Production by Activity

In 2016, the production for the maximum scenario (2,321 MBD) and minimum one (2,314 MBD) will be totally extracted by PEMEX (considering Round Zero, Preventive Allocations, and Migrations). None of these scenarios reflects the production from biddings or exploration activity. By 2030, in the maximum scenario, 63.2% of the production is estimated to be from exploration (PEMEX with 1,214 MBD and Biddings with 1,274 MBD) and 36.8% from extraction (PEMEX with 1,094 MBD and Biddings 352 MBD). For the minimum scenario, 57.8% will come from exploratory activities (PEMEX with 576 MBD and Biddings with 598 MBD) and 42.2% from extraction activities (PEMEX with 671 MBD and Biddings with 187 MBD), (see Figure 3. 2. Figure 3. 3).

FIGURE 3. 2 ESTIMATED PRODUCTION OF OIL BY TYPE OF ACTIVITY

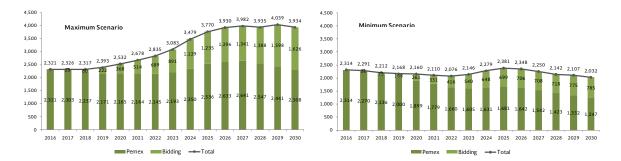
(thousand barrels per day)



Source: National Hydrocarbons Commission.

FIGURE 3. 3 ESTIMATED PRODUCTION OF OIL BY TYPE OF ACTIVITY

(thousand barrels per day)



Source: National Hydrocarbons Commission.

During 2016-2020, the main production sources are PEMEX's extraction fields and the tendered extraction fields. Nevertheless, the production from the current PEMEX's fields is speeding up their decline at an annual average rate of 8% starting in 2020. From that year on, the production coming from exploratory opportunities becomes relevant, PEMEX's, as well as the tendered in the different rounds.

In both scenarios, PEMEX is the main oil producer, with a contribution of 74% and 79% from the accumulated production between 2016 and 2030 in the maximum and minimum scenarios, respectively.

## 3.3.2. Production by Region

During the whole projected period, the hydrocarbons production is forces in shallow marine water. In 2016, these represent 78.4% in the maximum scenario, and 78.5% in the minimum. By 2030, its share decrease to 51.8% and 53.0%. From 2016 to 2030, in both scenarios, the largest volume of oil obtained will come from PEMEX's extraction activities, foreseeing that, by 2021, the production from exploratory activities will be added. It would be in 2017 and 2020 when the biddings from extraction and exploration will start recording production activity, (see Figure 3. 4).

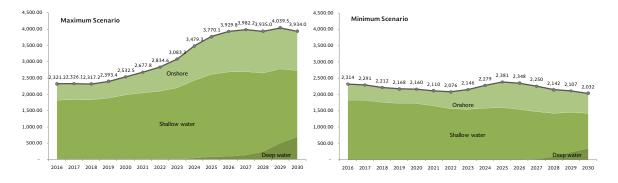
In 2016, the production from onshore areas represents 21.6% in the maximum scenario, and 21.5% in the minimum; this share in the total oil production rises to 30.6% and 30.2% in 2030. Deep marine areas



present activity starting in 2024 in the maximum scenario, and in 2027 in the minimum scenario. In 2030, these will account for 17.6% and 16.8% of the production in both scenarios.

FIGURE 3.4 **ESTIMATED OIL PRODUCTION BY REGION** 

(thousand barrels per day)



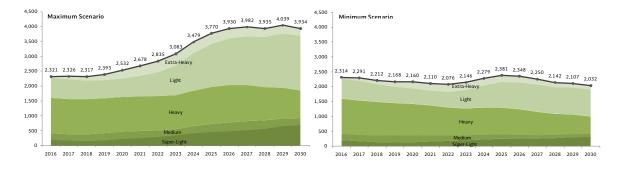
Source: National Hydrocarbons Commission.

## 3.3.3. Production by type of oil

During the period 2016-2030, the accumulated production of oil is mainly concentrated in obtaining heavy and light oil in both scenarios. In 2016, from the total estimated production in the maximum scenario, 50.8% corresponds to heavy oil, and 29.0% to light oil; by 2030, this share is of 23.4% and 46.7%, respectively. In the minimum scenario, heavy oil represents 50.8%, and light, 29.0%; for the next fifteen years, this proportion is reversed, so 28.9% from the production will be heavy oil, and 44.6% light, (see Figure 3.5).

FIGURE 3.5 ESTIMATED OIL PRODUCTION BY TYPE, 2016-2030

(thousand barrels per day)



Source: National Hydrocarbons Commission.

#### **Crude-Oil Refining Perspectives in Mexico** 3.4.

The crude-oil refining subsector is going through a process of reorganization, adaptation, and transformation combined with operational problems that, during 2016 have considerably impacted the levels of oil-products production. In 2015, this variable was already in a low level by the end of that year, with a processed volume

of 1,615 MBD compared with the last decade's average of 1,232 MBD. In 2016, this volume is expected to decrease to 954 MBD38.

Facing this situation, and considering the new legal frame derived from the Energy Reform, PEMEX is working in the design of alliances scheme and new business cases which will enable it to relaunch its refining system in the medium term.

The Business Plan 2016-2021 presents the general guidelines. It specifically outlines eight groups of projects related to refining, and in most of them are planned to be developed through alliances<sup>39</sup>:

- An alliance with a private company for the purchase of coking services in the refinery of Tula.
- Alliances to improve operations and/or perform upgrades in Tula, Salamanca, and Salina Cruz.
- Alliances for the installation of ultra-low-sulfur diesel plants by means of services contracts which include investment, operation, and maintenance.
- Alliances to improve the performance and carry out streamlines with multiple contracts which involve associates to provide capital, operate, and services contracts.
- Contracts for supplying crude to increase the distillates' yields.
- Long-term contracts for decommissioning residues and subproducts as fuel oil, coke, and asphalt.
- · Services contracts to supply hydrogen to refineries, wastewater and blackwater treatment, and sulfur recovery.
- Cogeneration of electricity and steam in Cadereyta, Salina Cruz, Minatitlan, and Tula. Cogeneration is the joint generation of steam and electricity; a scheme to generate power which operates with high efficiency and, if implemented along with combined cycle, optimizes costs by being more efficient and having less impact on emissions matter. These plants will be created through alliances with specialized companies. The capacity for electricity generation to be installed would be of 1,946 MW.

The exercise on production displayed in this Oil and Oil-Products Outlook 2016-2030 is based on the following assumptions:

- · A regulatory frame -among other aspects, referred to FHS maximum prices, commercial restrictionswhich enables PEMEX and private parties to compete equitably within oil-products markets, with the gradual liberalization of retail prices in 2017-2018.
- Operation levels like the ones before 2016 are recovered.
- A blend of lighter crudes for Tula and Salamanca during 2018-2020. It has been considered to import West Texas Intermediate, a crude with an API gravity of 36, and a blend known as Mars (API gravity 28-30), to increase these refineries' profitability. This would imply, possibly, an import of about 50 MBD of these types of crude.

<sup>38</sup> According to the PEMEX Institutional Database (BDI, for its Spanish acronym), from January to October 2016, the processing of crude in the SNR refineries was: Cadereyta 129.2 MBD, Madero 88.9 MBD, Tula 215.8 MBD, Salamanca 170.9 MBD, Minatitlan 116.1 MBD, and Salina Cruz 243.9 MBD. The total oil processing in the SNR refineries from January to October 2016 is 964.8 MBD. The projections for crude processing by refinery performed by IMP are below what is recorded in the BDI.

<sup>&</sup>lt;sup>39</sup> See PEMEX Business Plan 2016-2021, pp. 14, 45,46, 48, 52, 90, 92, 100.





- By 2019, completely available operational capacity of hydrotreaters for gasolines, diesel, and jet fuel, which posits the products within the current fuel quality standards and make them competitive with imports.
- Cokers working in Tula, Salamanca, and Salina Cruz by 2021.
- In general, gradual improvements on operation practices in refineries based on the compliance with maintenance programs in due time and proper form, on the supply of hydrogen, auxiliary services, and in the yields obtained from an appropriate use of the raw materials to achieve international standards in the medium term.
- Starting 2023, new refining capacity in the South-Southeast region, in one or more locations; it is considered this capacity will be developed by investors other than PEMEX if it is economically viable.

The possibilities of getting profits does not depend on the prices of the crude or oil-products produced, but on the refining net margin, that is, the difference between the crude and fuels consumables (gas, steam, and electricity, mainly), and the income gotten from the products sale (gasoline, diesel, jet fuel, residuals, and its subproducts, mainly). Labor costs, maintenance, investment yields, a net profit margin, etc., shall be paid from this net profit. A decrease in the crude price has a downward influence over the oil-products prices, but the influence over the refining margin is not necessarily proportional, given the diversity of concepts which define the final prices.

The exercises outlined here consider three different prices scenarios: low, moderate, and medium. In all cases, the conclusions do not differ too much regarding refining margins. Nowadays, the refineries with FCC scheme, that is, without a Coker but with processes of catalytic disintegration (Tula, Salamanca, and Salina Cruz) get negative margins or barely positive. By lightening the blend for the refining load and improving the existing processes (FCC), the margins become clearly positive, but still low. With the installation of cokers, margins become positive, but very tight, and sometimes negative. On the contrary, according to the preliminary estimates of IMP, more broader margins can be gotten by installing deep-conversion processes (cokers).

Additionally, the strategy outlined by PEMEX for its refineries sets to achieve a safe and reliable operation, as well as to reverse the maintenance backlogs, which will allow to reach an equivalent distillation capacity usage between 75% to 80%, and a reduction in the rate of non-programmed stoppages, which are basic operational indicators for supporting an improvement program on the oil-products yields of the SNR, since it is needed a sufficient volume of products to take advantage of a better refining margin.

On the other hand, it shall be considered the competency between refineries and imports. Each end client and wholesaler, or retail intermediate has, in theory, diverse supplying options: Mexican refinery or import; both origins with different routes and transportation modalities (pipeline, tankship, tanker, tanker truck, and multimodal) and different storage points. If the quality of products is similar, the choice depends on the prices of the refinery, of imports, and of the logistics costs from the different modalities and transportations routes, and storing facilities.

Competitiveness exercises were developed for national products regarding the imported from the different states <sup>40</sup> of the country under diverse prices and costs scenarios. Though, there are still many unknown factors regarding these variables and its regulating details <sup>41</sup>. The best information currently available seems to support, with some certainty, the possibility of positing the domestic production within the country at prices which guarantee a suffice refining margin, and are still competitive with imports.

The latter considerations draw to a projection in four phases:

<sup>&</sup>lt;sup>40</sup> As a first territorial form, the logistics per state is calculated considering the demand for fuels.

<sup>&</sup>lt;sup>41</sup> Retail prices for gasolines and diesel will be determined according to the market conditions, based on what is established in the Federal Revenue Law 2017. As for the regulation of FHS prices, this shall remain until new agents appear other than PEMEX. Under a competitiveness ambience, the CRE may amend the regulation regarding FHS.

- 2017: return to operation levels prior to 2016.
- 2018-2020: improvements on operation, yields, and products quality.
- 2021-2030: additional refining capacity.

### Oil Distribution

Production begins to increase during 2017-2018 and, by 2024 will rise considerably. The AAGR for the period 2015-2030 is of 3.7%. During 2018-2020, a volume of 50 MBD of light crudes could be imported. The availability of these crudes for exports is stable until 2021; after that year, there will be a rise derived from the production increase; for the whole period the AAGR is of 4.6%, (see Table 3. 9).

## TABLE 3. 9 DISTRIBUTION OF CRUDE 2015-2030

(thousand barrels per day)

Year								Data p	er year							
rear	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Production	2,266.8	2,181.5	2,326.1	2,317.2	2,393.4	2,532.5	2,677.8	2,834.6	3,083.3	3,479.3	3,770.1	3,929.8	3,982.2	3,935.0	4,039.5	3,934.0
Import	-	-	-	53.4	53.4	54.4	-	-	-	-	-	-	-	-	-	-
Shipped to refineries	1,064.5	986.5	1,083.4	1,292.7	1,292.7	1,292.7	1,380.7	1,380.7	1,630.7	1,630.7	1,630.7	1,630.7	1,630.7	1,630.7	1,630.7	1,630.7
Export	1,172.5	1,195.1	1,242.7	1,077.9	1,154.1	1,294.1	1,297.1	1,453.8	1,452.8	1,848.5	2,139.4	2,299.1	2,351.4	2,304.2	2,408.7	2,303.3
Inventories variation	29.8	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-

#### Notes:

Figures for 2016 are averages until September.

Figures for 2016 starting May include private production.

Shipping to refineries in 2016 do not coincide with the crude process of Table 2 because of conceptual differences, in estimate sources and methods.

Inventories variation include statistic difference.

Source: Prepared by the IMP, based on information from CNH, IMP y PEMEX.

## **Processing Capacity**

Pursuant of the assumptions considered, between 2015 and 2030, no additional atmospheric-distillation capacity is expected in the existing refineries; in these complexes, stands out the increase of the capacities of hydrodesulfurization from 1,160.5 MBD to 1,899.9 MBD, and coking from 155.8 to 431.6 MBD. The new 275 MBD-capacity in 2023 could be achieved through additions of trains in only one refinery or in several. Based on these studies, it may be viable that the production of distillates derived from this capacity can be justified by having a suffice demand in the country.

Nonetheless, the competitiveness of the additional capacity will depend of the relation benefit-cost regarding oil-products import in a free-market environment, where there will be incentives for optimizing the costs and performance of the current and new logistics infrastructure.

The latter is aligned with the worldwide behavior. According to the OPEC estimates, the additions of refining capacity will reach more than 7.3 million barrels per day (MMBD) within the next five years, as a result from refining projects. From these, 3.3 MMBD will be added by China, while Middle East will contribute with 1.7 MMBD; the rest will be contributed by other regions. The production of oil products derived from this addition will exceed the demand's expectations for more than 2.2 MMBD, which implies a high-competitive market. In contrast, the decommissioning of refining capacity will be of about 2.6 MMBD, capacity which corresponds to the closure of refineries in Europe and Asia Pacific, like in Japan, due to the stagnation in the demand and to the competency from other regions.

In the long term, additions on the refining capacity will be located, mostly, in developmental countries, led by Asia Pacific and Middle East, followed by Latin America and Africa. The mature markets like the United States, Canada, and Europe will have limited capacity increases in the long term. The increases on refining capacity are moderate due to a reduction in the demand and to the introduction of volumes of non-



conventional fuels (biofuels, gas to liquids, etc.). Thereby, given the capacity decommissions, long-term projections may come into an era of nonincrease on the global refining capacity, (see Table 3. 10).

**TABLE 3. 10 REFINING PROCESSING CAPACITIES IN MEXICO IN 2015 AND 2030** 

(thousand barrels per day)

Process	Cade	reyta	Mad	ero	Tu	la	Salam	anca	Minat	itlán	Nueva ca	apacidad	Salina	Cruz	To	tal
Process	2015	2030	2015	2030	2015	2030	2015	2030	2015	2030	2015	2030	2015	2030	2015	2030
Atmospheric distillation	275.0	275.0	190.0	190.0	315.0	315.0	245.0	245.0	285.0	285.0	-	275.0	330.0	330.0	1,640.0	1,915.0
Catalytic disintegration	90.0	90.0	60.5	60.5	80.0	120.0	40.0	65.0	72.0	72.0	-	72.0	80.0	105.0	422.5	584.5
Viscosity reduction	-	-	-	-	41.0	41.0	-	-	-	-	-		50.0	50.0	91.0	91.0
Catalytic reforming	46.0	46.0	30.0	30.0	65.0	115.0	39.3	50.0	49.0	49.0	-	49.0	50.0	103.0	279.3	442.0
Alkylation and isomerization	23.0	23.0	22.1	22.1	25.2	45.2	15.0	15.0	41.8	41.8	-	41.8	27.7	31.7	154.8	220.6
Hydrodesulfurization	229.0	306.5	181.7	271.7	219.4	329.4	116.5	246.5	188.4	243.4	-	188.4	165.0	314.0	1,100.0	1,899.9
Coking	50.0	50.0	50.0	50.0		86.0		44.0	55.8	55.8	-	55.8		90.0	155.8	431.6

Source: Prepared by the IMP based on information from IMP, PEMEX and SENER.

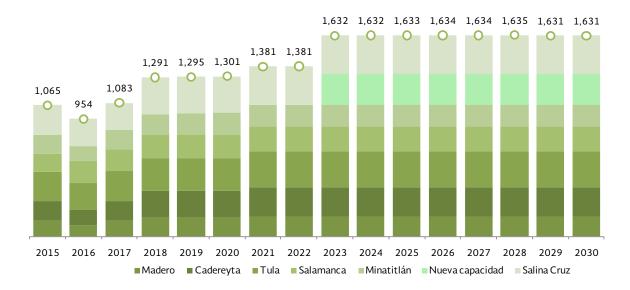
## 3.4.1. Oil Processing in the SNR

Based on the investment planning on projects to modernize and construct the SNR infrastructure, it is expected an integration of the capacity derived from the completion of the upgrades in the existing refineries, and to the integration of a new refining capacity. The increase during the coming years is due to an improvement on the processes, adjustments to the crude's blend, and a more efficient operation. In 2021, there is an impact because of the startup of cokers, and in 2023, because of the new capacity. The increase expected is of 53.4% for the period 2015-2030.

The completion of deep-conversion trains for the use of residuals, along with the integration of 250 MBD of capacity into the SNR, will draw the crude processing to levels above 1,630 MBD by 2023. The modernization works in the existing refineries will produce a decrease in the processing of crude by 2016, but will be restituted during 2017-2020, (see Figure 3. 6).

FIGURE 3. 6 CRUDE PROCESING IN THE SNR, 2015-2030

(thousand barrels per day)







Note: 2015 corresponds to version 6.1; The 2016 version is from the draft for the Annual Operating Program, June 2015. Source: Prepared by SENER, with information from PEMEX.

The variations on the processing of crude during the three first years of the analyzed period are the result of the works for the second stage of the quality project for fuels, and which are estimated to end by 2017 in Cadereyta, and in 2018 for the rest of the refineries.

An essential factor regarding this reduction on the crude processing during 2016 is the budgetary cut to PEMEX during the 2016 exercise, which resulted in a decrease of the available resources for the operation and maintenance of the refineries, as well as in the extension of the completion goals for the developmental projects currently in suspension of activities; therefore, it is required a budget adjustment which enables a logistically supported operation for achieving the foreseen goals.

#### Oil-Products Production, 2015-2030 3.5.

The investments projected for the SNR are aimed to increase the oil-products production, specifically, light and intermediate distillates, which, after the quality projects on fuels, upgrades and capacity additions in the processes, are expected to increase their gasoline and ultra-low-sulfur diesel (ULSD) during 2015-2030. Under this context, the growth expectation for oil-products production is of 2.9% annual average for the next 15 years, reaching 1,412.6 MBDCOE in 2030, (see Table 3. 11).

**TABLE 3.11 OIL-PRODUCTS PRODUCTION IN THE SNR, 2015-2030** 

(thousand barrels per day of crude oil equivalent)

								Data	per year								AAGR
Fuel	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Gasolines	306.8	276.4	327.8	413.3	414.8	417.1	514.1	514.3	598.5	598.7	598.9	599.1	599.3	599.5	598.1	598.1	4.6
Diesel	274.4	237.6	282.8	367.9	369.3	371.1	454.2	454.4	541.5	541.4	541.8	542.0	542.2	542.1	541.1	541.1	4.6
Jet fuel	46.3	42.0	53.3	62.1	62.1	62.2	66.2	66.2	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	3.7
Fuel oil	256.0	245.0	265.4	227.9	228.4	229.0	45.0	45.1	45.1	45.2	45.3	45.4	45.4	45.5	45.0	45.0	-10.9
Petroleum coke	38.4	27.1	39.2	52.9	53.4	54.1	121.3	121.3	149.2	149.2	149.3	149.4	149.5	149.5	149.1	149.1	9.5
Total	921.9	828.0	968.6	1,124.0	1,128.1	1,133.4	1,200.8	1,201.3	1,413.7	1,413.9	1,414.8	1,415.3	1,415.8	1,416.0	1,412.6	1,412.6	2.9

Note: Total may not coincide due to the rounding up. Source: Prepared by SENER, with information from the IMP.

The vacuum residues, like fuel oil, are the consumables for upgrading processes. Thereby, fuel-oil production has been reduced from 256 MBDCOE down to 45.0 MBDCOE, which is a rate reduction of 10.9% annual average; upgrading this oil product will bring an increase of 291.3 MBDCOE in gasolines, 266.7 MBDCOE of diesel, 33.1 MBDCOE of jet fuel, and 110.7 MBDCOE of petroleum coke.

A fraction equivalent to 15.0% of the oil-products production expected by the end of the period, will come from installing a new refining capacity in 2023, whose contribution to the SNR is expected of 211.9 MBDCOE, from which 80.7% will be a joint production of gasolines and diesel. As for the existing refineries, Cadereyta will have the largest increase in its production, adding 74.4 MBDCOE, seconded by Tula and Salamanca with 57.2 and 49.4 MBDCOE, respectively. Finally, Minatitlán and Salina Cruz with increases of 29.8 and 29.1 MBDCOE, respectively, having the lowest increases in production, (see Table 3. 12). The gradual decrease of fuel-oil production will be a constant; Tula and Salamanca will stop its production in 2021. As for the new refining capacity identified as required capacity, it will not have a production due to its high complexity.

## TABLE 3. 12 OIL-PRODUCTS PRODUCTION BY WORK CENTER, 2015-2030

(thousand barrels per day of crude oil equivalent)

								Data p	er year								Growth %	AAGR
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030		2015-2030
Production	922	828	969	1,124	1,128	1,133	1,201	1,201	1,414	1,414	1,415	1,415	1,416	1,416	1,413	1,413	53.2%	2.9
Salina Cruz	218.5	230.8	233.0	247.6	247.6	247.2	247.6	247.6	247.6	247.2	247.6	247.6	247.6	247.2	247.6	247.6	13.3%	0.8
Fuel oil	90.0	100.4	100.7	95.3	95.3	95.0	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	-83.9%	-11.4
Gasolines	66.0	60.9	60.9	81.2	81.2	81.2	107.7	107.7	107.7	107.7	107.7	107.7	107.7	107.7	107.7	107.7	63.4%	3.3
Diesel	48.3	56.7	56.8	58.6	58.6	58.5	88.3	88.3	88.3	88.0	88.3	88.3	88.3	88.0	88.3	88.3	n.a.	
Jet fuel	14.2	12.8	14.6	12.5	12.5	12.4	14.2	14.2	14.2	14.1	14.2	14.2	14.2	14.1	14.2	14.2	-0.2%	
Petroleum coke	-	-	-	-	-	-	22.9	22.9	22.9	22.8	22.9	22.9	22.9	22.8	22.9	22.9	n.a.	n.a.
Tula	208.7	191.8	212.5	235.7	235.7	235.7	266.0	266.0	266.0	266.0	266.0	266.0	266.0	266.0	266.0	266.0	27.4%	1.6
Fuel oil	77.7	73.5	81.6	65.6	65.6	65.6	-	-	-	-	-	-	-	-	-	-	-100.0%	-100.0
Gasolines	66.6	61.2	67.9	87.7	87.7	87.7	135.7	135.7	135.7	135.7	135.7	135.7	135.7	135.7	135.7	135.7	103.8%	4.9
Diesel	46.2	39.0	43.3	60.9	60.9	60.9	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	93.9%	n.a.
Jet fuel	18.2	18.1	19.7	21.5	21.5	21.5	20.3	20.3	20.3	20.3	20.3	20.3	20.3	20.3	20.3	20.3	11.2%	n.a.
Petroleum coke	-	-	-	-	-	-	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	n.a.	n.a.
Cadereyta	139.5	109.6	135.3	193.7	193.7	193.7	213.9	213.9	213.9	213.9	213.9	213.9	213.9	213.9	213.9	213.9	53.3%	2.9
Diesel	59.2	47.0	58.0	89.7	89.7	89.7	95.9	95.9	95.9	95.9	95.9	95.9	95.9	95.9	95.9	95.9	61.9%	3.3
Gasolines	52.3	43.2	53.3	74.5	74.5	74.5	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	57.3%	3.1
Fuel oil	12.9	8.3	10.3	2.2	2.2	2.2	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	-78.6%	-9.8
Petroleum coke	11.9	8.4	10.4	21.0	21.0	21.0	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4	114.1%	
Jet fuel	3.2	2.6	3.3	6.3	6.3	6.3	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	134.5%	5.8
Minatitlán	130.0	90.2	148.3	158.1	162.1	167.9	159.8	160.3	160.9	161.4	161.9	162.5	163.0	163.5	159.8	159.8	22.9%	1.4
Diesel	51.2	31.2	50.7	54.1	55.5	57.5	54.7	54.9	55.0	55.2	55.4	55.6	55.8	56.0	54.7	54.7	6.9%	0.4
Gasolines	43.4	35.4	57.5	61.3	62.9	65.1	62.0	62.2	62.4	62.6	62.8	63.0	63.2	63.4	62.0	62.0	42.9%	2.4
Petroleum coke	13.1	10.9	17.8	18.9	19.4	20.1	19.1	19.2	19.3	19.3	19.4	19.5	19.5	19.6	19.1	19.1	45.6%	n.a.
Fuel oil	22.3	12.7	20.6	22.0	22.6	23.4	22.2	22.3	22.4	22.5	22.5	22.6	22.7	22.8	22.2	22.2	-0.5%	0.0
Jet fuel	-	-	1.6	1.7	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	n.a.	n.a.
Salamanca	118.8	140.3	141.2	158.8	158.8	158.8	168.2	168.2	168.2	168.2	168.2	168.2	168.2	168.2	168.2	168.2	41.5%	2.3
Gasolines	36.6	47.0	47.0	57.5	57.5	57.5	72.1	72.1	72.1	72.1	72.1	72.1	72.1	72.1	72.1	72.1	97.1%	4.6
Fuel oil	39.3	45.0	45.0	34.3	34.3	34.3	-	-	-	-	-	-	-	-	-	-	-100.0%	n.a.
Diesel	33.6	40.3	40.3	54.3	54.3	54.3	69.8	69.8	69.8	69.8	69.8	69.8	69.8	69.8	69.8	69.8	107.8%	5.0
Jet fuel	9.3	8.1	8.9	12.7	12.7	12.7	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	49.3%	n.a.
Petroleum coke	-	-	-	-	-	-	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	n.a.	n.a.
Madero	106.3	65.4	98.4	130.1	130.1	130.1	145.4	145.4	145.4	145.4	145.4	145.4	145.4	145.4	145.4	145.4	36.7%	
Gasolines	42.0	28.7	41.2	50.9	50.9	50.9	54.3	54.3	54.3	54.3	54.3	54.3	54.3	54.3	54.3	54.3	29.1%	
Diesel	36.0	23.5	33.7	50.3	50.3	50.3	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.0%	
Fuel oil	13.7	5.0	7.2	8.5	8.5	8.5	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	-60.3%	
Petroleum coke	13.3	7.7	11.1	13.0	13.0	13.0	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	58.0%	
Jet fuel	1.3	0.4	5.2	7.4	7.4	7.4	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	566.8%	
Nueva Capacidad	-	-	-	-	-	-	-	-	211.9	211.9	211.9	211.9	211.9	211.9	211.9	211.9	n.a.	
Gasolines	-	-	-	-	-	-	-	-	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	n.a.	
Diesel	-	-	-	-	-	-	-	-	86.9	86.9	86.9	86.9	86.9	86.9	86.9	86.9	n.a.	n.a.
Fuel oil	-	-	-	-	-	-	-	-			- 27.0		- 27.0		-	27.	-	-
Petroleum coke	-	-	-	-	-	-	-	-	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	n.a.	
Jet fuel	-	-	-	-	-	-	-	-	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	n.a.	n.a.

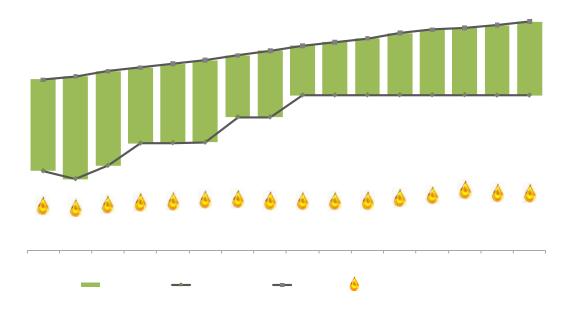
n.a.: not applicable.

Source: Prepared by SENER, with information from the IMP.

The production of light and intermediate distillates will show a meaningful increase with additions of 216.4 MBDCOE of gasolines, and 266.7 MBDCOE of diesel. By 2030, the petroleum-coke production will be of 149.7 MBDCOE, 3.9 times more than the one recorded in 2015 of 38.4 MBDCOE. Regarding jet fuel, its production will be of 79.4 MBDCOE during the last analyzed year, accounting for 5.6% of the oil-products total by the end of the period, being Tula the refinery with the largest production with 20.3 MBDCOE.

One of the follow-up indicators of the gasolines production is referred to its dependency on imports. While its production capacity keeps growing during 2015-2023, imports decreased down to 24.2%, but increase again up to 32.2% in 2030. This behavior is the result of a growth expectancy on gasolines demand, estimated to reach 1,064.6 MBD in that same year, (see Figure 3.7).

FIGURE 3. 7
PRODUCTION, DEMAND AND IMPORT OF GASOLINES, 2015-2030
(thousand barrels per day)



Source: Prepared by the IMP, based on AMDA, AMIA, ANPACT, BANXICO, CONUEE, CRE, EIA, EPA, INEGI, PEMEX, SENER and private companies.

In 2015, diesel production recorded 273.4 MBD, and it is estimated to reach 541.6 MBD in 2030. During 2023-2026, there will be a trade surplus that will return a deficit of 7.8% by the end of the period. For jet fuel, its 82.1 MBD production will generate a deficit of 18.2%, and will be until 2023 that production will get closer to meet the domestic demand.

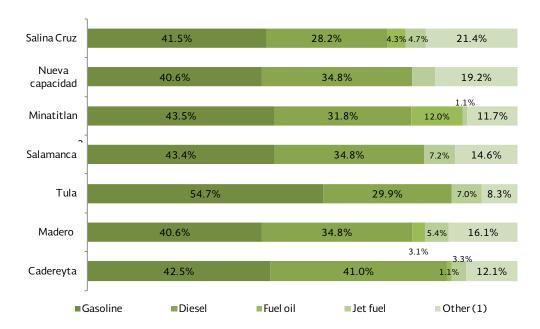
## 3.5.1. Production Yields

The improvements on the SNR infrastructure increase the complexity of the existing refineries by adding diverse conversion processes; these changes afford benefits which are reflected in the power intensity, improving the whole refining process. The capacity to process heavier crudes obtaining more high-value distillates is the result of the refineries upgrading.

Changes in the production yields are the result of obtaining a larger number of distillates, producing other industrial fuels, and reducing residual products, and are the indicators of the efficient conversion of crude oil in the SNR. Strategically, refineries are expected to have different yields for each oil product, and even if all refineries will seek to maximize their gasoline and diesel productions, some of them will stand out for having high yields for a specific oil product.

From the latter, it is expected that, by the end of the analyzed period, Tula will have the highest yield of gasolines production, seconded by Minatitlan and Salamanca. Likely, the highest yield of diesel will come from Cadereyta, Madero, and Minatitlan, with equal yield, besides the additional capacity estimated by 2023. For jet fuel, the highest yield will come from Salamanca, followed by Tula, while Minatitlan will have the lowest one. Regarding fuel oil, Minatitlan will have the highest yield, seconded by Salina Cruz, Madero, and Cadereyta; the rest of the SNR will not produce fuel oil, (see Figure 3. 8).

FIGURE 3. 8
REFINERIES' YIELDS BY PRODUCTS, 2030
(percentage)



<sup>1</sup>Includes: paraffins, aeroflex, asphalts, solvents, and petroleum coke. Source: Prepared by the IMP, based on information from PEMEX.

The SNR current configuration has diverse obstacles to optimally produce distillates; the need of processing heavier national crudes, with larger amounts of sulfur and heavy metals, makes it necessary to increase the number of processes to remove them, such as desulfurization, and comply with the environmental and quality standards of the fuels.

To supply oil products, sufficiently and timely, it is necessary to obtain different amounts of oil products in the national territory, in addition to appropriate transportation logistics and storage. Thereby, it is reasonable to increase the infrastructure for storing products through supply and delivery terminals (TAR, for its Spanish acronym), expand crude storage in refineries, increase the number and length of polyducts, improve safety, and assure the integrity of its conveyance in all its modalities; being thus, able to meet the needs for fuels of the country, and affording an efficient and effective oil industry.

On the understanding that yields are obtained by dividing the oil-products production per refinery between the processed crude, they reflect the achievement of the goals of making refineries a profitable business through producing more of the products with the best prices in the market, like gasoline, diesel, and jet fuel. These fuels' yields, on volume terms, increase from 66% during 2016-2017, up to 85% during 2023-2030.

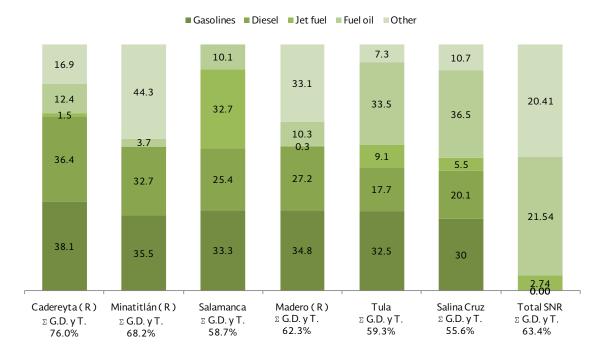
The yields per refinery during the period January-October 2016 are displayed on Figure 3. 9:





FIGURE 3. 9 YIELDS PER REFINERY JANUARY-OCTOBER 2016

(percentage)



(R) Upgraded refinery.

Σ G.D. and T.: Addition of the yields of gasolines, diesel, and jet fuel.

Other: Includes natural gas, LP gas, petroleum coke, propylene, sulfur, asphalt, and may include lubricants, carbon black,

Source: Periodic Reports from the SNR refineries subjected to permits.

#### Oil-Products Demand 3.6.

In the international context, the global energy demand is forecasted to grow 48% in the next 28 years. According with the projections of the Energy Outlook 2016, non-OECD countries will increase threefold faster their demand than OECD members. Oil and its derivatives will remain as the most used energy sources in the global market, even if they decrease their share in the total worldwide energy demand<sup>42</sup> 3.0%, derived from the consumption of the transportation and industrial sectors, which will increase at an annual average rate of 1.1% and 1.0%, respectively, towards 2040.43

At the long term, the use of natural gas is expected to expand, and renewable energies and nuclear power to increase, due to the prevailing high prices of oil. Regarding fossil fuels, they will still have the largest share in the global energy demand. The estimate is that liquid fuels, natural gas, and coal contribute with about 78% of the worldwide energy consumption in 2040.

Mexico will follow this same trend, with its oil demand mainly impelled by the transportation and industrial sectors; while the electricity sector will decrease its share due to the replacement with natural gas.

<sup>&</sup>lt;sup>42</sup> International Energy Outlook 2016. p. 7. Energy Information Administration. U.S.A.

<sup>&</sup>lt;sup>43</sup> Ibidem.





To prepare the estimate for the oil-products domestic demand in 2015-2030, the main economic indicators of the country were considered, such as the scenario of economic activity per state, sector, and subsector. The Mexican Petroleum Institute (IMP, for its Spanish acronym) is in charge of the projections for the fuels demand. To obtain the demand foreseen for each of the oil products in a disaggregated way by domestic, region, state, sector, and branch in some cases, it was necessary to be based on some important variables like: domestic and industrial GDP, oil-products price, composition of the vehicle fleet by fuel, considering the intensity of use, yields, and efficiencies, among other.

## 3.6.1. Transportation Sector

Worldwide, the transportation-sector energy demand from non-OECD countries is expected to grow at an AAGR of 2.5% towards 2040, while OECD members' increase will be marginal (0.2%), due to a higher efficiency in the transportation sector, and a low economic growth -if the economic activity and population growth rates, as well as a trend of higher efficiency in vehicles, are considered as key factors in the energy demand of the transportation sector.

Mexico's behavior, even if it is included within OECD members, is different from the rest, since it has a more dynamic economic growth, and, considering the number of vehicles per inhabitant, is still far from the saturation point. In this sense, between 2015 and 2030, the transportation sector is expected to increase by 40.0% its fuels demand, rising from 1,096 MBDCOE in 2015 to 1,534 MBDCOE in 2030. From the volume foreseen for the last prospected year, gasolines will have the largest demand, 57.4%, while diesel's will be of 34.5%, as a result from its intensive use in the motor-carrier sector. Hence, both fuels' consumption will account for 92.0% of the total demand in this sector; the rest is distributed among jet fuel (6.3%) and LP gas (1.6%). Compressed natural gas (CNG) and Intermediate 15 will still have a marginal share (see Table 3. 13).

**TABLE 3.13** FUELS DEMAND IN THE TRANSPORTATION SECTOR, 2015-2030

(thousand barrels per day of crude oil equivalent)

								Dat	a per yea	ır							AAGR
Fuel	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Total	1,096	1,124	1,157	1,184	1,211	1,240	1,278	1,313	1,349	1,376	1,403	1,440	1,467	1,486	1,508	1,534	2.3
Gasolines	657.0	670.7	690.4	704.4	718.6	732.9	751.2	769.1	788.9	802.0	817.0	837.3	850.4	857.1	867.2	881.2	2.0
Diesel	345.5	355.8	365.1	375.0	385.3	398.4	415.0	430.7	445.1	457.7	468.0	483.4	496.1	507.1	517.8	529.7	2.9
LP gas	23.8	25.6	27.1	28.0	28.6	28.9	29.3	29.4	29.2	28.9	28.5	28.0	27.2	26.2	25.3	24.1	0.1
Jet fuel	68.5	71.0	73.5	75.6	77.5	79.1	80.7	82.5	84.2	86.1	87.9	89.7	91.5	93.4	95.2	97.0	2.4
Intermediate 15	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0
Compressed natural	0.4	0.5	0.5	0.6	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.4	1.6	1.7	9.8

Source: Prepared by the IMP, based on AMDA, AMIA, ANPACT, BANXICO, CONUEE, CRE, EIA, EPA, INEGI, PEMEX, SENER and private

### Motor-carrier

The premise taken to devise the fuels demand for motor carrier is the assumption of constant retail prices on real terms for automotive gasolines and diesel, as well as the assumptions of the introduction of new technologies into the automotive market which will improve yields, among other, and which will be reflected in the future composition of the vehicle fleet.

Gasolines are still the main fuel consumed in the motor-carrier branch during 2015-2030. Gasolines demand is expected to increase 34.1%, reaching 1,063.5 MBD by the end of the period; 270.6 MBD larger than in 2015, and the result of an expected increase on the gasoline vehicle fleet.

The estimate shows that PEMEX Premium gasoline will have an annual average growth of 2.9%, and PEMEX Magna gasoline, 1.7%. The volume of PEMEX Magna demanded will have the largest consumption and share,



regarding the gasoline total during the prospected period, going from 638.0 MBD in 2015 to 826.8 MBD in 2030. As for PEMEX Premium, its demand will go from 154.9 MBD to 236.7 MBD during the same period, (see Figure 3. 14).

**TABLE 3.14 MOTOR-CARRIER DEMAND FOR FUELS, 2015-2030** 

(thousand barrels per day)

Food								Data pe	er year								AAGR
Fuel	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Magna gasoline	638.0	629.0	647.7	660.9	674.3	687.6	705.0	721.9	740.6	753.1	767.2	786.4	798.5	804.6	813.9	826.8	1.7
Premium gasoline	154.9	180.4	185.5	189.3	193.0	196.9	201.6	206.3	211.5	214.9	218.8	224.1	227.8	229.8	232.7	236.7	2.9
Total gasolines	792.9	809.4	833.2	850.2	867.3	884.5	906.6	928.1	952.1	967.9	986.0	1,010.5	1,026.3	1,034.4	1,046.6	1,063.5	2.0
Diesel	317.2	326.4	336.2	345.9	355.7	368.2	384.3	399.4	413.1	425.1	434.7	449.4	461.4	471.8	481.8	493.0	3.0
LP gas	35.3	34.5	34.6	34.4	33.5	34.2	34.9	35.5	35.9	36.3	36.4	36.6	36.7	36.6	36.4	35.8	0.1
Natural gas (MMCFD)	2.4	2.9	3.1	3.4	3.7	4.3	4.9	5.4	5.9	6.4	6.9	7.4	7.9	8.4	9.1	9.6	9.8

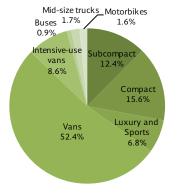
Note: Gasoline with less than 92 octanes is considered Magna; the one with 92 or more octanes, Premium Source: Prepared by the IMP, based on AMDA, AMIA, ANPACT, BANXICO, CONUEE, CRE, EIA, EPA, INEGI, PEMEX, SENER and private companies.

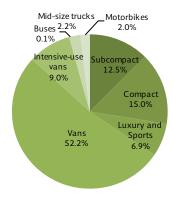
The upward trend in the gasolines demand is related to the introduction of vans in the vehicle fleet, which are estimated to demand 52.2% of this fuel in 2030. By the end of the prospective period, this type of vehicles will consume 555.4 MBD, an increase of 33.7% regarding 2015, which was of 415.5 MBD, (see Figure 3. 10).

Regarding the modality of compact vehicles, these will demand 160.0 MBD of gasoline in 2030, an increase of 29.5% regarding the demand recorded in 2015 (123.5 MBD). As for the subcompact-vehicles demand, it will increase 35,7% throughout the projection, having a demand of 98.2 MBD in 2015 and reaching 133.2 MBD in 2030.

Luxury and sports vehicles will have a meaningful behavior in the gasolines demand, whose consumption will go from 54.1 MBD in 2015 to 73.3 MBD in 2030. Regarding the gasolines consumption of intensive-use vans, it will rise from 67.9 MBD in 2015 to 95.7 MBD in 2030, that is, a growth of 41.1% in the period. The use of motorbikes as means of transportation will represent a rise in the gasolines consumption of 66.0%, growing from 12.8 MBD in 2015 to 21.2 MBD in 2030.

**FIGURE 3. 10** DEMAND FOR AUTOMOTIVE GASOLINE BY SEGMENT, 2015 AND 2030 (thousand barrels per day)







Source: Prepared by the IMP, based on AMDA, AMIA, ANPACT, BANXICO, CONUEE, CRE, EIA, EPA, INEGI, Melgar, PEMEX, SENER and private companies.

As for the domestic demand for diesel, the motor-carrier sector is the largest demand of this fuel, rising from 317.2 MBD in 2015 to 493.0 MBD in 2030, an increase of 77.4% during the period. Diesel consumption will display a lower AAGR (3.0%) than the one recorded in the diesel vehicle fleet, which will be of 4.0% during 2015-2030. On the other hand, improvements on the efficiency of diesel engines will contribute to reduce this fuel consumption.

### Vehicle fleet by type of fuel

During 2015-2030, the vehicle fleet will increase 32.8%, an addition of 11.0 million vehicles, from which 10.9 million will correspond to gasoline and diesel engines, and in smaller proportion, to LP gas and compressed natural gas automobiles (see Table 3. 15).

Between 2015 and 2030, the gasoline vehicle fleet will grow 31.8%, that is, from its 32.3 million units -in all its categories<sup>44</sup>- in 2015, it will increase to 42.6 million units in 2030. Regarding diesel, its vehicle fleet by 2015 is of 833 thousand units, and it is expected to rise to 1.5 million units by the last year of the period, standing out the category of vans and intensive-use vans.

**TABLE 3. 15** VEHICLE FLEET BY TYPE OF FUEL, 2015-2030

(million vehicles)

								Data p	er year								AAGR
Fuel	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Total	33.4	34.3	34.7	34.9	35.5	36.1	37.1	38.2	39.3	40.0	40.9	41.8	42.7	43.2	43.8	44.4	1.9
Gasoline	32.3	33.2	33.6	33.8	34.4	34.9	35.9	36.9	37.9	38.6	39.4	40.3	41.1	41.6	42.1	42.6	1.9
Diesel	0.8	0.8	0.8	0.8	0.9	0.9	1.0	1.0	1.1	1.2	1.2	1.3	1.3	1.4	1.4	1.5	4.0
LP gas	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4
Compressed natural gas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3

Note: the compressed-natural-gas vehicle fleet is so small it would seem zero, though, it is attributable to the rounding up of a decimal. Source: Prepared by the IMP, based on AMDA, AMIA, ANPACT, BANXICO, CONUEE, CRE, EIA, EPA, INEGI, PEMEX, SENER and private companies.

During 2015-2030, the estimate demand of fuels in the motor-carrier sector is expected to grow at an AAGR of 2.3%, while the vehicle fleet by type of fuels will grow at an AAGR of 1.9%, (see Figure 3. 11).

<sup>&</sup>lt;sup>44</sup> According to its importance, the categories with the largest growth are vans, compacts, subcompacts, luxury and sports, intensive-use vans, mid-sized trucks, and buses.





FIGURE 3.11 MOTOR-CARRIER FUELS DEMAND, AND VEHICLE FLEET BY TYPE OF FUEL, 2015-2030 (thousand barrels per day of crude oil equivalent and million vehicles)



Note: Considers gasolines, diesel, LP gas, and compressed natural gas. Source: Prepared by SENER, with information from the IMP.

The regions which will remain recording the largest concentration of gasoline vehicle fleet are the Central, Central-Eastern, and Northeast regions, with a share of 29.9%, 22.4%, and 19.7%, respectively, in 2015, and it is expected to reach 33.6%, 24.4%, and 17.0%, in the ordered mentioned above. On the contrary, the contribution of the South-Southeast and Northwest regions in 2015 is estimated in 16.0% and 10.8%, respectively, and towards the last year of the projection, in 14.2% and 10.8%. Nonetheless, the regions with the largest AAGR will be the Central and the Central-Eastern regions (see Table 3. 16).

**TABLE 3. 16 GASOLINE VEHICLE FLEET, 2015-2030** (million vehicles)

								Data p	er year								AAGR
Region	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Total	32.3	33.2	33.6	33.8	34.4	34.9	35.9	36.9	37.9	38.6	39.4	40.3	41.1	41.6	42.1	42.6	1.9
Northwest	3.9	4.0	4.1	4.1	4.2	4.1	4.2	4.3	4.4	4.4	4.4	4.5	4.6	4.5	4.6	4.6	1.1
Northeast	6.4	6.3	6.4	6.4	6.5	6.5	6.6	6.7	6.8	6.9	7.0	7.1	7.2	7.2	7.2	7.3	0.9
Central-Eastern	7.2	7.5	7.6	7.7	8.0	8.1	8.3	8.6	8.9	9.1	9.3	9.6	9.9	10.0	10.2	10.4	2.5
Central	9.7	10.2	10.4	10.5	10.7	11.1	11.5	12.0	12.4	12.7	13.1	13.4	13.7	13.9	14.1	14.3	2.7
South-Southeast	5.2	5.2	5.2	5.1	5.2	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9	5.9	6.0	1.0

Source: Prepared by the IMP, based on AMDA, AMIA, ANPACT, BANXICO, CONUEE, CRE, EIA, EPA, INEGI, PEMEX, SENER and private companies.

For the diesel vehicle fleet, it is forecasted the Central-Eastern, South-Southeast, and Central regions will display the largest annual average rates, followed by the Northeast and Northwest regions, (see Table 3.17).





**TABLE 3.17** DIESEL VEHICLE FLEET, 2015-2030

(million vehicles)

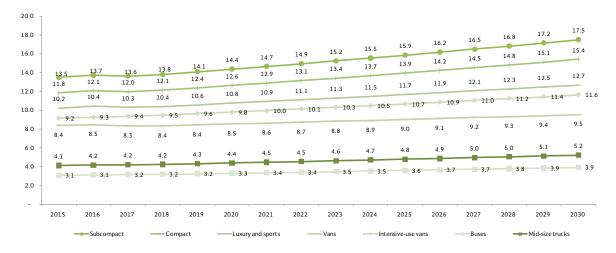
								Data p	er year								AAGR
Region	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Total	0.8	0.8	0.8	0.8	0.9	0.9	1.0	1.0	1.1	1.2	1.2	1.3	1.3	1.4	1.4	1.5	4.0
Northwest	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.08	0.08	0.09	0.09	0.10	0.10	2.1
Northeast	0.20	0.20	0.20	0.21	0.21	0.22	0.24	0.25	0.26	0.27	0.28	0.30	0.31	0.32	0.33	0.34	3.6
Central-Eastern	0.19	0.20	0.20	0.21	0.22	0.23	0.25	0.27	0.29	0.30	0.32	0.34	0.35	0.37	0.39	0.40	5.2
Central	0.26	0.26	0.26	0.27	0.28	0.30	0.31	0.33	0.35	0.36	0.38	0.39	0.41	0.42	0.44	0.45	3.8
South-Southeast	0.11	0.11	0.10	0.10	0.11	0.12	0.12	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.19	0.20	3.9

Source: Prepared by the IMP, based on AMDA, AMIA, ANPACT, BANXICO, CONUEE, CRE, EIA, EPA, INEGI, PEMEX, SENER and private companies.

## Vehicle-fleet yields, 2015-2030

Yields (kilometer per liter) is considered in the demand's projection of gasoline and diesel in the new vehicle fleet; thus, the projection shows that the lowest ranks of efficiency in gasoline vehicles are in the classifications of trucks, mid-sized trucks, and vans. On the other hand, subcompacts, compacts, luxury and sports, will display the largest increases in their yields by the end of the prospected period (see Figure 3.12).

**FIGURE 3. 12** AVERAGE YIEL OF THE GASOLINE VEHICLE FLEET BY CATEGORY, 2015-2030 (Kilometers per liter)



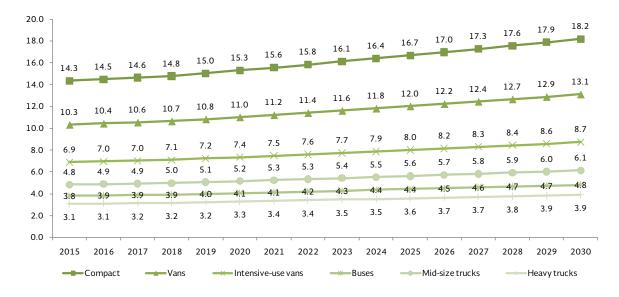
Source: Prepared by the IMP, based on AMDA, AMIA, ANPACT, BANXICO, CONUEE, CRE, EIA, EPA, INEGI, PEMEX, SENER and private companies.

As for the new diesel vehicles, compact ones will have the largest yield, going from 14.3 km/l of gasoline equivalent in 2014, to 18.2 km/l of gasoline equivalent in 2030. Regarding heavy trucks or buses, they will record the lowest growth in their efficiency during the prospective period, 3.9 and 4.8 km/l, respectively, in 2030. The factor which determines low yields in this type of vehicles is their average age, therefore, their performance is low throughout the time, (see Figure 3. 13).





**FIGURE 3. 13** AVERAGE YIELD OF DIESEL VEHICLE FLEET BY CATEGORY, 2015-2030 (Kilometers per liter)



Source: Prepared by the IMP, based on AMDA, AMIA, ANPACT, BANXICO, CONUEE, CRE, EIA, EPA, INEGI, PEMEX, SENER and private companies.

Likewise, the automotive industry in Mexico has moved to a production of more efficient vehicles that comply with the environmental and safety standards. The market of vehicles yielding higher fuel efficiency and on alternative fuels (electric hybrid) has become relevant. The car companies are continuously investing in research and development to offer environmentally-friendly new technologies, or even to migrate to new fuel sources, such as hydrogen and electric power.

## Rail, Sea, and Aerial Transportation

In the next fifteen years, the demand for jet fuel will increase 41.7%, going from 70.8 MBD in 2015 to 100.3 MBD by the end of the period. Jet fuel is an oil product destined mainly to meet the aerial sector demand, thereof its direct relation with this sector's behavior, such as a growth in the aerial fleet of the airlines, the introduction of more efficient aircrafts, more occupied flights, or the investments for developing the New Mexico City Airport (NAICM, for its Spanish acronym), among other, which have a great influence on the consumption of this oil product, (see Table 3. 18).

On the other hand, the demand for diesel in the maritime transportation sector depends to a great extent on the Industrial GDP growth, maritime freights, and its direct correlation with global trade. Based on the latter, it is estimated that in the next 15 years, its average consumption reaches 16.3 MBD, a 0.9% AAGR.





**TABLE 3. 18** FUELS DEMAND IN THE RAIL, SEA, AND AERIAL TRANSPORTATION, 2015-2030

(thousand barrels per day)

_								Data	a per ye	ar							AAGR
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Railway transportation	13.4	13.2	13.5	13.9	14.3	14.8	15.2	15.7	16.1	16.6	17.1	17.6	18.1	18.6	19.2	19.7	2.6
Diesel	13.4	13.2	13.5	13.9	14.3	14.8	15.2	15.7	16.1	16.6	17.1	17.6	18.1	18.6	19.2	19.7	2.6
Maritime transportation	15.6	16.9	16.0	15.9	16.0	16.1	16.3	16.5	16.7	16.8	17.0	17.2	17.4	17.6	17.8	17.9	0.9
Diesel	15.2	16.5	15.6	15.5	15.5	15.7	15.9	16.1	16.2	16.4	16.6	16.8	17.0	17.1	17.3	17.5	0.9
Fuel oil	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0
Aerial transportation	70.8	73.4	76.0	78.1	80.1	81.8	83.4	85.2	87.1	89.0	90.9	92.7	94.6	96.5	98.4	100.3	2.4
Jet fuel	70.8	73.4	76.0	78.1	80.1	81.8	83.4	85.2	87.1	89.0	90.9	92.7	94.6	96.5	98.4	100.3	2.4

Source: Prepared by the IMP, based on AMDA, AMIA, ANPACT, BANXICO, CONUEE, CRE, EIA, EPA, INEGI, PEMEX, SENER and private companies.

The projections of the rail-transportation diesel consumption point out an annual average demand of 16.1 MBD. This moderate demand is related, mainly, to the introduction of more efficient locomotives.

It is worth mentioning that diesel is the most consumed oil product in the rail freight transportation, for industrial products, as well as for agriculture, forestry, and for passengers' transportation. There are currently eight companies dedicated to freight transportation, and the only suburban train operating in Mexico is in the metropolitan zone of Mexico City, which runs from Buenavista to Cuautitlán, in the Estado de México. The project of the Interurban Train Mexico-Toluca, has considerably progressed, and it is expected to start up in 2018.

## 3.6.2. Electricity Sector

The National Electricity Sector, now assimilated to the Wholesale Electricity Market, began operations on January 2016 opening the participation of the private sector for electricity generation, and having an impact over the fuels consumption. The estimates on the electricity sector fuels demand are based on the criteria, assumptions, and long-term considerations of the Development Program of the National Electricity System (PRODESEN, for its Spanish acronym) 2016-2030.

By 2030, this sector's total demand for fuels is expected to rise 0.7% regarding 2015, derived from a marginal variation in the oil-products consumption which results in an almost null AAGR. The participation rules in the Wholesale Electricity Market, focused on the availability and efficiency of generation technologies, foresees an increase in the natural-gas consumption and a decrease in the consumption of conventional fuels like fuel oil, coal, and diesel. The natural-gas demand accounted for 68.9% from the total in 2015 and will rise to 96.5% in 2030, (see Table 3. 19).

**TABLE 3.19** FOSSIL-FUELS DEMAND IN THE ELECTRICITY SECTOR, 2015-2030

(thousand barrels per day of crude oil equivalent)

Fuel								Dat	a per yea	ar							AAGR
ruei	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Total	941.1	1,285.3	1,171.9	1,072.1	849.9	767.1	766.1	780.2	808.3	818.3	843.5	864.9	912.4	901.2	927.4	947.5	0.0
Coal	156.1	513.0	510.6	398.4	99.3	3.1	1.1	3.2	1.1	2.1	2.8	2.0	17.6	3.2	9.8	11.6	-15.9
Fuel oil	110.0	98.2	4.1	3.8	1.9	1.7	1.6	1.6	1.8	1.9	1.9	1.8	9.5	1.4	1.5	1.5	-24.9
Petroleum coke	17.4	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	0.3
Diesel	9.3	1.5	1.7	0.8	0.3	0.3	0.3	0.3	0.4	0.5	0.9	0.6	0.7	0.9	1.2	1.5	-11.3
Natural gas*	648.3	654.4	637.3	651.0	730.1	743.7	744.8	756.8	786.9	795.6	819.7	842.3	866.4	877.5	896.7	914.7	2.3

n.a.: not applicable.

\* This demand does not include electricity exports.

Source: Prepared by the IMP, based on CFE, PEMEX, SENER and private companies.

In 2016, the fuel-oil demand (98.2 MBDCOE) is attributable to events like: a) reduction in this fuel's price regarding the previous year (58%); b) the availability of infrastructure and, thus, the supply of natural gas to dual-fueled power plants which can use this fuel o can opt for fuel oil; and c) termination of power plants that CFE considers to be fueled by fuel oil or natural gas depending on the prices in the fuels market. During 2017-2018 some CFE and private plants will demand small amounts, which will be importantly reduced afterwards. For the rest of the studied period, the electricity sector demand for this fuel is expected to decrease to an average rate of 24.9%, being barely used in this sector.

The estimate for diesel in generating electricity processes (in some internal combustion or mobile gas turbine power units) displays an average consumption of 1.3 MBD. As for petroleum coke, this will only be consumed in activities related to the cement and mining industries. Between 2015 and 2016, this fuels demand will average 1,261 MTA and will be destined to two power plants located in San Luis Potosi.

## 3.6.3. Industrial Sector

One of the main variables considered to devise the prospective scenario of industrial fuels (petroleum coke, natural gas, LP gas, and diesel) are their retail prices; this, due to the impact they have when deciding to replace fuels, e.g. fuel oil with natural gas. The demand for fuels in the industrial sector is closely related to the behavior of the country's economic activity (Gross Domestic Product of each branch of the industrial sector), plans for the supply of the fuels consumed in this sector; technological innovation in the efficiency of the production processes of the companies and plants using those fuels. Within the industrial sector, the most demanded fuel is natural gas, whose AAGR is estimated in 3.1% for the next 15 years. This percentage is higher than the AAGR of the total demand of fuels in this sector, estimated in 2.2%, a growth from 346.4 MBDCOE in 2015 to 481.3 MBDCOE in 2030, and which implies that natural gas displaces other fuels. From accounting for 66.0% of the total fuels consumption in 2015, it will rise to 75.2% in the last prospected year. Fuel oil will be the most impacted fuel, whose use will be gradually falling away until disappearing in the coming years; its high polluting emissions (CO<sub>2</sub>, CO, SOx, among other), as well as its restrictive use, and the advantages of natural gas over fuel oil, signal a high probability that, in the short term, the industrial sector will stop consuming this oil product and will replace it with natural gas, (see Table 3. 20).

TABLE 3. 20
FUELS CONSUMPTION IN THE INDUSTRIAL SECTOR, 2015-2030

(thousand barrels per day of crude oil equivalent)

51							I	Data per	year								AAGR
Fuel	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Total	346.4	358.6	410.3	442.3	444.9	449.7	455.4	461.2	465.5	468.6	471.8	475.2	477.8	479.5	480.9	481.3	2.2
Natural gas	228.5	247.7	299.7	328.7	333.3	338.2	342.6	347.0	350.1	352.5	355.1	357.4	359.5	361.0	361.8	361.9	3.1
Petroleum coke	58.7	57.3	59.1	63.3	61.9	62.2	62.8	63.5	63.8	63.5	63.2	63.3	62.7	61.7	61.0	60.1	0.2
LP gas	19.5	19.7	19.0	18.5	18.8	19.0	19.3	19.6	20.0	20.4	20.9	21.4	22.0	22.6	23.4	24.2	1.5
Diesel	29.6	29.3	29.0	29.4	29.8	30.2	30.7	31.2	31.7	32.1	32.6	33.1	33.7	34.2	34.7	35.2	1.1
Fuel oil	10.0	4.6	3.5	2.3	1.2	-	-	-	-	-	-	-	-	-	-	-	n.a.

Source: Prepared by the IMP, based on information from BANXICO, CNIAA, CONAGUA, CONUEE, CRE, EIA, EPA, IEA, INE, INEGI, PEMEX, SE, SEMARNAT, SENER and private companies.

Petroleum-coke demand is related with the cement industry  $^{45}$ , thereof the petroleum-coke projection is based on considering the different investment plants of the cement plants, on the growth of the scenario for the branch of non-metallic minerals, and on its efficiency factor. Its consumption is mainly the result of its relatively low cost compared to natural gas and fuel oil, coupled with the fact that the cement industry has not yet developed technologies that allow its combustion with an appropriate management of NOx and  $SO_2$  emissions.

<sup>&</sup>lt;sup>45</sup> There are currently 32 cement plants in the country which can consume petroleum coke, but some of them are not operating. It is worth mentioning the projection for the petroleum coke demand at industrial level is devised per cement plant.





Based on the later, petroleum coke will display an AAGR of barely 0.2%; its total share in the industrial sector fuels demand will decrease from 16.9% in 2015 to 12.5% in 2030. Within the industrial branches with intensive consumption, its demand will decrease from 95.6% in 2015 to 92.2% in 2030 (see Table 3.21).

The differential between the retail prices of petroleum coke and natural gas have been reduced compared with the historic years. In 2015, such differential was of 1.45 dollars per million BTU (MMBTU); towards the future, this differential in the prospective average prices of natural gas are expected to rise to 1.6 dollars MMBTU regarding petroleum coke, which would not foster any replacement in the use of fuels by cement plants.

**TABLE 3.21** PETROLEUM-COKE DEMAND IN THE INDUSTRIAL SECTOR BY GROUP OF BRANCHES, 2015-2030 (thousand tons per year)

								Data pe	r year								AAGR
Group of branches	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Total	4,055.5	3,984.4	4,097.5	4,388.5	4,290.7	4,322.4	4,355.0	4,398.1	4,419.1	4,416.5	4,382.4	4,388.0	4,345.0	4,291.2	4,231.0	4,162.9	0.2
Cement	3,788.3	3,711.3	3,819.2	4,102.0	4,010.1	4,042.2	4,066.5	4,102.0	4,115.7	4,106.6	4,069.5	4,068.9	4,023.1	3,967.9	3,906.3	3,838.8	0.1
Basic metals	52.5	51.8	52.2	53.6	51.6	50.7	51.3	51.8	52.4	52.8	52.5	52.6	52.0	51.1	50.8	49.4	-0.4
Chemistry	59.5	60.6	62.1	64.2	63.4	63.8	66.2	68.4	70.9	73.1	73.9	76.2	77.5	78.3	79.1	79.3	1.9
Metalic, electric, and transportation products	41.3	41.8	42.8	44.7	44.3	44.6	46.6	48.1	48.9	49.5	50.3	51.1	52.1	52.3	52.1	52.0	1.5
Glass	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	2.7
Rest	113.7	118.6	121.0	123.8	120.9	120.8	124.1	127.5	130.9	134.2	136.0	138.9	140.1	141.3	142.4	143.0	1.5

Source: Prepared by the IMP, based on CFE, CNIC, EIA, IEA, INEGI, PEMEX, SE, SENER and private companies.

The states which concentrate the largest consumption of petroleum coke are related to the location of cement plants, like Hidalgo, San Luis Potosi, Puebla, Sonora, Veracruz, and Morelos, which gather 62.7%, average, of the petroleum coke demand during 2014-2030, (see Table 3. 22).

**TABLE 3. 22** PETROLEUM-COKE STATE CONSUMPTION IN THE CEMENT INDUSTRY, 2015-2030 (thousand tons per year)

Federal entities								Data per	year								AAGR
reueral elitities	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGK
Total	3,788.3	3,711.3	3,819.2	4,102.0	4,010.1	4,042.2	4,066.5	4,102.0	4,115.7	4,106.6	4,069.5	4,068.9	4,023.1	3,967.9	3,906.3	3,838.8	0.1
Aguascalientes	242.8	242.8	242.8	242.8	233.1	228.2	223.1	219.3	214.5	206.9	198.2	192.1	183.5	176.7	170.3	162.2	-2.7
Baja California	37.9	38.5	38.8	50.6	50.5	51.4	53.2	55.1	57.5	59.3	60.2	62.2	63.7	65.1	66.8	68.1	4.0
Coahuila	130.5	140.7	149.5	172.3	168.8	168.8	170.2	171.7	172.9	172.4	170.0	169.1	166.5	163.1	160.2	157.7	1.3
Colima	135.0	123.2	128.3	128.3	123.2	120.6	118.5	116.5	114.2	110.0	106.3	102.6	98.0	94.3	90.7	85.7	-3.0
Guerrero	20.1	24.9	24.9	24.9	23.9	23.4	24.9	26.2	27.6	28.8	29.9	31.4	32.8	34.2	35.1	36.2	4.0
Hidalgo	813.9	714.9	710.8	740.9	725.2	724.2	729.5	738.6	746.9	750.6	744.5	741.5	728.9	724.1	716.5	702.3	-1.0
Jalisco	191.0	192.6	192.2	190.5	190.2	193.7	189.1	184.0	176.9	170.4	162.8	157.1	148.5	141.3	134.1	126.9	-2.7
México	194.6	200.8	205.0	201.1	196.6	196.0	191.9	187.5	184.3	178.7	172.9	167.6	159.9	151.9	144.3	138.3	-2.3
Morelos	257.1	184.4	184.4	184.4	177.1	173.4	175.9	177.0	175.8	175.7	172.9	173.2	170.3	168.3	165.2	163.3	-3.0
Nuevo León	114.1	128.2	174.0	210.7	209.0	211.6	217.5	222.6	228.6	233.0	235.3	241.1	242.5	244.5	244.4	243.0	5.2
Oaxaca	200.6	200.6	200.6	200.6	192.6	188.5	193.7	199.0	204.6	209.7	214.4	221.7	225.6	229.8	230.1	233.3	1.0
Puebla	324.5	360.1	393.2	531.0	525.0	529.6	540.0	549.7	550.4	555.3	556.9	565.1	562.3	553.7	549.0	539.8	3.5
San Luis Potosí	477.1	482.5	485.6	465.0	454.7	453.6	458.2	464.2	466.2	467.3	463.5	459.9	458.7	449.1	441.9	436.8	-0.6
Sonora	267.6	317.2	323.8	376.4	369.3	411.9	415.0	421.9	427.1	423.5	423.2	427.4	428.2	423.9	416.6	409.8	2.9
Tabasco	45.1	56.0	56.0	56.0	53.8	52.6	54.8	57.5	59.3	61.2	62.2	64.7	66.7	68.6	70.2	71.0	3.1
Tamaulipas	- 0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	266.0	227.6	228.3	229.2	220.0	215.4	215.2	217.6	217.8	215.3	211.8	209.9	208.1	204.3	200.3	196.6	-2.0
Yucatán	70.3	76.1	81.1	97.4	97.2	99.0	95.9	93.5	91.2	88.4	84.5	82.1	79.1	74.9	70.7	67.7	-0.3

Source: Prepared by the IMP, based on CFE, CNIC, EIA, IEA, INEGI, PEMEX, SE, SENER and private companies.

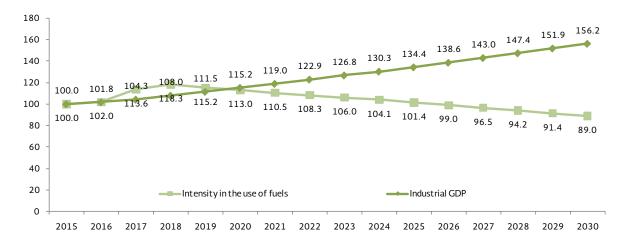
Regarding the average demand for diesel and LP gas, these are expected to reach 31.7 MBDCOE and 20.5 MBDCOE, respectively, with an AAGR of 1.1% and 1.5% for the studied period. As for the fuel-oil demand, its use is forecasted to disappear in the industrial sector by 2019. Between 2015 and 2019, its average consumption is estimated in 4.3 MBDCOE. This behavior is the result of replacing fuel oil with natural gas, due to the price differential between both fuels. For example, in 2015, fuel oil was more expensive than natural gas 2.8 times (reckoned at dollars per MMBTU). Besides, fuel oil pollutes more than natural gas. Based on this, there will be a lesser demand for fuel oil in the industrial sector.



A better use of fuels and its replacement to achieve a better efficiency in the industrial sector will be reflected upon an improvement (decrease) of the power intensity, which is understood as the relation between the industrial sector fuels consumption and the behavior of the manufacturing GDP. It can be observed that such intensity goes from 100.0 in 2015 to 89.9 in 2030 (see Figure 3. 14). Among the steps to achieve an efficient use of fuels are to optimize processes, replace fuels, and implement energy-efficiency measures.

FIGURE 3. 14
INTENSITY IN THE USE OF HYDROCARBONS IN THE
INDUSTRIAL SECTOR AND MANUFACTURING GDP, 2015-2030

(Index, 2012=100)



Source: Prepared by the IMP, based on information from BANXICO, CNIAA, CONAGUA, CONUEE, CRE, EIA, EPA, IEA, INE, INEGI, PEMEX, SE, SEMARNAT, SENER and private companies.

### 3.6.4. Oil Sector

The oil sector is forecasted to increase its fuels consumption 3.0% from 2015 to 2030. During this period, fuel-oil consumption will average 23.7 MBD, and diesel, 20.7 MBD. In general, this sector uses fuel oil to produce useful heat for its productive processes. Gasoline will display a meaningful decrease on its demand, 38.6% regarding 2015 levels, (see Table 3. 23).

TABLE 3. 23
OIL SECTOR TOTAL FUELS DEMAND. 2015-2030

(thousand barrels per day)

								Data p	er year								AAGR
Fuel	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Total	44.3	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	0.2
Gasolines	1.8	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	-3.2
Diesel	19.8	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7	0.3
Fuel oil	22.7	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	0.3

Source: Prepared by SENER based on information from PEMEX.

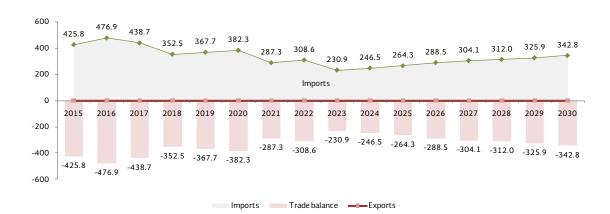


#### Oil-Products Foreign Trade 3.7.

From 2015-230 the oil-products production is expected to rise 53.2%, while its demand will rise 23.7%, attributable to a larger consumption of gasolines. Even with the investments on refining capacity, the distillates production will still be short, though, the bridge in the trade balance will be reduced. From 2015 to 2030, oil-products imports will be reduced by 22.6%, while imports will increase 40.9%.

By type of fuel, the gasolines demand is prospected to remain in levels above the domestic supply. During 2015-2030, the deficit is expected to go from 425.8 MBD to 342.8 MBD, a decrease of 19.5% by the end of that period. During the estimated period, gasolines imports will account for 35.8% average, of the domestic demand, (see Figure 3. 15).

**FIGURE 3. 15 GASOLINES FOREIGN TRADE, 2015-2030** (thousand barrels per day)



Source: Prepared by the IMP, based on information from AIE, AMDA, AMIA, ANPACT, CRE, INEGI, EPA, PEMEX, SENER and private companies

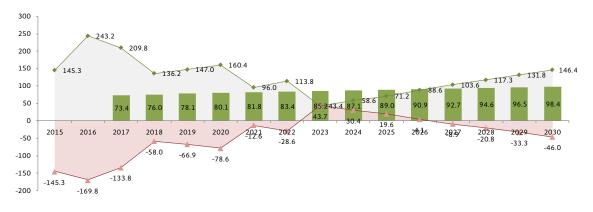
Three moments related to diesel's trade balance are identified during 2015-2030: 1) during the first seven years of the projection, the domestic supply is lower than the domestic demand, making it necessary to resort to imports; from 2015 to 2022, it averages a diesel production of 351.8 MD, an import level of 156.5 MBD, a demand of 436.5 MBD, and exports for 69.8 MBD. 2) Starting in 2023 and until 2026, the average production rises to 542.2 MBD; there will be a reduction in imports of 65.5% average, since it has been considered the startup of the new capacity with which exports increase to 89.9 MBD. 3) During the last four projected years, there will be again a trade deficit, since the supply will be lower than the demand (see Figure 3.16).





**FIGURE 3. 16** DIESEL FOREIGN TRADE, 2015-2030

(thousand barrels per day)



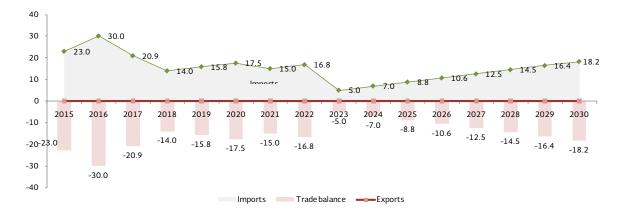
Imports ■ Trade balance ■ Exports

Source: Prepared by the IMP, based on AMDA, AMIA, ANPACT, BANXICO, CFE, CNIAA, CONAGUA, CONUEE, CRE, EIA, EPA, IEA, INE, INEGI, PEMEX, SE, SEMARNAT, SCT, SENER and private companies.

In the period 2015-2030, the jet fuel production and demand will display an AAGR of 3.7% and 2.4%. Nonetheless, even with the increase on the production, it will not be enough to satisfy the consumption level of the aerial sector, and having, thus a deficit of this fuel. Therefore, to meet the domestic demand, it will be necessary to resort to imports, which increased by 4.7 MBD regarding 2015, (see Figure 3. 17).

**FIGURE 3.17** JET-FUEL FOREIGN TRADE, 2015-2030

(thousand barrels per day)



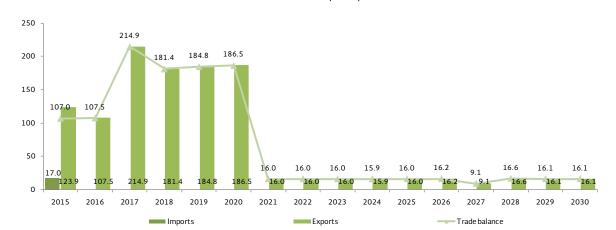
Source: Prepared by the IMP, based on information from ASA, BANXICO, INEGI, PEMEX, SCT and SENER.

During 2015-2030, the fuel-oil domestic demand is projected to continue with a strong downward trend; being completely replaced with other fuels, such as natural gas, in the different sectors, mainly the electricity and industrial ones. The latter turns into a positive trade balance between 2015 and 2020 because of a fuel surplus, which will be sent to exports. By 2021, the refineries in Tula and Salamanca are expected to stop their fuel-oil production (see Figure 3. 18).





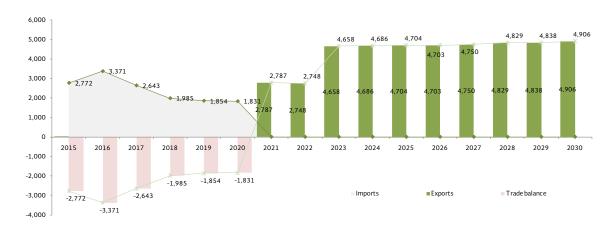
**FIGURE 3. 18 FUEL-OIL FOREIGN TRADE, 2015-2030** (thousand barrels per day)



Source: Prepared by the IMP, based on information from BANXICO, CFE, CNIAA, CONAGUA, CONUEE, CRE, EIA, EPA, IEA, INE, INEGI, PEMEX, SE, SEMARNAT, SENER and private companies.

As for the petroleum-coke production, during 2015-2020, it will not suffice the domestic demand (mainly from the cement branch and the electricity sector). Therefore, the dependency of the imports to meet such demand, will remain; during the next five years, an average of 2,409.3 MTA will be imported. Starting in 2021, the new upgrades for deep conversion in Tula, Salamanca, and Salina Cruz will afford a better use of residues; thus, there will be a turnabout due to a production larger than its consumption, which will result in trade surplus for this fuel. Starting in 2021, the production of petroleum coke is estimated to double compared with the last five years, which will allow an export capacity for over 50% more from this product (see Figure 3. 19).

**FIGURE 3.19** PETROLEUM-COKE FOREIGN TRADE, 2015-2030 (thousand tons per year)



Source: Prepared by the IMP, based on CFE, CNIC, EIA, IEA, INEGI, PEMEX, SE, SENER and private companies.

## ANNEX A. MOTOR-CARRIER

The historic retail prices for gasolines and diesel have been administered by the Federal Government through the Secretariat of Finance and Public Credit (SHCP, for its Spanish acronym) pursuing economic and tax policies objectives. That means that the variations in their prices did not correspond to the market laws. Only PEMEX could import those products.

As part of the Energy Reform, in 2016, the SENER begins granting imports permits. Starting in 2017, the process for the liberalization of retail prices will begin, concluding in 2018. The CRE is authorized to determine PEMEX's first-hand sales maximum prices, an asymmetric regulation that will last until PEMEX has predominant domain over the markets.

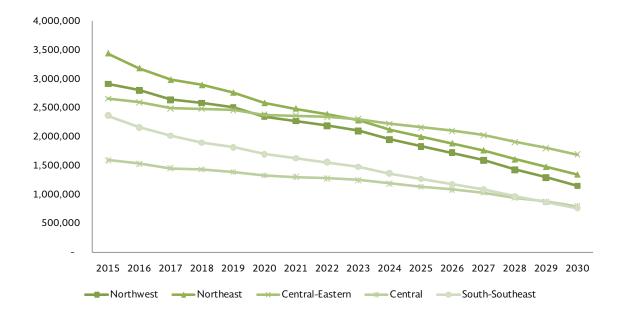
On the other hand, a significant aspect within the motor-carrier sector development, is the introduction of new technologies, which will be reflected in the composition of the future vehicle fleet. Additionally, it has been considered the reduction of second-hand vehicles imports, derived from the measures implemented by the Tax Administration System (SAT, for its Spanish acronym) and which establishes the following:

- Set up a duty of 48% over the purchase of foreign second-hand vehicles.
- Fixation of specific schedules to allow the entry of vehicles into the national territory through the northern border customs.
- Tax audits to import companies and its associates, as well as to the customs agents who, in the know of the irregularity of this procedure, support importers.
- Request for American certificates or origin which ensure these vehicles can be exported.
- Those vehicles considered as waste, damaged, stolen, unsafe, or which overpass the limits for pollutant emissions of the United States, will not be allowed in the country.

The decrease on these vehicles' imports will improve the average yields of the vehicle fleet, and thus, will reduce fuels consumption and pollutant emissions.

Based on the latter, and pursuant to the results of the model, the five regions considered in the study will display a decrease in their second-hand vehicles imports' annual rate during 2016-2030, that is: The Northwest region will show a rate of 6.2%, the Northeast 6%, the Central-Easter 3%, and the South-Southeast 7.2% (see Figure A. 1).

FIGURE A. 1 SECOND-HAND IMPORTED VEHICLE FLEET BY REGION (UNITS)



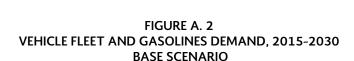
Source: Prepared by the IMP, based on AMIA, SAT, and private companies.

This decrease is mostly reflected on vans, seconded by compact vehicles, and luxury and sports automobiles.

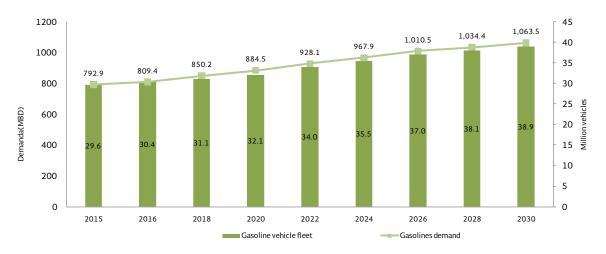
On the other hand, in 2015, not considering motorbikes, the gasoline vehicle fleet is estimated in 30,437,627 units in its different categories; by 2030, the vehicle fleet is estimated in 38, 926, 401 units.

The demand for gasolines for the period 2016-2030, considers the introduction of modality change from private to public service due to investments on the public-transportation infrastructure; it considers the decrease on second-hand vehicles imports, and a larger penetration of electric vehicles starting in 2016, as well as an improve of vehicle yields. Under this context, the gasolines demand will grow 2.0% annual average during the prospected period 2016-2030, from 809.4 MBD to 1,063.5 MBD in 2030. Such demand includes measures on energy savings for motor-carrier, which explains the moderate growth of the gasolines consumption (see Figure A. 2).





(million units and thousand barrels per day)

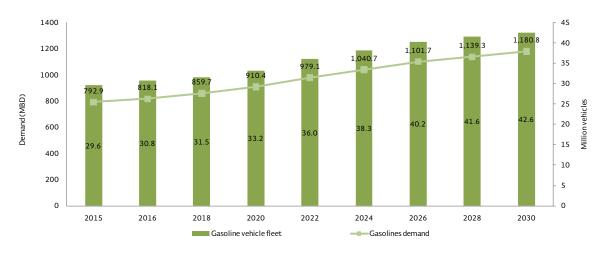


Source: Prepared by the IMP, based on AMDA, AMIA, ANPACT, BANXICO, CONUEE, CRE, EIA, EPA, INEGI, PEMEX, SENER and private companies.

For the scenario of base demand with low savings, the trend in the gasolines consumption is displayed on Figure A. 3. This scenario does not include the modality change and applies lower yields from vehicles.

FIGURE A. 3 VEHICLE FLEET AND GASOLINES DEMAND, 2015-2030 **BASE SCENARIO WITH LOW SAVINGS** 

(million units and thousand barrels per day)



Source: Prepared by the IMP, based on AMDA, AMIA, ANPACT, BANXICO, CONUEE, CRE, EIA, EPA, INEGI, PEMEX, SENER and private companies

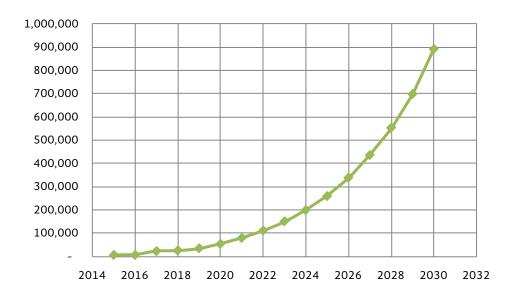
The difference of the gasolines yields between the base and base-with-low-savings scenario is mainly attributable to the measures on energy savings that will be implemented, and which reflect more efficient combustion systems, reductions in the losses due to friction in the motor system and power-transmission systems, and to the use of lighter materials that reduce the vehicle's weight.





As for electric vehicles, it is expected an increase with an AAGR of 43.2% during 2106-2030, going from 5,824 units in 2016, to 890,565 units in the last year. These automobiles are expected to have meaningful growth; thereby, members of the automotive sector, CFE and organizations like AMIA, are carrying out important actions which will foster this type of technology in Mexico. Only in the month of July, 2016, more than 300 electric units for private use, fleet, and electric-cab units for Mexico City and Aguascalientes (see Figure A. 4), were sold. Nevertheless, it will be until the mid-2020's when the electric-vehicle fleet will become strong.

FIGURE A. 4 BEHAVIOR OF THE ELECTRIC VEHICLE FLEET, 2015-2030



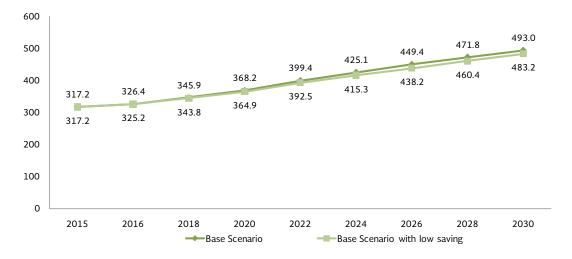
Source: Prepared by the IMP, based on AMDA, AMIA, ANPACT, BANXICO, CONUEE, CRE, EIA, EPA, INEGI, PEMEX, SENER and private companies.

Nowadays, investments are used to generate the infrastructure for charging stations which can recharge a battery capacity up to 80% in about 20 minutes. This type of stations will be fed through a solar-panel system, fostering thus, the sustainability supply chain through using renewable energies. One of these stations was recently opened in Guadalajara. Currently, the average charging time to 100% is of four hours.

As for diesel, the vehicle fleet using this fuel (including buses which circulate on confined lanes) is estimated of 831,171 units by 2016, and of 1,497,042 units by 2030. Regarding its demand, its AAGR will be of 3.0% in the Base Scenario, going from 326.4 MBD in 2016 to 493 MBD in 2030. The expected growth during the prospected period, for the base scenario as well as for the base scenario with low savings, is displayed in Figure A. 5.

FIGURE A. 5
DIESEL DEMAND IN THE MOTOR-CARRIER SECTOR, 2015-2030
BASE SCENARIO AND BASE SCENARIO WITH LOW SAVING

(thousand barrels per day)



Source: Prepared by the IMP, based on AMDA, AMIA, ANPACT, BANXICO, CONUEE, CRE, EIA, EPA, INEGI, PEMEX, SENER and private companies.

Based on the results of Figure 2.5, it can be observed that the base-scenario demand is slightly higher than the base-scenario-with-low savings on; this, because the Base Scenario considers in its projection the "modality change" of the private service into public, that implies a lesser use from the private transportation and a larger use of the public transportation, and reflects an increase in the diesel consumption of the latter.

Given that the use of CNG is currently gaining some dynamism, its consumption is estimated to grown from 2.9 MMCFD in 2016 to 9.6 MMCFD by the end of the projection, which is a growth of 8.8%. Regarding LP gas, its demand is expected to be impacted by the competence of new and more attractive technologies, reducing the costs related to travels, specifically for the penetration of electric and hybrid vehicles in the 2020's. By 2030, its demand is projected of 35.8 MBD, almost the same as in 2016, 35.8 MBD.

## ANNEX B. SENSITIVITY SCENARIOS FOR THE OIL-PRODUCTS DEMAND

For this outlook, the sensitivity analysis for the fuels demand was prepared considering three macroeconomic scenarios (base, high, and moderate). For the base scenario, the growth will be 2.9%, average, 3.6% for the high scenario, and 2.4% for the moderate one, during 2016-2030.

The assumptions considered for the base scenario are the following:

### External factors:

- The standardization of the American monetary policy and the rise of its interest rates, generate uncertainty within the financial and exchange markets, strengthening the U.S. dollar and weakening other currencies.
- The exit of the United Kingdom from the European Union emphasizes the financial and currency uncertainty in the short term, and will weaken ever more the worldwide trade and economy in the medium and long terms.
- China's economy loss of dynamism affects international trade, particularly emerging economies.
- The dropping in the prices of raw materials and commodities, reduce the revenues of producing countries and limiting thus, their demand for goods and services.
- The industrial sector contraction in the United States as an impact on their economic activity.

### Internal factors:

- Budgetary cuts in 2016 and 2017 will narrow economic growth potential.
- Financial and Exchange markets turmoil
- Tightening of the monetary policy and rises on the interest rates.
- The domestic market and its determiners will lose dynamism
- The Energy Reform will foster the oil and the electricity-generation sectors.

For the moderate scenario (low) it was considered the following:

- Oil-supply worldwide surplus keeps oil prices below \$100 per barrel at the medium term.
- The normalization of the American monetary policy has an effect over the financial and exchange markets of emerging countries.
- The United Kingdom's exit from the E.U., have an impact on important trade agreements and over the economic growth of the Eurozone.
- China's economic slowdown is deeper than expected.

- The prices' drop of raw materials and commodities, will continue reducing the revenues of producing countries limiting their demand for goods and services.
- The American economic growth is lower than expected.
- U.S. industrial crisis becomes more acute impacting Mexican industry and manufacturing sector.
- The exchange turmoil spreads and widens.
- The determiners of the domestic market are weakening, unable to counteract the negative effects from abroad.

Finally, for the high scenario, the assumptions are:

### **External factors:**

- Drop of the prices of raw materials and commodities.
- Discoordination of the monetary policies in advanced economies.
- Uncertainty in emerging economies.
- Less dynamism of the American economy.
- Normalization of the U.S. monetary policy.
- Turmoil in financial markets.

### Internal factors:

- Employment formalization, revenues from real salaries, and credit expansion, which foster consumption and investment.
- Family remittances go on in the medium and long term.
- The oil production platform recovers, thanks to the Energy Reform.
- The advances in infrastructure to transport hydrocarbons will reduce costs, and foster their consumption.
- The Financial Reform has generated the necessary means to have access to financing at lower rates and to higher credit amounts.

## **Fuel Oil**

## **Electricity Sector**

## TABLE B. 1 FUEL-OIL DEMAND ELECTRICITY SECTOR BASE SCENARIO PROS16-30

(thousand barrels per day)

State								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California Sur	4.9	9.6	3.6	3.4	1.6	1.4	1.4	1.4	1.5	1.6	1.6	1.5	1.2	1.2	1.2	1.2	-8.7
Campeche	4.1	6.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chiapas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	1.7	2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Coahuila	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Colima	7.3	4.7	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	n.a.
Ciudad de México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Durango	3.0	3.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guanajuato	1.1	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guerrero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Hidalgo	19.0	22.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Jalisco	0.3	0.0	-	-	-	-	-	-	-	-	-	-	1.9	-	-	-	n.a.
México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Michoacán	0.2	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Morelos	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nayarit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Oaxaca	0.0	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	n.a.
Puebla	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Querétaro	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	8.1	7.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sinaloa	22.1	15.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sonora	3.3	2.2	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tabasco	0.0	-	_	-	-	-	-	-	-	-	-	-	-	-	_	_	n.a.
Tamaulipas	4.5	5.9	_	-	-	-	-	-	-	-	-	-	0.6	-	_	_	n.a.
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	21.3	8.8	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	4.8	0.2	0.2	0.2	-28.0
Yucatán	1.8	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Zacatecas	-	-	_	-	-	-	-	-	-	-	-	-	-	-	_	_	n.a.
Domestic	103.2	91.0	3.8	3.5	1.7	1.6	1.5	1.5	1.6	1.8	1.7	1.6	8.8	1.3	1.4	1.4	-24.9

## TABLE B. 2 FUEL-OIL DEMAND ELECTRICITY SECTOR BASE SCENARIO-LOW SAVING PROS16-30

(thousand barrels per day)

State								Data pe	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California Sur	4.9	9.6	3.6	3.4	1.6	1.4	1.4	1.4	1.5	1.6	1.6	1.5	1.2	1.2	1.2	1.2	-8.7
Campeche	4.1	6.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chiapas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	1.7	2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Coahuila	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Colima	7.3	4.7	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	n.a.
Ciudad de México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Durango	3.0	3.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guanajuato	1.1	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guerrero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Hidalgo	19.0	22.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Jalisco	0.3	0.0	-	-	-	-	-	-	-	-	-	-	1.9	-	-	-	n.a.
México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Michoacán	0.2	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Morelos	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nayarit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Oaxaca	0.0	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	n.a.
Puebla	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Querétaro	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	8.1	7.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sinaloa	22.1	15.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sonora	3.3	2.2	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tabasco	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tamaulipas	4.5	5.9	-	-	-	-	-	-	-	-	-	-	0.6	-	-	-	n.a.
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	21.3	8.8	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	4.8	0.2	0.2	0.2	-28.0
Yucatán	1.8	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Zacatecas	-	-	-	-	-	-	_	-	-	-	-	-	-	-	-	-	n.a.
Domestic	103.2	91.0	3.8	3.5	1.7	1.6	1.5	1.5	1.6	1.8	1.7	1.6	8.8	1.3	1.4	1.4	-24.9

## TABLE B. 3 FUEL-OIL DEMAND ELECTRICITY SECTOR MODERATE SCENARIO PROS16-30

(thousand barrels per day)

Chata								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California Sur	4.9	9.6	3.6	3.4	1.6	1.4	1.4	1.4	1.5	1.6	1.6	1.5	1.2	1.2	1.2	1.2	-8.7
Campeche	4.1	6.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chiapas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	1.7	2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Coahuila	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Colima	7.3	4.7	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	n.a.
Ciudad de México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Durango	3.0	3.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guanajuato	1.1	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guerrero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Hidalgo	19.0	22.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Jalisco	0.3	0.0	-	-	-	-	-	-	-	-	-	-	1.9	-	-	-	n.a.
México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Michoacán	0.2	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Morelos	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nayarit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Oaxaca	0.0	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	n.a.
Puebla	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Querétaro	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	8.1	7.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sinaloa	22.1	15.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sonora	3.3	2.2	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tabasco	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tamaulipas	4.5	5.9	-	-	-	-	-	-	-	-	-	-	0.6	-	-	-	n.a.
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	21.3	8.8	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	4.8	0.2	0.2	0.2	-28.0
Yucatán	1.8	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Zacatecas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Domestic	103.2	91.0	3.8	3.5	1.7	1.6	1.5	1.5	1.6	1.8	1.7	1.6	8.8	1.3	1.4	1.4	-24.9

## TABLE B. 4 FUEL-OIL DEMAND ELECTRICITY SECTOR HIGH SCENARIO PROS16-30

(thousand barrels per day)

State								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California Sur	4.9	9.6	3.6	3.4	1.6	1.4	1.4	1.4	1.5	1.6	1.6	1.5	1.2	1.2	1.2	1.2	-8.7
Campeche	4.1	6.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chiapas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	1.7	2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Coahuila	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Colima	7.3	4.7	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	n.a.
Ciudad de México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Durango	3.0	3.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guanajuato	1.1	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guerrero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Hidalgo	19.0	22.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Jalisco	0.3	0.0	-	-	-	-	-	-	-	-	-	-	1.9	-	-	-	n.a.
México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Michoacán	0.2	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Morelos	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nayarit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Oaxaca	0.0	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	n.a.
Puebla	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Querétaro	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	8.1	7.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sinaloa	22.1	15.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sonora	3.3	2.2	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tabasco	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tamaulipas	4.5	5.9	-	-	-	-	-	-	-	-	-	-	0.6	-	-	-	n.a.
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	21.3	8.8	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	4.8	0.2	0.2	0.2	-28.0
Yucatán	1.8	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Zacatecas	-	-	-	_	_	-	-	-	-	-	-	-	_	-	-	_	n.a.
Domestic	103.2	91.0	3.8	3.5	1.7	1.6	1.5	1.5	1.6	1.8	1.7	1.6	8.8	1.3	1.4	1.4	

## **Industrial Sector**

## TABLE B. 5 FUEL-OIL DEMAND INDUSTRIAL SECTOR BASE SCENARIO PROS16-30

(thousand barrels per day)

State								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	0.1	0.1	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California	0.2	0.1	0.1	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California Sur	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Campeche	0.1	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chiapas	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Coahuila	0.3	0.1	0.1	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Colima	0.3	0.1	0.1	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Ciudad de México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Durango	0.2	0.1	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guanajuato	0.8	0.3	0.2	0.1	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guerrero	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Hidalgo	0.6	0.4	0.4	0.3	0.3	-	-	-	-	-	-	-	-	-	-	-	n.a.
Jalisco	0.6	0.3	0.2	0.1	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
México	0.5	0.2	0.2	0.1	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Michoacán	0.9	0.3	0.2	0.1	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Morelos	0.4	0.3	0.2	0.2	0.2	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nayarit	0.3	0.1	0.1	0.1	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	0.1	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Oaxaca	0.3	0.2	0.2	0.1	0.1	-	-	-	-	-	-	-	-	-	-	-	n.a.
Puebla	0.4	0.2	0.2	0.1	0.1	-	-	-	-	-	-	-	-	-	-	-	n.a.
Querétaro	0.2	0.1	0.1	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Quintana Roo	0.1	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	0.3	0.2	0.1	0.1	0.1	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sinaloa	0.3	0.1	0.1	0.1	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sonora	0.4	0.2	0.1	0.1	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tabasco	0.1	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tamaulipas	0.1	0.1	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tlaxcala	0.2	0.1	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	0.8	0.5	0.4	0.3	0.1	-	-	-	-	-	-	-	-	-	-	-	n.a.
Yucatán	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Zacatecas	0.4	0.2	0.1	0.1	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Domestic	9.3	4.3	3.2	2.2	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.a.

Source: Prepared by the IMP, based on information from CNIAA, CONUEE, CRE, EIA, EPA, IEA, INEGI, PEMEX, SE, SENER and private companies.

0.4

Domestic 9.3 4.3

0.2

0.1

3.2 2.2

0.1 0.0

1.1

# TABLE B. 6 FUEL-OIL DEMAND INDUSTRIAL SECTOR BASE SCENARIO-LOW SAVING PROS16-30 (thousand barrels per day)

Data per year AAGR State 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2015-2030 0.1 0.1 0.0 0.0 0.0 Aguascalientes 0.2 0.1 0.1 0.0 0.0 Baja California n.a. Baja California Sur 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.0 Campeche n.a. Chiapas Chihuahua 0.0 0.0 0.0 Coahuila 0.3 0.1 0.1 0.0 0.0 0.3 Colima 0.1 0.1 0.0 Ciudad de México 0.0 0.2 0.1 0.0 Durango Guanajuato 0.2 0.1 0.0 0.0 0.0 0.0 0.0 0.0 Guerrero 0.6 0.4 0.3 0.4 Hidalgo 0.6 0.3 0.2 0.1 0.5 México 0.2 0.2 0.1 0.0 Michoacán 0.9 0.3 0.2 0.1 0.3 0.3 0.1 Nayarit 0.1 0.1 0.1 0.0 0.0 0.0 Nuevo León 0.3 0.2 0.2 0.1 0.1 0.4 Puebla 0.2 0.2 0.1 0.1 0.1 0.1 0.0 0.2 Querétaro n.a. Quintana Roo 0.1 0.0 0.0 0.0 0.0 San Luis Potosí 0.3 0.1 0.1 0.1 0.2 Sinaloa 0.3 0.1 0.1 0.1 0.4 0.2 0.1 0.1 0.0 Tabasco 0.1 0.0 0.0 0.0 Tamaulipas 0.1 0.0 0.2 0.1 0.0 0.0 0.0 Tlaxcala 0.8 Veracruz 0.5 0.4 0.3 0.1 n.a. 0.0 0.0 0.0 0.0

Source: Prepared by the IMP, based on information from CNIAA, CONUEE, CRE, EIA, EPA, IEA, INEGI, PEMEX, SE, SENER and private companies.

## TABLE B. 7 FUEL-OIL DEMAND INDUSTRIAL SECTOR MODERATE SCENARIO PROS16-30

(thousand barrels per day)

Stata								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	0.1	0.1	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California	0.2	0.1	0.1	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California Sur	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Campeche	0.1	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chiapas	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Coahuila	0.3	0.1	0.1	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Colima	0.3	0.1	0.1	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Ciudad de México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Durango	0.2	0.1	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guanajuato	0.8	0.3	0.2	0.1	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guerrero	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Hidalgo	0.6	0.4	0.4	0.3	0.3	-	-	-	-	-	-	-	-	-	-	-	n.a.
Jalisco	0.6	0.3	0.2	0.1	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
México	0.5	0.2	0.2	0.1	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Michoacán	0.9	0.3	0.2	0.1	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Morelos	0.4	0.3	0.2	0.2	0.2	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nayarit	0.3	0.1	0.1	0.1	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	0.1	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Oaxaca	0.3	0.2	0.2	0.1	0.1	-	-	-	-	-	-	-	-	-	-	-	n.a.
Puebla	0.4	0.2	0.2	0.1	0.1	-	-	-	-	-	-	-	-	-	-	-	n.a.
Querétaro	0.2	0.1	0.1	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Quintana Roo	0.1	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	0.3	0.2	0.1	0.1	0.1	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sinaloa	0.3	0.1	0.1	0.1	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sonora	0.4	0.2	0.1	0.1	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tabasco	0.1	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tamaulipas	0.1	0.1	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tlaxcala	0.2	0.1	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	0.8	0.5	0.4	0.3	0.1	-	-	-	_	_	-	_	-	-	-	_	n.a.
Yucatán	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-	-	_	-	-	-	-	n.a
Zacatecas	0.4	0.0	0.1	0.1	0.0	-	-	-	-	-	-	_	-	_	-	-	n.a.
Domestic	9.3	4.3	3.2	2.2	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Source: Prepared by the IMP, based on information from CNIAA, CONUEE, CRE, EIA, EPA, IEA, INEGI, PEMEX, SE, SENER and private companies.

### TABLE B. 8 FUEL-OIL DEMAND INDUSTRIAL SECTOR HIGH SCENARIO PROS16-30

(thousand barrels per day)

State								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	0.1	0.1	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California	0.2	0.1	0.1	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California Sur	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Campeche	0.1	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chiapas	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Coahuila	0.3	0.1	0.1	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Colima	0.3	0.1	0.1	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Ciudad de México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Durango	0.2	0.1	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guanajuato	0.8	0.3	0.2	0.1	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guerrero	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Hidalgo	0.6	0.4	0.4	0.3	0.3	-	-	-	-	-	-	-	-	-	-	-	n.a.
Jalisco	0.6	0.3	0.2	0.1	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
México	0.5	0.2	0.2	0.1	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Michoacán	0.9	0.3	0.2	0.1	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Morelos	0.4	0.3	0.2	0.2	0.2	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nayarit	0.3	0.1	0.1	0.1	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	0.1	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Oaxaca	0.3	0.2	0.2	0.1	0.1	-	-	-	-	-	-	-	-	-	-	-	n.a.
Puebla	0.4	0.2	0.2	0.1	0.1	-	-	-	-	-	-	-	-	-	-	-	n.a.
Querétaro	0.2	0.1	0.1	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Quintana Roo	0.1	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	0.3	0.2	0.1	0.1	0.1	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sinaloa	0.3	0.1	0.1	0.1	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sonora	0.4	0.2	0.1	0.1	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tabasco	0.1	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tamaulipas	0.1	0.1	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tlaxcala	0.2	0.1	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	0.8	0.5	0.4	0.3	0.1	-	-	-	-	-	-	-	-	-	-	-	n.a.
Yucatán	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Zacatecas	0.4	0.2	0.1	0.1	0.0	-	-	-	-	-	-	-	-	-	-	-	n.a.
Domestic	9.3	4.3	3.2	2.2	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.a.

#### **Maritime Transportation Sector**

### TABLE B. 9 FUEL-OIL DEMAND MARITIME TRANSPORTATION SECTOR BASE SCENARIO PROS16-30

(thousand barrels per day)

State								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California Sur	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Campeche	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chiapas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Coahuila	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Colima	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Ciudad de México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Durango	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guanajuato	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guerrero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Hidalgo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Jalisco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Michoacán	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.0
Morelos	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nayarit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Oaxaca	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Puebla	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Querétaro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sinaloa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sonora	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tabasco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tamaulipas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
Yucatán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Zacatecas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Domestic	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	

# TABLE B. 10 FUEL-OIL DEMAND MARITIME TRANSPORTATION SECTOR BASE SCENARIO-LOW SAVING PROS16-30

(thousand barrels per day)

State								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Baja California	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Baja California Sur	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Campeche	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Chiapas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Chihuahua	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Coahuila	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Colima	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Ciudad de México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Durango	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Guanajuato	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Guerrero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Hidalgo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Jalisco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Michoacán	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.0
Morelos	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Nayarit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Nuevo León	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Oaxaca	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Puebla	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Querétaro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
San Luis Potosí	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Sinaloa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Sonora	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Tabasco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Tamaulipas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Veracruz	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
Yucatán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Zacatecas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Domestic	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0

TABLE B. 11
FUEL-OIL DEMAND MARITIME TRANSPORTATION SECTOR MODERATE SCENARIO PROS16-30
(thousand barrels per day)

State								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Baja California	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California Sur	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Campeche	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chiapas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Coahuila	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Colima	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Ciudad de México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Durango	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guanajuato	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guerrero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Hidalgo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Jalisco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Michoacán	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.0
Morelos	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Nayarit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Oaxaca	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Puebla	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Querétaro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sinaloa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sonora	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tabasco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tamaulipas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
Yucatán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Zacatecas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Domestic	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0

# TABLE B. 12 FUEL-OIL DEMAND MARITIME TRANSPORTATION SECTOR HIGH SCENARIO PROS16-30 (thousand barrels per day)

Data per year AAGR State 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2015-2030 Aguascalientes Baja California Baja California Sur -Campeche - n.a. Chihuahua Ciudad de México - -Guerrero Jalisco 0.3 0.3 0.3 0.3 0.3 0.3 0.3 Michoacán 0.3 0.3 0.3 0.3 0.3 Morelos n.a. Nuevo León - -0.0 0.0 0.0 0.0 0.0 0.0 0.0 Oaxaca 0.0 0.0 0.0 0.0 0.0 0.0 Puebla Ouerétaro 0.0 Yucatán n.a. 7acatecas n a

Source: Prepared by the IMP, based on CONUEE, CRE, EIA, EPA, IEA, INECC, INEGI, PEMEX, SEMARNAT, SCT, SENER and private companies.

#### **Petroleum Coke**

#### **Electricity Service**

### TABLE B. 13 PETROLEUM-COKE DEMAND ELECTRICITY SECTOR BASE SCENARIO PROS16-30

(Thousand tons)

State								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California Sur	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Campeche	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chiapas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Coahuila	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Colima	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Ciudad de México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Durango	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guanajuato	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guerrero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Hidalgo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Jalisco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Michoacán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Morelos	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nayarit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Oaxaca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Puebla	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Querétaro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	1,204.6	1,267.5	1,264.1	1,264.1	1,264.1	1,267.5	1,264.1	1,264.1	1,264.1	1,267.5	1,264.1	1,264.1	1,264.1	1,267.5	1,264.1	1,264.1	0.3
Sinaloa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sonora	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tabasco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tamaulipas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Yucatán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Zacatecas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Domestic	1204.6	1267.5	1264.1	1264.1	1264.1	1267.5	1264.1	1264.1	1264.1	1267.5	1264.1	1264.1	1264.1	1267.5	1264.1	1264.	1 0.3

TABLE B. 14
PETROLEUM-COKE DEMAND ELECTRICITY SECTOR BASE SCENARIO-LOW SAVING PROS16-30
(Thousand tons)

State								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California Sur	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Campeche	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chiapas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Coahuila	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Colima	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Ciudad de México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Durango	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guanajuato	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guerrero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Hidalgo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Jalisco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Michoacán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Morelos	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nayarit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Oaxaca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Puebla	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Querétaro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	1,204.6	1,267.5	1,264.1	1,264.1	1,264.1	1,267.5	1,264.1	1,264.1	1,264.1	1,267.5	1,264.1	1,264.1	1,264.1	1,267.5	1,264.1	1,264.1	0.3
Sinaloa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sonora	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tabasco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tamaulipas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Yucatán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Zacatecas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Domestic	1204.6	1267.5	1264.1	1264.1	1264.1	1267.5	1264.1	1264.1	1264.1	1267.5	1264.1	1264.1	1264.1	1267.5	1264.1	1264.1	0.3

# TABLE B. 15 PETROLEUM-COKE DEMAND ELECTRICITY SECTOR MODERATE SCENARIO PROS16-30 (Thousand tons)

State								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Baja California	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California Sur	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Campeche	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chiapas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Coahuila	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Colima	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Ciudad de México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Durango	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guanajuato	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guerrero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Hidalgo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Jalisco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Michoacán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Morelos	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nayarit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Oaxaca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Puebla	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Querétaro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	1,204.6	1,267.5	1,264.1	1,264.1	1,264.1	1,267.5	1,264.1	1,264.1	1,264.1	1,267.5	1,264.1	1,264.1	1,264.1	1,267.5	1,264.1	1,264.1	0.3
Sinaloa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sonora	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tabasco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tamaulipas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Yucatán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Zacatecas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Domestic	1204.6	1267.5	1264.1	1264.1	1264.1	1267.5	1264.1	1264.1	1264.1	1267.5	1264.1	1264.1	1264.1	1267.5	1264.1	1264.1	0.3

## TABLE B. 16 PETROLEUM-COKE DEMAND ELECTRICITY SECTOR HIGH SCENARIO PROS16-30

(Thousand tons)

C+-+-								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Baja California	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Baja California Sur	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Campeche	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chiapas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Coahuila	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Colima	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Ciudad de México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Durango	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guanajuato	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guerrero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Hidalgo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Jalisco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Michoacán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Morelos	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nayarit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Oaxaca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Puebla	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Querétaro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	1,204.6	1,267.5	1,264.1	1,264.1	1,264.1	1,267.5	1,264.1	1,264.1	1,264.1	1,267.5	1,264.1	1,264.1	1,264.1	1,267.5	1,264.1	1,264.1	0.3
Sinaloa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sonora	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tabasco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tamaulipas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Yucatán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Zacatecas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Domestic	1204.6	1267.5	1264.1	1264.1	1264.1	1267.5	1264.1	1264.1	1264.1	1267.5	1264.1	1264.1	1264.1	1267.5	1264.1	1264.1	0.3

#### **Industrial Sector**

### TABLE B. 17 PETROLEUM-COKE DEMAND INDUSTRIAL SECTOR BASE SCENARIO PROS16-30

(Thousand tons)

State								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	242.8	242.8	242.8	242.8	233.1	228.2	223.1	219.3	214.5	206.9	198.2	192.1	183.5	176.7	170.3	162.2	-2.7
Baja California	39.2	39.9	40.2	52.0	51.9	52.8	54.7	56.7	59.1	60.9	61.9	63.9	65.4	66.9	68.5	69.8	3.9
Baja California Sur	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Campeche	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chiapas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.0
Coahuila	131.8	142.1	150.9	173.8	170.3	170.3	171.7	173.3	174.6	174.1	171.8	170.9	168.3	164.9	162.1	159.5	1.3
Colima	135.1	123.3	128.4	128.4	123.3	120.7	118.5	116.6	114.3	110.1	106.3	102.7	98.0	94.4	90.7	85.7	-3.0
Distrito Federal	9.1	9.2	9.2	9.2	8.8	8.5	8.6	8.7	8.7	8.6	8.5	8.5	8.4	8.3	8.2	8.0	-0.9
Durango	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guanajuato	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guerrero	20.1	24.9	24.9	24.9	23.9	23.4	24.9	26.2	27.6	28.8	29.9	31.4	32.8	34.2	35.1	36.2	4.0
Hidalgo	917.5	823.2	821.2	853.9	835.6	834.5	842.8	855.0	866.4	873.1	868.6	868.2	856.6	853.0	846.3	832.7	-0.6
Jalisco	191.2	192.7	192.3	190.7	190.4	193.8	189.2	184.1	177.0	170.6	162.9	157.3	148.6	141.4	134.2	127.1	-2.7
México	198.3	204.6	208.9	205.1	200.4	199.8	195.8	191.5	188.4	182.9	177.2	172.0	164.2	156.3	148.7	142.7	-2.2
Michoacán	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	7.1
Morelos	257.3	184.6	184.6	184.6	177.2	173.5	176.1	177.2	175.9	175.9	173.1	173.4	170.5	168.5	165.3	163.5	-3.0
Nayarit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	216.8	229.6	276.8	316.9	312.7	314.6	323.1	330.3	337.7	343.3	346.1	352.9	354.6	356.0	355.3	352.4	3.3
Oaxaca	200.6	200.6	200.6	200.6	192.6	188.5	193.7	199.0	204.6	209.7	214.4	221.7	225.6	229.8	230.1	233.3	1.0
Puebla	325.0	360.7	393.7	531.5	525.5	530.2	540.6	550.3	550.9	555.9	557.5	565.7	562.9	554.3	549.6	540.5	3.4
Querétaro	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.9
Quintana Roo	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
San Luis Potosí	477.1	482.5	485.6	465.0	454.7	453.6	458.2	464.2	466.2	467.3	463.5	459.9	458.7	449.1	441.9	436.8	-0.6
Sinaloa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sonora	267.6	317.2	323.8	376.4	369.3	411.9	415.0	421.9	427.1	423.5	423.2	427.4	428.2	423.9	416.6	409.8	2.9
Tabasco	45.1	56.0	56.0	56.0	53.8	52.6	54.8	57.5	59.3	61.2	62.2	64.7	66.7	68.6	70.2	71.0	3.1
Tamaulipas	42.6	44.9	46.4	48.4	48.2	49.0	51.3	53.4	55.8	58.1	59.0	61.3	62.8	63.8	64.8	65.4	2.9
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	267.4	229.0	229.6	230.5	221.3	216.7	216.5	218.8	219.0	216.5	213.0	211.0	209.2	205.5	201.4	197.7	-2.0
Yucatán	70.3	76.1	81.1	97.4	97.2	99.0	95.9	93.5	91.2	88.4	84.5	82.1	79.1	74.9	70.7	67.7	-0.3
Zacatecas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Domestic	4055.5	3984.4	4097.5	4388.5	4290.7	4322.4	4355.0	4398.1	4419.1	4416.5	4382.4	4388.0	4345.0	4291.2	4231.0	4162.9	0.2

TABLE B. 18
PETROLEUM-COKE DEMAND INDUSTRIAL SECTOR BASE SCENARIO-LOW SAVING PROS16-30
(Thousand tons)

State								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	242.8	242.8	242.8	242.8	242.8	242.8	236.3	231.6	226.2	218.2	211.3	205.2	198.6	193.8	189.6	183.5	-1.9
Baja California	39.2	39.9	40.2	52.0	54.1	56.2	57.9	59.9	62.4	64.2	66.0	68.3	70.8	73.4	76.3	79.0	4.8
Baja California Sur	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Campeche	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chiapas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.9
Coahuila	131.8	142.1	150.9	173.8	177.4	181.2	182.0	183.0	184.2	183.6	183.2	182.6	182.1	181.0	180.5	180.5	2.1
Colima	135.1	123.3	128.4	128.4	128.4	128.4	125.6	123.1	120.5	116.1	113.4	109.7	106.1	103.5	101.0	96.9	-2.2
Distrito Federal	9.1	9.2	9.2	9.2	9.2	9.2	9.3	9.3	9.3	9.2	9.3	9.3	9.3	9.3	9.3	9.2	0.1
Durango	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guanajuato	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guerrero	20.1	24.9	24.9	24.9	24.9	24.9	26.3	27.6	29.1	30.3	31.9	33.6	35.4	37.5	39.0	41.0	4.9
Hidalgo	917.5	823.2	821.2	853.9	871.0	889.1	894.2	904.3	915.3	922.2	927.6	928.9	928.4	937.3	943.7	943.2	0.2
Jalisco	191.2	192.7	192.3	190.7	198.3	206.2	200.4	194.4	186.7	179.9	173.7	168.0	160.8	155.1	149.4	143.7	-1.9
México	198.3	204.6	208.9	205.1	208.8	212.6	207.4	202.3	198.8	193.0	189.0	183.7	177.7	171.5	165.6	161.4	-1.4
Michoacán	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	8.2
Morelos	257.3	184.6	184.6	184.6	184.6	184.6	186.5	187.1	185.6	185.5	184.6	185.2	184.5	184.9	184.1	184.9	-2.2
Nayarit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	216.8	229.6	276.8	316.9	326.5	336.3	344.3	351.2	359.0	365.4	372.9	381.5	388.9	396.5	402.4	406.2	4.3
Oaxaca	200.6	200.6	200.6	200.6	200.6	200.6	205.2	210.2	215.9	221.1	228.6	236.8	244.1	252.1	256.2	263.8	1.8
Puebla	325.0	360.7	393.7	531.5	547.4	564.0	572.7	581.1	581.1	586.2	594.5	604.3	609.1	608.1	611.9	611.1	4.3
Querétaro	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2.9
Quintana Roo	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9
San Luis Potosí	477.1	482.5	485.6	465.0	473.6	482.6	485.4	490.3	491.7	492.8	494.2	491.3	496.4	492.7	491.9	493.9	0.2
Sinaloa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sonora	267.6	317.2	323.8	376.4	384.7	438.2	439.7	445.5	450.5	446.7	451.2	456.5	463.3	465.0	463.8	463.4	3.7
Tabasco	45.1	56.0	56.0	56.0	56.0	56.0	58.1	60.7	62.5	64.5	66.3	69.1	72.2	75.2	78.2	80.3	3.9
Tamaulipas	42.6	44.9	46.4	48.4	50.5	52.7	55.0	57.1	59.8	62.3	64.0	66.7	69.3	71.4	73.8	75.7	3.9
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	267.4	229.0	229.6	230.5	230.5	230.5	229.3	231.1	231.1	228.4	227.1	225.5	226.4	225.4	224.2	223.6	-1.2
Yucatán	70.3	76.1	81.1	97.4	101.3	105.3	101.6	98.8	96.2	93.3	90.1	87.7	85.6	82.2	78.7	76.5	0.6
Zacatecas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Domestic	4055 5	3984 4	4097.5	4388.5	4471.3	4602 2	4618.0	4649.4	4666.6	4663.7	4679.6	46947	4709 R	4717.0	4720.7	4718 9	1.0

TABLE B. 19
PETROLEUM-COKE DEMAND INDUSTRIAL SECTOR MODERATE SCENARIO PROS16-30
(Thousand tons)

State								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	242.8	242.8	242.8	242.8	242.8	242.8	233.8	226.4	218.1	207.3	197.7	188.8	179.5	172.0	165.0	156.4	-2.9
Baja California	39.2	39.9	40.1	52.0	54.0	56.2	57.3	58.5	60.1	61.0	61.7	62.8	63.9	65.1	66.3	67.3	3.7
Baja California Sur	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Campeche	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chiapas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	-0.4
Coahuila	131.8	142.1	150.9	173.8	177.4	181.1	180.0	178.8	177.5	174.4	171.3	167.9	164.6	160.5	157.0	153.7	1.0
Colima	135.1	123.3	128.4	128.4	128.4	128.4	124.2	120.3	116.2	110.3	106.1	101.0	95.9	91.9	87.9	82.6	-3.2
Distrito Federal	9.1	9.1	9.1	9.0	9.0	8.9	8.8	8.7	8.6	8.4	8.3	8.2	8.1	7.9	7.7	7.5	-1.3
Durango	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guanajuato	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guerrero	20.1	24.9	24.9	24.9	24.9	24.9	26.1	27.0	28.0	28.8	29.8	30.9	32.0	33.3	34.0	34.9	3.8
Hidalgo	917.5	822.7	820.2	852.3	868.2	885.0	880.5	879.8	878.2	872.1	863.5	850.4	834.9	827.4	816.7	799.6	-0.9
Jalisco	191.2	192.7	192.3	190.7	198.3	206.2	198.3	190.1	180.0	170.9	162.5	154.6	145.4	137.7	130.0	122.5	-2.9
México	198.3	204.6	208.8	205.0	208.7	212.5	205.1	197.6	191.5	183.2	176.7	168.9	160.5	152.0	143.9	137.4	-2.4
Michoacán	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	6.6
Morelos	257.3	184.6	184.6	184.6	184.6	184.6	184.6	182.9	178.9	176.3	172.7	170.5	166.7	164.0	160.1	157.6	-3.2
Nayarit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	216.8	229.1	275.8	315.3	323.6	332.0	336.0	338.4	340.8	341.4	342.6	344.3	344.2	343.9	341.6	337.1	3.0
Oaxaca	200.6	200.6	200.6	200.6	200.6	200.6	203.0	205.5	208.1	210.1	213.9	217.9	220.6	223.7	222.9	224.8	0.8
Puebla	325.0	360.6	393.7	531.5	547.4	564.0	566.6	568.1	560.3	557.1	556.1	556.1	550.6	539.6	532.3	520.9	3.2
Querétaro	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.5
Quintana Roo	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
San Luis Potosí	477.1	482.5	485.6	465.0	473.6	482.6	480.3	479.3	474.1	468.3	462.4	452.1	448.7	437.2	428.0	421.0	-0.8
Sinaloa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sonora	267.6	317.2	323.8	376.4	384.7	438.2	435.0	435.5	434.4	424.5	422.2	420.1	418.8	412.6	403.5	395.0	2.6
Tabasco	45.1	56.0	56.0	56.0	56.0	56.0	57.5	59.4	60.3	61.3	62.0	63.6	65.3	66.8	68.0	68.4	2.8
Tamaulipas	42.6	44.7	46.0	47.7	49.3	50.9	52.4	53.8	55.4	56.8	57.5	58.8	59.9	60.6	61.3	61.5	2.5
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	267.4	228.9	229.6	230.5	230.5	230.5	226.9	225.8	222.7	217.0	212.4	207.4	204.6	200.0	195.0	190.5	-2.2
Yucatán	70.3	76.1	81.1	97.4	101.3	105.3	100.6	96.6	92.7	88.6	84.3	80.7	77.4	72.9	68.4	65.2	-0.5
Zacatecas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Domestic	4055.5	3983.1	4094.9	4384.4	4463.8	4591.2	4557,5	4533,1	4486.8	4418.7	4364.3	4305.6	4242.5	4170.0	4090.5	4004.8	-0.1

# TABLE B. 20 PETROLEUM-COKE DEMAND INDUSTRIAL SECTOR HIGH SCENARIO PROS16-30 (Thousand tons)

<b>.</b> .								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	242.8	242.8	242.8	242.8	242.8	242.8	237.3	232.6	226.7	217.6	209.6	202.2	194.3	188.0	182.2	174.5	-2.2
Baja California	39.2	39.9	40.2	52.0	54.1	56.3	58.2	60.1	62.5	64.1	65.5	67.3	69.3	71.2	73.4	75.2	4.4
Baja California Sur	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Campeche	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chiapas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.7
Coahuila	131.8	142.1	150.9	173.8	177.4	181.2	182.7	183.8	184.6	183.2	181.7	180.0	178.2	175.6	173.5	171.7	1.8
Colima	135.1	123.3	128.4	128.4	128.4	128.4	126.1	123.6	120.8	115.8	112.4	108.1	103.8	100.4	97.0	92.2	-2.5
Distrito Federal	9.1	9.2	9.2	9.3	9.4	9.5	9.6	9.6	9.5	9.4	9.4	9.3	9.3	9.2	9.1	8.9	-0.2
Durango	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guanajuato	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guerrero	20.1	24.9	24.9	24.9	24.9	24.9	26.5	27.8	29.1	30.2	31.6	33.1	34.7	36.4	37.5	39.0	4.5
Hidalgo	917.5	823.5	821.9	855.9	873.6	892.4	901.2	911.3	920.7	923.5	923.6	919.2	912.1	913.1	910.8	901.1	-0.1
Jalisco	191.2	192.7	192.3	190.7	198.3	206.2	201.2	195.2	187.1	179.4	172.3	165.6	157.3	150.5	143.6	136.7	-2.2
México	198.3	204.6	208.9	205.1	208.9	212.7	208.4	203.2	199.3	192.6	187.5	181.2	174.0	166.5	159.2	153.6	-1.7
Michoacán	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	7.9
Morelos	257.3	184.6	184.6	184.6	184.6	184.6	187.3	187.9	186.0	185.0	183.1	182.6	180.5	179.3	176.9	175.9	-2.5
Nayarit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	216.8	229.9	277.4	318.7	328.8	339.0	348.1	354.7	361.5	365.7	370.6	376.2	380.0	383.5	384.8	383.6	3.9
Oaxaca	200.6	200.6	200.6	200.6	200.6	200.6	206.0	211.0	216.3	220.6	226.7	233.4	238.8	244.5	246.2	250.9	1.5
Puebla	325.0	360.7	393.7	531.5	547.4	564.0	575.0	583.5	582.3	584.7	589.5	595.6	595.9	589.9	588.0	581.3	4.0
Querétaro	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2.7
Quintana Roo	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8
San Luis Potosí	477.1	482.5	485.6	465.0	473.6	482.6	487.4	492.2	492.7	491.6	490.1	484.2	485.6	477.9	472.7	469.8	-0.1
Sinaloa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sonora	267.6	317.2	323.8	376.4	384.7	438.2	441.4	447.3	451.4	445.5	447.5	449.9	453.2	451.1	445.7	440.8	3.4
Tabasco	45.1	56.0	56.0	56.0	56.0	56.0	58.3	61.0	62.6	64.4	65.7	68.1	70.6	73.0	75.1	76.3	3.6
Tamaulipas	42.6	45.0	46.7	49.3	51.6	54.2	56.7	58.8	61.3	63.5	64.9	67.1	69.1	70.5	72.1	73.1	3.7
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	267.4	229.0	229.6	230.5	230.5	230.5	230.3	232.0	231.5	227.8	225.2	222.2	221.5	218.7	215.5	212.7	-1.5
Yucatán	70.3	76.1	81.1	97.4	101.3	105.3	102.0	99.2	96.4	93.0	89.3	86.4	83.7	79.7	75.6	72.8	0.2
Zacatecas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Domestic	4055.5	3985.2	4099.1	4393.6	4477.7	4610.1	4644.5	4675.5	4683.1	4658.8	4647.1	4632.6	4612.7	4580.0	4539.9	4490.7	0.7

#### Diesel

#### **Motor-Carrier Sector**

## TABLE B. 21 DIESEL DEMAND MOTOR-CARRIER SECTOR BASE SCENARIO PROS16-30

(thousand barrels per day)

State								Data pe	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	4.3	4.4	4.5	4.7	4.9	5.0	5.3	5.5	5.7	5.9	6.1	6.3	6.5	6.6	6.8	7.0	3.3
Baja California	10.3	10.6	10.8	11.1	11.6	12.2	12.8	13.4	13.8	14.1	14.3	14.6	14.9	15.1	15.3	15.5	2.8
Baja California Sur	2.1	2.1	2.2	2.2	2.3	2.5	2.6	2.7	2.8	2.8	2.9	3.0	3.0	3.0	3.1	3.1	2.8
Campeche	1.4	1.5	1.5	1.6	1.6	1.7	1.8	1.8	1.9	2.0	2.0	2.1	2.1	2.2	2.2	2.3	3.1
Chiapas	8.1	8.3	8.7	9.0	9.1	9.4	9.9	10.3	10.6	11.0	11.3	11.6	12.0	12.2	12.5	12.7	3.1
Chihuahua	11.3	11.6	11.9	12.0	12.4	12.8	13.4	14.0	14.6	15.1	15.3	16.2	16.8	17.3	17.6	18.3	3.3
Coahuila	4.4	4.6	4.7	4.7	4.9	5.0	5.3	5.5	5.8	6.0	6.0	6.4	6.6	6.8	6.9	7.2	3.3
Colima	12.5	12.8	13.3	13.7	14.2	14.7	15.4	16.0	16.6	17.2	17.7	18.3	18.8	19.4	19.9	20.4	3.3
Ciudad de México	22.4	23.0	23.6	24.3	24.5	25.3	26.3	27.1	27.9	28.6	29.2	30.0	30.6	31.3	31.9	32.4	2.5
Durango	12.0	12.3	12.6	12.7	13.1	13.6	14.3	14.9	15.5	16.0	16.2	17.2	17.8	18.3	18.7	19.4	3.3
Guanajuato	15.4	15.8	16.4	16.9	17.5	18.1	18.9	19.7	20.5	21.1	21.8	22.5	23.2	23.9	24.5	25.1	3.3
Guerrero	3.9	4.1	4.2	4.4	4.4	4.6	4.8	5.0	5.2	5.3	5.5	5.7	5.8	5.9	6.1	6.2	3.1
Hidalgo	17.5	18.0	18.7	19.6	20.2	20.9	21.8	22.6	23.3	24.1	24.7	25.5	26.1	26.8	27.4	28.1	3.2
Jalisco	15.0	15.4	15.9	16.4	17.0	17.6	18.4	19.2	19.9	20.6	21.2	21.9	22.6	23.2	23.9	24.5	3.3
México	15.7	16.1	16.6	17.0	17.2	17.8	18.4	19.0	19.5	20.1	20.5	21.0	21.5	21.9	22.3	22.7	2.5
Michoacán	11.5	11.8	12.2	12.6	13.0	13.5	14.1	14.7	15.3	15.8	16.2	16.8	17.3	17.8	18.3	18.8	3.3
Morelos	3.7	3.8	4.0	4.2	4.3	4.4	4.6	4.8	5.0	5.1	5.2	5.4	5.6	5.7	5.8	6.0	3.2
Nayarit	1.6	1.6	1.7	1.7	1.8	1.9	1.9	2.0	2.1	2.2	2.2	2.3	2.4	2.4	2.5	2.6	3.3
Nuevo León	24.4	25.1	25.7	26.3	26.8	27.2	27.8	28.3	28.8	29.2	29.6	30.1	30.5	30.9	31.4	31.8	1.8
Oaxaca	4.5	4.7	4.8	5.0	5.1	5.3	5.5	5.7	5.9	6.1	6.3	6.5	6.7	6.8	7.0	7.1	3.1
Puebla	10.6	10.9	11.4	11.9	12.3	12.7	13.2	13.7	14.2	14.6	15.0	15.5	15.9	16.3	16.7	17.1	3.2
Querétaro	8.7	9.0	9.3	9.6	9.9	10.3	10.8	11.2	11.6	12.0	12.4	12.8	13.2	13.6	13.9	14.3	3.3
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	8.3	8.5	8.8	9.0	9.4	9.7	10.2	10.6	11.0	11.3	11.7	12.1	12.5	12.8	13.1	13.5	3.3
Sinaloa	14.9	15.3	15.5	16.0	16.7	17.6	18.4	19.3	19.9	20.3	20.7	21.1	21.5	21.8	22.1	22.3	2.8
Sonora	15.3	15.7	16.0	16.4	17.2	18.0	18.9	19.8	20.4	20.9	21.3	21.7	22.1	22.4	22.7	23.0	2.8
Tabasco	3.0	3.1	3.2	3.3	3.4	3.5	3.7	3.8	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7	3.1
Tamaulipas	19.2	19.8	20.3	20.5	21.1	21.8	22.9	23.9	24.9	25.8	26.1	27.7	28.7	29.5	30.0	31.2	3.3
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	23.5	24.2	25.2	26.1	26.6	27.4	28.7	29.8	30.9	31.9	32.7	33.8	34.8	35.5	36.3	37.0	3.1
Yucatán	7.9	8.1	8.5	8.8	8.9	9.2	9.6	10.0	10.4	10.7	11.0	11.4	11.7	11.9	12.2	12.4	3.1
Zacatecas	3.8	4.0	4.1	4.2	4.4	4.5	4.7	4.9	5.1	5.3	5.4	5.6	5.8	6.0	6.1	6.3	3.3
Domestic	317.2	326.4	336.2	345.9	355.7	368.2	384.3	399.4	413.1	425.1	434.7	449.4	461.4	471.8	481.8	493.0	3.0

TABLE B. 22
DIESEL DEMAND MOTOR-CARRIER SECTOR BASE SCENARIO-LOW SAVING PROS16-30
(thousand barrels per day)

State								Data po	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	4.3	4.4	4.5	4.7	4.8	5.0	5.2	5.4	5.6	5.8	6.0	6.2	6.4	6.6	6.8	7.0	3.3
Baja California	10.3	10.6	10.7	10.9	11.4	11.9	12.4	13.0	13.3	13.6	13.8	14.1	14.4	14.6	14.8	15.1	2.6
Baja California Sur	2.1	2.1	2.2	2.2	2.3	2.4	2.5	2.6	2.7	2.7	2.8	2.9	2.9	2.9	3.0	3.0	2.6
Campeche	1.4	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.9	1.9	1.9	2.0	2.1	2.1	2.1	2.2	2.8
Chiapas	8.1	8.3	8.7	9.0	9.2	9.4	9.8	10.1	10.4	10.7	10.9	11.2	11.5	11.7	12.0	12.2	2.8
Chihuahua	11.3	11.6	11.8	11.9	12.2	12.6	13.1	13.6	14.1	14.5	14.7	15.4	15.9	16.4	16.7	17.4	2.9
Coahuila	4.4	4.6	4.6	4.7	4.8	5.0	5.2	5.4	5.5	5.7	5.8	6.1	6.3	6.4	6.6	6.9	2.9
Colima	12.5	12.7	13.2	13.6	14.1	14.6	15.2	15.8	16.4	16.9	17.4	18.0	18.6	19.1	19.7	20.3	3.3
Ciudad de México	22.4	22.9	23.6	24.2	24.5	25.2	26.1	26.9	27.6	28.3	28.9	29.7	30.4	31.1	31.8	32.4	2.5
Durango	12.0	12.3	12.5	12.6	13.0	13.4	13.9	14.4	14.9	15.4	15.6	16.4	16.9	17.4	17.8	18.5	2.9
Guanajuato	15.4	15.7	16.2	16.8	17.4	18.0	18.7	19.5	20.2	20.8	21.5	22.2	22.9	23.6	24.3	25.0	3.3
Guerrero	3.9	4.1	4.2	4.4	4.5	4.6	4.8	4.9	5.1	5.2	5.3	5.5	5.6	5.7	5.8	6.0	2.8
Hidalgo	17.5	17.8	18.6	19.4	20.0	20.7	21.4	22.1	22.8	23.5	24.0	24.8	25.4	26.1	26.7	27.4	3.0
Jalisco	15.0	15.3	15.8	16.3	16.9	17.5	18.2	19.0	19.7	20.3	20.9	21.6	22.3	23.0	23.7	24.4	3.3
México	15.7	16.1	16.5	17.0	17.2	17.7	18.3	18.8	19.4	19.9	20.3	20.8	21.3	21.8	22.3	22.7	2.5
Michoacán	11.5	11.7	12.1	12.5	13.0	13.4	14.0	14.5	15.1	15.6	16.0	16.6	17.1	17.6	18.1	18.7	3.3
Morelos	3.7	3.8	3.9	4.1	4.3	4.4	4.6	4.7	4.8	5.0	5.1	5.3	5.4	5.5	5.7	5.8	3.0
Nayarit	1.6	1.6	1.7	1.7	1.8	1.8	1.9	2.0	2.1	2.1	2.2	2.3	2.4	2.4	2.5	2.6	3.3
Nuevo León	24.4	25.1	25.7	26.3	26.8	27.2	27.8	28.4	28.8	29.3	29.7	30.3	30.9	31.4	31.9	32.5	1.9
Oaxaca	4.5	4.7	4.9	5.0	5.1	5.3	5.5	5.6	5.8	6.0	6.1	6.3	6.4	6.6	6.7	6.8	2.8
Puebla	10.6	10.8	11.3	11.8	12.2	12.6	13.0	13.5	13.9	14.3	14.6	15.1	15.5	15.9	16.3	16.7	3.0
Querétaro	8.7	8.9	9.2	9.5	9.9	10.2	10.7	11.1	11.5	11.9	12.2	12.6	13.0	13.4	13.8	14.2	3.3
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	8.3	8.4	8.7	9.0	9.3	9.6	10.1	10.4	10.8	11.2	11.5	11.9	12.3	12.7	13.0	13.4	3.3
Sinaloa	14.9	15.3	15.4	15.7	16.5	17.2	17.9	18.7	19.2	19.6	19.9	20.4	20.7	21.1	21.4	21.7	2.6
Sonora	15.3	15.7	15.9	16.2	16.9	17.7	18.4	19.2	19.8	20.2	20.5	20.9	21.3	21.6	22.0	22.3	2.6
Tabasco	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.5	4.6	2.8
Tamaulipas	19.2	19.8	20.1	20.2	20.9	21.5	22.4	23.2	24.0	24.7	25.1	26.3	27.2	27.9	28.6	29.7	2.9
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	23.5	24.2	25.2	26.1	26.8	27.4	28.4	29.4	30.3	31.0	31.7	32.6	33.5	34.1	34.8	35.6	2.8
Yucatán	7.9	8.1	8.5	8.8	9.0	9.2	9.6	9.9	10.2	10.4	10.6	11.0	11.2	11.4	11.7	11.9	2.8
Zacatecas	3.8	3.9	4.1	4.2	4.3	4.5	4.7	4.9	5.0	5.2	5.4	5.6	5.7	5.9	6.1	6.3	3.3
Domestic	317.2	325.2	334.5	343.8	354.3	364.9	379.2	392.5	404.7	415.3	424.5	438.2	449.9	460.4	471.3	483.2	2.8

### TABLE B. 23 DIESEL DEMAND MOTOR-CARRIER SECTOR MODERATE SCENARIO PROS16-30

(thousand barrels per day)

C+-+-								Data pe	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	4.3	4.5	4.5	4.6	4.7	4.9	5.1	5.3	5.5	5.6	5.8	6.0	6.2	6.3	6.5	6.7	3.0
Baja California	10.3	10.6	10.7	11.0	11.4	11.9	12.4	12.9	13.3	13.6	13.8	14.1	14.3	14.5	14.6	14.8	2.5
Baja California Sur	2.1	2.1	2.2	2.2	2.3	2.4	2.5	2.6	2.7	2.7	2.8	2.8	2.9	2.9	3.0	3.0	2.5
Campeche	1.4	1.5	1.5	1.6	1.6	1.6	1.7	1.8	1.8	1.9	1.9	2.0	2.0	2.1	2.1	2.1	2.7
Chiapas	8.1	8.5	8.6	8.9	8.9	9.1	9.5	9.9	10.2	10.5	10.8	11.1	11.4	11.6	11.8	12.0	2.7
Chihuahua	11.3	11.8	11.7	11.7	12.0	12.4	13.0	13.5	14.0	14.5	14.7	15.5	16.1	16.5	16.8	17.4	2.9
Coahuila	4.4	4.7	4.6	4.6	4.7	4.9	5.1	5.3	5.5	5.7	5.8	6.1	6.3	6.5	6.6	6.9	2.9
Colima	12.5	13.0	13.1	13.4	13.8	14.3	14.9	15.4	16.0	16.5	16.9	17.5	18.0	18.5	18.9	19.4	3.0
Ciudad de México	22.4	23.0	23.4	23.8	24.0	24.6	25.4	26.2	26.9	27.5	28.1	28.7	29.3	29.9	30.4	31.0	2.2
Durango	12.0	12.6	12.4	12.5	12.8	13.2	13.8	14.3	14.9	15.4	15.6	16.5	17.1	17.5	17.8	18.5	2.9
Guanajuato	15.4	16.0	16.1	16.5	17.0	17.6	18.3	19.0	19.7	20.3	20.9	21.6	22.2	22.8	23.4	23.9	3.0
Guerrero	3.9	4.1	4.2	4.3	4.3	4.4	4.6	4.8	5.0	5.1	5.2	5.4	5.5	5.6	5.8	5.9	2.7
Hidalgo	17.5	18.2	18.5	19.2	19.7	20.3	21.0	21.7	22.4	23.1	23.6	24.3	24.9	25.4	26.0	26.6	2.8
Jalisco	15.0	15.6	15.7	16.1	16.6	17.1	17.8	18.5	19.2	19.8	20.3	21.0	21.6	22.2	22.7	23.3	3.0
México	15.7	16.1	16.4	16.7	16.8	17.3	17.8	18.4	18.8	19.3	19.7	20.1	20.5	20.9	21.3	21.7	2.2
Michoacán	11.5	12.0	12.0	12.3	12.7	13.1	13.7	14.2	14.7	15.1	15.6	16.1	16.6	17.0	17.4	17.9	3.0
Morelos	3.7	3.9	3.9	4.1	4.2	4.3	4.5	4.6	4.8	4.9	5.0	5.2	5.3	5.4	5.5	5.6	2.8
Nayarit	1.6	1.6	1.7	1.7	1.7	1.8	1.9	1.9	2.0	2.1	2.1	2.2	2.3	2.3	2.4	2.5	3.0
Nuevo León	24.4	25.3	25.4	25.9	26.2	26.5	27.1	27.5	27.8	28.2	28.5	29.0	29.4	29.7	30.1	30.5	1.5
Oaxaca	4.5	4.8	4.8	4.9	5.0	5.1	5.3	5.5	5.7	5.9	6.0	6.2	6.4	6.5	6.6	6.7	2.7
Puebla	10.6	11.1	11.3	11.7	12.0	12.3	12.8	13.2	13.6	14.0	14.3	14.8	15.1	15.5	15.8	16.2	2.8
Querétaro	8.7	9.1	9.2	9.4	9.7	10.0	10.4	10.8	11.2	11.5	11.9	12.3	12.6	12.9	13.3	13.6	3.0
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	8.3	8.6	8.7	8.9	9.1	9.4	9.8	10.2	10.6	10.9	11.2	11.6	11.9	12.2	12.5	12.8	3.0
Sinaloa	14.9	15.3	15.5	15.8	16.5	17.2	18.0	18.7	19.2	19.6	19.9	20.3	20.6	20.9	21.2	21.4	2.5
Sonora	15.3	15.7	15.9	16.3	16.9	17.6	18.5	19.2	19.7	20.1	20.5	20.9	21.2	21.4	21.7	22.0	2.5
Tabasco	3.0	3.2	3.2	3.3	3.3	3.4	3.5	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.5	2.7
Tamaulipas	19.2	20.2	20.0	20.0	20.5	21.1	22.1	23.0	23.9	24.7	25.0	26.5	27.4	28.1	28.6	29.7	2.9
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	23.5	24.7	25.0	25.7	25.9	26.6	27.7	28.7	29.7	30.5	31.2	32.2	33.1	33.7	34.4	35.0	2.7
Yucatán	7.9	8.3	8.4	8.6	8.7	8.9	9.3	9.6	10.0	10.2	10.5	10.8	11.1	11.3	11.5	11.8	2.7
Zacatecas	3.8	4.0	4.0	4.1	4.3	4.4	4.6	4.7	4.9	5.1	5.2	5.4	5.5	5.7	5.8	6.0	3.0
Domestic	317.2	330.1	332.6	339.9	347.3	357.7	372.2	385.2	397.4	408.2	416.6	430.1	440.9	450.1	459.1	469.3	2.6

TABLE B. 24
DIESEL DEMAND MOTOR-CARRIER SECTOR HIGH SCENARIO PROS16-30

(thousand barrels per day)

C+-+-								Data pe	r year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	4.3	4.5	4.6	4.8	5.0	5.3	5.6	5.9	6.2	6.4	6.7	7.0	7.3	7.5	7.8	8.1	4.3
Baja California	10.3	10.6	10.8	11.1	11.9	12.6	13.5	14.4	15.0	15.5	15.9	16.4	16.8	17.2	17.6	17.9	3.8
Baja California Sur	2.1	2.1	2.2	2.2	2.4	2.6	2.7	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.6	3.8
Campeche	1.4	1.5	1.6	1.6	1.7	1.8	1.9	2.0	2.1	2.1	2.2	2.3	2.4	2.5	2.6	2.6	4.1
Chiapas	8.1	8.6	8.7	9.1	9.5	9.9	10.5	11.1	11.6	12.0	12.5	13.0	13.5	13.9	14.3	14.7	4.1
Chihuahua	11.3	11.9	11.9	12.2	12.7	13.4	14.2	15.0	15.8	16.5	16.8	18.0	18.8	19.5	20.0	21.0	4.2
Coahuila	4.4	4.7	4.7	4.8	5.0	5.3	5.6	5.9	6.2	6.5	6.6	7.1	7.4	7.7	7.9	8.3	4.2
Colima	12.5	13.1	13.3	13.9	14.6	15.4	16.3	17.1	18.0	18.8	19.5	20.4	21.2	21.9	22.7	23.5	4.3
Ciudad de México	22.4	23.2	23.8	24.8	25.4	26.6	27.9	29.1	30.3	31.3	32.3	33.4	34.5	35.5	36.5	37.4	3.5
Durango	12.0	12.6	12.7	12.9	13.5	14.2	15.1	15.9	16.8	17.5	17.9	19.2	20.0	20.7	21.3	22.3	4.2
Guanajuato	15.4	16.2	16.4	17.2	18.0	19.0	20.1	21.1	22.2	23.1	24.0	25.1	26.1	27.1	28.0	29.0	4.3
Guerrero	3.9	4.2	4.2	4.4	4.6	4.8	5.1	5.4	5.6	5.9	6.1	6.3	6.6	6.8	7.0	7.2	4.1
Hidalgo	17.5	18.3	18.9	20.0	20.8	21.9	23.2	24.3	25.4	26.4	27.4	28.5	29.6	30.6	31.6	32.7	4.3
Jalisco	15.0	15.7	16.0	16.7	17.5	18.4	19.6	20.6	21.6	22.5	23.4	24.4	25.4	26.3	27.3	28.3	4.3
México	15.7	16.3	16.7	17.4	17.8	18.6	19.6	20.4	21.2	22.0	22.6	23.4	24.2	24.9	25.6	26.2	3.5
Michoacán	11.5	12.1	12.3	12.8	13.4	14.1	15.0	15.8	16.5	17.3	17.9	18.7	19.5	20.2	20.9	21.7	4.3
Morelos	3.7	3.9	4.0	4.2	4.4	4.7	4.9	5.2	5.4	5.6	5.8	6.1	6.3	6.5	6.7	6.9	4.3
Nayarit	1.6	1.7	1.7	1.8	1.8	1.9	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	4.3
Nuevo León	24.4	25.4	25.8	26.7	27.5	28.2	29.3	30.1	30.8	31.5	32.2	33.0	33.8	34.6	35.4	36.2	2.7
Oaxaca	4.5	4.8	4.9	5.1	5.3	5.5	5.9	6.2	6.5	6.7	7.0	7.3	7.5	7.8	8.0	8.2	4.1
Puebla	10.6	11.2	11.5	12.1	12.7	13.3	14.1	14.8	15.5	16.1	16.6	17.3	18.0	18.6	19.2	19.9	4.3
Querétaro	8.7	9.2	9.4	9.8	10.2	10.8	11.4	12.0	12.6	13.1	13.7	14.3	14.8	15.4	15.9	16.5	4.3
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	8.3	8.7	8.8	9.2	9.7	10.2	10.8	11.3	11.9	12.4	12.9	13.5	14.0	14.5	15.0	15.6	4.3
Sinaloa	14.9	15.3	15.6	16.1	17.1	18.2	19.5	20.8	21.7	22.3	22.9	23.6	24.2	24.8	25.4	25.9	3.8
Sonora	15.3	15.7	16.0	16.5	17.6	18.7	20.0	21.4	22.2	22.9	23.5	24.3	24.9	25.5	26.1	26.6	3.8
Tabasco	3.0	3.2	3.2	3.4	3.5	3.7	3.9	4.1	4.3	4.5	4.6	4.8	5.0	5.2	5.3	5.5	4.1
Tamaulipas	19.2	20.3	20.3	20.8	21.7	22.8	24.3	25.6	27.0	28.1	28.7	30.8	32.2	33.3	34.2	35.9	4.2
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	23.5	24.9	25.4	26.5	27.5	28.8	30.6	32.1	33.7	35.0	36.3	37.8	39.2	40.4	41.6	42.8	4.1
Yucatán	7.9	8.4	8.5	8.9	9.2	9.7	10.3	10.8	11.3	11.8	12.2	12.7	13.2	13.6	14.0	14.4	4.1
Zacatecas	3.8	4.0	4.1	4.3	4.5	4.7	5.0	5.3	5.5	5.8	6.0	6.3	6.5	6.8	7.0	7.3	4.3
Domestic	317.2	332.3	337.8	351.5	366.7	385.0	407.7	428.6	448.1	465.2	479.8	500.8	518.8	535.3	551.4	569.3	4.0

#### **Industrial Sector**

### TABLE B. 25 DIESEL DEMAND INDUSTRIAL SECTOR BASE SCENARIO PROS16-30

(thousand barrels per day)

C+-+-								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
Baja California	1.5	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.1
Baja California Sur	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	1.1
Campeche	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.1
Chiapas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	3.3	3.2	3.2	3.2	3.3	3.3	3.4	3.4	3.5	3.5	3.6	3.6	3.7	3.8	3.8	3.9	1.1
Coahuila	1.4	1.4	1.3	1.4	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.1
Colima	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.1
Ciudad de México	1.5	1.5	1.4	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.8	1.1
Durango	1.4	1.4	1.3	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.1
Guanajuato	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.1
Guerrero	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.1
Hidalgo	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.3	2.4	2.4	2.4	2.5	1.1
Jalisco	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.1
México	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	1.1
Michoacán	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	1.1
Morelos	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.1
Nayarit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	2.8	2.8	2.7	2.8	2.8	2.9	2.9	3.0	3.0	3.0	3.1	3.1	3.2	3.2	3.3	3.3	1.1
Oaxaca	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.1
Puebla	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	1.1
Querétaro	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.1
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	2.1	2.1	2.0	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.3	2.4	2.4	2.4	2.5	1.1
Sinaloa	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1
Sonora	4.0	3.9	3.9	3.9	4.0	4.0	4.1	4.2	4.2	4.3	4.4	4.4	4.5	4.6	4.6	4.7	1.1
Tabasco	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
Tamaulipas	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	2.8	2.8	2.8	2.8	2.8	2.9	2.9	3.0	3.0	3.1	3.1	3.1	3.2	3.2	3.3	3.3	1.1
Yucatán	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1
Zacatecas	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.1
Domestic	29.7	29.3	29.0	29.4	29.8	30.3	30.7	31.2	31.7	32.2	32.7	33.2	33.7	34.2	34.7	35.2	1.1

TABLE B. 26
DIESEL DEMAND INDUSTRIAL SECTOR BASE SCENARIO-LOW SAVING PROS16-30

(thousand barrels per day)

6								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
Baja California	1.5	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.1
Baja California Sur	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	1.1
Campeche	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.1
Chiapas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	3.3	3.2	3.2	3.2	3.3	3.3	3.4	3.4	3.5	3.5	3.6	3.6	3.7	3.8	3.8	3.9	1.1
Coahuila	1.4	1.4	1.3	1.4	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.1
Colima	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.1
Ciudad de México	1.5	1.5	1.4	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.8	1.1
Durango	1.4	1.4	1.3	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.1
Guanajuato	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.1
Guerrero	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.1
Hidalgo	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.3	2.4	2.4	2.4	2.5	1.1
Jalisco	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.1
México	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	1.1
Michoacán	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	1.1
Morelos	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.1
Nayarit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	2.8	2.8	2.7	2.8	2.8	2.9	2.9	3.0	3.0	3.0	3.1	3.1	3.2	3.2	3.3	3.3	1.1
Oaxaca	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.1
Puebla	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	1.1
Querétaro	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.1
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	2.1	2.1	2.0	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.3	2.4	2.4	2.4	2.5	1.1
Sinaloa	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1
Sonora	4.0	3.9	3.9	3.9	4.0	4.0	4.1	4.2	4.2	4.3	4.4	4.4	4.5	4.6	4.6	4.7	1.1
Tabasco	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
Tamaulipas	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	2.8	2.8	2.8	2.8	2.8	2.9	2.9	3.0	3.0	3.1	3.1	3.1	3.2	3.2	3.3	3.3	1.1
Yucatán	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1
Zacatecas	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.1
Domestic	29.7	29.3	29.0	29.4	29.8	30.3	30.7	31.2	31.7	32.2	32.7	33.2	33.7	34.2	34.7	35.2	1.1

## TABLE B. 27 DIESEL DEMAND INDUSTRIAL SECTOR MODERATE SCENARIO PROS16-30

(thousand barrels per day)

State								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
Baja California	1.5	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.7	0.9
Baja California Sur	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.9
Campeche	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.9
Chiapas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.4	3.4	3.4	3.5	3.5	3.6	3.6	3.7	3.7	0.9
Coahuila	1.4	1.4	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.6	1.6	0.9
Colima	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.7	0.9
Ciudad de México	1.5	1.5	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.7	1.7	0.9
Durango	1.4	1.4	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.6	1.6	0.9
Guanajuato	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.9
Guerrero	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.9
Hidalgo	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.4	0.9
Jalisco	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.9
México	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.9
Michoacán	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.9
Morelos	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.9
Nayarit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	2.8	2.8	2.7	2.8	2.8	2.8	2.9	2.9	2.9	3.0	3.0	3.0	3.1	3.1	3.2	3.2	0.9
Oaxaca	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.9
Puebla	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.9
Querétaro	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.9
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.4	0.9
Sinaloa	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9
Sonora	4.0	3.9	3.8	3.9	3.9	4.0	4.0	4.1	4.1	4.2	4.2	4.3	4.3	4.4	4.5	4.5	0.9
Tabasco	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
Tamaulipas	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	0.9
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	2.8	2.8	2.7	2.8	2.8	2.8	2.9	2.9	2.9	3.0	3.0	3.1	3.1	3.1	3.2	3.2	0.9
Yucatán	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	0.9
Zacatecas	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.9
Domestic	29.7	29.2	28.9	29.2	29.5	29.9	30.2	30.6	31.0	31.4	31.8	32.2	32.6	33.0	33.4	33.8	0.9

### TABLE B. 28 DIESEL DEMAND INDUSTRIAL SECTOR HIGH SCENARIO PROS16-30

(thousand barrels per day)

Stata								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5
Baja California	1.5	1.4	1.4	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.7	1.7	1.7	1.8	1.8	1.8	1.5
Baja California Sur	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	1.5
Campeche	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.5
Chiapas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	3.3	3.2	3.2	3.3	3.3	3.4	3.5	3.5	3.6	3.7	3.7	3.8	3.9	4.0	4.0	4.1	1.5
Coahuila	1.4	1.4	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.5
Colima	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.7	1.7	1.7	1.8	1.8	1.8	1.9	1.9	1.9	1.5
Ciudad de México	1.5	1.5	1.4	1.5	1.5	1.5	1.6	1.6	1.6	1.7	1.7	1.7	1.8	1.8	1.8	1.9	1.5
Durango	1.4	1.4	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.5
Guanajuato	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.5
Guerrero	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.5
Hidalgo	2.1	2.1	2.0	2.1	2.1	2.2	2.2	2.3	2.3	2.3	2.4	2.4	2.5	2.5	2.6	2.6	1.5
Jalisco	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.5
México	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	1.5
Michoacán	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	1.5
Morelos	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.5
Nayarit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	2.8	2.8	2.8	2.8	2.9	2.9	3.0	3.0	3.1	3.2	3.2	3.3	3.4	3.4	3.5	3.5	1.5
Oaxaca	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.5
Puebla	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	1.5
Querétaro	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.5
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	2.1	2.1	2.0	2.1	2.1	2.2	2.2	2.3	2.3	2.3	2.4	2.4	2.5	2.5	2.6	2.6	1.5
Sinaloa	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.5
Sonora	4.0	3.9	3.9	4.0	4.0	4.1	4.2	4.3	4.4	4.5	4.5	4.6	4.7	4.8	4.9	5.0	1.5
Tabasco	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5
Tamaulipas	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.5
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	2.8	2.8	2.8	2.8	2.9	2.9	3.0	3.1	3.1	3.2	3.2	3.3	3.4	3.4	3.5	3.5	1.5
Yucatán	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.5
Zacatecas	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.5
Domestic	29.7	29.3	29.1	29.7	30.3	30.9	31.6	32.2	32.8	33.5	34.1	34.7	35.4	36.0	36.7	37.4	1.5

#### **Rail Transportation Sector**

### TABLE B. 29 DIESEL DEMAND RAIL-TRANSPORTATION SECTOR BASE SCENARIO PROS16-30

(thousand barrels per day)

State								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	3.9
Baja California	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	2.7
Baja California Sur	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Campeche	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3
Chiapas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.9	2.8
Coahuila	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	3.9
Colima	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	2.6
Ciudad de México	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	2.4
Durango	1.4	1.5	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.8	1.9	1.9	2.0	2.0	2.1	2.1	2.7
Guanajuato	1.1	1.1	1.2	1.2	1.2	1.3	1.3	1.4	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.9	3.8
Guerrero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Hidalgo	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	2.9
Jalisco	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.5	1.5	1.6	1.6	3.1
México	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	2.5
Michoacán	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	3.3
Morelos	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nayarit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4
Nuevo León	1.3	1.4	1.4	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.8	1.9	1.9	2.0	2.0	2.1	2.9
Oaxaca	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	2.6
Puebla	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	2.8
Querétaro	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	3.3
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	2.4
Sinaloa	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	1.0	1.0	2.8
Sonora	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.1	1.1	3.3
Tabasco	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	2.2
Tamaulipas	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	2.7
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	2.0	2.1	2.1	2.2	2.2	2.3	2.3	2.4	2.5	2.5	2.6	2.7	2.8	2.8	2.9	3.0	2.5
Yucatán	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	2.5
Zacatecas	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	2.7
Domestic	12.8	13.2	13.5	13.9	14.3	14.8	15.2	15.7	16.1	16.6	17.1	17.6	18.1	18.6	19.2	19.7	2.9

TABLE B. 30
DIESEL DEMAND RAIL-TRANSPORTATION SECTOR BASE SCENARIO-LOW SAVING PROS16-30
(thousand barrels per day)

State								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	3.9
Baja California	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	2.7
Baja California Sur	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Campeche	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3
Chiapas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.9	2.8
Coahuila	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	3.9
Colima	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	2.6
Ciudad de México	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	2.4
Durango	1.4	1.5	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.8	1.9	1.9	2.0	2.0	2.1	2.1	2.7
Guanajuato	1.1	1.1	1.2	1.2	1.2	1.3	1.3	1.4	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.9	3.8
Guerrero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Hidalgo	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	2.9
Jalisco	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.5	1.5	1.6	1.6	3.1
México	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	2.5
Michoacán	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	3.3
Morelos	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nayarit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4
Nuevo León	1.3	1.4	1.4	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.8	1.9	1.9	2.0	2.0	2.1	2.9
Oaxaca	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	2.6
Puebla	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	2.8
Querétaro	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	3.3
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	2.4
Sinaloa	0.7	0.7	0.7	0.7	0.7	0.8	0.8	8.0	0.8	0.8	0.9	0.9	0.9	0.9	1.0	1.0	2.8
Sonora	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.1	1.1	3.3
Tabasco	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	2.2
Tamaulipas	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	2.7
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	2.0	2.1	2.1	2.2	2.2	2.3	2.3	2.4	2.5	2.5	2.6	2.7	2.8	2.8	2.9	3.0	2.5
Yucatán	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	2.5
Zacatecas	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	2.7
Domestic	12.8	13.2	13.5	13.9	14.3	14.8	15.2	15.7	16.1	16.6	17.1	17.6	18.1	18.6	19.2	19.7	2.9

TABLE B. 31
DIESEL DEMAND RAIL-TRANSPORTATION SECTOR MODERATE SCENARIO PROS16-30
(thousand barrels per day)

State								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	3.4
Baja California	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	2.3
Baja California Sur	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Campeche	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8
Chiapas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	2.3
Coahuila	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	3.4
Colima	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	2.1
Ciudad de México	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	1.9
Durango	1.4	1.4	1.5	1.5	1.5	1.6	1.6	1.7	1.7	1.7	1.8	1.8	1.9	1.9	1.9	2.0	2.3
Guanajuato	1.1	1.1	1.1	1.2	1.2	1.3	1.3	1.4	1.4	1.4	1.5	1.5	1.6	1.6	1.7	1.8	3.3
Guerrero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Hidalgo	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2.4
Jalisco	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.4	1.5	1.5	2.6
México	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	2.0
Michoacán	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	2.8
Morelos	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nayarit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9
Nuevo León	1.3	1.4	1.4	1.5	1.5	1.5	1.6	1.6	1.7	1.7	1.7	1.8	1.8	1.9	1.9	1.9	2.4
Oaxaca	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	2.1
Puebla	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	2.3
Querétaro	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	2.8
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.9
Sinaloa	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	2.3
Sonora	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0	2.8
Tabasco	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.7
Tamaulipas	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	2.2
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	2.0	2.0	2.1	2.1	2.2	2.2	2.3	2.3	2.4	2.4	2.5	2.5	2.6	2.7	2.7	2.8	2.1
Yucatán	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2.1
Zacatecas	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	2.2
Domestic	12.8	13.1	13.4	13.7	14.1	14.4	14.8	15.2	15.5	15.9	16.3	16.8	17.1	17.6	18.0	18.4	2.4

## TABLE B. 32 DIESEL DEMAND RAIL-TRANSPORTATION SECTOR HIGH SCENARIO PROS16-30

(thousand barrels per day)

Chaha								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	4.6
Baja California	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	3.4
Baja California Sur	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Campeche	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9
Chiapas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	3.5
Coahuila	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	4.6
Colima	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	3.2
Ciudad de México	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.8	0.8	3.1
Durango	1.4	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.9	1.9	2.0	2.1	2.1	2.2	2.3	2.3	3.4
Guanajuato	1.1	1.1	1.2	1.2	1.3	1.3	1.4	1.5	1.5	1.6	1.7	1.8	1.8	1.9	2.0	2.1	4.4
Guerrero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Hidalgo	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	3.5
Jalisco	1.0	1.1	1.1	1.1	1.2	1.2	1.3	1.3	1.4	1.4	1.5	1.5	1.6	1.6	1.7	1.8	3.8
México	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.6	3.2
Michoacán	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	3.9
Morelos	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nayarit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	3.1
Nuevo León	1.3	1.4	1.4	1.5	1.6	1.6	1.7	1.8	1.8	1.9	2.0	2.0	2.1	2.2	2.2	2.3	3.6
Oaxaca	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	3.2
Puebla	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	3.5
Querétaro	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	3.9
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	3.1
Sinaloa	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.9	0.9	1.0	1.0	1.0	1.1	1.1	3.5
Sonora	0.7	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.9	1.0	1.0	1.1	1.1	1.1	1.2	1.2	4.0
Tabasco	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	2.8
Tamaulipas	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	3.4
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	2.0	2.1	2.1	2.2	2.3	2.4	2.5	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.2
Yucatán	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	3.2
Zacatecas	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	3.4
Domestic	12.8	13.2	13.6	14.2	14.7	15.3	15.9	16.5	17.2	17.8	18.4	19.1	19.7	20.4	21.1	21.7	3.6

#### **Maritime Transportation Sector**

## TABLE B. 33 DIESEL DEMAND MARITIME TRANSPORTATION SECTOR BASE SCENARIO PROS16-30

(thousand barrels per day)

Chaha								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	-0.8
Baja California Sur	1.6	1.6	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	-0.8
Campeche	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.1
Chiapas	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	1.1
Chihuahua	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Coahuila	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Colima	0.4	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.3	1.3	8.3
Ciudad de México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Durango	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guanajuato	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guerrero	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Hidalgo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Jalisco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Michoacán	0.2	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	8.3
Morelos	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nayarit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Oaxaca	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1
Puebla	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Querétaro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sinaloa	3.5	3.4	3.2	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	-0.8
Sonora	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	-0.8
Tabasco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tamaulipas	1.5	1.8	1.7	1.7	1.8	1.8	1.8	1.9	1.9	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.4
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	4.5	4.7	4.5	4.5	4.5	4.6	4.6	4.7	4.8	4.9	5.0	5.0	5.1	5.2	5.3	5.3	1.1
Yucatán	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	1.1
Zacatecas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Domestic	15.2	16.5	15.6	15.5	15.5	15.7	15.9	16.1	16.2	16.4	16.6	16.8	17.0	17.1	17.3	17.5	0.9

TABLE B. 34
DIESEL DEMAND MARITIME TRANSPORTATION SECTOR BASE SCENARIO-LOW SAVING PROS16-30
(thousand barrels per day)

State								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	-0.8
Baja California Sur	1.6	1.6	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	-0.8
Campeche	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.1
Chiapas	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	1.1
Chihuahua	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Coahuila	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Colima	0.4	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.3	1.3	8.3
Ciudad de México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Durango	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guanajuato	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guerrero	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Hidalgo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Jalisco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Michoacán	0.2	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	8.3
Morelos	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nayarit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Oaxaca	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1
Puebla	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Querétaro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sinaloa	3.5	3.4	3.2	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	-0.8
Sonora	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	-0.8
Tabasco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tamaulipas	1.5	1.8	1.7	1.7	1.8	1.8	1.8	1.9	1.9	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.4
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	4.5	4.7	4.5	4.5	4.5	4.6	4.6	4.7	4.8	4.9	5.0	5.0	5.1	5.2	5.3	5.3	1.1
Yucatán	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	1.1
Zacatecas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Domestic	15.2	16.5	15.6	15.5	15.5	15.7	15.9	16.1	16.2	16.4	16.6	16.8	17.0	17.1	17.3	17.5	0.9

TABLE B. 35
DIESEL DEMAND MARITIME TRANSPORTATION SECTOR MODERATE SCENARIO PROS16-30
(thousand barrels per day)

State								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	-0.8
Baja California Sur	1.6	1.6	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	-0.8
Campeche	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.8
Chiapas	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.8
Chihuahua	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Coahuila	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Colima	0.4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	8.0
Ciudad de México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Durango	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guanajuato	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guerrero	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Hidalgo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Jalisco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Michoacán	0.2	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	8.0
Morelos	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nayarit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Oaxaca	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	0.8
Puebla	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Querétaro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sinaloa	3.5	3.4	3.2	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	-0.8
Sonora	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	-0.8
Tabasco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tamaulipas	1.5	1.8	1.7	1.7	1.7	1.8	1.8	1.8	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.1	2.1
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	4.5	4.7	4.5	4.4	4.4	4.5	4.6	4.6	4.7	4.8	4.8	4.9	4.9	5.0	5.0	5.1	0.8
Yucatán	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.8
Zacatecas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Domestic	15.2	16.5	15.6	15.4	15.4	15.5	15.7	15.8	16.0	16.1	16.3	16.4	16.6	16.7	16.9	17.0	0.7

# TABLE B. 36 DIESEL DEMAND MARITIME TRANSPORTATION SECTOR HIGH SCENARIO PROS16-30 (thousand barrels per day)

State								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Baja California	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	-0.8
Baja California Sur	1.6	1.6	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	-0.8
Campeche	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.5
Chiapas	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	1.5
Chihuahua	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Coahuila	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Colima	0.4	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.2	1.3	1.3	1.3	1.4	8.8
Ciudad de México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Durango	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guanajuato	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guerrero	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Hidalgo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Jalisco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Michoacán	0.2	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	8.8
Morelos	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nayarit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Oaxaca	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.5
Puebla	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Querétaro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sinaloa	3.5	3.4	3.2	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	-0.8
Sonora	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	-0.8
Tabasco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tamaulipas	1.5	1.8	1.7	1.7	1.8	1.8	1.9	1.9	2.0	2.0	2.1	2.1	2.2	2.2	2.3	2.3	2.9
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	4.5	4.8	4.5	4.5	4.6	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.4	5.5	5.6	5.7	1.5
Yucatán	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1.5
Zacatecas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Domestic	15.2	16.5	15.7	15.6	15.7	15.9	16.2	16.4	16.7	16.9	17.1	17.3	17.6	17.8	18.0	18.3	1.2

#### **Electricity Sector**

### TABLE B. 37 DIESEL DEMAND ELECTRICITY SECTOR BASE SCENARIO PROS16-30

(thousand barrels per day)

State								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California Sur	1.7	1.4	1.7	0.8	0.0	-	0.0	-	0.1	0.1	0.5	0.3	0.3	0.6	0.9	1.2	-2.3
Campeche	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chiapas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Coahuila	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Colima	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Ciudad de México	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Durango	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guanajuato	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guerrero	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Hidalgo	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Jalisco	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
México	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Michoacán	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Morelos	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nayarit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Oaxaca	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Puebla	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Querétaro	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Quintana Roo	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	0.1	-	-	-	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	6.6
Sinaloa	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sonora	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tabasco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tamaulipas	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Yucatán	4.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Zacatecas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Domestic	9.3	1.5	1.7	0.8	0.3	0.3	0.3	0.3	0.4	0.5	0.9	0.6	0.7	0.9	1.2	1.5	-11.3

## TABLE B. 38 DIESEL DEMAND ELECTRICITY SECTOR BASE SCENARIO-LOW SAVING PROS16-30

(thousand barrels per day)

State								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California Sur	1.7	1.4	1.7	0.8	0.0	-	0.0	-	0.1	0.1	0.5	0.3	0.3	0.6	0.9	1.2	-2.3
Campeche	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chiapas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Coahuila	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Colima	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Ciudad de México	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Durango	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guanajuato	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guerrero	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Hidalgo	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Jalisco	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
México	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Michoacán	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Morelos	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nayarit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Oaxaca	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Puebla	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Querétaro	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Quintana Roo	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	0.1	-	-	-	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	6.6
Sinaloa	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sonora	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tabasco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tamaulipas	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Yucatán	4.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Zacatecas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Domestic	9.3	1.5	1.7	0.8	0.3	0.3	0.3	0.3	0.4	0.5	0.9	0.6	0.7	0.9	1.2	1.5	-11.3

### TABLE B. 39 DIESEL DEMAND ELECTRICITY SECTOR MODERATE SCENARIO PROS16-30

(thousand barrels per day)

State								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California Sur	1.7	1.4	1.7	0.8	0.0	-	0.0	-	0.1	0.1	0.5	0.3	0.3	0.6	0.9	1.2	-2.3
Campeche	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chiapas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Coahuila	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Colima	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Ciudad de México	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Durango	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guanajuato	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guerrero	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Hidalgo	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Jalisco	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
México	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Michoacán	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Morelos	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nayarit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Oaxaca	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Puebla	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Querétaro	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Quintana Roo	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	0.1	-	-	-	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	6.6
Sinaloa	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sonora	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tabasco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tamaulipas	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Yucatán	4.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Zacatecas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Domestic	9.3	1.5	1.7	0.8	0.3	0.3	0.3	0.3	0.4	0.5	0.9	0.6	0.7	0.9	1.2	1.5	-11.3

### TABLE B. 40 DIESEL DEMAND ELECTRICITY SECTOR HIGH SCENARIO PROS16-30

(thousand barrels per day)

State								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California Sur	1.7	1.4	1.7	0.8	0.0	-	0.0	-	0.1	0.1	0.5	0.3	0.3	0.6	0.9	1.2	-2.3
Campeche	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chiapas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Coahuila	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Colima	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Ciudad de México	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Durango	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guanajuato	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guerrero	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Hidalgo	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Jalisco	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
México	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Michoacán	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Morelos	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nayarit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Oaxaca	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Puebla	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Querétaro	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Quintana Roo	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	0.1	-	-	-	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	6.6
Sinaloa	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sonora	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tabasco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tamaulipas	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Yucatán	4.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Zacatecas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Domestic	9.3	1.5	1.7	0.8	0.3	0.3	0.3	0.3	0.4	0.5	0.9	0.6	0.7	0.9	1.2	1.5	-11.3

#### Gasoline

**Motor-Carrier Sector** 

TABLE B. 41
GASOLINE DEMAND MOTOR-CARRIER SECTOR BASE SCENARIO, PEMEX MAGNA PROS16-30
(thousand barrels per day)

<b>5</b> 4.4.								Data pe	r year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	8.6	8.5	8.6	8.7	8.9	9.0	9.3	9.5	9.8	10.0	10.2	10.5	10.7	10.9	11.1	11.3	1.8
Baja California	30.5	30.0	31.4	32.3	33.3	34.1	34.9	35.6	36.5	36.9	37.4	38.3	38.8	38.9	39.3	39.6	1.8
Baja California Sur	6.3	6.2	6.5	6.6	6.9	7.0	7.2	7.3	7.5	7.6	7.7	7.9	8.0	8.0	8.1	8.1	1.8
Campeche	3.8	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.5	4.5	4.7	4.8	4.8	4.9	5.1	1.9
Chiapas	13.7	13.5	13.8	14.0	14.4	14.7	15.1	15.4	15.8	16.1	16.4	16.8	17.1	17.4	17.7	18.2	1.9
Chihuahua	28.8	28.5	30.1	31.1	32.1	32.7	34.0	35.3	36.6	37.5	38.6	40.0	40.0	39.7	39.6	39.5	2.1
Coahuila	13.8	13.7	14.4	14.9	15.3	15.6	16.3	16.9	17.5	17.9	18.5	19.2	19.1	19.0	18.9	18.9	2.1
Colima	14.7	14.5	14.8	14.9	15.3	15.4	15.9	16.3	16.8	17.1	17.4	17.9	18.3	18.6	19.0	19.3	1.8
Ciudad de México	82.8	81.6	83.2	85.0	84.7	86.8	88.6	90.0	92.0	93.7	95.0	96.4	97.5	98.2	98.6	100.4	1.3
Durango	18.0	17.8	18.8	19.4	20.0	20.4	21.2	22.0	22.9	23.4	24.1	25.0	25.0	24.8	24.7	24.6	2.1
Guanajuato	29.6	29.2	29.7	30.0	30.8	31.1	32.0	32.8	33.8	34.4	35.1	36.1	36.9	37.4	38.2	38.9	1.8
Guerrero	9.8	9.7	9.9	10.1	10.3	10.6	10.9	11.1	11.4	11.6	11.8	12.1	12.3	12.5	12.7	13.1	1.9
Hidalgo	22.6	22.3	22.9	23.4	23.9	24.4	24.9	25.3	25.8	26.2	26.7	27.3	27.8	28.2	28.7	29.2	1.7
Jalisco	33.2	32.7	33.3	33.6	34.5	34.8	35.8	36.8	37.8	38.5	39.3	40.4	41.4	42.0	42.8	43.6	1.8
México	44.0	43.4	44.3	45.2	45.0	46.2	47.1	47.9	48.9	49.8	50.5	51.2	51.8	52.2	52.4	53.4	1.3
Michoacán	23.1	22.8	23.2	23.4	24.0	24.3	25.0	25.6	26.4	26.8	27.4	28.2	28.8	29.2	29.8	30.4	1.8
Morelos	11.2	11.0	11.3	11.5	11.8	12.0	12.3	12.5	12.7	12.9	13.2	13.5	13.7	13.9	14.1	14.4	1.7
Nayarit	3.4	3.3	3.4	3.4	3.5	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.3	4.4	1.8
Nuevo León	37.1	36.5	37.8	38.6	38.9	39.4	39.9	40.6	41.2	41.6	42.1	42.9	43.7	44.1	44.8	45.7	1.4
Oaxaca	11.0	10.8	11.1	11.3	11.6	11.8	12.1	12.4	12.7	12.9	13.2	13.5	13.8	14.0	14.2	14.7	1.9
Puebla	23.1	22.8	23.3	23.8	24.4	24.9	25.4	25.8	26.4	26.8	27.2	27.9	28.4	28.8	29.3	29.8	1.7
Querétaro	13.5	13.3	13.6	13.7	14.0	14.2	14.6	15.0	15.4	15.7	16.0	16.5	16.9	17.1	17.4	17.8	1.8
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	13.7	13.5	13.7	13.8	14.2	14.4	14.8	15.2	15.6	15.9	16.2	16.7	17.0	17.3	17.6	18.0	1.8
Sinaloa	21.5	21.2	22.1	22.8	23.5	24.0	24.6	25.1	25.7	26.0	26.4	27.0	27.4	27.4	27.7	27.9	1.8
Sonora	19.5	19.2	20.1	20.7	21.3	21.8	22.3	22.8	23.4	23.6	24.0	24.5	24.9	24.9	25.2	25.4	1.8
Tabasco	7.2	7.1	7.2	7.4	7.5	7.7	7.9	8.1	8.3	8.4	8.6	8.8	9.0	9.1	9.3	9.6	1.9
Tamaulipas	28.8	28.5	30.1	31.0	32.0	32.6	34.0	35.3	36.6	37.4	38.5	40.0	39.9	39.6	39.5	39.4	2.1
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	38.9	38.3	39.2	39.9	40.8	41.9	42.9	43.9	44.9	45.6	46.5	47.7	48.7	49.4	50.4	51.8	1.9
Yucatán	20.6	20.2	20.7	21.1	21.6	22.2	22.7	23.2	23.8	24.1	24.6	25.2	25.8	26.1	26.6	27.4	1.9
Zacatecas	5.4	5.3	5.4	5.4	5.6	5.6	5.8	6.0	6.1	6.2	6.4	6.5	6.7	6.8	6.9	7.1	1.8
Domestic	638.0	629.0	647.7	660.9	674.3	687.6	705.0	721.9	740.6	753.1	767.2	786.4	798.5	804.6	813.9	826.8	1.7

# TABLE B. 42 GASOLINE DEMAND MOTOR-CARRIER SECTOR BASE SCENARIO-LOW SAVING, PEMEX MAGNA PROS16-30

(thousand barrels per day)

Ch. A.								Data pe	r year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	8.6	8.6	8.8	8.9	9.2	9.5	9.9	10.3	10.7	11.0	11.3	11.7	12.0	12.3	12.5	12.8	2.7
Baja California	30.5	30.2	31.5	32.0	33.1	34.1	35.2	36.2	37.4	38.0	38.8	39.9	40.7	41.1	41.7	42.2	2.2
Baja California Sur	6.3	6.2	6.5	6.6	6.8	7.0	7.2	7.4	7.7	7.8	8.0	8.2	8.4	8.5	8.6	8.7	2.2
Campeche	3.8	3.8	3.8	3.9	4.0	4.2	4.3	4.5	4.7	4.8	4.9	5.1	5.2	5.4	5.5	5.7	2.7
Chiapas	13.7	13.6	13.9	14.2	14.5	15.1	15.7	16.3	16.9	17.3	17.8	18.4	18.9	19.3	19.8	20.5	2.7
Chihuahua	28.8	28.9	30.5	31.5	32.6	33.8	35.5	37.3	39.1	40.5	42.1	44.0	44.3	44.2	44.3	44.4	2.9
Coahuila	13.8	13.8	14.6	15.1	15.6	16.2	17.0	17.8	18.7	19.4	20.1	21.1	21.2	21.2	21.2	21.2	2.9
Colima	14.7	14.7	15.1	15.3	15.7	16.2	16.9	17.6	18.3	18.8	19.4	20.0	20.6	21.0	21.4	21.9	2.7
Ciudad de México	82.8	82.1	83.9	85.8	85.7	89.2	92.0	94.4	97.3	99.8	101.7	103.7	105.3	106.4	107.1	109.3	1.9
Durango	18.0	18.0	19.0	19.7	20.4	21.1	22.2	23.3	24.4	25.3	26.3	27.5	27.7	27.6	27.7	27.7	2.9
Guanajuato	29.6	29.7	30.3	30.7	31.7	32.6	34.1	35.5	36.9	37.9	39.0	40.3	41.4	42.2	43.2	44.1	2.7
Guerrero	9.8	9.8	10.0	10.2	10.4	10.8	11.3	11.7	12.1	12.5	12.8	13.2	13.6	13.9	14.2	14.7	2.7
Hidalgo	22.6	22.7	23.3	23.9	24.6	25.6	26.5	27.3	28.2	28.9	29.7	30.6	31.3	31.9	32.6	33.3	2.6
Jalisco	33.2	33.3	34.0	34.4	35.5	36.6	38.2	39.8	41.4	42.5	43.7	45.2	46.4	47.3	48.4	49.5	2.7
México	44.0	43.6	44.6	45.6	45.6	47.4	48.9	50.2	51.8	53.1	54.1	55.1	56.0	56.6	57.0	58.1	1.9
Michoacán	23.1	23.2	23.7	24.0	24.7	25.5	26.6	27.7	28.8	29.6	30.4	31.5	32.3	32.9	33.7	34.4	2.7
Morelos	11.2	11.2	11.5	11.8	12.1	12.6	13.1	13.5	13.9	14.3	14.6	15.1	15.5	15.7	16.1	16.4	2.6
Nayarit	3.4	3.4	3.5	3.5	3.6	3.7	3.9	4.0	4.2	4.3	4.4	4.6	4.7	4.8	4.9	5.0	2.7
Nuevo León	37.1	36.7	38.0	38.7	39.0	39.9	40.7	41.7	42.5	43.1	43.8	44.8	45.7	46.3	47.1	48.1	1.8
Oaxaca	11.0	10.9	11.2	11.4	11.6	12.1	12.6	13.1	13.6	13.9	14.3	14.8	15.2	15.5	15.9	16.5	2.7
Puebla	23.1	23.2	23.7	24.4	25.1	26.1	27.0	27.8	28.8	29.5	30.3	31.2	32.0	32.6	33.3	34.0	2.6
Querétaro	13.5	13.6	13.8	14.0	14.5	14.9	15.6	16.2	16.8	17.3	17.8	18.4	18.9	19.3	19.7	20.1	2.7
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	13.7	13.7	14.0	14.2	14.6	15.1	15.7	16.4	17.0	17.5	18.0	18.6	19.1	19.5	19.9	20.4	2.7
Sinaloa	21.5	21.3	22.2	22.5	23.3	24.0	24.8	25.5	26.3	26.8	27.4	28.1	28.7	29.0	29.4	29.8	2.2
Sonora	19.5	19.3	20.2	20.5	21.2	21.8	22.5	23.2	23.9	24.3	24.8	25.6	26.1	26.3	26.7	27.0	2.2
Tabasco	7.2	7.1	7.3	7.4	7.6	7.9	8.2	8.5	8.8	9.1	9.3	9.6	9.9	10.1	10.4	10.7	2.7
Tamaulipas	28.8	28.8	30.4	31.4	32.6	33.7	35.5	37.2	39.1	40.4	42.0	43.9	44.2	44.1	44.2	44.3	2.9
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	38.9	38.6	39.4	40.2	41.1	42.8	44.6	46.3	47.9	49.2	50.6	52.3	53.8	54.9	56.2	58.2	2.7
Yucatán	20.6	20.4	20.9	21.3	21.7	22.7	23.6	24.5	25.4	26.0	26.8	27.7	28.5	29.0	29.7	30.8	2.7
Zacatecas	5.4	5.4	5.5	5.6	5.8	5.9	6.2	6.4	6.7	6.9	7.1	7.3	7.5	7.7	7.8	8.0	2.7
Domestic	638.0	635.8	655.0	668.4	683.8	707.9	735.4	761.6	789.4	809.8	831.2	857.5	875.5	886.4	900.3	918.2	2.5

TABLE B. 43
GASOLINE DEMAND MOTOR-CARRIER SECTOR MODERATE SCENARIO, PEMEX MAGNA PROS16-30
(thousand barrels per day)

Chaha								Data pe	r year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	8.6	8.7	8.5	8.4	8.6	8.6	8.8	9.1	9.3	9.4	9.6	9.9	10.1	10.2	10.3	10.5	1.3
Baja California	30.5	31.9	31.7	31.9	32.7	33.3	33.9	34.4	35.1	35.3	35.7	36.4	36.8	36.8	37.1	37.3	1.4
Baja California Sur	6.3	6.6	6.5	6.6	6.7	6.9	7.0	7.1	7.2	7.3	7.3	7.5	7.6	7.6	7.6	7.7	1.4
Campeche	3.8	3.9	3.8	3.8	3.9	4.0	4.0	4.1	4.2	4.2	4.3	4.4	4.5	4.5	4.6	4.7	1.5
Chiapas	13.7	14.0	13.8	13.8	14.0	14.3	14.5	14.8	15.1	15.3	15.5	15.8	16.1	16.3	16.5	17.0	1.5
Chihuahua	28.8	30.0	30.1	30.6	31.4	31.8	32.9	34.0	35.1	35.9	36.8	38.1	38.0	37.6	37.4	37.2	1.7
Coahuila	13.8	14.4	14.4	14.6	15.0	15.2	15.7	16.3	16.8	17.2	17.6	18.2	18.2	18.0	17.9	17.8	1.7
Colima	14.7	14.9	14.5	14.4	14.7	14.7	15.1	15.5	15.9	16.2	16.4	16.9	17.2	17.4	17.7	18.0	1.3
Ciudad de México	82.8	81.6	82.0	83.1	82.1	83.7	84.9	85.9	87.5	88.8	89.7	90.8	91.6	92.1	92.3	93.9	0.8
Durango	18.0	18.8	18.8	19.1	19.6	19.9	20.5	21.2	21.9	22.4	23.0	23.8	23.7	23.4	23.3	23.2	1.7
Guanajuato	29.6	30.0	29.1	29.0	29.5	29.7	30.5	31.2	32.0	32.5	33.1	34.0	34.6	35.0	35.6	36.2	1.3
Guerrero	9.8	10.0	9.9	9.9	10.1	10.3	10.5	10.6	10.8	11.0	11.1	11.4	11.6	11.7	11.9	12.2	1.5
Hidalgo	22.6	23.1	22.6	22.7	23.1	23.4	23.7	24.0	24.4	24.7	25.0	25.5	25.9	26.1	26.4	26.8	1.1
Jalisco	33.2	33.7	32.7	32.5	33.1	33.3	34.1	35.0	35.9	36.4	37.1	38.1	38.8	39.3	39.9	40.6	1.3
México	44.0	43.4	43.6	44.2	43.7	44.5	45.1	45.7	46.5	47.2	47.7	48.3	48.7	49.0	49.1	49.9	0.8
Michoacán	23.1	23.4	22.7	22.6	23.0	23.2	23.8	24.4	25.0	25.4	25.8	26.5	27.0	27.3	27.8	28.3	1.3
Morelos	11.2	11.4	11.1	11.2	11.4	11.5	11.7	11.8	12.0	12.2	12.3	12.6	12.8	12.9	13.0	13.2	1.1
Nayarit	3.4	3.4	3.3	3.3	3.4	3.4	3.5	3.6	3.6	3.7	3.8	3.9	3.9	4.0	4.1	4.1	1.3
Nuevo León	37.1	37.3	37.4	37.8	38.0	38.4	38.7	39.3	39.9	40.2	40.7	41.4	42.1	42.4	43.1	43.9	1.1
Oaxaca	11.0	11.2	11.1	11.1	11.3	11.5	11.7	11.9	12.1	12.3	12.4	12.7	13.0	13.1	13.3	13.7	1.5
Puebla	23.1	23.5	23.1	23.2	23.6	23.9	24.2	24.5	24.9	25.2	25.5	26.0	26.4	26.6	27.0	27.4	1.1
Querétaro	13.5	13.7	13.3	13.2	13.5	13.6	13.9	14.3	14.6	14.8	15.1	15.5	15.8	16.0	16.3	16.5	1.3
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	13.7	13.9	13.5	13.4	13.6	13.7	14.1	14.4	14.8	15.0	15.3	15.7	16.0	16.2	16.4	16.7	1.3
Sinaloa	21.5	22.5	22.3	22.5	23.1	23.5	23.9	24.2	24.7	24.9	25.2	25.6	25.9	25.9	26.1	26.3	1.4
Sonora	19.5	20.4	20.3	20.4	21.0	21.3	21.7	22.0	22.5	22.6	22.9	23.3	23.6	23.6	23.7	23.9	1.4
Tabasco	7.2	7.3	7.2	7.2	7.4	7.5	7.6	7.8	7.9	8.0	8.1	8.3	8.5	8.5	8.7	8.9	1.5
Tamaulipas	28.8	30.0	30.1	30.6	31.3	31.8	32.8	33.9	35.1	35.8	36.7	38.0	37.9	37.5	37.3	37.1	1.7
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	38.9	39.7	39.1	39.3	39.9	40.6	41.3	42.0	42.8	43.4	44.0	45.0	45.8	46.3	47.0	48.3	1.5
Yucatán	20.6	21.0	20.7	20.8	21.1	21.5	21.9	22.2	22.7	22.9	23.3	23.8	24.2	24.5	24.9	25.6	1.5
Zacatecas	5.4	5.5	5.3	5.3	5.4	5.4	5.5	5.7	5.8	5.9	6.0	6.2	6.3	6.4	6.5	6.6	1.3
Domestic	638.0	649.3	642.5	646.5	654.9	664.0	677.6	690.8	706.2	715.9	727.1	743.3	752.5	756.2	762.9	773.6	1.3

TABLE B. 44
GASOLINE DEMAND MOTOR-CARRIER SECTOR HIGH SCENARIO, PEMEX MAGNA PROS16-30
(thousand barrels per day)

Chaha								Data pe	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	8.6	8.8	8.6	8.8	9.2	9.5	9.9	10.3	10.7	11.0	11.4	11.8	12.2	12.4	12.8	13.1	2.8
Baja California	30.5	32.1	32.0	33.1	34.5	35.8	37.0	38.1	39.4	40.0	41.0	42.2	43.2	43.6	44.4	45.1	2.7
Baja California Sur	6.3	6.6	6.6	6.8	7.1	7.4	7.6	7.8	8.1	8.2	8.4	8.7	8.9	9.0	9.1	9.3	2.7
Campeche	3.8	3.9	3.9	4.0	4.1	4.3	4.5	4.6	4.8	4.9	5.0	5.2	5.4	5.5	5.7	5.9	3.0
Chiapas	13.7	14.1	14.0	14.3	14.9	15.5	16.1	16.7	17.3	17.7	18.2	18.8	19.4	19.9	20.4	21.2	3.0
Chihuahua	28.8	30.3	30.6	31.6	33.1	34.2	36.1	37.9	39.6	40.9	42.4	44.4	44.7	44.6	44.9	45.1	3.0
Coahuila	13.8	14.5	14.6	15.1	15.9	16.4	17.3	18.1	19.0	19.6	20.3	21.2	21.4	21.4	21.5	21.6	3.0
Colima	14.7	15.1	14.8	15.1	15.8	16.2	17.0	17.7	18.4	18.9	19.4	20.2	20.8	21.3	21.8	22.4	2.8
Ciudad de México	82.8	82.6	83.9	86.8	88.2	92.0	95.4	98.1	101.4	104.1	106.3	108.7	110.8	112.2	113.4	116.1	2.3
Durango	18.0	18.9	19.1	19.7	20.7	21.4	22.5	23.6	24.7	25.5	26.5	27.7	27.9	27.9	28.0	28.1	3.0
Guanajuato	29.6	30.4	29.8	30.3	31.7	32.6	34.1	35.5	37.0	38.0	39.2	40.6	41.9	42.8	44.0	45.1	2.8
Guerrero	9.8	10.1	10.1	10.3	10.7	11.2	11.6	12.0	12.4	12.7	13.1	13.5	14.0	14.3	14.7	15.3	3.0
Hidalgo	22.6	23.3	23.1	23.9	24.8	25.8	26.8	27.6	28.6	29.3	30.1	31.1	32.0	32.8	33.6	34.5	2.9
Jalisco	33.2	34.1	33.4	34.0	35.5	36.6	38.3	39.8	41.5	42.6	43.9	45.5	47.0	48.0	49.3	50.6	2.8
México	44.0	43.9	44.6	46.2	46.9	48.9	50.7	52.2	53.9	55.4	56.5	57.8	58.9	59.7	60.3	61.7	2.3
Michoacán	23.1	23.7	23.2	23.7	24.8	25.5	26.7	27.7	28.9	29.7	30.6	31.7	32.7	33.4	34.3	35.2	2.8
Morelos	11.2	11.5	11.4	11.8	12.3	12.7	13.2	13.6	14.1	14.5	14.8	15.4	15.8	16.2	16.6	17.0	2.9
Nayarit	3.4	3.5	3.4	3.5	3.6	3.7	3.9	4.0	4.2	4.3	4.5	4.6	4.8	4.9	5.0	5.1	2.8
Nuevo León	37.1	37.6	37.9	38.9	39.6	40.6	41.6	42.6	43.7	44.3	45.2	46.4	47.5	48.2	49.2	50.5	2.1
Oaxaca	11.0	11.3	11.2	11.5	12.0	12.5	13.0	13.4	13.9	14.2	14.6	15.1	15.6	16.0	16.4	17.0	3.0
Puebla	23.1	23.8	23.6	24.4	25.4	26.4	27.3	28.1	29.1	29.9	30.7	31.8	32.7	33.4	34.3	35.2	2.9
Querétaro	13.5	13.9	13.6	13.9	14.5	14.9	15.6	16.2	16.9	17.4	17.9	18.6	19.1	19.6	20.1	20.6	2.8
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	13.7	14.0	13.7	14.0	14.6	15.1	15.8	16.4	17.1	17.6	18.1	18.8	19.4	19.8	20.3	20.8	2.8
Sinaloa	21.5	22.6	22.6	23.3	24.3	25.2	26.1	26.8	27.8	28.2	28.9	29.7	30.4	30.8	31.3	31.8	2.7
Sonora	19.5	20.6	20.5	21.2	22.1	22.9	23.7	24.4	25.2	25.6	26.2	27.0	27.6	27.9	28.4	28.9	2.7
Tabasco	7.2	7.4	7.3	7.5	7.8	8.1	8.5	8.8	9.1	9.3	9.5	9.9	10.2	10.4	10.7	11.1	3.0
Tamaulipas	28.8	30.2	30.6	31.6	33.1	34.2	36.1	37.8	39.6	40.8	42.3	44.3	44.6	44.6	44.8	45.0	3.0
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	38.9	40.0	39.8	40.7	42.3	44.1	45.8	47.4	49.1	50.3	51.7	53.5	55.2	56.5	58.0	60.3	3.0
Yucatán	20.6	21.2	21.0	21.5	22.4	23.3	24.2	25.1	26.0	26.6	27.4	28.3	29.2	29.9	30.7	31.9	3.0
Zacatecas	5.4	5.5	5.4	5.5	5.8	5.9	6.2	6.5	6.7	6.9	7.1	7.4	7.6	7.8	8.0	8.2	2.8
Domestic	638.0	655.5	654.4	673.0	697.7	722.8	752.5	779.0	808.0	828.8	851.2	880.0	900.7	914.5	931.8	953.8	2.7

TABLE B. 45
GASOLINE DEMAND MOTOR-CARRIER SECTOR BASE SCENARIO, PEMEX PREMIUM PROS16-30
(thousand barrels per day)

Chaha								Data pe	r year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	1.8	2.1	2.1	2.1	2.2	2.2	2.3	2.4	2.4	2.5	2.5	2.6	2.6	2.7	2.7	2.8	3.0
Baja California	7.7	9.0	9.4	9.7	10.0	10.2	10.4	10.6	10.9	11.0	11.2	11.4	11.6	11.6	11.8	11.8	2.9
Baja California Sur	2.4	2.8	3.0	3.1	3.2	3.2	3.3	3.4	3.5	3.5	3.5	3.6	3.7	3.7	3.7	3.7	2.9
Campeche	0.9	1.0	1.0	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.4	3.1
Chiapas	3.4	4.0	4.1	4.1	4.2	4.3	4.5	4.6	4.7	4.7	4.8	4.9	5.1	5.1	5.2	5.4	3.1
Chihuahua	4.2	4.8	5.0	5.2	5.3	5.4	5.7	5.9	6.1	6.2	6.4	6.7	6.7	6.6	6.6	6.6	3.0
Coahuila	3.0	3.4	3.6	3.7	3.8	3.9	4.1	4.2	4.4	4.5	4.6	4.8	4.8	4.8	4.7	4.7	3.0
Colima	3.7	4.3	4.4	4.5	4.6	4.6	4.7	4.9	5.0	5.1	5.2	5.4	5.5	5.6	5.7	5.8	3.0
Ciudad de México	20.8	24.3	24.8	25.3	25.2	25.9	26.4	26.8	27.4	27.9	28.3	28.7	29.1	29.3	29.4	29.9	2.4
Durango	3.9	4.4	4.6	4.8	4.9	5.0	5.2	5.4	5.6	5.7	5.9	6.1	6.1	6.1	6.1	6.0	3.0
Guanajuato	6.7	7.8	7.9	8.0	8.2	8.3	8.5	8.8	9.0	9.2	9.4	9.6	9.9	10.0	10.2	10.4	3.0
Guerrero	3.7	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.5	5.5	5.6	5.8	3.1
Hidalgo	6.1	7.2	7.3	7.5	7.7	7.8	8.0	8.1	8.3	8.4	8.6	8.8	8.9	9.1	9.2	9.4	2.9
Jalisco	7.2	8.4	8.5	8.6	8.8	8.9	9.2	9.4	9.7	9.9	10.1	10.4	10.6	10.8	11.0	11.2	3.0
México	9.3	10.9	11.1	11.3	11.3	11.6	11.8	12.0	12.3	12.5	12.7	12.9	13.0	13.1	13.2	13.4	2.4
Michoacán	5.2	6.1	6.2	6.2	6.4	6.5	6.7	6.8	7.0	7.2	7.3	7.5	7.7	7.8	8.0	8.1	3.0
Morelos	3.9	4.6	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9	6.0	2.9
Nayarit	1.5	1.7	1.7	1.7	1.8	1.8	1.9	1.9	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.3	3.0
Nuevo León	10.0	11.7	12.1	12.4	12.5	12.7	12.8	13.0	13.2	13.3	13.5	13.8	14.0	14.1	14.4	14.7	2.6
Oaxaca	3.3	3.9	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.6	4.7	4.9	5.0	5.0	5.1	5.3	3.1
Puebla	6.2	7.3	7.4	7.6	7.8	7.9	8.1	8.2	8.4	8.5	8.7	8.9	9.1	9.2	9.3	9.5	2.9
Querétaro	3.4	4.0	4.1	4.1	4.2	4.3	4.4	4.5	4.7	4.7	4.8	5.0	5.1	5.2	5.3	5.4	3.0
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	2.4	2.8	2.8	2.8	2.9	3.0	3.0	3.1	3.2	3.3	3.3	3.4	3.5	3.6	3.6	3.7	3.0
Sinaloa	5.5	6.4	6.7	6.9	7.1	7.3	7.5	7.6	7.8	7.9	8.0	8.2	8.3	8.3	8.4	8.5	2.9
Sonora	4.4	5.2	5.4	5.6	5.7	5.9	6.0	6.1	6.3	6.3	6.4	6.6	6.7	6.7	6.8	6.8	2.9
Tabasco	2.4	2.8	2.8	2.9	3.0	3.0	3.1	3.2	3.3	3.3	3.4	3.5	3.5	3.6	3.7	3.8	3.1
Tamaulipas	3.5	4.0	4.2	4.3	4.5	4.6	4.7	4.9	5.1	5.2	5.4	5.6	5.6	5.5	5.5	5.5	3.0
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	12.2	14.3	14.7	14.9	15.3	15.7	16.0	16.4	16.8	17.1	17.4	17.8	18.2	18.5	18.8	19.4	3.1
Yucatán	6.0	7.1	7.2	7.4	7.5	7.7	7.9	8.1	8.3	8.4	8.6	8.8	9.0	9.1	9.3	9.6	3.1
Zacatecas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Domestic	154.9	180.4	185.5	189.3	193.0	196.9	201.6	206.3	211.5	214.9	218.8	224.1	227.8	229.8	232.7	236.7	2.9

## TABLE B. 46 GASOLINE DEMAND MOTOR-CARRIER SECTOR BASE SCENARIO-LOW SAVING, PEMEX PREMIUM PROS16-30

(thousand barrels per day)

Chaha.								Data pe	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	1.8	2.1	2.2	2.2	2.3	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.0	3.1	3.2	3.9
Baja California	7.7	9.0	9.4	9.6	9.9	10.2	10.5	10.8	11.2	11.4	11.6	11.9	12.2	12.3	12.5	12.6	3.4
Baja California Sur	2.4	2.9	3.0	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	3.9	3.9	4.0	3.4
Campeche	0.9	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.5	1.5	1.5	3.9
Chiapas	3.4	4.0	4.1	4.2	4.3	4.4	4.6	4.8	5.0	5.1	5.3	5.4	5.6	5.7	5.8	6.0	3.9
Chihuahua	4.2	4.8	5.1	5.2	5.4	5.6	5.9	6.2	6.5	6.7	7.0	7.3	7.4	7.4	7.4	7.4	3.9
Coahuila	3.0	3.5	3.7	3.8	3.9	4.0	4.3	4.5	4.7	4.9	5.0	5.3	5.3	5.3	5.3	5.3	3.9
Colima	3.7	4.4	4.5	4.6	4.7	4.8	5.1	5.3	5.5	5.6	5.8	6.0	6.2	6.3	6.4	6.6	3.9
Ciudad de México	20.8	24.5	25.0	25.6	25.6	26.6	27.4	28.1	29.0	29.7	30.3	30.9	31.4	31.7	31.9	32.6	3.0
Durango	3.9	4.4	4.7	4.8	5.0	5.2	5.4	5.7	6.0	6.2	6.5	6.7	6.8	6.8	6.8	6.8	3.9
Guanajuato	6.7	7.9	8.1	8.2	8.5	8.7	9.1	9.5	9.9	10.1	10.4	10.8	11.1	11.3	11.5	11.8	3.9
Guerrero	3.7	4.3	4.4	4.5	4.6	4.8	5.0	5.2	5.4	5.5	5.7	5.9	6.0	6.2	6.3	6.5	3.9
Hidalgo	6.1	7.3	7.5	7.7	7.9	8.2	8.5	8.8	9.1	9.3	9.5	9.8	10.1	10.3	10.5	10.7	3.8
Jalisco	7.2	8.5	8.7	8.8	9.1	9.4	9.8	10.2	10.6	10.9	11.2	11.6	11.9	12.1	12.4	12.7	3.9
México	9.3	11.0	11.2	11.5	11.5	11.9	12.3	12.6	13.0	13.3	13.6	13.9	14.1	14.2	14.3	14.6	3.0
Michoacán	5.2	6.2	6.3	6.4	6.6	6.8	7.1	7.4	7.7	7.9	8.1	8.4	8.6	8.8	9.0	9.2	3.9
Morelos	3.9	4.7	4.8	4.9	5.0	5.2	5.4	5.6	5.8	5.9	6.1	6.3	6.4	6.5	6.7	6.8	3.8
Nayarit	1.5	1.7	1.8	1.8	1.8	1.9	2.0	2.1	2.1	2.2	2.3	2.3	2.4	2.5	2.5	2.6	3.9
Nuevo León	10.0	11.8	12.2	12.4	12.5	12.8	13.1	13.4	13.7	13.8	14.1	14.4	14.7	14.8	15.1	15.5	2.9
Oaxaca	3.3	3.9	4.0	4.1	4.2	4.4	4.5	4.7	4.9	5.0	5.2	5.3	5.5	5.6	5.7	5.9	3.9
Puebla	6.2	7.4	7.6	7.8	8.0	8.3	8.6	8.9	9.2	9.4	9.7	10.0	10.2	10.4	10.6	10.8	3.8
Querétaro	3.4	4.1	4.2	4.2	4.4	4.5	4.7	4.9	5.1	5.2	5.4	5.6	5.7	5.8	6.0	6.1	3.9
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	2.4	2.8	2.9	2.9	3.0	3.1	3.2	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	3.9
Sinaloa	5.5	6.5	6.7	6.8	7.1	7.3	7.5	7.7	8.0	8.1	8.3	8.5	8.7	8.8	8.9	9.0	3.4
Sonora	4.4	5.2	5.4	5.5	5.7	5.9	6.0	6.2	6.4	6.5	6.7	6.9	7.0	7.1	7.2	7.3	3.4
Tabasco	2.4	2.8	2.9	2.9	3.0	3.1	3.2	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	3.9
Tamaulipas	3.5	4.0	4.3	4.4	4.5	4.7	5.0	5.2	5.5	5.7	5.9	6.1	6.2	6.2	6.2	6.2	3.9
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	12.2	14.4	14.7	15.0	15.4	16.0	16.7	17.3	17.9	18.4	18.9	19.5	20.1	20.5	21.0	21.7	3.9
Yucatán	6.0	7.1	7.3	7.4	7.6	7.9	8.2	8.5	8.8	9.1	9.3	9.6	9.9	10.1	10.4	10.7	3.9
Zacatecas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Domestic	154.9	182.3	187.5	191.3	195.6	202.5	210.2	217.5	225.2	230.9	236.8	244.1	249.5	252.9	257.1	262.6	3.6

## TABLE B. 47 GASOLINE DEMAND MOTOR-CARRIER SECTOR MODERATE SCENARIO, PEMEX PREMIUM PROS16-30

(thousand barrels per day)

<b>5.</b> .								Data pe	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	1.8	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.4	2.4	2.5	2.5	2.6	2.6	2.5
Baja California	7.7	9.5	9.5	9.5	9.8	10.0	10.1	10.3	10.5	10.6	10.7	10.9	11.0	11.0	11.1	11.2	2.5
Baja California Sur	2.4	3.0	3.0	3.0	3.1	3.2	3.2	3.3	3.3	3.3	3.4	3.4	3.5	3.5	3.5	3.5	2.5
Campeche	0.9	1.1	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.3	2.6
Chiapas	3.4	4.1	4.1	4.1	4.1	4.2	4.3	4.4	4.4	4.5	4.6	4.7	4.8	4.8	4.9	5.0	2.6
Chihuahua	4.2	5.0	5.0	5.1	5.2	5.3	5.5	5.7	5.9	6.0	6.1	6.3	6.3	6.3	6.2	6.2	2.6
Coahuila	3.0	3.6	3.6	3.7	3.8	3.8	3.9	4.1	4.2	4.3	4.4	4.6	4.6	4.5	4.5	4.5	2.6
Colima	3.7	4.5	4.3	4.3	4.4	4.4	4.5	4.6	4.8	4.8	4.9	5.0	5.1	5.2	5.3	5.4	2.5
Ciudad de México	20.8	24.3	24.4	24.8	24.5	24.9	25.3	25.6	26.1	26.5	26.7	27.1	27.3	27.4	27.5	28.0	2.0
Durango	3.9	4.6	4.6	4.7	4.8	4.9	5.0	5.2	5.4	5.5	5.6	5.8	5.8	5.8	5.7	5.7	2.6
Guanajuato	6.7	8.0	7.8	7.7	7.9	7.9	8.1	8.3	8.5	8.7	8.8	9.1	9.3	9.4	9.5	9.7	2.5
Guerrero	3.7	4.4	4.4	4.4	4.5	4.5	4.6	4.7	4.8	4.9	4.9	5.0	5.1	5.2	5.3	5.4	2.6
Hidalgo	6.1	7.4	7.3	7.3	7.4	7.5	7.6	7.7	7.8	7.9	8.0	8.2	8.3	8.4	8.5	8.6	2.3
Jalisco	7.2	8.6	8.4	8.3	8.5	8.5	8.7	9.0	9.2	9.3	9.5	9.8	9.9	10.1	10.2	10.4	2.5
México	9.3	10.9	11.0	11.1	11.0	11.2	11.3	11.5	11.7	11.9	12.0	12.1	12.2	12.3	12.3	12.5	2.0
Michoacán	5.2	6.3	6.1	6.0	6.2	6.2	6.3	6.5	6.7	6.8	6.9	7.1	7.2	7.3	7.4	7.5	2.5
Morelos	3.9	4.7	4.6	4.7	4.7	4.8	4.9	4.9	5.0	5.1	5.1	5.2	5.3	5.4	5.4	5.5	2.3
Nayarit	1.5	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.1	2.5
Nuevo León	10.0	12.0	12.0	12.1	12.2	12.3	12.4	12.6	12.8	12.9	13.1	13.3	13.5	13.6	13.8	14.1	2.3
Oaxaca	3.3	4.0	4.0	4.0	4.1	4.1	4.2	4.3	4.4	4.4	4.5	4.6	4.7	4.7	4.8	4.9	2.6
Puebla	6.2	7.5	7.4	7.4	7.5	7.6	7.7	7.8	8.0	8.0	8.1	8.3	8.4	8.5	8.6	8.7	2.3
Querétaro	3.4	4.1	4.0	4.0	4.1	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.8	4.9	5.0	2.5
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	2.4	2.9	2.8	2.7	2.8	2.8	2.9	3.0	3.0	3.1	3.1	3.2	3.3	3.3	3.4	3.4	2.5
Sinaloa	5.5	6.8	6.8	6.8	7.0	7.1	7.2	7.4	7.5	7.5	7.6	7.8	7.9	7.9	7.9	8.0	2.5
Sonora	4.4	5.5	5.4	5.5	5.6	5.7	5.8	5.9	6.0	6.1	6.1	6.3	6.3	6.3	6.4	6.4	2.5
Tabasco	2.4	2.9	2.8	2.8	2.9	2.9	3.0	3.0	3.1	3.1	3.2	3.3	3.3	3.4	3.4	3.5	2.6
Tamaulipas	3.5	4.2	4.2	4.3	4.4	4.4	4.6	4.7	4.9	5.0	5.1	5.3	5.3	5.2	5.2	5.2	2.6
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	12.2	14.8	14.6	14.7	14.9	15.2	15.4	15.7	16.0	16.2	16.4	16.8	17.1	17.3	17.6	18.1	2.6
Yucatán	6.0	7.3	7.2	7.2	7.4	7.5	7.6	7.8	7.9	8.0	8.1	8.3	8.4	8.5	8.7	8.9	2.6
Zacatecas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Domestic	154.9	186.1	184.1	185.2	187.5	190.1	193.8	197.4	201.6	204.2	207.3	211.7	214.6	215.9	218.0	221.3	2.4

TABLE B. 48
GASOLINE DEMAND MOTOR-CARRIER SECTOR HIGH SCENARIO, PEMEX PREMIUM PROS16-30
(thousand barrels per day)

2								Data pe	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	1.8	2.2	2.1	2.2	2.3	2.3	2.4	2.5	2.7	2.7	2.8	2.9	3.0	3.1	3.2	3.2	4.0
Baja California	7.7	9.6	9.6	9.9	10.3	10.7	11.1	11.4	11.8	12.0	12.2	12.6	12.9	13.1	13.3	13.5	3.8
Baja California Sur	2.4	3.0	3.0	3.1	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.1	4.2	4.3	3.8
Campeche	0.9	1.1	1.1	1.1	1.1	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.5	1.5	1.5	1.6	4.1
Chiapas	3.4	4.2	4.1	4.2	4.4	4.6	4.8	4.9	5.1	5.2	5.4	5.6	5.7	5.9	6.0	6.3	4.1
Chihuahua	4.2	5.0	5.1	5.3	5.5	5.7	6.0	6.3	6.6	6.8	7.1	7.4	7.4	7.4	7.5	7.5	4.0
Coahuila	3.0	3.6	3.7	3.8	4.0	4.1	4.3	4.5	4.8	4.9	5.1	5.3	5.4	5.4	5.4	5.4	4.0
Colima	3.7	4.5	4.4	4.5	4.7	4.8	5.1	5.3	5.5	5.6	5.8	6.0	6.2	6.4	6.5	6.7	4.0
Ciudad de México	20.8	24.6	25.0	25.9	26.3	27.4	28.4	29.2	30.2	31.0	31.7	32.4	33.0	33.4	33.8	34.6	3.4
Durango	3.9	4.6	4.7	4.8	5.1	5.2	5.5	5.8	6.1	6.3	6.5	6.8	6.8	6.8	6.9	6.9	4.0
Guanajuato	6.7	8.1	7.9	8.1	8.5	8.7	9.1	9.5	9.9	10.2	10.5	10.9	11.2	11.4	11.7	12.1	4.0
Guerrero	3.7	4.5	4.5	4.6	4.7	4.9	5.1	5.3	5.5	5.6	5.8	6.0	6.2	6.3	6.5	6.8	4.1
Hidalgo	6.1	7.5	7.4	7.7	8.0	8.3	8.6	8.9	9.2	9.4	9.7	10.0	10.3	10.5	10.8	11.1	4.0
Jalisco	7.2	8.7	8.5	8.7	9.1	9.4	9.8	10.2	10.6	10.9	11.2	11.7	12.0	12.3	12.6	13.0	4.0
México	9.3	11.0	11.2	11.6	11.8	12.3	12.7	13.1	13.5	13.9	14.2	14.5	14.8	15.0	15.1	15.5	3.4
Michoacán	5.2	6.3	6.2	6.3	6.6	6.8	7.1	7.4	7.7	7.9	8.2	8.5	8.7	8.9	9.2	9.4	4.0
Morelos	3.9	4.8	4.7	4.9	5.1	5.3	5.5	5.7	5.9	6.0	6.2	6.4	6.6	6.7	6.9	7.1	4.0
Nayarit	1.5	1.8	1.7	1.8	1.8	1.9	2.0	2.1	2.2	2.2	2.3	2.4	2.4	2.5	2.6	2.6	4.0
Nuevo León	10.0	12.1	12.2	12.5	12.7	13.0	13.3	13.7	14.0	14.2	14.5	14.9	15.2	15.5	15.8	16.2	3.2
Oaxaca	3.3	4.1	4.0	4.1	4.3	4.5	4.7	4.8	5.0	5.1	5.3	5.4	5.6	5.7	5.9	6.1	4.1
Puebla	6.2	7.6	7.5	7.8	8.1	8.4	8.7	9.0	9.3	9.5	9.8	10.1	10.4	10.7	10.9	11.2	4.0
Querétaro	3.4	4.2	4.1	4.2	4.4	4.5	4.7	4.9	5.1	5.2	5.4	5.6	5.8	5.9	6.1	6.2	4.0
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	2.4	2.9	2.8	2.9	3.0	3.1	3.2	3.4	3.5	3.6	3.7	3.9	4.0	4.1	4.2	4.3	4.0
Sinaloa	5.5	6.9	6.9	7.1	7.4	7.7	7.9	8.1	8.4	8.6	8.8	9.0	9.2	9.3	9.5	9.7	3.8
Sonora	4.4	5.5	5.5	5.7	5.9	6.2	6.4	6.6	6.8	6.9	7.0	7.3	7.4	7.5	7.6	7.8	3.8
Tabasco	2.4	2.9	2.9	3.0	3.1	3.2	3.3	3.4	3.6	3.6	3.7	3.9	4.0	4.1	4.2	4.4	4.1
Tamaulipas	3.5	4.2	4.3	4.4	4.6	4.8	5.0	5.3	5.5	5.7	5.9	6.2	6.2	6.2	6.3	6.3	4.0
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	12.2	15.0	14.9	15.2	15.8	16.5	17.1	17.7	18.3	18.8	19.3	20.0	20.6	21.1	21.7	22.5	4.1
Yucatán	6.0	7.4	7.3	7.5	7.8	8.1	8.5	8.7	9.1	9.3	9.5	9.9	10.2	10.4	10.7	11.1	4.1
Zacatecas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Domestic	154.9	187.9	187.5	192.8	199.7	207.0	215.3	222.7	230.8	236.6	242.8	250.9	257.1	261.3	266.5	273.3	3.9

### TABLE B. 49 GASOLINE DEMAND MOTOR-CARRIER SECTOR BASE SCENARIO PROS16-30

(thousand barrels per day)

C+-+-								Data	a per yea	r							AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	10.4	10.6	10.8	10.9	11.1	11.3	11.6	11.9	12.2	12.4	12.7	13.1	13.4	13.6	13.8	14.1	2.0
Baja California	38.2	39.0	40.7	41.9	43.3	44.3	45.3	46.3	47.4	47.9	48.6	49.7	50.4	50.6	51.1	51.5	2.0
Baja California Sur	8.7	9.0	9.4	9.7	10.0	10.2	10.5	10.7	11.0	11.1	11.2	11.5	11.7	11.7	11.8	11.9	2.1
Campeche	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.4	5.6	5.7	5.8	5.9	6.0	6.1	6.2	6.4	2.2
Chiapas	17.1	17.4	17.9	18.2	18.6	19.1	19.5	20.0	20.5	20.8	21.2	21.7	22.2	22.5	22.9	23.6	2.2
Chihuahua	33.0	33.3	35.2	36.2	37.4	38.1	39.7	41.2	42.7	43.7	45.0	46.7	46.7	46.3	46.2	46.0	2.2
Coahuila	16.8	17.1	18.0	18.6	19.2	19.6	20.4	21.1	21.9	22.4	23.1	23.9	23.9	23.7	23.7	23.6	2.3
Colima	18.4	18.8	19.2	19.3	19.9	20.1	20.6	21.2	21.8	22.2	22.6	23.3	23.8	24.2	24.6	25.1	2.1
Ciudad de México	103.6	105.9	108.1	110.3	109.9	112.7	115.0	116.9	119.5	121.6	123.3	125.1	126.6	127.4	128.0	130.3	1.5
Durango	21.8	22.2	23.4	24.2	24.9	25.4	26.4	27.5	28.5	29.2	30.0	31.1	31.1	30.8	30.8	30.7	2.3
Guanajuato	36.3	37.0	37.6	38.0	39.0	39.4	40.5	41.6	42.8	43.5	44.4	45.7	46.8	47.4	48.4	49.3	2.1
Guerrero	13.5	14.0	14.3	14.6	14.9	15.3	15.7	16.0	16.4	16.7	17.0	17.4	17.8	18.1	18.4	18.9	2.3
Hidalgo	28.8	29.5	30.2	30.9	31.6	32.3	32.8	33.4	34.1	34.7	35.2	36.1	36.8	37.3	37.9	38.6	2.0
Jalisco	40.4	41.1	41.8	42.2	43.3	43.8	45.0	46.3	47.5	48.4	49.4	50.8	52.0	52.7	53.8	54.8	2.1
México	53.4	54.3	55.4	56.5	56.3	57.8	58.9	59.9	61.2	62.3	63.2	64.1	64.9	65.3	65.6	66.8	1.5
Michoacán	28.3	28.9	29.4	29.7	30.4	30.7	31.6	32.5	33.4	34.0	34.7	35.7	36.5	37.0	37.8	38.5	2.1
Morelos	15.1	15.6	16.0	16.3	16.7	17.0	17.4	17.7	18.0	18.3	18.6	19.1	19.4	19.7	20.0	20.4	2.0
Nayarit	4.8	5.0	5.1	5.2	5.3	5.4	5.5	5.7	5.8	5.9	6.0	6.2	6.4	6.4	6.6	6.7	2.2
Nuevo León	47.1	48.2	49.9	51.0	51.4	52.1	52.7	53.6	54.5	54.9	55.6	56.7	57.7	58.2	59.2	60.4	1.7
Oaxaca	14.3	14.7	15.1	15.4	15.7	16.1	16.5	16.9	17.3	17.6	17.9	18.3	18.7	19.0	19.4	19.9	2.2
Puebla	29.3	30.0	30.8	31.4	32.2	32.9	33.5	34.0	34.8	35.3	35.9	36.8	37.5	37.9	38.6	39.3	2.0
Querétaro	17.0	17.4	17.7	17.8	18.3	18.5	19.0	19.5	20.1	20.4	20.9	21.4	21.9	22.3	22.7	23.1	2.1
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	16.1	16.2	16.5	16.7	17.1	17.3	17.8	18.3	18.8	19.1	19.5	20.1	20.5	20.8	21.3	21.7	2.0
Sinaloa	27.0	27.6	28.8	29.7	30.6	31.3	32.1	32.7	33.5	33.9	34.4	35.2	35.7	35.8	36.1	36.4	2.0
Sonora	23.9	24.4	25.5	26.2	27.1	27.7	28.3	28.9	29.6	29.9	30.4	31.1	31.5	31.6	31.9	32.2	2.0
Tabasco	9.5	9.8	10.1	10.3	10.5	10.8	11.0	11.3	11.5	11.7	12.0	12.3	12.5	12.7	12.9	13.3	2.2
Tamaulipas	32.3	32.5	34.3	35.4	36.5	37.2	38.7	40.2	41.7	42.7	43.9	45.5	45.5	45.1	45.0	44.9	2.2
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	51.1	52.6	53.9	54.8	56.1	57.5	58.9	60.3	61.7	62.7	63.9	65.5	66.9	67.9	69.2	71.2	2.2
Yucatán	26.6	27.3	28.0	28.5	29.1	29.9	30.6	31.3	32.1	32.6	33.2	34.0	34.8	35.3	35.9	37.0	2.2
Zacatecas	5.4	5.3	5.4	5.4	5.6	5.6	5.8	6.0	6.1	6.2	6.4	6.5	6.7	6.8	6.9	7.1	1.8
Domestic	792.9	809.4	833.2	850.2	867.3	884.5	906.6	928.1	952.1	967.9	986.0	1010.5	1026.3	1034.4	1046.6	1063.5	2.0

TABLE B. 50
GASOLINE DEMAND MOTOR-CARRIER SECTOR BASE SCENARIO-LOW SAVING PROS16-30
(thousand barrels per day)

State								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	10.4	10.8	11.0	11.1	11.5	11.8	12.3	12.9	13.4	13.7	14.1	14.6	15.0	15.3	15.6	16.0	2.9
Baja California	38.2	39.2	40.9	41.5	42.9	44.3	45.7	47.0	48.5	49.3	50.4	51.9	52.9	53.4	54.2	54.9	2.5
Baja California Sur	8.7	9.1	9.5	9.6	9.9	10.2	10.6	10.9	11.2	11.4	11.7	12.0	12.2	12.3	12.5	12.7	2.5
Campeche	4.7	4.8	4.9	5.0	5.1	5.3	5.5	5.7	5.9	6.1	6.3	6.5	6.7	6.8	7.0	7.2	3.0
Chiapas	17.1	17.6	18.0	18.3	18.7	19.5	20.3	21.1	21.8	22.4	23.1	23.8	24.5	25.0	25.6	26.5	3.0
Chihuahua	33.0	33.7	35.6	36.7	38.0	39.4	41.5	43.5	45.6	47.3	49.1	51.3	51.7	51.6	51.7	51.8	3.0
Coahuila	16.8	17.3	18.2	18.8	19.5	20.2	21.3	22.3	23.4	24.2	25.2	26.3	26.5	26.5	26.5	26.6	3.1
Colima	18.4	19.2	19.6	19.8	20.5	21.0	22.0	22.9	23.8	24.5	25.1	26.0	26.7	27.2	27.8	28.5	2.9
Ciudad de México	103.6	106.6	108.9	111.3	111.3	115.8	119.4	122.6	126.4	129.5	132.0	134.6	136.7	138.1	139.0	141.9	2.1
Durango	21.8	22.5	23.7	24.5	25.4	26.2	27.6	29.0	30.4	31.5	32.7	34.2	34.4	34.4	34.4	34.5	3.1
Guanajuato	36.3	37.6	38.4	38.9	40.2	41.3	43.2	45.0	46.7	48.0	49.4	51.1	52.5	53.5	54.7	55.9	2.9
Guerrero	13.5	14.1	14.4	14.7	15.0	15.6	16.3	16.9	17.5	18.0	18.5	19.1	19.7	20.1	20.5	21.3	3.1
Hidalgo	28.8	30.0	30.7	31.6	32.5	33.8	35.0	36.0	37.3	38.2	39.2	40.4	41.4	42.2	43.1	44.0	2.9
Jalisco	40.4	41.8	42.7	43.2	44.6	45.9	48.0	50.0	51.9	53.4	54.9	56.7	58.3	59.4	60.8	62.1	2.9
México	53.4	54.6	55.8	57.1	57.0	59.3	61.2	62.8	64.8	66.4	67.7	69.0	70.1	70.8	71.3	72.7	2.1
Michoacán	28.3	29.4	30.0	30.4	31.3	32.3	33.7	35.1	36.5	37.5	38.5	39.9	41.0	41.7	42.7	43.6	2.9
Morelos	15.1	15.9	16.3	16.7	17.2	17.9	18.5	19.1	19.7	20.2	20.7	21.4	21.9	22.3	22.8	23.3	2.9
Nayarit	4.8	5.1	5.2	5.3	5.5	5.6	5.9	6.1	6.4	6.5	6.7	6.9	7.1	7.3	7.4	7.6	3.1
Nuevo León	47.1	48.5	50.1	51.1	51.5	52.7	53.7	55.0	56.2	56.9	57.9	59.2	60.4	61.1	62.2	63.6	2.0
Oaxaca	14.3	14.8	15.2	15.5	15.8	16.5	17.1	17.8	18.4	18.9	19.5	20.1	20.7	21.1	21.6	22.4	3.0
Puebla	29.3	30.6	31.3	32.2	33.1	34.4	35.6	36.7	38.0	39.0	39.9	41.2	42.2	43.0	43.9	44.9	2.9
Querétaro	17.0	17.7	18.0	18.3	18.8	19.4	20.3	21.1	21.9	22.5	23.2	24.0	24.6	25.1	25.7	26.2	2.9
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	16.1	16.5	16.9	17.1	17.6	18.2	19.0	19.8	20.5	21.1	21.7	22.4	23.1	23.5	24.0	24.6	2.9
Sinaloa	27.0	27.7	29.0	29.4	30.4	31.3	32.3	33.2	34.3	34.9	35.7	36.7	37.4	37.8	38.3	38.8	2.5
Sonora	23.9	24.5	25.6	26.0	26.8	27.7	28.6	29.4	30.3	30.8	31.5	32.4	33.1	33.4	33.9	34.3	2.4
Tabasco	9.5	9.9	10.1	10.3	10.6	11.0	11.5	11.9	12.3	12.6	13.0	13.4	13.8	14.1	14.5	15.0	3.0
Tamaulipas	32.3	32.9	34.7	35.8	37.1	38.4	40.4	42.4	44.5	46.1	47.9	50.1	50.4	50.3	50.4	50.5	3.0
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	51.1	53.0	54.2	55.3	56.5	58.8	61.2	63.5	65.8	67.6	69.5	71.8	73.9	75.4	77.3	79.9	3.0
Yucatán	26.6	27.5	28.1	28.7	29.3	30.6	31.8	33.0	34.2	35.1	36.1	37.3	38.4	39.2	40.1	41.5	3.0
Zacatecas	5.4	5.4	5.5	5.6	5.8	5.9	6.2	6.4	6.7	6.9	7.1	7.3	7.5	7.7	7.8	8.0	2.7
Domestic	792.9	818.1	842.5	859.7	879.4	910.4	945.6	979.1	1014.6	1040.7	1068.0	1101.7	1125.0	1139.3	1157.4	1180.8	2.7

TABLE B. 51
GASOLINE DEMAND MOTOR-CARRIER SECTOR MODERATE SCENARIO PROS16-30
(thousand barrels per day)

Data per year AAGR State 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2015-2030 10.4 10.9 10.6 10.5 10.7 10.7 11.0 11.3 11.6 11.8 12.0 12.3 12.5 12.7 12.9 Aguascalientes 1.6 38.2 41.4 41.1 41.5 42.5 43.3 44.0 44.7 45.6 45.8 46.4 47.3 47.8 47.8 48.2 48.5 Baja California 1.6 10.3 10.7 8.7 9.6 9.5 9.6 9.8 10.0 10.2 10.5 10.6 10.9 11.0 11.1 11.1 11.2 Baja California Sur 1.7 4.7 4.9 Campeche 5.2 1.7 17.1 18.1 17.8 17.9 18.2 18.8 19.1 19.5 19.8 20.1 20.5 20.9 21.1 Chiapas 18.5 21.4 22.0 1.7 Chihuahua 33.0 35.1 35.1 35.7 36.6 37.1 38.4 39.7 41.0 41.8 42.9 44.4 44.3 43.8 43.6 43.4 1.8 16.8 18.0 18.0 18.3 188 190 197 20.3 21.0 21.5 22.0 228 22.7 22.5 22.4 223 Coahuila 1.9 18.4 19.4 18.8 18.7 19.0 19.2 19.7 20.1 20.6 21.0 21.4 21.9 22.4 22.6 23.0 Colima 23.4 1.6 103.6 107.8 106.6 115.2 119.0 106.0 106.5 108.6 110.2 113.5 Ciudad de México 1.1 24.7 25.6 27.9 Durango 21.8 23.4 23.4 23.8 24.4 26.4 27.3 28.6 29.6 29.5 29.2 29.1 28.9 36.3 38.1 36.9 36.7 37.4 37.6 38.6 39.5 40.5 41.2 41.9 43.0 43.9 44.4 45.1 Guanaiuato 1.6 13.5 14.5 14.3 14.3 14.6 14.8 15.1 15.4 15.6 15.8 16.1 16.4 16.7 16.9 17.2 17.7 1.8 Guerrero 28.8 30.5 29.9 30.1 30.5 30.9 31.4 31.7 32.3 32.7 33.0 33.7 34.2 34.5 34.9 35.4 Hidalgo 1.4 40.8 Jalisco 43.9 45.1 45.8 1.6 59.1 59.7 53.4 54.3 54.6 55.3 54.6 55.7 56.5 57.1 58.2 60.4 61.0 61.3 61.4 62.5 28.3 29.7 28.8 28.6 29.2 29.4 30.1 30.9 31.6 32.2 32.7 33.6 34.3 34.7 35.2 35.8 Michoacán 1.6 Morelos 15.1 16.1 15.8 15.9 16.1 16.4 16.6 16.8 17.1 17.3 17.5 17.8 18.1 18.2 18.5 18.7 1.5 4.8 5.0 5.2 5.4 5.6 5.2 5.0 5.1 5.1 5.5 5.7 5.8 6.0 6.0 6.1 6.2 Nayarit 1.7 47.1 49.4 50.0 50.2 50.7 51.1 53.1 55.6 56.1 56.9 Nuevo León 1.4 143 153 151 15 1 153 15.6 159 16.2 16.5 16.7 169 173 17.6 178 181 186 Oaxaca 29.3 31.1 30.4 30.6 31.1 31.5 31.9 32.3 32.9 33.3 33.7 34.3 34.8 35.1 35.6 36.1 Puebla 1.4 17.0 17.9 17.3 17.2 17.5 17.7 18.1 18.6 19.0 19.3 19.7 20.2 20.6 20.8 21.2 21.5 Querétaro 1.6 Quintana Roo 16.1 16.7 16.1 16.5 17.0 17.4 17.8 San Luis Potosí 1.5 27.0 29.3 29.1 29.3 30.1 30.6 31.1 31.6 32.2 32.4 32.8 33.4 33.8 33.8 34.1 34.3 23.9 25.9 25.7 25.9 26.6 27.1 27.5 27.9 28.5 28.7 29.0 29.5 29.9 29.9 30.1 30.3 Sonora 1.6 9.5 10.2 10.1 10.1 10.2 10.4 10.6 10.8 11.0 11.1 11.3 11.6 11.8 11.9 12.1 1.8 35.7 38.7 41.9 Tamaulipas 32.3 34.2 34.3 34.8 36.2 37.4 40.0 40.8 43.3 43.2 42.7 42.5 42.3 1.8 Tlaxcala n.a. 511 54.5 53.8 54.0 547 55.7 56.7 577 58.8 596 60.5 61.8 629 63.6 64 6 664 26.6 28.3 27.9 28.0 28.4 28.9 29.5 30.0 30.6 30.9 31.4 32.1 32.7 33.0 33.6 34.5 Yucatán 17 Zacatecas 5.4 5.5 5.3 5.3 5.4 5.4 5.5 5.7 5.8 5.9 6.0 6.2 6.3 6.4 6.5 1.3 Domestic 792.9 835.4 826.6 831.7 842.3 854.1 871.4 888.2 907.8 920.2 934.4 955.0 967.0 972.1 980.9

TABLE B. 52
GASOLINE DEMAND MOTOR-CARRIER SECTOR HIGH SCENARIO PROS16-30

(thousand barrels per day)

State								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	10.4	11.0	10.8	11.0	11.5	11.8	12.4	12.9	13.4	13.8	14.2	14.7	15.2	15.5	15.9	16.3	3.1
Baja California	38.2	41.7	41.6	43.0	44.9	46.5	48.1	49.5	51.2	52.0	53.2	54.8	56.1	56.7	57.7	58.6	2.9
Baja California Sur	8.7	9.6	9.6	9.9	10.4	10.7	11.1	11.4	11.8	12.0	12.3	12.7	13.0	13.1	13.3	13.6	3.0
Campeche	4.7	5.0	4.9	5.1	5.3	5.5	5.7	5.9	6.1	6.2	6.4	6.6	6.8	7.0	7.2	7.5	3.2
Chiapas	17.1	18.2	18.1	18.6	19.3	20.1	20.9	21.6	22.4	22.9	23.6	24.4	25.1	25.7	26.4	27.5	3.2
Chihuahua	33.0	35.3	35.7	36.9	38.7	39.9	42.1	44.2	46.3	47.7	49.5	51.7	52.1	52.1	52.3	52.6	3.2
Coahuila	16.8	18.1	18.3	18.9	19.8	20.5	21.6	22.7	23.7	24.5	25.4	26.5	26.7	26.7	26.8	27.0	3.2
Colima	18.4	19.6	19.2	19.6	20.5	21.0	22.0	22.9	23.9	24.5	25.3	26.2	27.0	27.6	28.4	29.1	3.1
Ciudad de México	103.6	107.2	108.9	112.7	114.5	119.4	123.9	127.4	131.6	135.2	138.0	141.1	143.8	145.7	147.1	150.7	2.5
Durango	21.8	23.6	23.8	24.6	25.8	26.6	28.1	29.4	30.8	31.8	33.0	34.5	34.7	34.7	34.9	35.0	3.2
Guanajuato	36.3	38.5	37.7	38.4	40.2	41.3	43.3	45.0	46.9	48.2	49.6	51.5	53.1	54.3	55.7	57.2	3.1
Guerrero	13.5	14.6	14.5	14.9	15.5	16.1	16.7	17.3	17.9	18.4	18.9	19.5	20.2	20.6	21.2	22.0	3.3
Hidalgo	28.8	30.9	30.5	31.5	32.8	34.1	35.4	36.4	37.7	38.7	39.8	41.2	42.3	43.3	44.4	45.6	3.1
Jalisco	40.4	42.8	41.9	42.7	44.7	45.9	48.1	50.1	52.1	53.6	55.1	57.2	59.0	60.3	61.9	63.5	3.1
México	53.4	54.9	55.8	57.8	58.7	61.2	63.5	65.3	67.5	69.3	70.7	72.3	73.7	74.7	75.4	77.2	2.5
Michoacán	28.3	30.0	29.4	30.0	31.4	32.3	33.8	35.2	36.6	37.6	38.7	40.2	41.4	42.4	43.5	44.6	3.1
Morelos	15.1	16.3	16.1	16.7	17.4	18.0	18.7	19.3	19.9	20.5	21.0	21.8	22.4	22.9	23.5	24.1	3.2
Nayarit	4.8	5.2	5.1	5.2	5.5	5.6	5.9	6.1	6.4	6.5	6.7	7.0	7.2	7.4	7.6	7.8	3.2
Nuevo León	47.1	49.7	50.1	51.4	52.3	53.6	54.9	56.3	57.7	58.6	59.7	61.3	62.7	63.6	65.0	66.7	2.3
Oaxaca	14.3	15.4	15.3	15.7	16.3	17.0	17.6	18.2	18.9	19.4	19.9	20.6	21.2	21.7	22.3	23.2	3.3
Puebla	29.3	31.4	31.1	32.1	33.4	34.8	36.0	37.1	38.4	39.5	40.5	41.9	43.1	44.1	45.3	46.5	3.1
Querétaro	17.0	18.1	17.7	18.0	18.9	19.4	20.3	21.1	22.0	22.6	23.3	24.2	24.9	25.5	26.1	26.8	3.1
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	16.1	16.9	16.6	16.9	17.7	18.2	19.0	19.8	20.6	21.2	21.8	22.6	23.3	23.8	24.5	25.1	3.0
Sinaloa	27.0	29.5	29.4	30.4	31.7	32.9	34.0	35.0	36.2	36.8	37.6	38.8	39.6	40.1	40.8	41.5	2.9
Sonora	23.9	26.1	26.0	26.9	28.1	29.1	30.1	30.9	32.0	32.5	33.3	34.3	35.1	35.4	36.1	36.7	2.9
Tabasco	9.5	10.3	10.2	10.5	10.9	11.3	11.8	12.2	12.6	12.9	13.3	13.8	14.2	14.5	14.9	15.5	3.3
Tamaulipas	32.3	34.5	34.8	36.0	37.7	39.0	41.1	43.1	45.1	46.6	48.3	50.5	50.8	50.8	51.0	51.3	3.1
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	51.1	55.0	54.6	55.9	58.1	60.6	63.0	65.1	67.4	69.1	71.1	73.5	75.8	77.5	79.7	82.8	3.3
Yucatán	26.6	28.5	28.4	29.1	30.2	31.5	32.7	33.8	35.0	35.9	36.9	38.2	39.4	40.3	41.4	43.0	3.3
Zacatecas	5.4	5.5	5.4	5.5	5.8	5.9	6.2	6.5	6.7	6.9	7.1	7.4	7.6	7.8	8.0	8.2	2.8
Domestic	792.9	843.4	841.8	865.7	897.4	929.8	967.7	1001.7	1038.7	1065.4	1094.1	1130.9	1157.8	1175.8	1198.4	1227.0	3.0

#### Jet Fuel

### **Aerial Transportation Sector**

TABLE B. 53
JET-FUEL DEMAND AERIAL-TRANSPORTATION SECTOR BASE SCENARIO PROS16-30
(thousand barrels per day)

State								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California	3.5	3.8	4.0	4.2	4.3	4.5	4.6	4.7	4.9	5.0	5.2	5.3	5.4	5.6	5.7	5.9	3.6
Baja California Sur	2.4	2.6	2.7	2.9	3.0	3.1	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	3.6
Campeche	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chiapas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Coahuila	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Colima	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Ciudad de México	16.2	19.8	20.3	20.7	21.2	21.4	21.7	22.0	22.3	22.6	22.9	23.2	23.6	23.9	24.2	24.5	2.8
Durango	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guanajuato	9.7	13.4	13.7	14.1	14.5	15.0	15.4	15.8	16.3	16.7	17.2	17.7	18.1	18.6	19.1	19.6	4.8
Guerrero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Hidalgo	2.1	2.6	2.6	2.7	2.8	2.8	2.8	2.9	2.9	2.9	3.0	3.0	3.1	3.1	3.1	3.2	2.8
Jalisco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Michoacán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Morelos	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nayarit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	3.2	3.0	3.1	3.2	3.3	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	1.8
Oaxaca	6.8	5.5	5.7	5.9	6.0	6.1	6.3	6.4	6.5	6.6	6.8	6.9	7.0	7.2	7.3	7.4	0.6
Puebla	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Querétaro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sinaloa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sonora	2.4	2.7	2.8	3.0	3.1	3.2	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.2	3.6
Tabasco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tamaulipas	4.1	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1	5.2	1.6
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	11.1	8.9	9.3	9.5	9.8	10.0	10.2	10.4	10.6	10.8	11.0	11.2	11.4	11.6	11.8	12.0	0.6
Yucatán	9.7	7.8	8.2	8.4	8.6	8.7	8.9	9.1	9.3	9.5	9.6	9.8	10.0	10.2	10.4	10.6	0.6
Zacatecas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Domestic	71.2	73.9	76.4	78.6	80.5	82.2	83.9	85.7	87.5	89.4	91.3	93.2	95.1	97.0	98.9	100.8	2.3

TABLE B. 54

JET-FUEL DEMAND AERIAL-TRANSPORTATION SECTOR BASE SCENARIO-LOW SAVING PROS16-30

(thousand barrels per day)

Chata								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California	3.5	3.8	4.0	4.2	4.3	4.5	4.6	4.7	4.9	5.0	5.2	5.3	5.4	5.6	5.7	5.9	3.6
Baja California Sur	2.4	2.6	2.7	2.9	3.0	3.1	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	3.6
Campeche	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chiapas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Coahuila	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Colima	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Ciudad de México	16.2	19.8	20.3	20.7	21.2	21.6	22.1	22.5	23.0	23.5	24.0	24.5	25.0	25.6	26.1	26.6	3.4
Durango	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guanajuato	9.7	13.4	13.7	14.1	14.5	15.0	15.4	15.9	16.4	16.8	17.3	17.8	18.4	18.9	19.4	20.0	4.9
Guerrero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Hidalgo	2.1	2.6	2.6	2.7	2.8	2.8	2.9	2.9	3.0	3.1	3.1	3.2	3.3	3.3	3.4	3.5	3.4
Jalisco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Michoacán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Morelos	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nayarit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	3.2	3.0	3.1	3.2	3.3	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	1.8
Oaxaca	6.8	5.5	5.7	5.9	6.0	6.2	6.3	6.5	6.7	6.8	7.0	7.2	7.4	7.6	7.7	7.9	1.0
Puebla	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Querétaro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sinaloa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sonora	2.4	2.7	2.8	3.0	3.1	3.2	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.2	3.6
Tabasco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tamaulipas	4.1	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1	5.2	1.6
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	11.1	8.9	9.3	9.5	9.8	10.0	10.3	10.5	10.8	11.1	11.4	11.7	12.0	12.3	12.6	12.8	1.0
Yucatán	9.7	7.8	8.2	8.4	8.6	8.8	9.0	9.2	9.5	9.7	10.0	10.2	10.5	10.8	11.0	11.3	1.0
Zacatecas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Domestic	71.2	73.9	76.4	78.6	80.5	82.6	84.6	86.8	89.0	91.3	93.7	96.0	98.3	100.7	103.1	105.6	2.7

TABLE B. 55

JET-FUEL DEMAND AERIAL-TRANSPORTATION SECTOR MODERATE SCENARIO PROS16-30

(thousand barrels per day)

State								Data p	er year								AAGR
state	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Baja California	3.5	3.8	4.0	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.2	5.3	5.4	5.5	3.1
Baja California Sur	2.4	2.6	2.7	2.8	2.9	3.0	3.1	3.1	3.2	3.3	3.4	3.4	3.5	3.6	3.7	3.8	3.1
Campeche	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chiapas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Coahuila	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Colima	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Ciudad de México	16.2	19.8	20.1	20.5	20.8	21.0	21.2	21.4	21.6	21.8	22.0	22.2	22.4	22.6	22.8	22.9	2.3
Durango	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guanajuato	9.7	13.3	13.6	13.9	14.3	14.6	15.0	15.3	15.7	16.1	16.5	16.9	17.2	17.6	18.0	18.4	4.4
Guerrero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Hidalgo	2.1	2.6	2.6	2.7	2.7	2.7	2.8	2.8	2.8	2.8	2.9	2.9	2.9	2.9	3.0	3.0	2.3
Jalisco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Michoacán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Morelos	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nayarit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	3.2	3.0	3.1	3.1	3.2	3.3	3.3	3.4	3.5	3.6	3.6	3.7	3.8	3.9	3.9	4.0	1.4
Oaxaca	6.8	5.5	5.7	5.8	5.9	6.0	6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.9	6.9	0.1
Puebla	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Querétaro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sinaloa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sonora	2.4	2.7	2.8	2.9	3.0	3.1	3.2	3.2	3.3	3.4	3.5	3.6	3.6	3.7	3.8	3.9	3.1
Tabasco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tamaulipas	4.1	3.8	3.9	4.0	4.0	4.1	4.2	4.3	4.4	4.4	4.5	4.6	4.7	4.8	4.9	5.0	1.3
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	11.1	8.9	9.2	9.4	9.6	9.7	9.9	10.1	10.2	10.4	10.5	10.7	10.9	11.0	11.1	11.3	0.1
Yucatán	9.7	7.8	8.1	8.3	8.4	8.5	8.7	8.8	9.0	9.1	9.2	9.4	9.5	9.7	9.8	9.9	0.1
Zacatecas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Domestic	71.2	73.6	75.8	77.6	79.1	80.5	81.8	83.2	84.6	86.1	87.6	89.0	90.4	91.8	93.2	94.6	1.9

## TABLE B. 56 JET-FUEL DEMAND AERIAL-TRANSPORTATION SECTOR HIGH SCENARIO PROS16-30

(thousand barrels per day)

Chaha								Data p	er year								AAGR
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2015-2030
Aguascalientes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California	3.5	3.8	4.0	4.3	4.5	4.6	4.8	5.0	5.2	5.3	5.5	5.7	5.9	6.1	6.3	6.5	4.2
Baja California Sur	2.4	2.6	2.7	2.9	3.0	3.2	3.3	3.4	3.5	3.7	3.8	3.9	4.0	4.1	4.3	4.4	4.2
Campeche	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chiapas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Coahuila	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Colima	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Ciudad de México	16.2	19.9	20.4	21.1	21.7	22.2	22.7	23.2	23.6	24.1	24.5	25.0	25.4	25.9	26.4	26.8	3.4
Durango	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guanajuato	9.7	13.4	13.8	14.4	14.9	15.5	16.1	16.6	17.2	17.8	18.4	19.0	19.6	20.2	20.8	21.5	5.4
Guerrero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Hidalgo	2.1	2.6	2.7	2.7	2.8	2.9	3.0	3.0	3.1	3.1	3.2	3.3	3.3	3.4	3.4	3.5	3.4
Jalisco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Michoacán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Morelos	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nayarit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	3.2	3.0	3.1	3.2	3.3	3.4	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.4	4.5	4.6	2.4
Oaxaca	6.8	5.5	5.8	6.0	6.2	6.4	6.5	6.7	6.9	7.1	7.2	7.4	7.6	7.8	7.9	8.1	1.2
Puebla	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Querétaro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sinaloa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sonora	2.4	2.7	2.8	3.0	3.1	3.3	3.4	3.5	3.6	3.8	3.9	4.0	4.2	4.3	4.4	4.6	4.2
Tabasco	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tamaulipas	4.1	3.8	3.9	4.1	4.2	4.3	4.4	4.6	4.7	4.8	4.9	5.1	5.2	5.3	5.5	5.6	2.1
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	11.1	8.9	9.4	9.7	10.0	10.3	10.6	10.9	11.2	11.5	11.8	12.0	12.3	12.6	12.9	13.2	1.2
Yucatán	9.7	7.8	8.2	8.5	8.8	9.0	9.3	9.6	9.8	10.1	10.3	10.6	10.8	11.1	11.3	11.6	1.2
Zacatecas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Domestic	71.2	74.1	76.8	79.8	82.5	85.1	87.6	90.1	92.6	95.1	97.6	100.1	102.6	105.1	107.7	110.3	3.0

# ANNEX C. HISTORIC AND PROSPECTIVE DOMESTIC BALANCES

Supplementary Statistic for Oil and Oil Products, 2005-2015 and 2015-2030

### TABLE C. 1 OIL-PRODUCTS DOMESTIC BALANCE, 2005-2015

(thousand barrels per day of crude oil equivalent)

Concept					Da	ıta per yea	ır					AAGR
·	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014		2005-2015
Origin	1422.1	1460.7	1494.5	1540.2	1532.1	1519.0	1553.0	1588.6	1540.2	1494.9	1500.4	0.5
Production	1143.6	1131.4	1115.2	1105.3	1138.5	1044.2	1005.2	1031.1	1057.3	995.7	921.9	-2.1
Cadereyta	167.8	180.5	184.6	183.2	186.7	155.0	144.9	161.2	162.5	154.3	139.5	-1.8
Madero	129.3	141.7	131.3	131.9	130.6	111.8	90.3	105.0	109.3	99.2	106.3	-1.9
Tula	260.5	240.6	255.4	237.1	262.2	237.2	245.2	242.6	216.2	219.5	208.7	-2.2
Salamanca	158.7	157.5	145.4	151.4	150.6	150.3	133.8	142.2	158.0	136.1	118.8	-2.9
Minatitlán	161.0	149.9	147.9	143.3	148.5	141.4	137.0	149.6	146.9	141.1	130.0	-2.1
Salina Cruz	266.3	261.2	250.5	258.4	259.8	248.6	254.1	230.5	264.3	245.5	218.5	-2.0
Import	278.5	329.3	379.4	434.9	393.6	474.7	547.8	557.5	483.0	499.2	578.5	7.6
Destination	1426.3	1455.0	1512.2	1537.4	1549.1	1530.6	1538.4	1549.0	1545.4	1486.3	1485.6	0.4
Domestic demand	1,415.3	1,406.1	1,463.0	1,460.9	1,406.9	1,396.4	1,427.9	1,463.7	1,431.5	1,346.5	1,351.9	-0.5
Transportation sector	902.7	968.1	1,025.8	1,069.6	1,037.1	1,057.4	1,063.6	1,077.8	1,058.9	1,058.0	1,071.4	1.7
Electricity sector	320.0	253.0	245.7	218.4	215.1	197.9	219.5	247.0	224.0	151.5	136.7	-8.2
Public electricity generation	294.2	228.1	220.4	196.4	193.4	174.3	197.6	224.1	201.2	128.1	114.6	-9.0
Private electricity generation	25.8	24.9	25.3	21.9	21.8	23.6	21.9	22.9	22.8	23.3	22.1	-1.6
Indpendent energy producers	0.3	0.0	0.3	0.6	0.0	0.0	0.0	0.3	0.3	0.6	0.9	14.1
Electricity self-generation	25.5	24.9	25.0	21.4	21.7	23.6	21.9	22.6	22.5	22.8	21.1	-1.9
Industrial sector	129.9	128.9	134.1	115.9	98.4	90.7	93.7	92.2	97.4	88.3	98.1	-2.8
Oil sector	62.7	56.0	57.5	57.1	56.3	50.4	51.1	46.7	51.2	48.7	45.7	-3.1
Export	11.0	48.9	49.2	76.5	142.1	134.3	110.5	85.3	113.9	139.8	133.7	28.4
Inventories variation	-4.2	5.7	-17.7	2.8	-17.0	-11.6	14.6	39.6	-5.2	8.5	14.8	n.a.

n.a.: not applicable

Source: Prepared by the IMP, with information from ASA, CFE, CRE, DGAC, SCT, PEMEX, SE, SENER and private companies.

### TABLE C. 2 OIL-PRODUCTS BALANCE 2005-2015, NORTHWEST REGION

(thousand barrels per day of crude oil equivalent)

Concept					Da	ta per ye						AAGR
·	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Origin	207.5	214.0	221.5	208.5	202.8	203.1	219.0	224.9	205.9	193.7	186.8	-1.0
Production	-	-	-	-	-	-	-	-	-	-	-	n.a.
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import	18.3	25.0	51.5	80.1	64.7	54.9	68.7	78.2	56.0	56.2	85.3	16.6
From other regions	189.2	189.0	169.9	128.4	138.1	148.2	150.2	146.7	149.9	137.5	101.5	-6.0
Destination	208.3	213.3	223.0	208.8	203.6	204.5	218.6	221.7	206.4	193.0	185.0	-1.2
Domestic demand	208.3	213.3	223.0	208.8	203.6	204.5	218.6	221.7	206.4	193.0	185.0	-1.2
Transportation sector	119.6	128.2	135.7	142.4	133.6	135.5	139.3	141.9	138.7	136.5	139.8	1.6
Electricity sector	75.6	71.3	73.2	55.6	61.2	61.9	70.9	70.1	56.0	46.3	34.2	-7.6
Public electricity generation	75.1	70.8	72.7	55.2	60.9	61.5	70.6	69.9	55.7	45.7	33.3	-7.8
Private electricity generation	0.5	0.5	0.5	0.4	0.3	0.4	0.2	0.3	0.3	0.6	0.9	5.1
Indpendent energy producers	-	-	-	-	-	-	-	-	-	0.0	-	n.a.
Electricity self-generation	0.5	0.5	0.5	0.4	0.3	0.4	0.2	0.3	0.3	0.6	0.9	5.1
Industrial sector	13.1	13.8	14.0	10.7	8.8	7.0	8.4	9.7	11.7	10.2	11.0	-1.7
Oil sector	-	-	-	-	-	-	-	-	-	-	-	n.a.
Export	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	0.0	-	-	-	-	-	-	-	-	-	-	n.a.
Inventories variation	-0.8	0.7	-1.5	-0.3	-0.8	-1.4	0.4	3.2	-0.5	0.6	1.8	n.a.

n.a.: not applicable

Source: Prepared by the IMP, with information from ASA, CFE, CRE, DGAC, PEMEX, SE, SENER and private companies.

### TABLE C. 3 OIL-PRODUCTS BALANCE 2005-2015, NORTHEAST REGION

(thousand barrels per day of crude oil equivalent)

Concept					Da	ta per ye	ar					AAGR
concept	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Origin	370.6	410.2	422.2	432.3	419.9	400.7	377.7	390.5	409.2	373.3	387.7	0.5
Production	297.1	322.2	316.0	315.1	317.3	266.7	235.2	266.2	271.8	253.5	245.8	-1.9
Cadereyta	167.8	180.5	184.6	183.2	186.7	155.0	144.9	161.2	162.5	154.3	139.5	-1.8
Madero	129.3	141.7	131.3	131.9	130.6	111.8	90.3	105.0	109.3	99.2	106.3	-1.9
Tula	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import	55.8	77.9	96.8	112.3	89.6	125.7	133.4	119.7	131.6	117.5	137.5	9.4
From other regions	17.6	10.2	9.4	5.0	13.0	8.2	9.1	4.7	5.8	2.4	4.4	-13.0
Destination	371.8	409.4	425.5	434.5	423.3	403.3	365.3	378.1	407.3	369.9	381.6	0.3
Domestic demand	254.4	255.8	264.1	265.6	248.9	242.1	239.2	248.3	245.4	232.4	243.3	-0.4
Transportation sector	176.3	193.6	210.2	220.3	209.0	208.6	206.6	207.7	203.7	206.6	213.5	1.9
Electricity sector	48.0	30.7	24.9	19.1	19.9	16.4	14.8	20.4	19.1	8.9	11.0	-13.7
Public electricity generation	46.8	30.0	23.6	18.4	18.8	15.5	13.5	19.2	17.9	6.7	10.2	-14.1
Private electricity generation	1.1	0.7	1.3	0.7	1.1	0.9	1.3	1.2	1.2	2.2	0.8	-3.9
Indpendent energy producers	0.1	-	-	-	-	-	-	-	0.1	0.0	0.1	n.a.
Electricity self-generation	1.1	0.7	1.3	0.7	1.1	0.9	1.3	1.2	1.1	2.2	0.7	-4.5
Industrial sector	22.8	26.0	24.8	21.9	15.6	13.8	14.8	17.4	18.2	14.4	16.7	-3.0
Oil sector	7.3	5.5	4.2	4.3	4.4	3.3	3.0	2.9	4.4	2.5	2.1	-11.6
Export	3.5	17.5	21.4	14.8	23.9	28.9	16.0	8.2	9.8	24.7	15.2	16.0
To other regions	114.0	136.1	140.0	154.1	150.6	132.3	110.1	121.6	152.1	112.8	123.1	0.8
Inventories variation	-1.2	0.8	-3.3	-2.1	-3.5	-2.6	12.3	12.4	2.0	3.4	6.1	n.a.

n.a.: not applicable

Source: Prepared by the IMP, with information from ASA, CFE, CRE, DGAC, PEMEX, SE, SENER and private companies.

#### TABLE C. 4 OIL-PRODUCTS BALANCE 2005-2015, CENTRAL-EASTERN REGION

(thousand barrels per day of crude oil equivalent)

Concept					Da	ta per ye	ar					AAGR
Сопсере	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Origin	329.5	319.7	331.9	357.8	337.7	346.4	353.4	351.2	349.2	331.2	343.9	0.4
Production	158.7	157.5	145.4	151.4	150.6	150.3	133.8	142.2	158.0	136.1	118.8	-2.9
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	158.7	157.5	145.4	151.4	150.6	150.3	133.8	142.2	158.0	136.1	118.8	-2.9
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import	9.5	5.7	15.3	27.4	17.5	14.7	16.1	13.8	7.7	15.0	29.1	11.9
From other regions	161.3	156.5	171.2	179.0	169.6	181.4	203.5	195.2	183.4	180.1	196.0	2.0
Destination	328.3	317.9	333.7	348.0	339.2	348.9	354.0	349.2	352.8	330.2	342.8	0.4
Domestic demand	327.5	316.2	330.7	343.6	325.8	325.9	330.2	330.4	335.6	298.5	305.5	-0.7
Transportation sector	213.6	227.3	236.1	243.3	241.7	249.0	249.0	250.8	246.5	241.0	240.1	1.2
Electricity sector	74.3	51.9	56.8	65.8	52.4	44.1	51.4	56.5	60.2	32.6	36.5	-6.8
Public electricity generation	55.4	32.4	38.2	48.7	35.4	24.6	33.2	37.1	40.7	13.5	17.5	-10.9
Private electricity generation	18.8	19.4	18.6	17.0	16.9	19.6	18.2	19.4	19.4	19.1	19.1	0.1
Indpendent energy producers	0.1	-	0.2	0.2	-	-	-	-	-	-	0.0	n.a.
Electricity self-generation	18.8	19.4	18.4	16.9	16.9	19.6	18.2	19.4	19.4	19.1	19.0	0.1
Industrial sector	34.2	31.8	32.7	29.7	27.4	29.1	26.1	19.7	25.1	22.1	25.8	-2.8
Oil sector	5.5	5.1	5.1	4.8	4.4	3.6	3.7	3.4	3.8	2.8	3.2	-5.4
Export	0.0	0.8	0.0	2.5	12.5	19.4	23.3	14.5	9.8	26.6	36.9	n.a.
To other regions	0.8	1.0	3.0	1.9	0.9	3.7	0.5	4.3	7.4	5.1	0.4	-7.8
Inventories variation	1.2	1.8	-1.8	9.8	-1.5	-2.5	-0.7	2.0	-3.6	1.0	1.1	-0.5

n.a.: not applicable Source: Prepared by the IMP, with information from ASA, CFE, CRE, DGAC, PEMEX, SE, SENER and private companies.

### TABLE C. 5 OIL-PRODUCTS BALANCE 2005-2015, CENTRAL REGION

(thousand barrels per day of crude oil equivalent)

Concept					Da	ta per ye	ar					AAGR
Сопсерс	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Origin	365.6	370.3	384.0	381.9	388.7	396.2	404.9	408.2	390.1	394.7	391.3	0.7
Production	260.5	240.6	255.4	237.1	262.2	237.2	245.2	242.6	216.2	219.5	208.7	-2.2
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	260.5	240.6	255.4	237.1	262.2	237.2	245.2	242.6	216.2	219.5	208.7	-2.2
Salamanca	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import	5.9	5.4	9.0	11.2	10.0	15.9	16.6	18.7	-	-	-	n.a.
From other regions	99.2	124.2	119.6	133.6	116.5	143.0	143.1	146.8	173.9	175.2	182.6	6.3
Destination	366.9	369.6	388.6	384.8	392.7	395.4	403.8	400.3	391.4	394.7	390.2	0.6
Domestic demand	341.6	343.6	359.0	357.8	345.3	349.7	362.7	366.0	352.0	347.8	340.3	0.0
Transportation sector	246.8	259.5	270.7	277.0	273.1	280.3	282.3	283.2	277.6	278.8	280.0	1.3
Electricity sector	35.3	27.7	31.3	29.8	28.4	29.0	36.1	40.2	35.6	29.5	20.6	-5.2
Public electricity generation	34.5	27.0	30.6	29.1	27.6	28.3	35.7	39.8	35.4	29.3	20.5	-5.1
Private electricity generation	0.8	0.6	0.7	0.7	0.8	0.7	0.5	0.4	0.2	0.3	0.1	-19.0
Indpendent energy producers	-	-	-	-	-	-	-	-	-	-	-	n.a.
Electricity self-generation	0.8	0.6	0.7	0.7	0.8	0.7	0.5	0.4	0.2	0.3	0.1	-19.0
Industrial sector	46.5	44.0	44.0	38.8	32.9	30.3	32.9	34.3	30.8	30.5	31.9	-3.7
Oil sector	13.0	12.5	12.9	12.3	10.9	10.2	11.3	8.4	7.9	9.0	7.8	-5.0
Export	-	0.0	0.4	0.0	0.0	0.0	0.0	0.0	-	-	-	n.a.
To other regions	25.3	26.0	29.3	27.0	47.4	45.7	41.0	34.4	39.4	46.9	50.0	7.1
Inventories variation	-1.3	0.7	-4.6	-2.9	-4.0	0.7	1.1	7.9	-1.2	0.1	1.1	n.a.

n.a.: not applicable Source: Prepared by the IMP, with information from ASA, CFE, CRE, DGAC, PEMEX, SE, SENER and private companies.

TABLE C. 6 **OIL-PRODUCTS BALANCE 2005-2015, SOUTH-SOUTHEAST REGION** 

(thousand barrels per day of crude oil equivalent)

Concept					Da	ta per ye	ar					AAGR
Сопсерс	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Origin	620.4	632.3	611.2	614.8	627.1	659.9	710.3	715.0	708.4	713.6	684.5	1.0
Production	427.3	411.1	398.4	401.7	408.4	389.9	391.1	380.1	411.2	386.6	348.6	-2.0
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	161.0	149.9	147.9	143.3	148.5	141.4	137.0	149.6	146.9	141.1	130.0	-2.1
Salina Cruz	266.3	261.2	250.5	258.4	259.8	248.6	254.1	230.5	264.3	245.5	218.5	-2.0
Import	189.0	215.3	206.7	203.9	211.9	263.5	312.9	327.0	287.6	310.5	326.6	5.6
From other regions	4.1	5.9	6.1	9.1	6.8	6.4	6.4	7.8	9.6	16.5	9.4	8.6
Destination	622.4	630.5	617.7	616.4	634.4	665.8	708.9	700.8	710.2	710.2	679.8	0.9
Domestic demand	283.5	277.1	286.3	285.1	283.4	274.3	277.2	297.2	292.1	274.8	277.8	-0.2
Transportation sector	146.4	159.5	173.1	186.6	179.7	183.9	186.5	194.3	192.3	195.0	198.0	3.1
Electricity sector	86.9	71.4	59.5	48.1	53.3	46.5	46.2	59.8	53.2	34.2	34.4	-8.8
Public electricity generation	82.4	67.8	55.3	45.0	50.6	44.5	44.6	58.1	51.4	33.0	33.2	-8.7
Private electricity generation	4.5	3.6	4.2	3.0	2.7	2.0	1.7	1.7	1.7	1.2	1.3	-11.7
Indpendent energy producers	0.1	0.0	0.1	0.4	0.0	0.0	0.0	0.3	0.3	0.5	0.8	21.6
Electricity self-generation	4.3	3.6	4.1	2.7	2.6	2.0	1.6	1.4	1.5	0.7	0.4	-20.6
Industrial sector	13.3	13.4	18.4	14.8	13.7	10.5	11.5	11.1	11.5	11.2	12.8	-0.4
Oil sector	36.9	32.8	35.3	35.6	36.7	33.3	33.0	32.0	35.1	34.4	32.6	-1.2
Export	7.6	30.6	27.4	59.3	105.7	86.0	71.1	62.6	94.3	88.6	81.6	26.9
To other regions	331.4	322.8	304.0	272.1	245.2	305.5	360.6	341.0	323.7	346.8	320.4	-0.3
Inventories variation	-2.1	1.8	-6.5	-1.6	-7.3	-5.9	1.4	14.2	-1.8	3.4	4.7	n.a.

n.a.: not applicable Source: Prepared by the IMP, with information from ASA, CFE, CRE, DGAC, PEMEX, SE, SENER and private companies.

#### TABLE C. 7 **FUEL-OIL DOMESTIC BALANCE, 2005-2015**

(thousand barrels per day)

Canada					D:	ata per yea	r					AAGR
Concept	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Origin	377.2	339.5	318.5	321.6	355.4	333.3	332.5	318.1	300.1	272.2	254.3	-3.9
Production	350.8	325.2	301.5	288.7	316.2	322.3	307.5	273.4	268.8	259.2	237.4	-3.8
Cadereyta	21.2	19.6	8.5	11.5	8.7	16.2	11.2	9.9	13.0	15.2	11.9	-5.6
Madero	19.5	24.6	20.8	12.1	16.8	17.4	7.0	14.1	11.5	19.0	12.7	-4.2
Tula	86.9	77.5	80.2	74.3	86.2	83.8	89.7	88.6	77.5	79.1	72.1	-1.9
Salamanca	48.4	42.0	37.4	35.5	42.2	46.7	40.4	41.4	46.3	38.8	36.4	-2.8
Minatitlán*	75.5	66.6	63.7	62.9	67.2	64.6	65.4	33.4	19.5	14.9	20.7	-12.1
Salina Cruz	99.2	95.0	90.9	92.4	95.1	93.5	93.9	86.1	101.2	92.3	83.5	-1.7
Import	26.4	14.3	17.0	32.9	39.2	11.0	25.0	44.6	31.3	13.0	17.0	-4.3
Destination	383.9	336.9	327.3	314.8	363.4	335.7	331.9	308.1	310.3	275.0	258.3	-3.9
Domestic demand	383.1	301.3	293.8	255.8	242.2	213.4	231.0	238.4	215.2	146.2	134.3	-9.9
Transportation sector marítimo	1.5	1.2	1.2	1.0	0.7	0.8	0.7	0.2	0.0	0.2	0.4	-11.9
Electricity sector	278.4	213.7	210.0	183.1	178.5	160.0	179.1	199.9	178.4	115.2	102.0	-9.6
Public electricity generation	267.5	205.2	201.7	178.0	173.1	155.9	176.1	196.5	175.6	112.5	100.2	-9.4
Electricity self-generation	10.9	8.5	8.4	5.1	5.4	4.1	3.0	3.4	2.8	2.7	1.8	-16.4
Industrial sector	60.7	48.8	45.6	35.5	29.8	24.1	20.8	14.3	10.9	6.5	9.3	-17.1
Oil sector	42.4	37.6	36.9	36.1	33.2	28.5	30.4	24.0	25.9	24.3	22.7	-6.1
Export	0.8	35.6	33.6	59.0	121.2	122.3	100.9	69.7	95.2	128.8	123.9	65.1
Inventories variation	-6.6	2.6	-8.9	6.8	-8.0	-2.4	0.6	9.9	-10.2	-2.8	-3.9	-5.1

\* Includes transfers from Cangrejera's topped oil to fuel oil.

Source: Prepared by the IMP, with information from CFE, CRE, PEMEX and SENER.

### TABLE C. 8 FUEL-OIL BALANCE 2005-2015, NORTHWEST REGION

(thousand barrels per day)

Concept					Da	ta per ye	ear					AAGR
сопсерс	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Origin	72.8	68.0	69.0	53.0	56.4	55.0	62.2	62.1	48.1	39.2	28.9	-8.8
Production	-	-	-	-	-	-	-	-	-	-	-	n.a.
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import	7.0	3.7	3.5	11.4	14.7	5.0	11.1	14.7	10.0	6.8	7.0	0.0
From other regions	65.7	64.3	65.5	41.6	41.8	50.0	51.0	47.4	38.1	32.4	21.9	-10.4
Destination	73.7	67.5	70.0	52.2	56.5	55.3	62.1	60.9	49.0	39.4	29.1	-8.9
Domestic demand	73.7	67.5	70.0	52.2	56.5	55.3	62.1	60.9	49.0	39.4	29.1	-8.9
Transportation sector	0.2	0.0	-	-	-	-	-	-	-	-	-	n.a.
Electricity sector	68.6	63.3	66.1	49.5	54.2	54.8	61.4	60.8	48.9	39.4	29.1	-8.2
Public electricity generation	68.3	63.1	66.0	49.4	54.1	54.6	61.3	60.8	48.9	39.4	29.1	-8.2
Electricity self-generation	0.3	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	-19.7
Industrial sector	4.9	4.1	3.9	2.8	2.3	0.6	0.7	0.1	0.1	0.0	0.0	-43.0
Oil sector	-	-	-	-	-	-	-	-	-	-	-	n.a.
Export	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	-	-	-	-	-	-	-	-	-	-	-	n.a.
Inventories variation	-0.9	0.5	-1.0	0.8	-0.1	-0.3	0.1	1.2	-0.9	-0.3	-0.2	-13.4

 $\label{eq:n.a.:} not \ applicable. \\ Source: Prepared by the IMP, with information from CFE, CRE, PEMEX and SENER. \\$ 

### TABLE C. 9 FUEL-OIL BALANCE 2005-2015, NORTHEAST REGION

(thousand barrels per day)

Concept					Da	ta per ye	ear					AAGR
concept	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Origin	58.2	56.6	41.3	31.6	40.4	44.1	31.1	34.3	34.5	39.3	29.3	-6.6
Production	40.8	44.1	29.2	23.6	25.5	33.7	18.2	24.1	24.5	34.2	24.7	-4.9
Cadereyta	21.2	19.6	8.5	11.5	8.7	16.2	11.2	9.9	13.0	15.2	11.9	-5.6
Madero	19.5	24.6	20.8	12.1	16.8	17.4	7.0	14.1	11.5	19.0	12.7	-4.2
Tula	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import	1.1	3.1	3.4	3.4	2.8	2.8	4.5	5.9	4.6	2.9	0.9	-2.1
From other regions	16.4	9.4	8.7	4.6	12.1	7.6	8.4	4.3	5.4	2.2	3.7	-13.7
Destination	58.8	56.6	42.3	31.1	41.2	44.5	30.7	33.4	34.8	39.6	29.3	-6.7
Domestic demand	57.3	38.8	29.4	23.2	23.5	18.1	15.9	21.6	21.6	9.8	12.4	-14.2
Transportation sector	0.2	0.2	0.2	0.1	0.0	0.0	0.2	-	-	-	-	n.a.
Electricity sector	43.5	28.0	22.6	17.3	17.8	14.6	12.9	17.6	15.9	6.8	9.2	-14.4
Public electricity generation	42.7	27.5	21.6	17.0	17.4	14.3	12.4	17.0	15.6	5.8	9.0	-14.4
Electricity self-generation	0.9	0.5	1.0	0.3	0.4	0.3	0.5	0.6	0.3	1.0	0.2	-15.8
Industrial sector	6.8	5.5	2.8	1.8	1.6	0.4	0.1	1.3	1.7	0.6	1.2	-15.7
Oil sector	6.8	5.1	3.9	4.0	4.0	3.0	2.8	2.7	4.1	2.4	2.0	-11.6
Export	-	12.4	11.9	6.7	17.7	25.7	14.8	7.6	9.1	22.8	14.1	n.a.
To other regions	1.5	5.3	1.1	1.3	0.0	0.6	-	4.2	4.1	7.1	2.8	6.5
Inventories variation	-0.6	0.1	-1.0	0.5	-0.8	-0.3	0.4	0.9	-0.3	-0.3	0.0	-28.9

n.a.: not applicable.

Source: Prepared by the IMP, with information from CFE, CRE, PEMEX and SENER.

#### TABLE C. 10 FUEL-OIL BALANCE 2005-2015, CENTRAL-EASTERN REGION

(thousand barrels per day)

_					Da	ta per ye	ear					AAGR
Concept	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Origin	80.9	55.8	57.1	70.0	60.8	61.2	65.0	55.5	58.9	47.8	58.8	-3.1
Production	48.4	42.0	37.4	35.5	42.2	46.7	40.4	41.4	46.3	38.8	36.4	-2.8
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	48.4	42.0	37.4	35.5	42.2	46.7	40.4	41.4	46.3	38.8	36.4	-2.8
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import	7.3	2.0	6.0	14.6	7.3	0.4	4.0	0.6	2.4	2.5	3.6	-6.7
From other regions	25.2	11.8	13.7	20.0	11.3	14.1	20.6	13.6	10.3	6.5	18.8	-2.9
Destination	82.1	55.4	58.5	67.9	61.8	61.4	65.8	56.3	62.4	48.0	60.1	-3.1
Domestic demand	82.0	54.5	56.5	64.8	50.0	40.7	44.1	39.1	46.7	19.1	25.9	-10.9
Transportation sector	0.8	0.6	0.6	0.6	0.3	0.6	0.2	0.0	0.0	0.2	0.3	-9.6
Electricity sector	56.6	34.0	38.5	47.4	35.0	24.5	31.6	33.8	37.6	13.4	17.4	-11.1
Public electricity generation	51.3	29.8	35.3	45.1	32.7	22.7	30.6	32.2	36.3	12.5	16.1	-10.9
Electricity self-generation	5.3	4.2	3.2	2.2	2.4	1.7	1.0	1.6	1.3	1.0	1.3	-13.3
Industrial sector	19.4	15.2	12.7	12.3	10.5	12.3	8.9	2.1	5.5	2.9	5.2	-12.3
Oil sector	5.1	4.8	4.7	4.5	4.0	3.4	3.5	3.2	3.5	2.6	2.9	-5.4
Export	-	0.7	-	2.3	11.6	18.0	21.6	13.5	9.1	24.6	34.2	n.a.
To other regions	0.2	0.1	2.0	0.8	0.3	2.7	-	3.7	6.6	4.3	-	n.a.
Inventories variation	-1.3	0.5	-1.4	2.2	-1.1	-0.2	-0.8	-0.8	-3.4	-0.2	-1.3	-0.2

 $\label{eq:n.a.:} not \ applicable. \\ Source: Prepared by the IMP, with information from CFE, CRE, PEMEX and SENER. \\$ 

### TABLE C. 11 FUEL-OIL BALANCE 2005-2015, CENTRAL REGION

(thousand barrels per day)

Concept						Data pe	r year					AAGR
Солсерс	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Origin	86.9	77.5	80.2	74.3	86.2	83.8	89.7	88.6	77.5	79.1	72.1	-1.9
Production	86.9	77.5	80.2	74.3	86.2	83.8	89.7	88.6	77.5	79.1	72.1	-1.9
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	86.9	77.5	80.2	74.3	86.2	83.8	89.7	88.6	77.5	79.1	72.1	-1.9
Salamanca	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import	-	-	-	-	-	-	-	-	-	-	-	n.a.
From other regions	-	-	-	-	-	-	-	-	-	-	-	n.a.
Destination	88.0	76.7	82.1	73.1	87.5	83.8	89.4	85.0	78.5	79.5	72.7	-1.9
Domestic demand	66.7	54.2	56.7	50.6	45.2	43.6	52.5	54.1	42.8	36.7	27.1	-8.6
Transportation sector	-	-	-	-	-	-	-	-	-	-	-	n.a.
Electricity sector	32.4	25.4	28.7	27.2	25.9	26.4	33.2	37.0	32.9	27.2	19.0	-5.2
Public electricity generation	32.0	25.1	28.4	27.0	25.6	26.2	33.1	36.9	32.8	27.1	19.0	-5.1
Electricity self-generation	0.5	0.3	0.3	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.0	-24.3
Industrial sector	22.5	17.6	16.2	12.2	9.5	8.2	9.2	10.3	3.5	3.0	2.8	-18.9
Oil sector	11.8	11.2	11.8	11.2	9.8	9.0	10.1	6.8	6.4	6.6	5.4	-7.6
Export	-	-	0.3	-	-	-	-	-	-	-	-	n.a.
To other regions	21.3	22.5	25.0	22.5	42.4	40.2	36.9	30.9	35.7	42.7	45.5	7.9
Inventories variation	-1.1	0.8	-1.8	1.2	-1.3	0.0	0.3	3.6	-1.0	-0.4	-0.6	-5.8

 $n.a.: not \ applicable. \\ Source: Prepared by the IMP, with information from CFE, CRE, PEMEX and SENER. \\$ 

TABLE C. 12 FUEL-OIL BALANCE 2005-2015, SOUTH-SOUTHEAST REGION

(thousand barrels per day)

Concept					Da	ta per ye	ar					AAGR
Сопсере	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Origin	185.8	167.1	158.7	158.8	176.8	160.8	164.6	143.7	140.0	123.1	117.4	-4.5
Production	174.8	161.6	154.5	155.2	162.3	158.1	159.2	119.4	120.6	107.2	104.2	-5.0
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán*	75.5	66.6	63.7	62.9	67.2	64.6	65.4	33.4	19.5	14.9	20.7	-12.1
Salina Cruz	99.2	95.0	90.9	92.4	95.1	93.5	93.9	86.1	101.2	92.3	83.5	-1.7
Import	11.0	5.5	4.2	3.6	14.4	2.7	5.4	23.5	14.3	0.7	5.4	-6.8
From other regions	-	-	-	-	-	-	-	0.8	5.1	15.3	7.7	n.a.
Destination	188.5	166.3	162.3	156.7	181.6	162.4	163.9	138.7	144.6	124.7	119.2	-4.5
Domestic demand	103.4	86.2	81.1	64.9	67.1	55.6	56.4	62.6	55.1	41.2	39.8	-9.1
Transportation sector	0.3	0.4	0.4	0.2	0.3	0.2	0.3	0.1	0.0	0.1	0.1	-8.0
Electricity sector	77.2	63.0	54.1	41.8	45.5	39.7	40.1	50.7	43.0	28.3	27.2	-9.9
Public electricity generation	73.3	59.7	50.4	39.5	43.2	38.0	38.8	49.6	42.0	27.7	26.9	-9.5
Electricity self-generation	4.0	3.3	3.7	2.2	2.3	1.7	1.4	1.1	1.1	0.6	0.3	-22.4
Industrial sector	7.1	6.4	10.0	6.4	5.9	2.6	1.8	0.5	0.1	0.0	0.0	-39.7
Oil sector	18.8	16.4	16.5	16.5	15.4	13.1	14.1	11.4	11.9	12.8	12.4	-4.1
Export	0.8	22.5	21.4	50.1	91.9	78.6	64.4	48.7	77.0	81.4	75.6	57.2
To other regions	84.3	57.5	59.9	41.7	22.5	28.2	43.2	27.4	12.5	2.1	3.7	-26.8
Inventories variation	-2.7	0.8	-3.6	2.1	-4.7	-1.6	0.7	5.0	-4.6	-1.6	-1.8	n.a.

n.a.: not applicable.

\* Includes transfers from Cangrejera's topped oil to fuel oil.

Source: Prepared by the IMP, with information from CFE, CRE, PEMEX and SENER.

TABLE C. 13 PETROLEUM-COKE DOMESTIC BALANCE, 2005-2015

(thousand tons per year)

C					D	ata per yea	r					AAGR
Concept	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Origin	3,820.1	4,795.4	5,267.4	5,334.0	4,115.1	4,386.0	5,089.5	5,828.7	5,915.5	5,091.1	5,430.7	3.6
Production	1,523.0	1,632.5	1,689.1	1,880.5	1,962.5	1,511.0	1,628.0	2,578.7	2,992.1	2,705.1	2,658.3	5.7
Cadereyta	754.1	811.8	984.8	975.0	1,069.1	817.2	849.8	966.6	926.7	865.7	823.5	0.9
Madero	768.9	820.7	704.3	905.5	893.3	693.8	772.9	766.9	945.5	698.9	923.4	1.8
Tula	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	5.3	845.2	1,119.9	1,140.5	911.4	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import*	2,297.1	3,162.9	3,578.2	3,453.5	2,152.6	2,875.0	3,461.5	3,250.1	2,923.3	2,386.1	2,772.4	1.9
Destination	3,770.1	4,740.6	5,227.4	4,653.9	4,062.1	4,038.4	4,214.2	5,060.2	5,727.8	4,891.9	5,260.1	3.4
Domestic demand	3,623.2	4,623.1	5,183.9	4,603.9	3,968.6	3,989.8	4,212.2	4,358.5	5,026.0	4,827.7	5,260.1	3.8
Electricity sector	894.6	1,024.2	1,018.1	982.2	976.8	1,204.7	1,167.4	1,209.0	1,232.7	1,228.0	1,204.6	3.0
Public electricity generation	-	-	-	-	-	-	-	-	-	-	-	n.a.
Electricity self-generation	894.6	1,024.2	1,018.1	982.2	976.8	1,204.7	1,167.4	1,209.0	1,232.7	1,228.0	1,204.6	3.0
Industrial sector	2,728.7	3,598.9	4,165.8	3,621.7	2,991.8	2,785.1	3,044.8	3,149.6	3,793.3	3,599.7	4,055.5	4.0
Hydraulic cement	2,285.0	2,998.5	3,472.3	2,963.4	2,807.1	2,624.5	2,850.4	2,854.0	3,446.9	3,444.2	3,788.3	5.2
Basic metals industry	116.4	189.5	191.3	189.1	109.6	60.8	67.0	77.8	77.3	28.0	52.5	-7.7
Chemistry, rubber and plastic	195.2	310.8	401.9	372.0	32.7	52.4	46.1	55.5	64.9	18.1	59.5	-11.2
Machinery and appliances	62.5	67.0	50.2	54.9	7.5	40.0	53.0	56.3	47.2	7.3	41.3	-4.1
Glass	21.2	14.8	4.2	0.4	0.2	0.2	1.1	0.2	0.2	-	0.2	-36.3
Rest of the industry	48.3	18.3	45.8	42.1	34.6	7.1	27.3	105.7	156.9	102.2	113.7	8.9
Export	146.9	117.5	43.5	50.0	93.5	48.6	2.0	701.7	701.7	64.2	0.0	-59.6
Inventories variation	50.0	54.8	40.0	680.2	52.9	347.6	875.3	768.5	187.7	199.2	170.6	13.1

n.a.: not applicable.

Source: Prepared by the IMP, with information from PEMEX, SE, SENER and private companies.

<sup>\*</sup> Includes PEMEX and private parties.

#### TABLE C. 14 PETROLEUM-COKE BALANCE 2005-2015, NORTHWEST REGION

(thousand tons per year)

Concept	Data per year												
Сопсерс	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015	
Origin	284.4	383.8	397.8	264.8	215.5	165.9	210.4	263.4	392.8	290.8	306.8	0.8	
Production	-	-	-	-	-	-	-	-	-	-	-	n.a.	
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	n.a.	
Madero	-	-	-	-	-	-	-	-	-	-	-	n.a.	
Tula	-	-	-	-	-	-	-	-	-	-	-	n.a.	
Salamanca	-	-	-	-	-	-	-	-	-	-	-	n.a.	
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	n.a.	
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	n.a.	
Import*	-	1.0	1.2	0.9	1.0	1.1	1.4	1.5	101.5	1.3	1.3	n.a.	
From other regions	284.4	382.8	396.5	263.8	214.5	164.7	209.0	261.9	291.4	289.6	305.5	0.7	
Destination	284.4	383.8	397.8	264.8	215.5	165.9	210.4	263.4	392.8	290.8	306.8	0.8	
Domestic demand	284.4	383.8	397.8	264.8	215.5	165.9	210.4	263.4	392.8	290.8	306.8	0.8	
Electricity sector	-	-	-	-	-	-	-	-	-	-	-	n.a.	
Public electricity generation	-	-	-	-	-	-	-	-	-	-	-	n.a.	
Electricity self-generation	-	-	-	-	-	-	-	-	-	-	-	n.a.	
Industrial sector	284.4	383.8	397.8	264.8	215.5	165.9	210.4	263.4	392.8	290.8	306.8	0.8	
Hydraulic cement	284.4	382.8	396.5	263.8	214.5	164.7	209.0	261.9	291.4	289.6	305.5	0.7	
Basic metals industry	-	-	-	-	-	-	-	-	-	-	-	n.a.	
Chemistry, rubber and plastic	-	-	-	-	-	0.1	1.2	1.4	1.3	1.3	1.2	n.a.	
Machinery and appliances	-	-	-	-	-	-	-	-	-	-	-	n.a.	
Glass	-	-	-	-	-	0.1	0.1	0.1	0.1	-	0.2	n.a.	
Rest of the industry	-	1.0	1.2	0.9	1.0	1.0	-	-	100.0	-	-	n.a.	
Export	-	-	-	-	-	-	-	-	-	-	-	n.a.	
To other regions	-	-	-	-	-	-	-	-	-	-	-	n.a.	
Inventories variation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.a.	

#### TABLE C. 15 PETROLEUM-COKE BALANCE 2005-2015, NORTHEAST REGION

(thousand tons per year)

Concept					Dat	a per year						AAGR
Concept	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Origin	3364.4	4319.2	4582.8	4555.7	3419.5	3279.0	3928.1	3678.2	4661.9	3948.8	4506.6	3.0
Production	1523.0	1632.5	1689.1	1880.5	1962.5	1511.0	1622.7	1733.5	1872.2	1564.6	1746.9	1.4
Cadereyta	754.1	811.8	984.8	975.0	1069.1	817.2	849.8	966.6	926.7	865.7	823.5	0.9
Madero	768.9	820.7	704.3	905.5	893.3	693.8	772.9	766.9	945.5	698.9	923.4	1.8
Tula	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import*	1841.5	2686.7	2893.7	2675.2	1457.1	1768.0	2305.4	1944.8	2789.7	2384.2	2759.7	4.1
From other regions	-	-	-	-	-	-	-	-	-	-	-	n.a.
Destination	3474.3	4333.1	4627.1	4559.5	3446.7	3280.2	3158.1	3153.7	4551.0	3848.3	4376.6	2.3
Domestic demand	578.8	935.9	1087.5	940.3	501.4	423.2	436.6	409.4	428.1	278.4	391.5	-3.8
Electricity sector	-	-	-	-	-	-	-	-	-	-	-	n.a.
Public electricity generation	-	-	-	-	-	-	-	-	-	-	-	n.a.
Electricity self-generation	-	-	-	-	-	-	-	-	-	-	-	n.a.
Industrial sector	578.8	935.9	1087.5	940.3	501.4	423.2	436.6	409.4	428.1	278.4	391.5	-3.8
Hydraulic cement	304.5	411.8	456.0	287.0	320.8	268.7	265.9	198.5	236.7	225.5	244.6	n.a.
Basic metals industry	35.7	116.6	133.1	187.4	107.4	58.7	64.7	76.7	75.7	27.4	50.8	3.6
Chemistry, rubber and plastic	115.0	310.6	401.8	372.0	32.7	52.4	44.8	54.1	63.6	16.8	49.4	-8.1
Machinery and appliances	62.5	67.0	50.2	54.9	7.5	40.0	53.0	56.3	47.2	7.3	41.3	-4.1
Glass	21.1	14.8	4.2	0.0	-	-	0.9	-	-	-	-	n.a.
Rest of the industry	39.9	15.3	42.3	39.1	32.9	3.3	7.3	23.8	4.9	1.5	5.5	-18.0
Export	146.9	117.2	43.5	49.8	93.5	48.1	1.4	0.1	0.1	8.5	0.0	-60.9
To other regions	2748.5	3280.0	3496.0	3569.3	2851.9	2808.9	2720.1	2744.3	4122.8	3561.4	3985.0	3.8
Inventories variation	-109.8	-14.0	-44.2	-3.7	-27.2	-1.2	770.0	524.5	110.9	100.4	130.1	n.a.

n.a.: not applicable.

#### TABLE C. 16 PETROLEUM-COKE BALANCE 2005-2015, CENTRAL-EASTERN REGION

(thousand tons per year)

Concept					D	ata per yea	r					AAGR
сысерс	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Origin	1613.4	1830.2	2069.3	2429.3	1839.3	1936.8	1908.6	1988.1	2155.0	2143.2	2251.1	3.4
Production	-	-	-	-	-	-	-	-	-	-	-	n.a.
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import*	49.3	95.0	55.1	0.0	0.1	1.7	0.6	0.2	0.4	0.2	0.3	-39.6
From other regions	1564.1	1735.2	2014.1	2429.3	1839.2	1935.0	1908.0	1987.9	2154.6	2143.1	2250.8	3.7
Destination	1453.6	1761.5	1985.1	1745.4	1759.1	1936.8	1908.6	1988.1	2155.0	2143.2	2251.1	4.5
Domestic demand	1453.6	1761.3	1985.1	1745.4	1759.1	1936.8	1908.6	1988.1	2155.0	2143.2	2251.1	4.5
Electricity sector	894.6	1024.2	1018.1	982.2	976.8	1204.7	1167.4	1209.0	1232.7	1228.0	1204.6	3.0
Public electricity generation	-	-	-	-	-	-	-	-	-	-	-	n.a.
Electricity self-generation	894.6	1024.2	1018.1	982.2	976.8	1204.7	1167.4	1209.0	1232.7	1228.0	1204.6	3.0
Industrial sector	559.0	737.1	967.0	763.3	782.3	732.0	741.2	779.1	922.3	915.3	1046.4	6.5
Hydraulic cement	509.7	667.7	911.9	763.2	782.3	730.3	740.6	778.9	921.9	915.1	1046.0	7.5
Basic metals industry	49.3	69.4	55.1		0.1	0.5	0.6	0.2	0.4	0.2	0.2	-42.0
Chemistry, rubber and plastic	-	-	-	-	-	-	-	-	-	-	-	n.a.
Machinery and appliances	-	-	-	-	-	-	-	-	-	-	-	n.a.
Glass	-	-	-	-	-	-	-	-	-	-	-	n.a.
Rest of the industry	-	0.0	0.0	0.0	0.0	1.2	0.0	-	0.1	-	0.3	n.a.
Export	-	0.1	0.0	-	0.0	-	0.0	0.0	0.0	-	-	n.a.
To other regions	-	-	-	-	-	-	-	-	-	-	-	n.a.
Inventories variation	159.8	68.7	84.2	683.9	80.2	0.0	0.0	0.0	0.0	0.0	0.0	-96.9

n.a.: not applicable.

#### TABLE C. 17 PETROLEUM-COKE BALANCE 2005-2015, CENTRAL REGION

(thousand tons per year)

Concept					Da	ata per yea	r					AAGR
сысерс	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Origin	1131.0	1302.6	1414.0	1349.8	1223.6	1509.0	1359.9	1358.9	1547.9	1568.5	1656.6	3.9
Production	-	-	-	-	-	-	-	-	-	-	-	n.a.
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import*	406.4	377.2	625.7	776.4	693.3	1103.2	1153.6	1303.2	-	-	-	n.a.
From other regions	724.7	925.4	788.3	573.5	530.3	405.7	206.3	55.8	1547.9	1568.5	1656.6	8.6
Destination	1131.0	1302.6	1414.0	1349.8	1223.6	1160.2	1259.9	1258.9	1557.4	1598.9	1707.2	4.2
Domestic demand	1131.0	1302.6	1414.0	1349.7	1204.1	1159.7	1256.6	1252.0	1557.4	1598.9	1707.2	4.2
Electricity sector	-	-	-	-	-	-	-	-	-	-	-	n.a.
Public electricity generation	-	-	-	-	-	-	-	-	-	-	-	n.a.
Electricity self-generation	-	-	-	-	-	-	-	-	-	-	-	n.a.
Industrial sector	1131.0	1302.6	1414.0	1349.7	1204.1	1159.7	1256.6	1252.0	1557.4	1598.9	1707.2	4.2
Hydraulic cement	1010.9	1299.6	1411.0	1346.6	1202.2	1157.4	1235.3	1169.4	1505.0	1498.0	1590.0	4.6
Basic metals industry	31.4	0.7	0.7	0.7	1.0	0.6	1.2	0.6	0.5	0.2	0.2	-40.0
Chemistry, rubber and plastic	80.2	0.2	0.1	-	-	0.0	-	-	0.0	-	8.9	-19.7
Machinery and appliances	-	-	-	-	-	0.0	0.0	-	-	-	-	n.a.
Glass	0.1	-	-	0.3	0.2	0.1	0.1	0.1	0.1	-	0.1	-0.9
Rest of the industry	8.4	2.0	2.3	2.0	0.7	1.6	20.0	81.9	51.8	100.7	108.0	29.1
Export	-	0.0	-	0.2	-	0.5	0.5	0.4	-	-	-	n.a.
To other regions	-	-	-	-	19.5	-	2.8	6.5	-	-	-	n.a.
Inventories variation	0.0	0.0	0.0	0.0	0.0	348.8	100.0	100.0	-9.5	-30.4	-50.7	n.a.

n.a.: not applicable.

#### TABLE C. 18 PETROLEUM-COKE BALANCE 2005-2015, SOUTH-SOUTHEAST REGION

(thousand tons per year)

Concept	Data per year											
сысерс	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Origin	175.5	239.6	299.4	303.7	288.5	304.3	405.4	1,290.8	1,375.9	1,140.9	993.0	18.9
Production	-	-	-	-	-	-	5.3	845.2	1,119.9	1,140.5	911.4	n.a.
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	5.3	845.2	1,119.9	1,140.5	911.4	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import*		3.0	2.5	1.0	1.2	0.9	0.6	0.4	31.8	0.4	11.1	n.a.
From other regions	175.5	236.6	296.9	302.7	287.3	303.4	399.5	445.2	224.2	-	70.5	-8.7
Destination	175.5	239.6	299.4	303.7	288.5	304.3	400.1	1,146.8	1,289.6	1,011.7	901.8	17.8
Domestic demand	175.5	239.5	299.4	303.7	288.5	304.3	400.1	445.6	492.7	516.3	603.5	13.1
Electricity sector	-	-	-	-	-	-	-	-	-	-	-	n.a.
Public electricity generation	-	-	-	-	-	-	-	-	-	-	-	n.a.
Electricity self-generation	-	-	-	-	-	-	-	-	-	-	-	n.a.
Industrial sector	175.5	239.5	299.4	303.7	288.5	304.3	400.1	445.6	492.7	516.3	603.5	13.1
Hydraulic cement	175.5	236.6	296.9	302.7	287.3	303.4	399.5	445.2	492.0	516.1	602.2	13.1
Basic metals industry	-	2.8	2.4	1.0	1.2	0.9	0.6	0.4	0.7	0.2	1.3	n.a.
Chemistry, rubber and plastic	-	0.0	0.0	-	-	-	-	-	0.0	0.1	0.1	n.a.
Machinery and appliances	-	-	-	-	-	-	-	-	-	-	-	n.a.
Glass	-	-	-	-	-	-	-	-	-	-	-	n.a.
Rest of the industry	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.a.
Export	-	0.2	-	-	-	-	-	701.2	701.6	55.7	0.0	n.a.
To other regions	-	-	-	-	-	-	-	-	95.3	439.7	298.3	n.a.
Inventories variation	0.0	0.0	0.0	0.0	0.0	0.0	5.3	144.0	86.3	129.2	91.2	n.a.

n.a.: not applicable.

### TABLE C. 19 DIESEL DOMESTIC BALANCE, 2005-2015

(thousand barrels per day)

					Da	ata per yeai						AAGR
Concept	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Origin	343.0	369.4	386.8	411.5	384.7	397.5	409.5	432.5	420.5	419.5	420.0	2.0
Production	318.2	328.1	334.0	343.5	337.0	289.5	273.8	299.6	313.4	286.6	274.7	-1.5
Cadereyta	69.1	75.2	83.8	81.8	86.3	66.2	63.3	71.8	69.0	61.1	59.3	-1.5
Madero	42.9	45.9	43.1	48.1	43.4	34.6	29.1	31.1	33.5	30.7	36.0	-1.7
Tula	59.0	56.7	62.2	59.8	60.1	49.7	48.2	50.1	44.5	42.5	46.2	-2.4
Salamanca	42.1	44.5	42.4	51.0	45.0	41.7	37.7	39.2	44.4	38.7	33.6	-2.2
Minatitlán	39.2	42.2	44.4	39.7	37.9	37.7	34.1	52.1	63.0	57.2	51.2	2.7
Salina Cruz	65.9	63.7	58.2	63.1	64.4	59.6	61.2	55.3	59.0	56.4	48.4	-3.0
Import1	24.8	41.3	52.7	68.0	47.7	108.0	135.7	132.8	107.1	132.9	145.3	19.3
Destination	337.4	362.4	384.3	406.0	383.7	390.6	401.2	420.3	413.9	410.2	404.6	1.8
Domestic demand	336.5	359.8	375.5	399.5	378.9	390.2	401.2	420.3	413.9	410.2	404.6	1.9
Industrial sector	25.1	24.4	24.8	25.5	23.1	24.5	27.4	31.4	30.9	29.4	29.7	1.7
Oil sector	16.4	15.0	17.1	17.6	19.9	19.1	17.6	19.8	22.2	20.8	19.8	1.9
Transportation sector	288.1	312.7	329.1	349.7	327.3	338.6	346.8	355.0	346.9	350.4	345.8	1.8
Motor-carrier	261.6	285.2	301.9	320.1	303.3	312.5	317.2	326.7	320.5	323.6	317.2	1.9
Railway transportation	11.8	12.7	12.6	11.9	11.2	12.6	13.5	12.7	12.7	12.8	13.4	1.2
Maritime transportation	14.7	14.8	14.6	17.8	12.8	13.5	16.1	15.6	13.7	14.0	15.2	0.3
Electricity sector	6.9	7.8	4.5	6.8	8.6	8.0	9.5	14.1	13.9	9.5	9.3	3.1
Public electricity generation (CFE and LyFC)	5.7	6.8	2.9	4.5	6.7	6.2	7.6	12.2	11.8	6.8	6.6	1.4
Private electricity generation	1.1	1.0	1.6	2.3	1.9	1.8	1.9	1.8	2.0	2.7	2.7	9.4
Indpendent energy producers	0.3	0.0	0.3	0.6	0.0	0.0	0.0	0.3	0.3	0.6	0.9	14.1
Electricity self-generation	0.9	0.9	1.3	1.7	1.8	1.8	1.8	1.5	1.7	2.2	1.8	7.5
Export	0.8	2.5	8.8	6.4	4.8	0.4	0.0	-	-	-	-	n.a.
Inventories variation	5.6	7.0	2.5	5.6	1.0	6.9	8.3	12.1	6.6	9.3	15.4	10.6

n.a.: not applicable.

<sup>1</sup> Includes maquila.

Source: Prepared by the IMP, with information from CRE, CFE, PEMEX and SENER.

#### TABLE C. 20 DIESEL BALANCE 2005-2015, NORTHWEST REGION

(thousand barrels per day)

Concept						a per year						AAGR
Сопсерс	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Origin	47.2	51.9	53.3	56.9	51.0	53.3	59.1	62.3	60.0	61.2	62.0	2.8
Production	-	-	-	-	-	-	-	-	-	-	-	n.a.
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import1	1.9	6.3	19.5	23.3	17.1	20.5	23.8	28.0	22.6	27.7	39.7	35.3
From other regions	45.2	45.7	33.7	33.6	33.9	32.8	35.3	34.3	37.5	33.5	22.3	-6.8
Destination	46.7	51.4	53.0	56.5	50.9	52.6	58.3	61.0	59.2	60.3	60.1	2.6
Domestic demand	46.7	51.4	53.0	56.5	50.9	52.6	58.3	61.0	59.2	60.3	60.1	2.6
Industrial sector	3.7	3.8	4.1	3.9	3.2	4.0	4.6	5.8	6.0	6.0	6.6	5.8
Oil sector	-	-	-	-	-	-	-	-	-	-	-	n.a.
Transportation sector	41.3	44.6	46.9	50.3	44.9	45.8	48.9	50.6	50.0	50.5	50.8	2.1
Motor-carrier	33.0	36.7	39.0	41.2	37.7	38.2	40.7	43.2	42.8	43.1	42.5	2.6
Railway transportation	1.2	1.2	1.2	1.4	1.1	1.3	1.5	1.4	1.6	1.6	1.7	3.3
Maritime transportation	7.1	6.7	6.8	7.7	6.2	6.3	6.7	6.0	5.6	5.9	6.6	-0.7
Electricity sector	1.7	3.0	1.9	2.3	2.8	2.8	4.7	4.6	3.2	3.7	2.8	4.9
Public electricity generation (CFE and LyFC)	1.5	2.8	1.6	1.9	2.5	2.6	4.5	4.3	3.0	3.2	1.9	2.6
Private electricity generation	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.5	0.8	14.6
Indpendent energy producers	-	-	-	-	-	-	-	-	-	0.0	-	n.a.
Electricity self-generation	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.5	0.8	14.6
Export	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	0.0	-	-	-	-	-	-	-	-	-	-	n.a.
Inventories variation	0.4	0.5	0.3	0.5	0.1	0.6	0.9	1.3	0.8	0.9	1.9	15.9

n.a.: not applicable.

<sup>1</sup> Includes maquila for the historic period.

Source: Prepared by the IMP, with information from CRE, CFE, PEMEX and SENER.

#### TABLE C. 21 DIESEL BALANCE 2005-2015, NORTHEAST REGION

(thousand barrels per day)

Origin         113.6         126.5         140.0         151.5         140.7         131.7         127.6         131.8         135.6         119.4         125.5           Production         112.0         121.1         126.9         129.9         129.7         100.8         92.4         102.9         102.5         91.8         95.3           Cadereyta         69.1         75.2         83.8         81.8         86.3         66.2         63.3         71.8         69.0         61.1         59.3           Madero         42.9         45.9         43.1         48.1         43.4         34.6         29.1         31.1         33.5         30.7         36.0           Tula         - <td< th=""><th>5-2015 1.0 -1.6 -1.5 -1.7 n.a. n.a.</th></td<>	5-2015 1.0 -1.6 -1.5 -1.7 n.a. n.a.
Production         112.0         121.1         126.9         129.9         129.7         100.8         92.4         102.9         102.5         91.8         95.3           Cadereyta         69.1         75.2         83.8         81.8         86.3         66.2         63.3         71.8         69.0         61.1         59.3           Madero         42.9         45.9         43.1         48.1         43.4         34.6         29.1         31.1         33.5         30.7         36.0           Tula         -	-1.6 -1.5 -1.7 n.a. n.a.
Cadereyta         69.1         75.2         83.8         81.8         86.3         66.2         63.3         71.8         69.0         61.1         59.3           Madero         42.9         45.9         43.1         48.1         43.4         34.6         29.1         31.1         33.5         30.7         36.0           Tula         - </td <td>-1.5 -1.7 n.a. n.a.</td>	-1.5 -1.7 n.a. n.a.
Madero         42.9         45.9         43.1         48.1         43.4         34.6         29.1         31.1         33.5         30.7         36.0           Tula         -	-1.7 n.a. n.a.
Tula         -	n.a. n.a.
Salamanca         -	n.a.
Minatitián         -	
Salina Cruz         - <th< td=""><td>n.a.</td></th<>	n.a.
Import¹         1.6         5.4         13.1         21.7         11.0         30.9         35.2         28.8         33.0         27.6         30.2           From other regions         0.0         -	
From other regions         0.0         -	n.a.
Destination         112.0         124.6         139.3         150.0         140.5         129.8         125.4         128.6         133.8         117.0         121.4           Domestic demand         73.3         80.5         85.6         93.3         85.9         89.5         92.9         95.8         93.9         94.5         92.6           Industrial sector         7.1         6.5         6.2         6.4         6.7         7.2         8.4         10.0         10.2         9.7         9.8           Oil sector         -	34.3
Domestic demand         73.3         80.5         85.6         93.3         85.9         89.5         92.9         95.8         93.9         94.5         92.6           Industrial sector         7.1         6.5         6.2         6.4         6.7         7.2         8.4         10.0         10.2         9.7         9.8           Oil sector         -	n.a.
Industrial sector         7.1         6.5         6.2         6.4         6.7         7.2         8.4         10.0         10.2         9.7         9.8           Oil sector         - <t< td=""><td>0.8</td></t<>	0.8
Oil sector         -	2.4
Transportation sector         65.1         73.5         78.9         86.5         78.6         81.7         83.6         84.4         81.6         83.2         81.8           Motor-carrier         60.9         68.6         73.6         80.4         73.7         76.2         76.9         78.5         76.7         78.2         76.2           Railway transportation         2.8         3.3         3.7         3.5         3.3         3.9         4.1         3.9         3.5         3.8         4.1           Maritime transportation         1.5         1.5         1.5         2.6         1.5         1.7         2.6         1.9         1.4         1.2         1.5	3.2
Motor-carrier         60.9         68.6         73.6         80.4         73.7         76.2         76.9         78.5         76.7         78.2         76.2           Railway transportation         2.8         3.3         3.7         3.5         3.3         3.9         4.1         3.9         3.5         3.8         4.1           Maritime transportation         1.5         1.5         1.5         2.6         1.5         1.7         2.6         1.9         1.4         1.2         1.5	n.a.
Railway transportation       2.8       3.3       3.7       3.5       3.3       3.9       4.1       3.9       3.5       3.8       4.1         Maritime transportation       1.5       1.5       1.5       2.6       1.5       1.7       2.6       1.9       1.4       1.2       1.5	2.3
Maritime transportation 1.5 1.5 1.5 2.6 1.5 1.7 2.6 1.9 1.4 1.2 1.5	2.3
	3.8
	0.4
Electricity sector 1.0 0.5 0.5 0.5 0.7 0.6 0.9 1.4 2.0 1.5 1.1	0.5
Public electricity generation (CFE and LyFC) 0.8 0.4 0.3 0.1 - 0.1 0.1 0.9 1.1 0.4 0.5	-5.3
Private electricity generation 0.2 0.2 0.2 0.4 0.7 0.6 0.8 0.5 0.9 1.1 0.6	10.4
Indpendent energy producers 0.1 0.1 0.0 0.1	2.8
Electricity self-generation 0.2 0.2 0.2 0.4 0.7 0.6 0.8 0.5 0.9 1.1 0.5	12.5
Export 0.2 2.1 7.6 6.3 2.4 0.4	n.a.
To other regions 38.6 42.1 46.1 50.3 52.2 39.9 32.5 32.8 40.0 22.5 28.8	-2.9
Inventories variation 1.5 1.9 0.7 1.6 0.1 1.9 2.2 3.1 1.7 2.4 4.0	10.4

n.a.: not applicable.  $^1$  Includes maquila for the historic period. Source: Prepared by the IMP, with information from CRE, CFE, PEMEX and SENER.

#### TABLE C. 22 DIESEL BALANCE 2005-2015, CENTRAL-EASTERN REGION

(thousand barrels per day)

Concept					Da	ita per yea	ar					AAGR
Сопсерс	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Origin	78.7	83.2	85.6	89.4	86.1	92.1	94.8	98.4	94.4	93.0	91.6	1.5
Production	42.1	44.5	42.4	51.0	45.0	41.7	37.7	39.2	44.4	38.7	33.6	-2.2
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	42.1	44.5	42.4	51.0	45.0	41.7	37.7	39.2	44.4	38.7	39.7	-0.6
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import1	0.3	0.3	1.5	1.8	1.0	2.5	3.7	7.1	3.2	5.7	11.8	44.2
From other regions	36.3	38.3	41.6	36.7	40.1	48.0	53.3	52.1	46.9	48.5	46.2	2.4
Destination	77.7	82.0	85.2	88.6	85.8	91.0	93.4	96.4	93.4	91.6	89.2	1.4
Domestic demand	77.7	82.0	85.2	88.6	85.8	91.0	93.4	96.4	93.4	91.6	89.2	1.4
Industrial sector	5.2	4.8	5.1	5.5	4.7	5.2	5.8	6.2	5.8	5.7	5.1	-0.2
Oil sector	-	-	-	-	-	-	-	-	-	-	-	n.a.
Transportation sector	72.3	76.7	79.5	82.6	80.6	85.4	87.1	87.5	85.8	85.5	83.7	1.5
Motor-carrier	66.1	69.9	73.2	76.0	75.0	79.1	80.3	81.5	80.8	81.1	79.8	1.9
Railway transportation	4.9	5.6	5.0	4.8	4.3	4.8	4.9	4.3	4.3	3.6	3.3	-3.8
Maritime transportation	1.2	1.2	1.3	1.8	1.3	1.5	2.0	1.6	0.8	0.8	0.5	-7.5
Electricity sector	0.3	0.5	0.6	0.6	0.5	0.4	0.5	2.6	1.8	0.4	0.4	3.1
Public electricity generation (CFE and LyFC	0.1	0.3	0.1	0.1	0.2	0.1	0.2	2.3	1.6	0.1	0.1	2.5
Private electricity generation	0.2	0.2	0.5	0.5	0.3	0.3	0.3	0.3	0.2	0.3	0.3	3.2
Indpendent energy producers	0.1	-	0.2	0.2	-	-	-	-	-	-	0.0	-13.9
Electricity self-generation	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	6.6
Export	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	0.0	-	-	-	-	-	-	-	-	-	-	n.a.
Inventories variation	0.9	1.2	0.4	0.8	0.2	1.1	1.3	2.0	1.0	1.4	2.4	9.6

n.a.: not applicable.  $^1$  Includes maquila for the historic period. Source: Prepared by the IMP, with information from CRE, CFE, PEMEX and SENER.

#### TABLE C. 23 DIESEL BALANCE 2005-2015, CENTRAL REGION

(thousand barrels per day)

Concept					Dat	ta per year						AAGR
Сопсерс	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Origin	67.7	71.7	74.1	76.8	72.9	75.4	75.7	77.3	74.3	78.1	79.2	1.6
Production	59.0	56.7	62.2	59.8	60.1	49.7	48.2	50.1	44.5	42.5	46.2	-2.4
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	59.0	56.7	62.2	59.8	60.1	49.7	48.2	50.1	44.5	42.5	43.5	-3.0
Salamanca	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import1	-	-	-	-	-	-	-	-	-	-	-	n.a.
From other regions	8.7	15.0	11.9	17.0	12.8	25.7	27.5	27.3	29.8	35.6	33.1	14.3
Destination	66.7	70.4	73.6	75.8	72.8	74.4	74.5	75.6	73.4	76.8	77.0	1.4
Domestic demand	66.3	70.4	73.6	75.8	72.8	74.4	74.5	75.6	73.4	76.8	77.0	1.5
Industrial sector	6.0	6.2	6.2	6.2	5.3	4.7	4.9	5.2	4.6	4.2	4.3	-3.3
Oil sector	0.3	0.4	0.2	0.2	0.3	0.5	0.3	0.5	0.4	0.7	1.0	13.2
Transportation sector	59.7	63.4	66.9	69.0	66.7	68.7	69.0	69.7	68.3	71.7	71.6	1.8
Motor-carrier	58.8	62.6	65.9	68.2	65.9	67.8	67.9	68.5	67.0	70.0	69.9	1.7
Railway transportation	0.9	0.9	0.9	0.8	0.8	0.9	1.1	1.2	1.3	1.7	1.8	6.7
Maritime transportation	-	-	-	-	-	-	-	-	-	-	-	n.a.
Electricity sector	0.3	0.3	0.4	0.5	0.4	0.5	0.4	0.3	0.1	0.2	0.1	-13.7
Public electricity generation (CFE and LyFC)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	n.a.
Private electricity generation	0.3	0.3	0.4	0.4	0.4	0.5	0.4	0.3	0.1	0.2	0.1	-13.7
Indpendent energy producers	-	-	-	-	-	-	-	-	-	-	-	n.a.
Electricity self-generation	0.3	0.3	0.4	0.4	0.4	0.5	0.4	0.3	0.1	0.2	0.1	-13.7
Export	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	0.4	0.0	-	-	-	-	-	-	-	-	-	n.a.
Inventories variation	1.0	1.3	0.5	0.9	0.1	1.1	1.2	1.7	0.9	1.4	2.3	n.a.

n.a.: not applicable.

<sup>1</sup> Includes maquila for the historic period. Source: Prepared by the IMP, with information from CRE, CFE, PEMEX and SENER.

#### (thousand barrels per day)

Concept					Da	ta per yea	r					AAGR
Сопсерс	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Origin	126.1	135.1	121.1	124.1	120.8	151.5	168.4	176.3	170.4	185.4	163.3	2.6
Production	105.1	105.8	102.6	102.8	102.2	97.3	95.4	107.4	122.1	113.6	99.6	-0.5
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	39.2	42.2	44.4	39.7	37.9	37.7	34.1	52.1	63.0	57.2	51.2	2.7
Salina Cruz	65.9	63.7	58.2	63.1	64.4	59.6	61.2	55.3	59.0	56.4	48.4	-3.0
Import1	21.0	29.3	18.5	21.2	18.6	54.2	73.0	68.9	48.3	71.9	63.7	11.7
From other regions	0.0	-	-	-	-	-	-	-	-	-	-	n.a.
Destination	124.4	133.0	120.5	122.3	120.4	149.3	165.7	172.4	168.2	182.2	158.5	2.5
Domestic demand	72.6	75.6	78.2	85.3	83.5	82.7	82.1	91.5	94.1	87.1	85.7	1.7
Industrial sector	3.1	3.1	3.3	3.5	3.2	3.3	3.7	4.2	4.2	3.7	4.0	2.5
Oil sector	16.1	14.6	17.0	17.3	19.6	18.7	17.3	19.3	21.8	20.1	18.9	1.6
Transportation sector	49.7	54.5	56.9	61.4	56.5	57.0	58.1	62.9	61.2	59.5	57.8	1.5
Motor-carrier	42.8	47.4	50.1	54.3	51.0	51.2	51.4	54.9	53.2	51.2	48.8	1.3
Railway transportation	1.9	1.7	1.7	1.4	1.7	1.7	1.8	1.9	2.0	2.2	2.5	2.6
Maritime transportation	5.0	5.4	5.0	5.7	3.8	4.2	4.9	6.1	6.0	6.2	6.5	2.8
Electricity sector	3.6	3.4	1.1	3.0	4.2	3.7	2.9	5.2	6.8	3.7	5.1	3.5
Public electricity generation (CFE and LyFC)	3.4	3.3	0.9	2.4	4.0	3.5	2.8	4.7	6.2	3.1	4.1	1.9
Private electricity generation	0.2	0.1	0.2	0.6	0.2	0.2	0.2	0.5	0.6	0.6	0.9	18.2
Indpendent energy producers	0.1	0.0	0.1	0.4	0.0	0.0	0.0	0.3	0.3	0.5	0.8	21.6
Electricity self-generation	0.1	0.0	0.1	0.2	0.2	0.1	0.1	0.2	0.3	0.1	0.1	5.3
Export	0.7	0.5	1.2	0.1	2.4	-	-	-	-	-	-	n.a.
To other regions	51.1	56.9	41.1	37.0	34.5	66.6	83.7	80.8	74.2	95.1	72.8	3.6
Inventories variation	1.7	2.2	0.6	1.7	0.4	2.2	2.7	3.9	2.2	3.2	4.8	10.8

n.a.: not applicable.

<sup>1</sup> Includes maquila for the historic period. Source: Prepared by the IMP, with information from CRE, CFE, PEMEX and SENER.

TABLE C. 25 **GASOLINES DOMESTIC BALANCE, 2005-2015** 

(thousand barrels per day)

Concept	Data per year											AAGR
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Origin	671.2	716.2	753.7	776.7	784.4	783.1	793.4	810.9	783.3	779.3	796.0	1.7
Production	439.5	442.4	443.8	436.7	455.3	404.8	388.8	416.4	425.1	409.2	370.3	-1.7
Cadereyta	73.2	81.9	82.2	82.6	85.2	68.6	65.0	72.8	75.7	73.4	63.1	-1.5
Madero	57.3	60.9	61.5	61.8	61.0	51.9	44.3	50.6	51.4	40.1	50.7	-1.2
Tula	103.8	94.4	100.5	90.8	105.9	91.4	94.1	89.2	80.3	86.5	80.4	-2.5
Salamanca	63.6	66.3	63.4	62.8	62.4	61.0	54.6	60.8	64.6	56.3	44.1	-3.6
Minatitlán	45.5	42.0	41.7	43.1	46.1	41.0	39.0	57.1	56.4	62.1	52.3	1.4
Salina Cruz	96.0	96.9	94.5	95.5	94.8	90.9	91.9	85.8	96.6	90.7	79.6	-1.9
Import1	231.8	273.8	309.8	340.0	329.1	378.3	404.7	394.5	358.3	370.0	425.8	6.3
Destination	672.7	719.1	761.3	792.8	794.0	802.3	800.0	804.4	788.2	778.4	794.6	1.7
Domestic demand	672.1	718.9	761.0	792.6	792.6	802.3	800.0	804.4	788.2	778.4	794.6	1.7
Transportation sector	671.5	718.3	760.3	792.0	791.9	801.6	799.1	803.2	786.9	776.3	792.9	1.7
Oil sector	0.7	0.7	0.7	0.6	0.7	0.7	0.9	1.2	1.3	2.1	1.8	10.6
Export	0.6	0.2	0.4	0.2	1.4	0.0	0.0	0.0	0.0	0.0	0.0	n.a.
Inventories variation	-1.4	-3.0	-7.7	-16.2	-9.6	-19.2	-6.6	6.5	-4.8	0.9	1.4	n.a.

n.a.: not applicable. <sup>1</sup> Includes maquila.

Source: Prepared by the IMP, with information from PEMEX and SENER.

#### TABLE C. 26 **GASOLINES BALANCE 2005-2015, NORTHWEST REGION**

(thousand barrels per day)

Concept	Data per year											AAGR
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Origin	85.4	91.9	97.8	102.3	99.2	99.1	101.0	103.3	98.4	95.4	98.0	1.4
Production	-	-	-	-	-	-	-	-	-	-	-	n.a.
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import1	10.6	17.8	34.1	53.7	38.4	34.9	39.8	41.5	25.7	25.5	45.9	15.8
From other regions	74.8	74.1	63.7	48.7	60.9	64.2	61.2	61.8	72.7	69.9	52.0	-3.6
Destination	85.6	92.2	98.3	103.9	100.0	100.7	101.6	102.6	98.8	95.3	97.8	1.3
Domestic demand	85.6	92.2	98.3	103.9	100.0	100.7	101.6	102.6	98.8	95.3	97.8	1.3
Transportation sector	85.6	92.2	98.3	103.9	100.0	100.7	101.6	102.6	98.8	95.3	97.8	1.3
Oil sector	-	-	-	-	-	-	-	-	-	-	-	n.a.
Export	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	-	-	-	-	-	-	-	-	-	-	-	n.a.
Inventories variation	-0.2	-0.3	-0.5	-1.6	-0.8	-1.6	-0.6	0.7	-0.5	0.1	0.2	n.a.

n.a.: not applicable.

<sup>1</sup> Includes maquila for the historic period.

Source: Prepared by the IMP, with information from PEMEX and SENER.

TABLE C. 27 **GASOLINES BALANCE 2005-2015, NORTHEAST REGION** 

(thousand barrels per day)

Concept	Data per year											AAGR
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Origin	162.5	179.5	189.9	202.9	211.9	200.5	181.8	191.4	191.2	176.2	191.4	1.6
Production	130.5	142.8	143.7	144.4	146.2	120.5	109.3	123.3	127.1	113.5	113.8	-1.4
Cadereyta	73.2	81.9	82.2	82.6	85.2	68.6	65.0	72.8	75.7	73.4	63.1	-1.5
Madero	57.3	60.9	61.5	61.8	61.0	51.9	44.3	50.6	51.4	40.1	50.7	-1.2
Tula	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import1	32.0	36.7	46.2	58.5	65.7	80.0	72.6	68.1	64.1	62.7	77.6	9.3
From other regions	-	-	-	-	-	-	-	-	-	-	-	n.a.
Destination	162.9	180.3	191.7	206.8	214.3	204.9	183.3	190.5	192.6	176.1	191.1	1.6
Domestic demand	129.0	139.4	147.3	153.6	151.4	148.1	142.2	141.7	141.3	142.1	151.0	1.6
Transportation sector	129.0	139.4	147.3	153.6	151.4	148.1	142.2	141.7	141.3	142.1	151.0	1.6
Oil sector	-	-	-	-	-	-	-	-	-	-	-	n.a.
Export	-	-	-	-	1.07	-	-	-	-	-	-	n.a.
To other regions	33.9	40.9	44.4	53.2	61.8	56.8	41.0	48.8	51.3	34.0	40.1	1.7
Inventories variation	-0.3	-0.8	-1.8	-3.9	-2.4	-4.4	-1.4	0.9	-1.4	0.1	0.3	n.a.

n.a.: not applicable.

<sup>1</sup> Includes maquila for the historic period. Source: Prepared by the IMP, with information from PEMEX and SENER.

TABLE C. 28 GASOLINES BALANCE 2005-2015, CENTRAL-EASTERN REGION

Camanant					Da	ta per yea	r					AAGR
Concept	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Origin	155.0	165.2	174.5	178.3	182.3	184.1	185.4	188.4	180.4	176.8	177.2	1.35
Production	63.6	66.3	63.4	62.8	62.4	61.0	54.6	60.8	64.6	56.3	44.1	-3.59
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	63.6	66.3	63.4	62.8	62.4	61.0	54.6	60.8	64.6	56.3	44.1	-3.59
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import1	1	2.1	7.8	12.0	10.4	14.1	9.9	7.4	2.3	7.8	16.2	36.65
From other regions	90.7	96.8	103.3	103.5	109.5	109.0	121.0	120.2	113.4	112.6	116.8	2.57
Destination	155.3	165.8	175.8	181.0	183.9	187.3	186.6	187.5	181.5	176.7	177.1	1.32
Domestic demand	155.3	165.8	175.8	181.0	183.9	187.3	186.6	187.5	181.5	176.7	177.1	1.32
Transportation sector	155.3	165.8	175.8	181.0	183.9	187.3	186.6	187.5	181.5	176.7	177.1	1.32
Oil sector	-	-	-	-	-	-	-	-	-	-	-	n.a.
Export	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	-	-	-	-	-	-	-	-	-	-	-	n.a.
Inventories variation	-0.3	-0.6	-1.3	-2.7	-1.6	-3.1	-1.1	0.9	-1.1	0.1	0.1	n.a.

n.a.: not applicable.

<sup>1</sup> Includes maquila for the historic period. Source: Prepared by the IMP, with information from PEMEX and SENER.

TABLE C. 29 **GASOLINES BALANCE 2005-2015, CENTRAL REGION** 

(thousand barrels per day)

Concept					Da	ta per ye	ar					AAGR
Сопсерс	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Origin	200.1	209.6	216.8	221.4	221.7	225.4	229.4	231.6	226.2	226.8	231.6	1.5
Production	103.8	94.4	100.5	90.8	105.9	91.4	94.1	89.2	80.3	86.5	80.4	-2.5
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	103.8	94.4	100.5	90.8	105.9	91.4	94.1	89.2	80.3	86.5	80.4	-2.5
Salamanca	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import1	-	-	-	-	-	-	-	-	-	-	-	n.a.
From other regions	96.3	115.2	116.3	130.5	115.8	134.0	135.3	142.4	145.9	140.3	151.2	4.6
Destination	200.6	210.4	218.6	224.8	223.9	229.3	230.9	230.9	227.4	226.7	231.4	1.4
Domestic demand	200.6	210.4	218.6	224.8	223.9	229.3	230.9	230.9	227.4	226.7	231.4	1.4
Transportation sector	200.6	210.4	218.6	224.8	223.9	229.3	230.6	230.2	226.7	225.2	230.2	1.4
Oil sector	-	-	-	-	-	-	0.26	0.7	0.7	1.5	1.2	n.a.
Export	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	-	-	-	-	-	-	-	-	-	-	-	n.a.
Inventories variation	-0.5	-0.8	-1.8	-3.5	-2.2	-3.9	-1.5	0.8	-1.3	0.1	0.2	n.a.

n.a.: not applicable.

<sup>1</sup> Includes maquila for the historic period.

Source: Prepared by the IMP, with information from PEMEX and SENER.

TABLE C. 30
GASOLINES BALANCE 2005-2015, SOUTH-SOUTHEAST REGION

Concept					Da	ta per yea	ır					AAGR
Concept	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Origin	329.9	356.0	357.9	354.5	355.4	381.1	413.3	420.5	419.2	426.9	417.9	2.4
Production	141.5	138.9	136.2	138.6	140.8	132.0	130.8	143.0	153.0	152.9	131.9	-0.7
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	45.5	42.0	41.7	43.1	46.1	41.0	39.0	57.1	56.4	62.1	52.3	1.4
Salina Cruz	96.0	96.9	94.5	95.5	94.8	90.9	91.9	85.8	96.6	90.7	79.6	-1.9
Import1	188.4	217.1	221.6	215.9	214.6	249.1	282.5	277.6	266.2	274.0	286.0	4.3
From other regions	-	-	-	-	-	-	-	-	-	-	-	n.a.
Destination	330.1	356.5	360.1	358.9	357.9	387.2	415.2	417.3	419.8	426.4	417.3	2.4
Domestic demand	101.7	111.1	120.9	129.3	133.3	136.8	138.8	141.7	139.0	137.6	137.4	3.1
Transportation sector	101.0	110.5	120.3	128.6	132.6	136.2	138.1	141.2	138.5	137.0	136.8	3.1
Oil sector	0.7	0.7	0.7	0.6	0.7	0.7	0.6	0.6	0.6	0.6	0.5	-1.9
Export	0.6	0.2	0.4	0.2	0.3	-	-	-	-	-	-	n.a.
To other regions	227.8	245.2	238.8	229.5	224.3	250.4	276.5	275.6	280.8	288.8	280.0	2.1
Inventories variation	-0.2	-0.5	-2.3	-4.5	-2.6	-6.1	-1.9	3.2	-0.6	0.5	0.6	n.a.

n.a.: not applicable.

Source: Prepared by the IMP, with information from PEMEX and SENER.

TABLE C. 31
JET-FUEL DOMESTIC BALANCE<sup>1</sup>, 2005-2015

(thousand barrels per day)

C					D.	ata per yea	ar					AAGR
Concept	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Origin	63.3	64.9	66.3	64.0	57.1	51.9	56.3	59.7	64.0	65.1	70.8	1.1
Production	63.3	64.8	66.3	64.0	57.1	51.9	56.3	56.6	60.8	53.4	47.8	-2.8
Cadereyta	4.5	4.8	9.8	6.8	5.2	2.9	3.6	4.7	3.5	3.6	3.3	-2.9
Madero	7.0	7.2	4.9	6.8	6.0	5.5	6.0	5.9	7.5	4.9	1.3	-15.4
Tula	22.5	22.9	24.2	22.7	22.2	22.1	23.0	23.9	22.4	20.7	18.9	-1.7
Salamanca	12.2	13.3	10.5	10.5	8.7	8.1	7.5	8.3	10.6	9.2	9.7	-2.3
Minatitlán	2.8	1.2	0.3	0.2	0.1	0.0	0.0	2.1	0.1	-	-	n.a.
Salina Cruz	14.4	15.3	16.6	17.1	14.9	13.3	16.1	11.8	16.7	15.0	14.7	0.2
Import1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	3.1	3.2	11.7	23.0	n.a.
Destination	65.6	67.5	71.3	70.7	59.2	57.1	57.9	59.3	63.4	66.5	70.8	0.8
Domestic demand	58.7	61.2	67.9	65.0	55.0	55.8	56.1	59.3	62.2	66.5	70.8	1.9
Transportation sector	58.7	61.2	67.9	65.0	55.0	55.8	56.1	59.3	62.2	66.5	70.8	1.9
Oil sector	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.a.
Export	6.9	6.3	3.4	5.7	4.2	1.3	1.8	0.0	1.2	0.0	0.0	n.a.
Inventories variation	-2.3	-2.5	-5.0	-6.7	-2.1	-5.2	-1.6	0.4	0.6	-1.4	0.0	n.a.

n.a.: not applicable.

Source: Prepared by the IMP, with information from ASA, DGAC, PEMEX and SENER.

<sup>&</sup>lt;sup>1</sup> Includes maquila for the historic period.

<sup>&</sup>lt;sup>1</sup> Includes maquila for the historic period.

### TABLE C. 32 JET-FUEL BALANCE 2005-2015, NORTHWEST REGION

(thousand barrels per day)

Concont					D	ata per yea	ar					AAGR
Concept	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Origin	7.3	7.3	7.3	6.0	5.9	6.2	6.4	6.5	7.1	7.3	8.3	1.3
Production	-	-	-	-	-	-	-	-	-	-	-	n.a.
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import1	-	-	-	-	-	0.1	-	-	-	-	-	n.a.
From other regions	7.3	7.3	7.3	6.0	5.9	6.2	6.4	6.5	7.1	7.3	8.3	1.3
Destination	7.4	7.5	7.6	6.3	6.1	6.6	6.4	6.5	7.1	7.3	8.3	1.1
Domestic demand	7.4	7.5	7.6	6.3	6.1	6.6	6.4	6.5	7.1	7.3	8.3	1.1
Transportation sector	7.4	7.5	7.6	6.3	6.1	6.6	6.4	6.5	7.1	7.3	8.3	1.1
Oil sector	-	-	-	-	-	-	-	-	-	-	-	n.a.
Export	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	-	-	-	-	-	-	-	-	-	-	-	n.a.
Inventories variation	-0.1	-0.1	-0.3	-0.3	-0.1	-0.3	-0.1	0.0	0.0	-0.1	0.0	-19.5

n.a.: not applicable.

 $^{\rm 1}$  Includes maquila for the historic period. Source: Prepared by the IMP, with information from ASA, DGAC, PEMEX and SENER.

### TABLE C. 33 JET-FUEL BALANCE 2005-2015, NORTHEAST REGION

(thousand barrels per day)

Camanant					Da	ata per yea	ar					AAGR
Concept	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Origin	11.5	12.1	14.7	13.6	11.2	8.3	9.6	10.7	11.3	9.0	7.5	-4.2
Production	11.5	12.1	14.7	13.6	11.2	8.3	9.6	10.6	11.0	8.5	4.7	-8.6
Cadereyta	4.5	4.8	9.8	6.8	5.2	2.9	3.6	4.7	3.5	3.6	3.3	-2.9
Madero	7.0	7.2	4.9	6.8	6.0	5.5	6.0	5.9	7.5	4.9	1.3	-15.4
Tula	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import1	-	-	-	-	-	-	-	0.1	0.3	0.4	2.4	n.a.
From other regions	-	-	-	-	-	-	-	-	-	0.0	0.4	n.a.
Destination	11.7	12.4	15.6	14.6	11.5	8.8	9.8	10.7	11.2	9.1	7.4	-4.4
Domestic demand	4.3	4.7	9.5	6.7	5.2	4.4	5.2	6.2	5.2	5.9	6.9	4.9
Transportation sector	4.3	4.7	9.5	6.7	5.2	4.4	5.2	6.2	5.2	5.9	6.9	4.9
Oil sector	-	-	-	-	-	-	-	-	-	-	-	n.a.
Export	1.2	0.4	0.4	0.6	0.2	-	-	-	-	-	-	n.a.
To other regions	6.2	7.4	5.7	7.3	6.1	4.4	4.5	4.5	6.0	3.2	0.6	-21.3
Inventories variation	-0.2	-0.3	-0.9	-1.0	-0.3	-0.5	-0.2	0.1	0.1	-0.1	0.0	n.a.

n.a.: not applicable.

<sup>1</sup> Includes maquila for the historic period. Source: Prepared by the IMP, with information from ASA, DGAC, PEMEX and SENER.

## TABLE C. 34 JET-FUEL BALANCE 2005-2015, CENTRAL-EASTERN REGION

(thousand barrels per day)

Concept					Da	ıta per yea	ır					AAGR
Concept	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Origin	12.4	13.5	10.7	10.5	8.9	8.1	7.7	8.6	11.1	9.6	10.1	-2.1
Production	12.2	13.3	10.5	10.5	8.7	8.1	7.5	8.3	10.6	9.2	9.7	-2.3
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	12.2	13.3	10.5	10.5	8.7	8.1	7.5	8.3	10.6	9.2	9.7	-2.3
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import1	-	-	-	-	-	-	-	-	-	-	-	n.a.
From other regions	0.2	0.3	0.2	0.0	0.2	0.0	0.2	0.4	0.5	0.4	0.4	6.5
Destination	12.9	13.9	11.5	11.6	9.2	8.9	7.9	8.6	11.0	9.8	10.1	-2.4
Domestic demand	12.3	13.1	10.6	10.4	8.6	8.2	7.4	8.2	10.7	9.4	9.7	-2.3
Transportation sector	12.3	13.1	10.6	10.4	8.6	8.2	7.4	8.2	10.7	9.4	9.7	-2.3
Oil sector	-	-	-	-	-	-	-	-	-	-	-	n.a.
Export	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	0.6	0.9	0.8	1.2	0.6	0.8	0.5	0.4	0.3	0.5	0.4	-5.0
Inventories variation	-0.5	-0.4	-0.8	-1.1	-0.3	-0.8	-0.2	0.0	0.0	-0.2	0.0	n.a.

n.a.: not applicable.

<sup>1</sup> Includes maquila for the historic period.

Source: Prepared by the IMP, with information from ASA, DGAC, PEMEX and SENER.

# TABLE C. 35 JET-FUEL BALANCE 2005-2015, CENTRAL REGION

(thousand barrels per day)

Concept					Da	ata per yea	ar					AAGR
Concept	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Origin	22.8	23.4	24.2	22.9	22.2	22.6	23.6	24.7	23.4	21.5	19.2	-1.7
Production	22.5	22.9	24.2	22.7	22.2	22.1	23.0	23.9	22.4	20.7	18.9	-1.7
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	22.5	22.9	24.2	22.7	22.2	22.1	23.0	23.9	22.4	20.7	18.9	-1.7
Salamanca	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import1	-	-	-	-	-	-	-	-	-	-	-	n.a.
From other regions	0.3	0.5		0.3	0.0	0.4	0.6	0.8	1.0	0.8	0.3	0.7
Destination	23.6	24.2	25.9	25.2	23.1	24.8	24.2	24.5	23.2	22.1	19.2	-2.0
Domestic demand	21.6	22.5	23.5	22.5	21.6	22.3	23.0	23.5	22.2	21.3	18.3	-1.6
Transportation sector	21.6	22.5	23.5	22.5	21.6	22.3	23.0	23.5	22.2	21.3	18.3	-1.6
Oil sector	-	-	-	-	-	-	-	-	-	-	-	n.a.
Export	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	1.9	1.8	2.4	2.8	1.5	2.4	1.3	1.0	1.0	0.8	0.9	-7.6
Inventories variation	-0.8	-0.8	-1.7	-2.3	-0.8	-2.2	-0.6	0.2	0.2	-0.6	0.0	-30.5

n.a.: not applicable.

<sup>1</sup> Includes maquila for the historic period.

Source: Prepared by the IMP, with information from ASA, DGAC, PEMEX and SENER.

## TABLE C. 36 JET-FUEL BALANCE 2005-2015, SOUTH-SOUTHEAST REGION¹

(thousand barrels per day)

Concept					Da	ata per yea	ır					AAGR
Concept	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Origin	18.8	19.3	18.8	22.2	17.6	15.4	16.7	17.3	20.6	26.3	35.2	6.50
Production	17.1	16.5	16.9	17.2	15.0	13.3	16.1	13.9	16.8	15.0	14.7	-1.54
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	2.8	1.2	0.3	0.2	0.1		0.0	2.1	0.1	-	-	n.a.
Salina Cruz	14.4	15.3	16.6	17.1	14.9	13.3	16.1	11.8	16.7	15.0	14.7	0.20
Import1	-	0.1	-	-	-	-	-	2.9	3.0	11.3	20.5	n.a.
From other regions	1.6	2.6	1.9	5.0	2.6	2.1	0.6	0.5	0.9	-	-	n.a.
Destination	19.5	20.1	20.1	24.2	18.1	16.8	17.2	17.2	20.4	26.7	35.2	6.08
Domestic demand	13.1	13.5	16.7	19.1	13.5	14.4	14.1	14.9	17.0	22.6	27.6	7.76
Transportation sector	13.1	13.5	16.7	19.1	13.5	14.4	14.1	14.9	17.0	22.6	27.6	7.76
Oil sector	-	-	-	-	-	-	-	-	-	-	-	0.00
Export	5.7	5.9	3.0	5.2	4.0	1.3	1.8		1.2	-	-	n.a.
To other regions	0.7	0.7	0.5		0.6	1.1	1.3	2.4	2.2	4.0	7.6	27.20
Inventories variation	-0.7	-0.8	-1.4	-2.0	-0.5	-1.4	-0.5	0.1	0.2	-0.4	0.0	n.a.

n.a.: not applicable.

<sup>1</sup> Includes maquila for the historic period.

Source: Prepared by the IMP, with information from ASA, DGAC, PEMEX and SENER.



State					Da	ta per yea	ar					AAGR
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Aguascalientes	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California	2.1	2.0	1.1	0.7	0.6	0.5	0.3	0.1	0.1	0.0	0.0	-37.9
Baja California Sur	6.0	12.8	18.3	15.6	19.8	16.5	10.0	10.6	15.9	7.1	3.7	-4.6
Campeche	7.8	6.3	5.8	6.3	5.1	5.1	5.4	5.0	4.7	5.2	4.4	-5.5
Coahuila	0.4	0.3	0.8	0.2	0.3	0.1	0.4	0.5	0.1	0.9	0.0	-24.1
Colima	31.6	12.0	17.5	28.9	20.3	9.5	16.6	14.9	23.3	5.9	7.3	-13.6
Chiapas	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-13.6
Chihuahua	13.3	10.7	9.7	8.2	8.6	6.7	6.1	6.5	6.8	3.7	2.1	-17.0
Distrito Federal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-17.0
Durango	10.1	7.9	7.4	5.9	6.2	5.3	4.2	0.9	3.3	1.6	3.0	-11.6
Guanajuato	29.6	27.7	21.6	19.7	13.0	14.6	11.0	7.3	9.7	6.6	9.0	-11.2
Guerrero	1.0	0.0	0.0	3.7	4.5	0.0	0.0	0.0	0.0	0.0	0.0	-11.2
Hidalgo	66.2	53.9	56.4	50.4	44.9	43.4	52.4	54.0	42.8	36.7	27.1	-8.5
Jalisco	2.1	1.2	0.3	0.2	0.3	0.2	0.1	0.3	0.5	0.1	0.3	-18.0
México	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-18.0
Michoacán	2.7	2.0	2.3	2.2	2.2	1.6	1.8	1.3	1.8	0.8	0.7	-12.1
Morelos	0.5	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	-23.6
Nayarit	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-23.6
Nuevo León	6.8	7.9	4.5	4.4	4.4	2.7	2.3	3.5	4.9	2.5	2.6	-9.1
Oaxaca	15.6	16.5	16.1	14.5	12.7	11.7	11.7	10.2	11.2	12.2	11.6	-2.9
Puebla	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.9
Querétaro	0.3	0.6	0.5	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	1.2
Quintana Roo	0.3	0.1	0.1	0.1	0.2	0.0	0.1	0.1	0.1	0.0	0.0	1.2
San Luis Potosí	14.6	10.3	13.7	12.9	13.2	14.3	14.4	15.1	11.1	5.4	8.1	-5.7
Sinaloa	38.8	25.2	26.9	21.5	21.3	22.2	28.8	27.2	21.4	18.3	22.1	-5.5
Sonora	26.8	27.5	23.7	14.4	14.9	16.1	23.1	23.0	11.7	14.0	3.3	-18.9
Tabasco	0.2	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	-33.4
Tamaulipas	26.6	12.1	7.0	4.6	4.0	3.3	3.0	10.3	6.5	1.1	4.7	-15.9
Tlaxcala	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-15.9
Veracruz	71.7	58.8	56.5	39.7	43.3	37.8	36.6	45.5	37.5	21.7	22.0	-11.2
Yucatán	6.7	4.4	2.5	0.6	1.2	0.8	2.4	1.9	1.6	2.1	1.8	-12.1
Zacatecas	1.0	0.5	0.6	0.4	0.6	0.2	0.1	0.0	0.1	0.0	0.0	-12.1
Total	383.1	301.3	293.8	255.8	242.2	213.4	231.0	238.4	215.2	146.2	134.3	-9.9

 $n.a.: not \ applicable. \\ Source: Prepared by the IMP, with information from CFE, CRE, PEMEX and SENER. \\$ 

### TABLE C. 38 PETROLEUM-COKE STATE DEMAND 2005-2015

(thousand barrels per day)

State					Da	ta per ye	ar					AAGR
State	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Aguascalientes	0.0	25.5	0.0	0.0	108.3	93.4	115.4	143.3	184.1	194.2	242.8	n.a.
Baja California	53.9	66.3	63.3	58.8	54.1	45.6	48.3	37.5	39.7	33.6	39.2	-3.1
Baja California Sur	-	-	-	-	-	-	-	-	-	-	-	n.a.
Campeche	-	-	-	-	-	-	-	-	-	-	-	n.a.
Coahuila	138.8	197.9	169.8	109.2	155.5	138.7	128.8	106.7	124.6	119.1	131.8	-0.5
Colima	79.5	113.0	147.4	133.2	125.5	118.7	83.9	111.6	131.2	124.1	135.1	5.4
Chiapas	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	-	-	-	-	0.30	0.3	0.3	0.3	0.3	0.1	0.3	n.a.
Distrito Federal	-	-	-	-	-	-	18.00	75.5	30.5	0.2	9.1	n.a.
Durango	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guanajuato	0.0	0.00	55.11	0.0	-	-	-	-	0.04	0.0	-	n.a.
Guerrero	23.3	33.1	17.0	15.4	25.8	13.4	9.5	16.9	22.9	19.5	20.1	-1.5
Hidalgo	351.6	502.4	626.0	581.0	553.0	512.3	544.0	484.1	672.3	901.7	917.5	10.1
Jalisco	179.3	273.9	292.8	218.2	224.1	187.1	194.2	181.2	199.2	179.4	191.2	0.6
México	273.5	202.2	241.3	184.3	181.4	153.4	125.5	166.9	210.5	183.6	198.3	-3.2
Michoacán	49.27	69.4	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.2	0.1	-44.7
Morelos	266.82	306.6	197.1	215.2	154.9	181.2	178.8	163.4	200.4	220.6	257.3	-0.4
Nayarit	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	440.0	738.0	917.7	831.1	261.5	236.4	266.1	264.8	253.5	150.1	216.8	-6.8
Oaxaca	-	-	28.21	58.9	54.8	54.4	96.1	128.0	129.7	144.4	200.6	n.a.
Puebla	239.1	291.4	349.7	369.1	314.8	312.7	390.3	362.3	443.7	292.8	325.0	3.1
Querétaro	-	-	-	-	0.02	1.2	0.0	-	-	-	0.14	n.a.
Quintana Roo	-	-	-	-	0.00	0.0	0.0	-	-	0.00	0.0	n.a.
San Luis Potosí	1145.5	1279.5	1489.7	1394.0	1301.1	1536.3	1515.1	1551.9	1640.4	1645.4	1681.7	3.9
Sinaloa	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sonora	230.4	317.5	334.4	205.9	161.3	120.3	162.1	225.9	353.1	257.2	267.6	1.5
Tabasco	-	-	61.51	55.6	36.0	52.3	41.6	40.0	42.1	46.8	45.1	1.5
Tamaulipas	0.0	0.0	0.0	0.0	84.2	47.8	41.4	37.6	49.7	9.2	42.6	1.5
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	83.1	120.9	100.0	89.1	92.4	102.2	167.4	197.9	224.5	241.1	267.4	12.4
Yucatán	69.1	85.4	92.7	84.8	79.5	82.0	85.5	62.7	73.6	64.4	70.3	0.2
Zacatecas	-	-	-	-	-	-	-	-	-	-	-	n.a.
Total	3,623.2	4,623.1	5,183.9	4,603.9	3,968.6	3,989.8	4,212.2	4,358.5	5,026.0	4,827.7	5,260.1	3.8

 $n.a.: not \ applicable. \\ Source: Prepared by the IMP, with information from PEMEX, SE, SENER and private companies. \\$ 





TABLE C. 39 **DIESEL STATE DEMAND 2005-2015** 

State					Da	ta per yea	ar					AAGR
State	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Aguascalientes	4.5	4.8	4.9	4.8	4.7	5.0	5.2	5.3	5.0	5.6	4.4	-0.3
Baja California	12.8	14.6	15.3	16.3	13.0	13.5	14.3	14.9	14.3	13.5	13.0	0.1
Baja California Sur	4.2	5.3	5.0	5.5	5.3	5.3	7.5	7.9	5.8	6.8	5.6	3.1
Campeche	16.9	15.0	17.9	18.3	21.1	19.3	17.8	20.7	23.5	20.6	19.6	1.5
Coahuila	8.8	9.5	10.7	11.6	11.3	12.1	12.9	13.1	12.9	11.6	10.4	1.6
Colima	4.7	5.1	6.7	7.4	7.8	13.2	14.1	13.6	10.2	12.0	13.5	11.1
Chiapas	4.6	5.6	5.6	5.9	5.4	5.7	6.5	6.8	5.7	5.5	4.8	0.4
Chihuahua	12.3	13.5	14.9	16.3	15.3	15.3	16.4	17.2	17.6	17.1	16.6	3.0
Distrito Federal	25.0	26.8	27.3	27.1	26.4	25.2	25.2	26.8	26.0	26.8	25.4	0.1
Durango	11.2	12.5	13.3	13.5	13.3	14.9	14.2	14.5	14.4	14.5	14.8	2.9
Guanajuato	15.7	16.0	15.5	16.1	15.1	15.7	15.8	16.3	16.8	16.7	17.1	0.9
Guerrero	3.3	3.7	3.9	4.3	4.3	4.2	4.1	4.2	4.1	4.3	4.2	2.3
Hidalgo	10.4	11.3	12.2	13.4	12.8	14.3	15.0	14.8	14.1	16.0	20.0	6.7
Jalisco	20.8	22.1	21.2	22.3	20.9	18.0	18.2	17.8	18.7	17.9	16.3	-2.4
México	15.2	16.0	16.7	17.6	16.6	16.9	17.4	17.0	16.5	17.0	16.4	0.7
Michoacán	8.8	9.4	10.5	11.2	10.9	11.3	11.8	11.9	12.5	11.9	12.4	3.5
Morelos	3.6	3.5	3.6	3.8	3.8	3.7	3.7	3.8	3.5	3.5	3.9	0.8
Nayarit	1.0	1.1	1.1	1.2	1.2	1.3	1.3	1.4	1.4	1.6	1.6	4.8
Nuevo León	20.6	23.7	23.7	26.9	25.1	25.7	25.1	27.5	26.7	28.8	28.6	3.3
Oaxaca	5.4	5.5	5.6	7.6	5.6	5.4	5.4	5.9	5.5	5.4	5.6	0.5
Puebla	12.0	12.9	13.7	13.8	13.3	14.1	13.3	13.3	13.4	13.4	11.4	-0.5
Querétaro	10.9	11.5	11.7	11.4	11.5	12.5	12.7	15.0	14.0	11.0	9.2	-1.7
Quintana Roo	1.4	0.3	0.2	0.5	1.1	0.2	0.2	0.7	1.1	0.4	0.6	-8.2
San Luis Potosí	7.7	8.6	9.8	10.6	9.9	10.5	10.9	11.4	11.2	10.9	10.6	3.2
Sinaloa	16.6	17.3	17.8	19.2	18.2	18.1	18.5	18.7	19.0	19.4	20.5	2.1
Sonora	13.1	14.1	14.8	15.4	14.3	15.7	18.0	19.6	20.1	20.5	21.0	4.8
Tabasco	7.5	8.3	8.4	9.3	9.0	8.0	7.5	8.4	8.1	6.4	3.1	-8.5
Tamaulipas	20.3	21.3	23.1	25.0	20.8	21.6	24.3	23.5	22.3	22.6	22.2	0.9
Tlaxcala	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
Veracruz	23.2	24.8	26.0	26.6	25.9	27.8	28.7	31.7	32.2	32.3	34.0	3.9
Yucatán	10.2	12.4	10.7	12.8	11.2	12.2	11.8	13.1	13.8	12.2	13.7	3.0
Zacatecas	3.5	3.3	3.7	3.5	3.8	3.6	3.4	3.8	3.6	4.1	4.0	1.4
Total	336.5	359.8	375.5	399.5	378.9	390.2	401.2	420.3	413.9	410.2	404.6	1.9

Source: Prepared by the IMP, with information from CRE, CFE, PEMEX, SCT, SENER and private companies.





TABLE C. 40 **GASOLINES STATE DEMAND 2005-2015** 

State					Da	ta per yea	ar					AAGR
State	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Aguascalientes	10.4	11.1	11.9	11.6	12.3	12.1	12.1	12.5	12.1	12.0	10.4	0.0
Baja California	35.5	37.5	39.6	41.7	38.5	39.2	40.6	41.2	39.3	37.0	38.2	0.7
Baja California Sur	7.6	8.4	9.1	9.5	9.0	9.0	8.9	8.9	8.7	8.6	8.7	1.4
Campeche	3.9	4.0	4.5	4.6	5.0	5.0	4.9	5.1	5.1	4.8	5.1	2.7
Coahuila	13.2	14.5	15.5	16.4	16.3	17.3	16.4	16.2	16.3	15.9	16.8	2.4
Colima	6.5	7.0	12.3	14.7	14.5	21.5	21.0	21.3	17.9	17.6	18.4	11.1
Chiapas	11.9	13.5	15.1	16.5	16.9	18.6	19.7	20.1	18.9	18.5	17.1	3.6
Chihuahua	30.2	31.6	33.3	34.5	32.9	32.3	31.6	31.6	31.4	31.3	33.0	0.9
Distrito Federal	98.8	101.1	104.2	104.7	102.5	104.0	103.5	103.8	102.1	101.7	104.9	0.6
Durango	16.5	18.2	19.5	19.8	20.3	19.9	19.2	19.1	19.5	20.1	21.8	2.8
Guanajuato	27.5	28.9	31.4	32.7	33.2	34.4	34.0	34.1	34.1	33.4	36.3	2.8
Guerrero	11.4	11.9	12.8	13.7	14.0	14.0	13.5	13.5	13.0	13.2	13.5	1.7
Hidalgo	18.4	19.4	20.8	22.9	23.7	24.7	25.2	24.7	24.2	26.6	28.8	4.6
Jalisco	45.4	48.3	46.1	46.6	46.4	41.0	41.5	40.5	41.1	39.9	40.4	-1.2
México	44.0	47.4	49.0	51.4	51.8	52.5	54.1	54.2	54.0	52.9	53.4	2.0
Michoacán	24.5	26.5	27.4	28.9	29.8	29.8	29.5	29.0	27.9	27.9	28.3	1.5
Morelos	12.8	13.6	13.5	14.0	14.7	15.1	15.1	15.2	15.0	14.7	15.1	1.7
Nayarit	3.6	3.8	4.1	4.2	4.6	4.6	4.5	4.6	4.7	4.9	4.8	3.0
Nuevo León	39.2	43.7	46.0	47.7	46.9	46.3	44.7	44.8	44.9	45.6	47.1	1.8
Oaxaca	10.6	11.1	12.2	12.9	13.5	13.9	13.9	14.3	14.3	14.1	14.3	3.0
Puebla	26.8	28.9	31.1	31.8	31.2	33.1	33.0	33.0	32.1	30.9	29.3	0.9
Querétaro	15.7	17.1	18.3	18.2	18.6	19.1	19.4	21.0	20.9	18.8	17.0	0.8
Quintana Roo	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
San Luis Potosí	13.8	15.2	15.9	16.4	16.6	16.6	16.2	16.3	15.9	15.7	16.1	1.5
Sinaloa	22.8	24.7	26.4	28.5	28.6	28.4	27.6	27.6	26.7	26.1	27.0	1.7
Sonora	19.7	21.6	23.1	24.3	24.0	24.1	24.4	24.8	24.1	23.7	23.9	2.0
Tabasco	13.8	15.0	15.5	16.9	17.3	17.3	18.0	18.4	18.2	16.2	9.5	-3.6
Tamaulipas	29.8	31.4	33.0	35.1	35.1	32.3	30.3	30.0	29.2	29.1	32.3	0.8
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	31.6	34.8	38.1	40.3	42.5	43.5	43.5	44.7	44.4	45.1	51.2	5.0
Yucatán	18.5	20.7	22.7	24.3	23.9	24.6	25.2	25.6	25.1	25.7	26.6	3.7
Zacatecas	7.9	7.8	8.4	7.7	8.0	8.4	8.3	8.3	7.0	6.5	5.4	-3.8
Total	672.1	718.9	761.0	792.6	792.6	802.3	800.0	804.4	788.2	778.4	794.6	1.7

n.a.: not applicable. Note. The information is disaggregated by sale point, not by consumption place. Source: Prepared by the IMP, based on information from PEMEX.

### TABLE C. 41 JET-FUEL STATE DEMAND, 2005-2015

(thousand barrels per day)

State					Da	ta per yea	ar					AAGR
State	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Aguascalientes	-	-	-	-	-	-	-	-	-	-	-	n.a.
Baja California	3.5	3.3	0.0	0.3	2.8	2.9	2.6	2.8	3.0	3.2	3.5	0.0
Baja California Sur	2.0	2.0	2.3	1.9	1.8	2.0	2.0	2.1	2.1	2.2	2.4	1.5
Campeche	-	-	-	-	-	-	-	-	-	-	-	n.a.
Coahuila	-	-	-	-	-	-	-	-	-	-	-	n.a.
Colima	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chiapas	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chihuahua	-	-	-	-	-	-	-	-	-	-	-	n.a.
Distrito Federal	19.5	20.2	19.6	18.2	19.8	19.6	20.8	22.1	20.7	19.6	16.2	-1.8
Durango	-	-	-	-	-	-	-	-	-	-	-	n.a.
Guanajuato	12.3	13.1	10.6	10.4	8.6	8.2	7.4	8.2	10.7	9.4	9.7	-2.3
Guerrero	-	-	-	-	-	-	-	-	0.02	-	-	n.a.
Hidalgo	2.1	2.3	3.9	4.3	1.9	2.7	2.2	1.5	1.6	1.7	2.1	0.1
Jalisco	0.0	-	-	-	-	-	-	-	-	-	-	n.a.
México	-	-	-	-	-	-	-	-	-	-	-	n.a.
Michoacán	-	-	-	-	-	-	-	-	-	-	-	n.a.
Morelos	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nayarit	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nuevo León	4.0	4.4	9.5	6.3	5.0	3.0	3.4	4.9	3.4	3.8	3.2	-2.0
Oaxaca	1.9	2.3	5.8	5.6	5.0	5.4	8.0	5.3	8.1	7.8	6.8	13.7
Puebla	-	-	-	-	-	-	-	-	-	-	-	n.a.
Querétaro	-	-	-	-	-	-	-	-	-	-	-	n.a.
Quintana Roo	-	-	-	-	-	-	-	-	-	-	-	n.a.
San Luis Potosí	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sinaloa	-	-	-	-	-	-	-	-	-	-	-	n.a.
Sonora	1.9	2.1	5.3	4.1	1.5	1.7	1.9	1.7	2.0	2.0	2.4	2.6
Tabasco	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tamaulipas	0.3	0.3	0.0	0.4	0.2	1.4	1.8	1.3	1.8	2.1	3.6	28.6
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	n.a.
Veracruz	3.0	2.4	2.9	4.2	1.8	2.9	1.4	3.6	1.8	5.9	11.1	14.1
Yucatán	8.2	8.8	8.1	9.2	6.7	6.1	4.8	6.0	7.0	8.9	9.7	1.7
Zacatecas	-	-	-	-	-	-	-	-	-	-	-	n.a.
Total	58.7	61.2	67.9	65.0	55.0	55.8	56.1	59.3	62.2	66.5	70.8	1.9

n.a.: not applicable.

Note. The information is disaggregated by sale point, not by consumption place.

Note: Does not include gas jet.
Source: Prepared by the IMP, based on information from PEMEX.

### TABLE C. 42 **OIL-PRODUCTS DOMESTIC BALANCE, 2015-2030**

(thousand barrels per day of crude oil equivalent)

								Data	oer year								
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	1,500.4	1,543.7	1,600.0	1,594.3	1,621.7	1,653.7	1,549.2	1,586.9	1,653.2	1,683.4	1,713.4	1,753.2	1,783.4	1,805.7	1,830.1	1,860.5	1.4
Production	921.9	828.0	968.6	1,124.0	1,128.1	1,133.4	1,200.8	1,201.3	1,413.7	1,413.9	1,414.8	1,415.3	1,415.8	1,416.0	1,412.6	1,412.6	2.9
Cadereyta	139.5	109.6	135.3	193.7	193.7	193.7	213.9	213.9	213.9	213.9	213.9	213.9	213.9	213.9	213.9	213.9	2.9
Madero	106.3	65.4	98.4	130.1	130.1	130.1	145.4	145.4	145.4	145.4	145.4	145.4	145.4	145.4	145.4	145.4	2.1
Tula	208.7	191.8	212.5	235.7	235.7	235.7	266.0	266.0	266.0	266.0	266.0	266.0	266.0	266.0	266.0	266.0	1.6
Salamanca	118.8	140.3	141.2	158.8	158.8	158.8	168.2	168.2	168.2	168.2	168.2	168.2	168.2	168.2	168.2	168.2	2.3
Minatitlán	130.0	90.2	148.3	158.1	162.1	167.9	159.8	160.3	160.9	161.4	161.9	162.5	163.0	163.5	159.8	159.8	1.4
Nueva capacidad	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	211.9	211.9	211.9	211.9	211.9	211.9	211.9	211.9	n.a.
Salina Cruz	218.5	230.8	233.0	247.6	247.6	247.2	247.6	247.6	247.6	247.2	247.6	247.6	247.6	247.2	247.6	247.6	0.8
Import	578.5	715.7	631.4	470.3	493.6	520.3	348.5	385.6	239.5	269.5	298.6	337.9	367.5	389.7	417.5	447.9	-1.7
Destination	1,485.6	1,543.7	1,600.0	1,594.3	1,621.7	1,653.7	1,549.2	1,586.9	1,653.2	1,683.4	1,713.4	1,753.2	1,783.4	1,805.7	1,830.1	1,860.5	1.5
Domestic demand	1,351.9	1,354.4	1,292.3	1,320.6	1,342.4	1,370.8	1,408.4	1,444.8	1,481.8	1,509.9	1,537.5	1,575.2	1,610.5	1,621.9	1,644.6	1,672.2	1.4
Transportation sector	1,071.4	1,098.0	1,129.5	1,155.5	1,181.8	1,210.8	1,247.4	1,282.7	1,318.7	1,346.3	1,373.4	1,410.8	1,438.5	1,458.1	1,480.7	1,508.4	2.3
Electricity sector	136.7	117.9	24.0	22.8	20.4	20.2	20.2	20.2	20.4	20.6	21.0	20.6	28.4	20.5	20.9	21.3	-11.7
Industrial sector	98.1	91.2	91.6	95.0	92.8	92.4	93.5	94.6	95.4	95.7	95.9	96.5	96.3	95.9	95.7	95.2	-0.2
Oil sector	45.7	47.2	47.3	47.3	47.3	47.3	47.3	47.3	47.3	47.3	47.3	47.3	47.3	47.3	47.3	47.3	0.2
Export	133.7	189.3	307.6	273.7	279.3	282.9	140.8	142.1	171.4	173.4	175.9	178.0	172.8	183.8	185.5	188.3	2.3
Inventories variation	14.81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

n.a.: not applicable.

Source: Prepared by the IMP, with information from ASA, CFE, CRE, DGAC, PEMEX, SE, SENER and private companies.

### TABLE C. 43 OIL-PRODUCTS BALANCE 2015-2030, NORTHWEST REGION

(thousand barrels per day of crude oil equivalent)

								Data pe	er year								
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	186.8	195.6	173.1	175.2	178.7	185.4	182.4	187.5	192.5	195.4	198.9	202.7	205.4	207.3	210.0	212.4	0.9
Production	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nueva capacidad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import	85.3	116.1	146.6	112.7	116.7	121.6	102.3	109.5	80.7	89.8	93.3	99.3	105.2	106.1	107.4	108.5	1.6
From other regions	101.5	79.6	26.5	62.5	62.0	63.7	80.2	78.0	111.8	105.6	105.6	103.4	100.2	101.2	102.6	103.9	0.2
Destination	185.0	195.6	173.1	175.2	178.7	185.4	182.4	187.5	192.5	195.4	198.9	202.7	205.4	207.3	210.0	212.4	0.9
Domestic demand	185.0	186.6	165.6	169.5	172.1	177.3	182.4	187.5	192.5	195.4	198.9	202.7	205.4	207.3	210.0	212.4	0.9
Transportation sector	139.8	143.5	148.0	152.2	157.6	162.4	167.4	172.3	176.8	179.4	182.4	186.4	189.3	190.9	193.2	195.1	2.2
Electricity sector	34.2	31.1	5.6	4.4	1.7	1.5	1.5	1.5	1.7	1.9	2.2	1.9	1.6	1.8	2.2	2.6	-15.9
Industrial sector	11.0	12.0	12.0	12.8	12.7	13.4	13.6	13.8	14.0	14.1	14.2	14.4	14.6	14.6	14.7	14.7	2.0
Oil sector	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Export	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	-	9.06	7.51	5.79	6.7	8.1	0.0	-	-	-	-	-	-	-	-	-	n.a.
Inventories variation	1.80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

n.a.: not applicable.
Source: Prepared by the IMP, with information from ASA, CFE, CRE, DGAC, PEMEX, SE, SENER and private companies.

### TABLE C. 44 **OIL-PRODUCTS BALANCE 2015-2030, REGION NORESTE**

(thousand barrels per day of crude oil equivalent)

								Data pe	r year								
Concept	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	AAGR
Origin	387.7	512.3	491.9	490.7	498.7	509.3	467.0	497.5	420.0	417.9	433.5	456.1	474.2	491.1	505.0	517.3	1.9
Production	245.8	175.0	233.7	323.8	323.8	323.8	359.3	359.3	359.3	359.3	359.3	359.3	359.3	359.3	359.3	359.3	2.6
Cadereyta	139.5	109.6	135.3	193.7	193.7	193.7	213.9	213.9	213.9	213.9	213.9	213.9	213.9	213.9	213.9	213.9	2.9
Madero	106.3	65.4	98.4	130.1	130.1	130.1	145.4	145.4	145.4	145.4	145.4	145.4	145.4	145.4	145.4	145.4	2.1
Tula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nueva capacidad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import	137.5	329.5	258.2	166.9	174.9	185.5	107.8	138.3	60.8	58.7	74.24	96.85	114.89	131.88	145.76	158.04	0.9
From other regions	4.4	7.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Destination	381.6	512.3	491.9	490.7	498.7	509.3	467.0	497.5	420.0	417.9	433.5	456.1	474.2	491.1	505.0	517.3	2.0
Domestic demand	243.3	246.0	241.3	247.5	253.1	258.2	266.8	275.1	283.4	289.5	295.1	305.4	310.3	312.0	314.7	319.2	1.8
Transportation sector	213.5	212.4	220.5	225.7	231.4	236.4	244.6	252.6	260.6	266.4	271.9	281.9	285.9	288.1	290.7	295.1	2.2
Electricity sector	11.0	13.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	-100.0
Industrial sector	16.7	15.9	16.6	17.5	17.5	17.6	18.0	18.3	18.6	18.9	19.1	19.3	19.5	19.7	19.8	19.9	1.2
Oil sector	2.1	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.7
Export	15.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	123.1	266.3	250.5	243.2	245.6	251.1	200.3	222.4	136.6	128.4	138.4	150.7	163.9	179.1	190.3	198.1	3.2
Inventories variation	6.14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

n.a.: not applicable.

Source: Prepared by the IMP, with information from ASA, CFE, CRE, DGAC, PEMEX, SE, SENER and private companies.

### TABLE C. 45 OIL-PRODUCTS BALANCE 2015-2030, CENTRAL-EASTERN REGION

(thousand barrels per day of crude oil equivalent)

								Data pe	er year								
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	343.9	333.5	339.5	333.2	340.8	346.3	324.5	333.7	342.8	350.0	357.3	366.8	377.4	381.6	389.2	396.7	1.0
Production	118.8	140.3	141.2	158.8	158.8	158.8	168.2	168.2	168.2	168.2	168.2	168.2	168.2	168.2	168.2	168.2	2.3
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	118.8	140.3	141.2	158.8	158.8	158.8	168.2	168.2	168.2	168.2	168.2	168.2	168.2	168.2	168.2	168.2	2.3
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nueva capacidad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import	29.12	19.99	20.44	20.94	21.58	22.20	15.69	13.75	5.08	5.17	5.28	5.43	5.55	5.63	10.92	15.61	-4.1
From other regions	196.0	173.3	177.9	153.4	160.4	165.3	140.6	151.8	169.6	176.7	183.8	193.3	203.7	207.8	210.2	212.9	0.6
Destination	342.8	333.5	339.5	333.2	340.8	346.3	324.5	333.7	342.8	350.0	357.3	366.8	377.4	381.6	389.2	396.7	1.0
Domestic demand	305.5	307.5	298.7	302.6	309.7	315.0	324.5	333.7	342.8	350.0	357.3	366.8	377.4	381.6	389.2	396.7	1.8
Transportation sector	240.1	250.7	256.5	261.1	268.8	274.3	283.7	292.9	302.2	309.5	317.0	326.8	335.4	342.1	350.0	357.7	2.7
Electricity sector	36.5	32.4	18.2	18.2	18.6	18.6	18.6	18.6	18.6	18.6	18.6	18.6	20.8	18.6	18.6	18.6	-4.4
Industrial sector	25.8	21.7	21.3	20.5	19.7	19.5	19.5	19.5	19.4	19.2	19.0	18.8	18.6	18.2	18.0	17.7	-2.5
Oil sector	3.2	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	-1.1
Export	36.91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	0.4	26.0	40.7	30.6	31.1	31.3	-	-	-	-	-	-	-	-	-	-	n.a.
Inventories variation	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

n.a.: not applicable. Source: IMP, with information from ASA, CFE, CRE, DGAC, PEMEX, SE, SENER and private companies.

## TABLE C. 46 OIL-PRODUCTS BALANCE 2015-2030, CENTRAL REGION

(thousand barrels per day of crude oil equivalent)

								Data p	er year								
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	391.3	390.9	406.8	400.6	403.3	411.2	365.4	372.5	380.7	387.6	393.3	400.6	406.4	410.7	415.2	421.6	0.5
Production	208.7	191.8	212.5	235.7	235.7	235.7	266.0	266.0	266.0	266.0	266.0	266.0	266.0	266.0	266.0	266.0	1.6
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	208.7	191.8	212.5	235.7	235.7	235.7	266.0	266.0	266.0	266.0	266.0	266.0	266.0	266.0	266.0	266.0	1.6
Salamanca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nueva capacidad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
From other regions	182.6	199.2	194.3	164.9	167.6	175.5	99.4	106.6	114.7	121.6	127.4	134.6	140.4	144.8	149.2	155.7	-1.1
Destination	390.2	390.9	406.8	400.6	403.3	411.2	365.4	372.5	380.7	387.6	393.3	400.6	406.4	410.7	415.2	421.6	0.5
Domestic demand	340.3	355.1	338.1	347.7	350.1	357.4	365.4	372.5	380.7	387.6	393.3	400.6	406.4	410.7	415.2	421.6	1.4
Transportation sector	280.0	290.1	297.3	304.7	307.8	315.7	323.3	330.1	338.1	344.9	350.7	357.8	363.9	368.6	373.2	380.0	2.1
Electricity sector	20.6	24.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.a.
Industrial sector	31.9	28.3	28.5	30.8	30.1	29.5	29.9	30.2	30.4	30.5	30.4	30.6	30.3	29.9	29.8	29.4	-0.5
Oil sector	7.8	12.1	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2	3.0
Export	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	50.0	35.8	68.7	52.9	53.1	53.8	-	-	-	-	-	-	-	-	-	-	n.a.
Inventories variation	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

n.a.: not applicable.

Source: Prepared by the IMP, with information from ASA, CFE, CRE, DGAC, PEMEX, SE, SENER and private companies.

# TABLE C. 47 OIL-PRODUCTS BALANCE 2015-2030, SOUTH-SOUTHEAST REGION

(thousand barrels per day of crude oil equivalent)

6 .								Dat	ta per yea	r							4460
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	684.5	671.5	763.7	718.4	737.8	756.7	575.2	581.1	719.3	742.6	753.7	764.7	771.5	776.7	781.4	794.8	1.0
Production	348.6	321.0	381.2	405.7	409.8	415.1	407.4	407.9	620.3	620.5	621.4	621.9	622.5	622.6	619.3	619.3	3.9
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	130.0	90.2	148.3	158.1	162.1	167.9	159.8	160.3	160.9	161.4	161.9	162.5	163.0	163.5	159.8	159.8	1.4
Salina Cruz	218.5	230.8	233.0	247.6	247.6	247.2	247.6	247.6	247.6	247.2	247.6	247.6	247.6	247.2	247.6	247.6	0.8
Nueva capacidad	-	-	-	-	-	-	-	-	211.9	211.9	211.9	211.9	211.9	211.9	211.9	211.9	n.a.
Import	326.6	250.2	206.2	169.7	180.4	190.9	122.8	124.1	93.0	115.9	125.8	136.3	141.9	146.0	153.4	165.8	-4.4
From other regions	9.4	100.4	176.3	143.0	147.6	150.7	45.1	49.0	5.9	6.2	6.5	6.5	7.2	8.1	8.7	9.7	0.2
Destination	679.8	671.5	763.7	718.4	737.8	756.7	575.2	581.1	719.3	742.6	753.7	764.7	771.5	776.7	781.4	794.8	1.0
Domestic demand	277.8	259.1	248.6	253.4	257.4	262.8	269.4	275.9	282.4	287.5	292.9	299.6	311.1	310.2	315.5	322.3	1.0
Transportation sector	198.0	201.3	207.1	211.8	216.3	222.0	228.4	234.8	241.1	246.1	251.4	258.0	264.0	268.4	273.7	280.4	2.3
Electricity sector	34.4	16.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	5.4	0.2	0.2	0.2	-29.9
Industrial sector	12.8	13.3	13.2	13.3	12.8	12.5	12.6	12.8	13.0	13.1	13.2	13.3	13.4	13.5	13.5	13.5	0.4
Oil sector	32.6	28.2	28.2	28.2	28.2	28.2	28.2	28.2	28.2	28.2	28.2	28.2	28.2	28.2	28.2	28.2	-1.0
Export	81.6	189.3	307.6	273.7	279.3	282.9	140.8	142.1	171.4	173.4	175.9	178.0	172.8	183.8	185.5	188.3	5.7
To other regions	320.4	223.1	207.5	191.4	201.2	211.1	165.0	163.0	265.4	281.7	284.9	287.1	287.6	282.7	280.4	284.1	-0.8
Inventories variation	4.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

n.a.: not applicable.

Source: Prepared by the IMP, with information from ASA, CFE, CRE, DGAC, PEMEX, SE, SENER and private companies.

### TABLE C. 48 **GASOLINES DOMESTIC BALANCE, 2015-2030**

(thousand barrels per day)

_								D	ata per y	ear							
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	796.0	810.4	834.3	851.2	868.4	885.6	907.7	929.2	953.2	969.0	987.1	1,011.6	1,027.4	1,035.5	1,047.7	1,064.6	2.0
Production	370.3	333.5	395.7	498.7	500.6	503.3	620.4	620.6	722.3	722.5	722.8	723.0	723.3	723.5	721.8	721.8	4.6
Cadereyta	63.1	52.1	64.4	89.9	89.9	89.9	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	3.1
Madero	50.7	34.7	49.7	61.5	61.5	61.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5	1.7
Tula	80.4	73.9	82.0	105.9	105.9	105.9	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8	4.9
Salamanca	44.1	56.7	56.7	69.4	69.4	69.4	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	4.6
Minatitlán	52.3	42.7	69.4	74.0	75.9	78.6	74.8	75.1	75.3	75.6	75.8	76.1	76.3	76.6	74.8	74.8	2.4
Nueva capacidad	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	101.4	101.4	101.4	101.4	101.4	101.4	101.4	101.4	n.a.
Salina Cruz	79.6	73.5	73.5	98.0	98.0	98.0	130.0	130.0	130.0	130.0	130.0	130.0	130.0	130.0	130.0	130.0	3.3
Import1	425.8	476.9	438.7	352.5	367.7	382.3	287.3	308.6	230.9	246.5	264.3	288.5	304.1	312.0	325.9	342.8	-1.4
Destination	794.6	810.4	834.3	851.2	868.4	885.6	907.7	929.2	953.2	969.0	987.1	1,011.6	1,027.4	1,035.5	1,047.7	1,064.6	2.0
Domestic demand	794.6	810.4	834.3	851.2	868.4	885.6	907.7	929.2	953.2	969.0	987.1	1,011.6	1,027.4	1,035.5	1,047.7	1,064.6	2.0
Motor-carrier sector	792.9	809.4	833.2	850.2	867.3	884.5	906.6	928.1	952.1	967.9	986.0	1,010.5	1,026.3	1,034.4	1,046.6	1,063.5	2.0
Oil sector	1.8	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	-3.2
Export	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Inventories variation	1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

n.a.: not applicable.

Source: Prepared by the IMP, with information from PEMEX and SENER.

#### TABLE C. 49 **GASOLINES BALANCE 2015-2030, NORTHWEST REGION**

(thousand barrels per day)

								Data	per yea	•							
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	98.0	100.0	104.4	107.5	111.0	113.6	116.2	118.6	121.6	122.7	124.6	127.4	129.3	129.7	130.9	131.9	2.0
Production	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nueva capacidad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import1	45.9	57.0	95.0	55.9	57.7	59.0	60.4	61.6	63.2	63.8	64.8	66.2	67.2	67.4	68.0	68.6	2.7
From other regions	52.0	43.0	9.4	51.6	53.3	54.6	55.8	57.0	58.4	58.9	59.9	61.2	62.1	62.3	62.9	63.3	1.3
Destination	97.8	100.0	104.4	107.5	111.0	113.6	116.2	118.6	121.6	122.7	124.6	127.4	129.3	129.7	130.9	131.9	2.0
Domestic demand	97.8	100.0	104.4	107.5	111.0	113.6	116.2	118.6	121.6	122.7	124.6	127.4	129.3	129.7	130.9	131.9	2.0
Motor-carrier sector	97.8	100.0	104.4	107.5	111.0	113.6	116.2	118.6	121.6	122.7	124.6	127.4	129.3	129.7	130.9	131.9	2.0
Oil sector	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Export	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Inventories variation	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

 $\label{eq:n.a.:} not \ applicable. \\ \mbox{Source: Prepared by the IMP, with information from PEMEX and SENER.}$ 

## TABLE C. 50 GASOLINES BALANCE 2015-2030, NORTHEAST REGION

(thousand barrels per day)

								Data p	er year								
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	191.4	234.6	227.9	254.1	256.6	259.1	255.2	275.5	219.9	209.4	216.3	228.5	238.3	243.2	249.6	253.1	1.9
Production	113.8	86.8	114.1	151.4	151.4	151.4	164.7	164.7	164.7	164.7	164.7	164.7	164.7	164.7	164.7	164.7	2.5
Cadereyta	63.1	52.1	64.4	89.9	89.9	89.9	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	3.1
Madero	50.7	34.7	49.7	61.5	61.5	61.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5	1.7
Tula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nueva capacidad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import1	77.6	147.7	113.8	102.7	105.2	107.7	90.5	110.8	55.1	44.7	51.5	63.7	73.6	78.4	84.9	88.4	0.9
From other regions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Destination	191.1	234.6	227.9	254.1	256.6	259.1	255.2	275.5	219.9	209.4	216.3	228.5	238.3	243.2	249.6	253.1	1.9
Domestic demand	151.0	153.3	160.8	165.4	169.4	172.4	177.9	183.6	189.3	192.9	197.6	204.0	204.9	204.2	204.8	205.6	2.1
Motor-carrier sector	151.0	153.3	160.8	165.4	169.4	172.4	177.9	183.6	189.3	192.9	197.6	204.0	204.9	204.2	204.8	205.6	2.1
Oil sector	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Export	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	40.1	81.3	67.1	88.8	87.2	86.7	77.3	91.9	30.6	16.5	18.7	24.5	33.4	38.9	44.8	47.5	1.1
Inventories variation	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

n.a.: not applicable.

Source: Prepared by the IMP, with information from PEMEX and SENER.

## TABLE C. 51 GASOLINES BALANCE 2015-2030, CENTRAL-EASTERN REGION

(thousand barrels per day)

								Data po	er year								
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	177.2	180.3	183.5	185.2	190.0	192.0	197.4	202.9	208.5	212.3	216.6	222.7	228.0	231.3	235.8	240.3	2.1
Production	44.1	56.7	56.7	69.4	69.4	69.4	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	4.6
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	44.1	56.7	56.7	69.4	69.4	69.4	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	4.6
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nueva capacidad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import1	16.2	5.3	5.4	5.4	5.6	5.6	5.8	6.0	6.1	6.2	6.4	6.5	6.7	6.8	6.9	7.1	-5.4
From other regions	116.8	118.3	121.4	110.3	115.0	116.9	104.6	109.9	115.3	119.0	123.2	129.2	134.2	137.4	141.8	146.2	1.5
Destination	177.1	180.3	183.5	185.2	190.0	192.0	197.4	202.9	208.5	212.3	216.6	222.7	228.0	231.3	235.8	240.3	2.1
Domestic demand	177.1	180.3	183.5	185.2	190.0	192.0	197.4	202.9	208.5	212.3	216.6	222.7	228.0	231.3	235.8	240.3	2.1
Motor-carrier sector	177.1	180.3	183.5	185.2	190.0	192.0	197.4	202.9	208.5	212.3	216.6	222.7	228.0	231.3	235.8	240.3	2.1
Oil sector	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Export	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Inventories variation	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

n.a.: not applicable.

Source: Prepared by the IMP, with information from PEMEX and SENER.

## TABLE C. 52 GASOLINES BALANCE 2015-2030, CENTRAL REGION

(thousand barrels per day)

								Data po	er year								
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	231.6	235.4	240.6	245.7	247.0	252.9	257.8	262.1	267.9	272.6	276.5	281.4	285.4	287.9	290.4	295.6	1.6
Production	80.4	73.9	82.0	105.9	105.9	105.9	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8	4.9
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	80.4	73.9	82.0	105.9	105.9	105.9	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8	4.9
Salamanca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nueva capacidad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
From other regions	151.2	161.5	158.6	139.9	141.1	147.0	94.0	98.3	104.1	108.8	112.7	117.6	121.6	124.1	126.6	131.8	-0.9
Destination	231.4	235.4	240.6	245.7	247.0	252.9	257.8	262.1	267.9	272.6	276.5	281.4	285.4	287.9	290.4	295.6	1.6
Domestic demand	231.4	235.4	240.6	245.7	247.0	252.9	257.8	262.1	267.9	272.6	276.5	281.4	285.4	287.9	290.4	295.6	1.6
Motor-carrier sector	230.2	235.2	240.3	245.4	246.7	252.6	257.6	261.8	267.7	272.3	276.2	281.2	285.1	287.6	290.1	295.3	1.7
Oil sector	1.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	-9.9
Export	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Inventories variation	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

n.a.: not applicable.

Source: Prepared by the IMP, with information from PEMEX and SENER.

# TABLE C. 53 GASOLINES BALANCE 2015-2030, SOUTH-SOUTHEAST REGION

(thousand barrels per day)

								Data pe	r year								
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	417.9	383.0	367.3	360.5	373.2	386.6	335.5	335.3	413.1	438.8	448.8	459.5	464.3	467.3	472.3	485.0	1.0
Production	131.9	116.2	142.9	172.0	173.9	176.6	204.8	205.1	306.7	307.0	307.2	307.5	307.7	308.0	306.2	306.2	5.8
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	52.3	42.7	69.4	74.0	75.9	78.6	74.8	75.1	75.3	75.6	75.8	76.1	76.3	76.6	74.8	74.8	2.4
Nueva capacidad	-	-	-	-	-	-	-	-	101.4	101.4	101.4	101.4	101.4	101.4	101.4	101.4	n.a.
Salina Cruz	79.6	73.5	73.5	98.0	98.0	98.0	130.0	130.0	130.0	130.0	130.0	130.0	130.0	130.0	130.0	130.0	3.3
Import1	286.0	266.9	224.4	188.5	199.3	209.9	130.7	130.2	106.4	131.8	141.6	152.0	156.6	159.3	166.1	178.8	-3.1
From other regions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Destination	417.3	383.0	367.3	360.5	373.2	386.6	335.5	335.3	413.1	438.8	448.8	459.5	464.3	467.3	472.3	485.0	1.0
Domestic demand	137.4	141.5	144.9	147.5	150.9	154.7	158.4	162.1	165.9	168.5	171.7	176.0	179.8	182.4	185.8	191.2	2.2
Motor-carrier sector	136.8	140.6	144.1	146.7	150.1	153.9	157.5	161.2	165.1	167.7	170.9	175.1	179.0	181.6	185.0	190.4	2.2
Oil sector	0.5	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	3.0
Export	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	280.0	241.5	222.4	213.0	222.3	231.8	177.1	173.2	247.2	270.2	277.1	283.5	284.5	284.9	286.5	293.8	0.3
Inventories variation	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

n.a.: not applicable.

Source: Prepared by the IMP, with information from PEMEX and SENER.

TABLE C. 54 **DIESEL DOMESTIC BALANCE, 2015-2030** 

								Data p	er year								
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	420.0	481.0	492.8	504.4	516.6	531.8	550.6	568.6	585.3	600.5	613.5	631.1	646.2	659.9	673.3	687.9	3.3
Production	274.7	237.8	283.0	368.2	369.6	371.4	454.6	454.8	541.9	541.9	542.3	542.5	542.7	542.6	541.6	541.6	4.6
Cadereyta	59.3	47.0	58.1	89.8	89.8	89.8	95.9	95.9	95.9	95.9	95.9	95.9	95.9	95.9	95.9	95.9	3.3
Madero	36.0	23.5	33.7	50.3	50.3	50.3	56.2	56.2	56.2	56.2	56.2	56.2	56.2	56.2	56.2	56.2	3.0
Tula	46.2	39.0	43.3	61.0	61.0	61.0	89.6	89.6	89.6	89.6	89.6	89.6	89.6	89.6	89.6	89.6	4.5
Salamanca	33.6	40.3	40.3	54.4	54.4	54.4	69.8	69.8	69.8	69.8	69.8	69.8	69.8	69.8	69.8	69.8	5.0
Minatitlán	51.2	31.2	50.8	54.1	55.5	57.5	54.7	54.9	55.1	55.3	55.5	55.6	55.8	56.0	54.7	54.7	0.4
Nueva capacidad	-	-	-	-	-	-	-	-	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	n.a.
Salina Cruz	48.4	56.7	56.9	58.7	58.7	58.5	88.3	88.3	88.3	88.1	88.3	88.3	88.3	88.1	88.3	88.3	4.1
Import	145.3	243.2	209.8	136.2	147.0	160.4	96.0	113.8	43.4	58.6	71.2	88.6	103.6	117.3	131.8	146.4	0.0
Destination	404.6	481.0	492.8	504.4	516.6	531.8	550.6	568.6	585.3	600.5	613.5	631.1	646.2	659.9	673.3	687.9	3.6
Domestic demand	404.6	407.6	416.8	426.2	436.5	450.0	467.2	483.3	498.3	511.5	522.7	538.3	551.6	563.4	574.9	587.6	2.5
Industrial sector	29.7	29.3	29.0	29.4	29.8	30.3	30.7	31.2	31.7	32.2	32.7	33.2	33.7	34.2	34.7	35.2	1.1
Oil sector	19.8	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7	0.3
Transportation sector	345.8	356.1	365.4	375.3	385.6	398.7	415.4	431.1	445.5	458.1	468.4	483.8	496.5	507.6	518.3	530.1	2.9
Motor-carrier	317.2	326.4	336.2	345.9	355.7	368.2	384.3	399.4	413.1	425.1	434.7	449.4	461.4	471.8	481.8	493.0	3.0
Railway transportation	13.4	13.2	13.5	13.9	14.3	14.8	15.2	15.7	16.1	16.6	17.1	17.6	18.1	18.6	19.2	19.7	2.6
Maritime transportation	15.2	16.5	15.6	15.5	15.5	15.7	15.9	16.1	16.2	16.4	16.6	16.8	17.0	17.1	17.3	17.5	0.9
Electricity sector	9.3	1.5	1.7	0.8	0.3	0.3	0.3	0.3	0.4	0.5	0.9	0.6	0.7	0.9	1.2	1.5	-11.3
Export	-	73.43	75.99	78.14	80.06	81.76	83.45	85.24	87.08	88.99	90.87	92.73	94.62	96.52	98.43	100.31	n.a.
Inventories variation	15.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

n.a.: not applicable.

Source: Prepared by the IMP, with information from CRE, CFE, PEMEX and SENER.

### TABLE C. 55 **DIESEL BALANCE 2015-2030, NORTHWEST REGION**

(thousand barrels per day)

								Data p	er year								
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	62.0	68.9	67.9	66.5	68.9	72.8	67.4	70.0	71.9	73.4	75.1	76.3	77.4	78.7	80.1	81.3	1.8
Production	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nueva capacidad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import	39.7	68.9	67.9	66.5	68.9	72.8	52.3	58.5	28.3	37.0	39.7	44.5	49.6	50.3	51.1	51.7	1.8
From other regions	22.3	0.0	0.0	0.0	0.0	0.0	15.1	11.6	43.6	36.5	35.4	31.8	27.9	28.4	29.0	29.6	1.9
Destination	60.1	68.9	67.9	66.5	68.9	72.8	67.4	70.0	71.9	73.4	75.1	76.3	77.4	78.7	80.1	81.3	2.0
Domestic demand	60.1	59.8	60.4	60.7	62.3	64.7	67.4	70.0	71.9	73.4	75.1	76.3	77.4	78.7	80.1	81.3	2.0
Industrial sector	6.6	6.5	6.4	6.5	6.6	6.7	6.8	6.9	7.0	7.1	7.2	7.3	7.4	7.6	7.7	7.8	1.1
Oil sector	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Transportation sector	50.8	51.9	52.3	53.4	55.7	58.0	60.6	63.1	64.9	66.2	67.3	68.6	69.7	70.6	71.5	72.3	2.4
Motor-carrier	42.5	43.7	44.4	45.6	47.9	50.2	52.7	55.2	56.9	58.1	59.2	60.5	61.4	62.3	63.2	63.9	2.8
Railway transportation	1.7	1.7	1.8	1.8	1.9	1.9	2.0	2.0	2.1	2.2	2.2	2.3	2.4	2.4	2.5	2.6	2.7
Maritime transportation	6.6	6.5	6.1	6.0	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.8	5.8	5.8	-0.8
Electricity sector	2.8	1.4	1.7	0.8	0.0	0.0	0.0	0.0	0.1	0.1	0.5	0.3	0.3	0.6	0.9	1.2	-5.3
Export	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	-	9.1	7.5	5.8	6.7	8.1	-	-	-	-	-	-	-	-	-	-	n.a.
Inventories variation	1.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

 $\label{eq:n.a.:} not \ applicable. \\ Source: Prepared by the IMP, with information from CRE, CFE, PEMEX and SENER. \\$ 

## TABLE C. 56 DIESEL BALANCE 2015-2030, NORTHEAST REGION

(thousand barrels per day)

								Data p	er year								
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	125.5	229.3	217.7	193.3	201.1	210.1	185.0	198.6	167.2	173.8	183.7	196.2	206.1	219.1	227.6	237.0	4.3
Production	95.3	70.6	91.8	140.1	140.1	140.1	152.1	152.1	152.1	152.1	152.1	152.1	152.1	152.1	152.1	152.1	3.2
Cadereyta	59.3	47.0	58.1	89.8	89.8	89.8	95.9	95.9	95.9	95.9	95.9	95.9	95.9	95.9	95.9	95.9	3.3
Madero	36.0	23.5	33.7	50.3	50.3	50.3	56.2	56.2	56.2	56.2	56.2	56.2	56.2	56.2	56.2	56.2	3.0
Tula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nueva capacidad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import	30.2	158.7	125.9	53.2	61.1	70.1	32.9	46.5	15.1	21.7	31.6	44.1	54.0	67.0	75.5	84.9	7.1
From other regions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Destination	121.4	229.3	217.7	193.3	201.1	210.1	185.0	198.6	167.2	173.8	183.7	196.2	206.1	219.1	227.6	237.0	4.6
Domestic demand	92.6	88.9	90.5	91.9	94.2	96.7	100.3	103.6	106.9	109.7	111.2	115.9	119.2	121.9	124.0	127.7	2.2
Industrial sector	9.8	9.6	9.5	9.7	9.8	10.0	10.1	10.3	10.4	10.6	10.7	10.9	11.1	11.2	11.4	11.6	1.1
Oil sector	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Transportation sector	81.8	79.2	81.0	82.3	84.4	86.8	90.2	93.4	96.4	99.1	100.5	105.0	108.1	110.7	112.6	116.2	2.4
Motor-carrier	76.2	73.4	75.1	76.3	78.3	80.5	83.7	86.7	89.6	92.1	93.2	97.6	100.5	102.8	104.6	108.0	2.4
Railway transportation	4.1	4.0	4.2	4.3	4.4	4.5	4.7	4.8	4.9	5.1	5.2	5.4	5.5	5.7	5.8	6.0	2.6
Maritime transportation	1.5	1.8	1.7	1.7	1.8	1.8	1.8	1.9	1.9	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.4
Electricity sector	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Export	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	28.8	140.4	127.1	101.3	106.9	113.4	84.6	95.0	60.4	64.1	72.5	80.3	86.9	97.2	103.7	109.3	9.3
Inventories variation	4.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

n.a.: not applicable.

Source: Prepared by the IMP, with information from CRE, CFE, PEMEX and SENER.

# TABLE C. 57 DIESEL BALANCE 2015-2030, CENTRAL-EASTERN REGION

(thousand barrels per day)

								Data p	er year								
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	91.6	93.1	95.8	98.8	102.4	106.0	110.6	114.9	119.2	123.0	126.6	130.9	134.8	138.4	142.1	145.8	3.1
Production	33.6	40.3	40.3	54.4	54.4	54.4	69.8	69.8	69.8	69.8	69.8	69.8	69.8	69.8	69.8	69.8	5.0
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	33.6	40.3	40.3	54.4	54.4	54.4	69.8	69.8	69.8	69.8	69.8	69.8	69.8	69.8	69.8	69.8	5.0
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nueva capacidad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import	11.8	15.6	16.0	16.4	17.0	17.5	10.9	8.8	-	-	-	-	-	-	5.2	9.8	-1.2
From other regions	46.2	37.2	39.5	28.0	31.1	34.1	29.9	36.3	49.3	53.2	56.7	61.0	65.0	68.6	67.1	66.2	2.4
Destination	89.2	93.1	95.8	98.8	102.4	106.0	110.6	114.9	119.2	123.0	126.6	130.9	134.8	138.4	142.1	145.8	3.3
Domestic demand	89.2	93.1	95.8	98.8	102.4	106.0	110.6	114.9	119.2	123.0	126.6	130.9	134.8	138.4	142.1	145.8	3.3
Industrial sector	5.1	5.0	4.9	5.0	5.1	5.2	5.2	5.3	5.4	5.5	5.6	5.7	5.7	5.8	5.9	6.0	1.1
Oil sector	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Transportation sector	83.7	88.1	90.9	93.8	97.0	100.5	105.0	109.3	113.5	117.2	120.7	124.9	128.8	132.3	135.9	139.4	3.5
Motor-carrier	79.8	83.4	86.1	88.9	91.9	95.3	99.7	103.8	107.8	111.3	114.6	118.7	122.3	125.6	129.1	132.4	3.4
Railway transportation	3.3	3.3	3.4	3.5	3.6	3.8	3.9	4.0	4.1	4.3	4.4	4.6	4.7	4.9	5.0	5.2	3.0
Maritime transportation	0.5	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.6	1.6	1.6	1.7	1.7	1.7	1.8	1.8	8.3
Electricity sector	0.4	-	-	-	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	-1.2
Export	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Inventories variation	2.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

n.a.: not applicable.

Source: Prepared by the IMP, with information from CRE, CFE, PEMEX and SENER.

TABLE C. 58 **DIESEL BALANCE 2015-2030, CENTRAL REGION** 

								Da	ta per ye	ear							
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	79.2	78.0	80.4	83.1	84.7	87.5	90.8	93.8	96.6	99.3	101.7	104.4	106.9	109.3	111.6	113.8	2.4
Production	46.2	39.0	43.3	61.0	61.0	61.0	89.6	89.6	89.6	89.6	89.6	89.6	89.6	89.6	89.6	89.6	4.5
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	46.2	39.0	43.3	61.0	61.0	61.0	89.6	89.6	89.6	89.6	89.6	89.6	89.6	89.6	89.6	89.6	4.5
Salamanca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nueva capacidad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
From other regions	33.1	39.0	37.1	22.1	23.7	26.5	1.2	4.2	7.1	9.8	12.1	14.9	17.4	19.7	22.1	24.3	-2.0
Destination	77.0	78.0	80.4	83.1	84.7	87.5	90.8	93.8	96.6	99.3	101.7	104.4	106.9	109.3	111.6	113.8	2.6
Domestic demand	77.0	78.0	80.4	83.1	84.7	87.5	90.8	93.8	96.6	99.3	101.7	104.4	106.9	109.3	111.6	113.8	2.6
Industrial sector	4.3	4.2	4.2	4.2	4.3	4.3	4.4	4.5	4.6	4.6	4.7	4.8	4.8	4.9	5.0	5.1	1.1
Oil sector	1.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	-12.1
Transportation sector	71.6	73.6	76.1	78.7	80.3	83.0	86.2	89.2	91.9	94.6	96.8	99.5	102.0	104.2	106.5	108.7	2.8
Motor-carrier	69.9	71.9	74.3	76.9	78.4	81.1	84.3	87.2	89.9	92.5	94.7	97.3	99.7	101.9	104.1	106.2	2.8
Railway transportation	1.8	1.7	1.7	1.8	1.8	1.9	1.9	2.0	2.0	2.1	2.1	2.2	2.2	2.3	2.4	2.4	2.1
Maritime transportation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Electricity sector	0.1	0.04	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Export	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Inventories variation	2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

n.a.: not applicable.

Source: Prepared by the IMP, with information from CRE, CFE, PEMEX and SENER.

#### TABLE C. 59 DIESEL BALANCE 2015-2030, SOUTH-SOUTHEAST REGION

(thousand barrels per day)

								Data	a per yea	r							
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	163.3	161.2	165.6	169.9	173.0	176.8	181.5	186.2	230.4	230.3	230.8	231.0	231.1	231.1	230.0	230.0	2.3
Production	99.6	87.9	107.6	112.8	114.2	116.0	143.1	143.2	230.4	230.3	230.8	231.0	231.1	231.1	230.0	230.0	5.7
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	51.2	31.2	50.8	54.1	55.5	57.5	54.7	54.9	55.1	55.3	55.5	55.6	55.8	56.0	54.7	54.7	0.4
Nueva capacidad	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	n.a.
Salina Cruz	48.37	56.70	56.86	58.69	58.69	58.53	88.34	88.34	88.3	88.1	88.3	88.3	88.3	88.1	88.3	88.3	4.1
Import	63.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.a.
From other regions	-	73.3	58.0	57.0	58.8	60.8	38.5	42.9	-	-	-	-	-	-	-	-	n.a.
Destination	158.5	161.2	165.6	169.9	173.0	176.8	181.5	186.2	230.4	230.3	230.8	231.0	231.1	231.1	230.0	230.0	2.5
Domestic demand	85.7	87.8	89.7	91.7	92.9	95.1	98.1	100.9	103.7	106.0	108.2	110.8	113.2	115.1	117.1	119.0	2.2
Industrial sector	4.0	4.0	3.9	4.0	4.1	4.1	4.2	4.2	4.3	4.4	4.4	4.5	4.6	4.7	4.7	4.8	1.1
Oil sector	18.9	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	0.6
Transportation sector	57.8	63.2	65.1	67.1	68.3	70.3	73.3	76.1	78.8	81.0	83.1	85.7	88.1	89.8	91.8	93.6	3.3
Motor-carrier	48.8	54.0	56.2	58.2	59.2	61.1	63.9	66.5	69.0	71.0	73.0	75.4	77.5	79.1	80.8	82.4	3.6
Railway transportation	2.5	2.4	2.5	2.5	2.6	2.7	2.8	2.8	2.9	3.0	3.1	3.2	3.2	3.3	3.4	3.5	2.3
Maritime transportation	6.5	6.8	6.4	6.4	6.4	6.5	6.6	6.8	6.9	7.0	7.1	7.2	7.3	7.4	7.5	7.6	1.1
Electricity sector	5.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Export	-	73.4	76.0	78.1	80.1	81.8	83.4	85.2	87.1	89.0	90.9	92.7	94.6	96.5	98.4	100.3	n.a.
To other regions	72.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.7	35.4	31.7	27.4	23.3	19.5	14.5	10.8	-12.0
Inventories variation	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

n.a.: not applicable. Source: Prepared by the IMP, with information from CRE, CFE, PEMEX and SENER.

## TABLE C. 60 JET-FUEL DOMESTIC BALANCE, 2015-2030

(thousand barrels per day)

								Data pe	er year								
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	70.8	73.4	76.0	78.1	80.1	81.8	83.4	85.2	87.1	89.0	90.9	92.7	94.6	96.5	98.4	100.3	2.3
Production	47.8	43.4	55.1	64.2	64.2	64.3	68.5	68.5	82.1	82.0	82.1	82.1	82.1	82.1	82.1	82.1	3.7
Cadereyta	3.3	2.7	3.4	6.5	6.5	6.5	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	5.8
Madero	1.3	0.4	5.4	7.7	7.7	7.7	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	13.5
Tula	18.9	18.7	20.3	22.2	22.2	22.2	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	0.7
Salamanca	9.7	8.3	9.2	13.1	13.1	13.1	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	2.7
Minatitlán	0.0	0.0	1.7	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.8	1.8	n.a.
Nueva capacidad	-	-	-	-	-	-	-	-	13.60	13.60	13.60	13.60	13.60	13.60	13.60	13.60	n.a.
Salina Cruz	14.7	13.3	15.1	12.9	12.9	12.8	14.7	14.7	14.7	14.6	14.7	14.7	14.7	14.6	14.7	14.7	0.0
Import 2	23.0	30.0	20.9	14.0	15.8	17.5	15.0	16.8	5.0	7.0	8.8	10.6	12.5	14.5	16.4	18.2	-1.5
Destination	70.8	73.4	76.0	78.1	80.1	81.8	83.4	85.2	87.1	89.0	90.9	92.7	94.6	96.5	98.4	100.3	2.4
Domestic demand	70.8	73.4	76.0	78.1	80.1	81.8	83.4	85.2	87.1	89.0	90.9	92.7	94.6	96.5	98.4	100.3	2.4
Transportation sector	70.8	73.4	76.0	78.1	80.1	81.8	83.4	85.2	87.1	89.0	90.9	92.7	94.6	96.5	98.4	100.3	2.4
Oil sector	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Export	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Inventories variation	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

n.a.: not applicable.

Source: Prepared by the IMP, based on information from ASA, BANXICO, INEGI, PEMEX, PEMEX and SENER.

## TABLE C. 61 JET-FUEL BALANCE 2015-2030, NORTHWEST REGION

(thousand barrels per day)

								Data	per yea	ar							
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	8.3	9.1	9.6	10.1	10.4	10.7	11.0	11.3	11.6	12.0	12.3	12.7	13.0	13.3	13.7	14.0	3.6
Production	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nueva capacidad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
From other regions	8.3	9.1	9.6	10.1	10.4	10.7	11.0	11.3	11.6	12.0	12.3	12.7	13.0	13.3	13.7	14.0	3.6
Destination	8.3	9.1	9.6	10.1	10.4	10.7	11.0	11.3	11.6	12.0	12.3	12.7	13.0	13.3	13.7	14.0	3.6
Domestic demand	8.3	9.1	9.6	10.1	10.4	10.7	11.0	11.3	11.6	12.0	12.3	12.7	13.0	13.3	13.7	14.0	3.6
Transportation sector	8.3	9.1	9.6	10.1	10.4	10.7	11.0	11.3	11.6	12.0	12.3	12.7	13.0	13.3	13.7	14.0	3.6
Oil sector	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Export	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Inventories variation	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

n.a.: not applicable.

Source: Prepared by the IMP, based on information from ASA, BANXICO, INEGI, PEMEX, PEMEX and SENER.

TABLE C. 62 JET-FUEL BALANCE 2015-2030, NORTHEAST REGION

							D	ata pe	r year								
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	7.5	6.4	8.8	14.2	14.2	14.2	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	5.5
Production	4.7	3.1	8.8	14.2	14.2	14.2	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	8.9
Cadereyta	3.3	2.7	3.4	6.5	6.5	6.5	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	5.8
Madero	1.3	0.4	5.4	7.7	7.7	7.7	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	13.5
Tula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nueva capacidad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import	2.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
From other regions	0.4	3.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Destination	7.4	6.4	8.8	14.2	14.2	14.2	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	5.5
Domestic demand	6.9	6.4	6.6	6.7	6.9	7.1	7.2	7.4	7.6	7.8	8.0	8.2	8.4	8.6	8.8	9.0	1.8
Transportation sector	6.9	6.4	6.6	6.7	6.9	7.1	7.2	7.4	7.6	7.8	8.0	8.2	8.4	8.6	8.8	9.0	1.8
Oil sector	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Export	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	0.6	0.0	2.2	7.4	7.3	7.1	9.4	9.2	9.0	8.8	8.6	8.4	8.2	8.0	7.8	7.6	18.9
Inventories variation	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

n.a.: not applicable.

Source: Prepared by the IMP, based on information from ASA, BANXICO, INEGI, PEMEX, PEMEX and SENER.

### TABLE C. 63 JET-FUEL BALANCE 2015-2030, CENTRAL-EASTERN REGION

(thousand barrels per day)

								Data p	er yeaı	•							
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	10.1	13.4	13.7	14.1	14.5	15.0	15.4	15.8	16.3	16.7	17.2	17.7	18.1	18.6	19.1	19.6	4.5
Production	9.7	8.3	9.2	13.1	13.1	13.1	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	2.7
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	9.7	8.3	9.2	13.1	13.1	13.1	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	2.7
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nueva capacidad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
From other regions	0.4	5.0	4.5	1.0	1.4	1.8	0.9	1.4	1.8	2.3	2.8	3.2	3.7	4.2	4.7	5.2	18.1
Destination	10.1	13.4	13.7	14.1	14.5	15.0	15.4	15.8	16.3	16.7	17.2	17.7	18.1	18.6	19.1	19.6	4.6
Domestic demand	9.7	13.4	13.7	14.1	14.5	15.0	15.4	15.8	16.3	16.7	17.2	17.7	18.1	18.6	19.1	19.6	4.8
Transportation sector	9.7	13.4	13.7	14.1	14.5	15.0	15.4	15.8	16.3	16.7	17.2	17.7	18.1	18.6	19.1	19.6	4.8
Oil sector	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Export	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Inventories variation	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

n.a.: not applicable.
Source: Prepared by the IMP, based on information from ASA, BANXICO, INEGI, PEMEX, PEMEX and SENER.

## TABLE C. 64 JET-FUEL BALANCE, 2015-2030, CENTRAL REGION

(thousand barrels per day)

								Data p	er year								
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	19.2	22.4	22.9	23.4	23.9	24.2	24.5	24.9	25.2	25.6	25.9	26.3	26.6	27.0	27.3	27.6	2.5
Production	18.9	18.7	20.3	22.2	22.2	22.2	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	0.7
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	18.9	18.7	20.3	22.2	22.2	22.2	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	0.7
Salamanca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nueva capacidad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
From other regions	0.3	3.7	2.6	1.3	1.7	2.1	3.6	3.9	4.3	4.6	5.0	5.3	5.7	6.0	6.3	6.7	22.1
Destination	19.2	22.4	22.9	23.4	23.9	24.2	24.5	24.9	25.2	25.6	25.9	26.3	26.6	27.0	27.3	27.6	2.5
Domestic demand	18.3	22.4	22.9	23.4	23.9	24.2	24.5	24.9	25.2	25.6	25.9	26.3	26.6	27.0	27.3	27.6	2.8
Transportation sector	18.3	22.4	22.9	23.4	23.9	24.2	24.5	24.9	25.2	25.6	25.9	26.3	26.6	27.0	27.3	27.6	2.8
Oil sector	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Export	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Inventories variation	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

n.a.: not applicable.

Source: Prepared by the IMP, based on information from ASA, BANXICO, INEGI, PEMEX, PEMEX and SENER.

### TABLE C. 65 JET-FUEL BALANCE, 2015-2030, SOUTH-SOUTHEAST REGION

(thousand barrels per day)

								Data p	er yeaı	•							
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	35.2	43.3	37.7	28.6	30.6	32.3	31.5	33.3	35.1	37.0	38.9	40.7	42.6	44.5	46.4	48.3	2.1
Production	14.7	13.3	16.8	14.7	14.7	14.8	16.5	16.5	30.1	30.0	30.1	30.1	30.1	30.1	30.1	30.1	4.9
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	1.7	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.8	1.8	n.a.
Nueva capacidad	-	-	-	-	-	-	-	-	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	n.a.
Salina Cruz	14.7	13.3	15.1	12.9	12.9	12.8	14.7	14.7	14.7	14.6	14.7	14.7	14.7	14.6	14.7	14.7	-0.0
Import	20.5	30.0	20.9	14.0	15.8	17.5	15.0	16.8	5.0	7.0	8.8	10.6	12.5	14.5	16.4	18.2	-0.8
From other regions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Destination	35.2	43.3	37.7	28.6	30.6	32.3	31.5	33.3	35.1	37.0	38.9	40.7	42.6	44.5	46.4	48.3	2.1
Domestic demand	27.6	22.2	23.2	23.8	24.3	24.8	25.3	25.8	26.3	26.9	27.4	27.9	28.5	29.0	29.5	30.0	0.6
Transportation sector	27.6	22.2	23.2	23.8	24.3	24.8	25.3	25.8	26.3	26.9	27.4	27.9	28.5	29.0	29.5	30.0	0.6
Oil sector	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Export	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	7.6	21.1	14.4	4.9	6.2	7.4	6.1	7.4	8.7	10.1	11.5	12.8	14.2	15.5	16.9	18.3	6.1
Inventories variation	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

n.a.: not applicable.

Source: Prepared by the IMP, based on information from ASA, BANXICO, INEGI, PEMEX, PEMEX and SENER.

## TABLE C. 66 FUEL-OIL DOMESTIC BALANCE 2015-2030

(thousand barrels per day)

								Data pe	r year								
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	254,3	227,1	246,1	211,3	211,8	212,3	41,7	41,8	41,8	41,9	42,0	42,1	42,1	42,2	41,7	41,7	-11,4
Production	237,4	227,1	246,1	211,3	211,8	212,3	41,7	41,8	41,8	41,9	42,0	42,1	42,1	42,2	41,7	41,7	-10,9
Cadereyta	11,9	7,7	9,5	2,0	2,0	2,0	2,6	2,6	2,6	2,6	2,6	2,6	2,6	2,6	2,6	2,6	-9,8
Madero	12,7	4,7	6,7	7,8	7,8	7,8	5,0	5,0	5,0	5,0	5,0	5,0	5,0	5,0	5,0	5,0	-6,0
Tula	72,1	68,2	75,7	60,9	60,9	60,9	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	36,4	41,7	41,7	31,8	31,8	31,8	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán*	20,7	11,8	19,1	20,4	20,9	21,7	20,6	20,7	20,8	20,8	20,9	21,0	21,0	21,1	20,6	20,6	0,0
Nueva capacidad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	83,5	93,1	93,4	88,4	88,4	88,1	13,5	13,5	13,5	13,4	13,5	13,5	13,48	13,45	13,48	13,48	-11,4
Import	17,0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Destination	258,3	227,1	246,1	211,3	211,8	212,3	41,7	41,8	41,8	41,9	42,0	42,1	42,1	42,2	41,7	41,7	-11,4
Domestic demand	134,3	119,6	31,2	29,9	27,0	25,8	25,7	25,7	25,9	26,0	26,0	25,9	33,1	25,6	25,6	25,6	-10,5
Transportation sector	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,0
Electricity sector	102,0	91,0	3,8	3,5	1,7	1,6	1,5	1,5	1,6	1,8	1,7	1,6	8,8	1,3	1,4	1,4	-24,9
Industrial sector	9,3	4,3	3,2	2,2	1,1	0,0	-	-	-	-	-	-	-	-	-	-	n.a.
Oil sector	22,7	23,8	23,8	23,8	23,8	23,8	23,8	23,8	23,8	23,8	23,8	23,8	23,8	23,8	23,8	23,8	0,3
Export	123,9	107,5	214,9	181,4	184,8	186,5	16,0	16,0	16,0	15,9	16,0	16,2	9,1	16,6	16,1	16,1	-12,7
Inventories variation	-3,9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

n.a.: not applicable.

Source: Prepared by the IMP, based on information from BANXICO, CFE, CNIAA, CONAGUA, CONUEE, CRE, EIA, EPA, IEA, INE, INEGI, PEMEX, SE, SEMARNAT, SENER and private companies.

## TABLE C. 67 FUEL-OIL BALANCE 2015-2030, NORTHWEST REGION

(thousand barrels per day)

							Da	ata per	year								
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	28.9	27.9	3.9	3.5	1.6	1.4	1.4	1.4	1.5	1.6	1.6	1.5	1.2	1.2	1.2	1.2	-18.9
Production	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nueva capacidad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import	7.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
From other regions	21.9	27.9	3.9	3.5	1.6	1.4	1.4	1.4	1.5	1.6	1.6	1.5	1.2	1.2	1.2	1.2	-17.4
Destination	29.1	27.9	3.9	3.5	1.6	1.4	1.4	1.4	1.5	1.6	1.6	1.5	1.2	1.2	1.2	1.2	-18.9
Domestic demand	29.1	27.9	3.9	3.5	1.6	1.4	1.4	1.4	1.5	1.6	1.6	1.5	1.2	1.2	1.2	1.2	-18.9
Transportation sector	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Electricity sector	29.1	27.5	3.6	3.4	1.6	1.4	1.4	1.4	1.5	1.6	1.6	1.5	1.2	1.2	1.2	1.2	-18.9
Industrial sector	0.0	0.4	0.3	0.2	0.0	0.0	-	-	-	-	-	-	-	-	-	-	n.a.
Oil sector	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Export	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Inventories variation	-0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

n.a.: not applicable.

Source: Prepared by the IMP, based on information from BANXICO, CFE, CNIAA, CONAGUA, CONUEE, CRE, EIA, EPA, IEA, INE, INEGI, PEMEX, SE, SEMARNAT, SENER and private companies.

### TABLE C. 68 FUEL-OIL BALANCE 2015-2030, NORTHEAST REGION

(thousand barrels per day)

							Da	ta per	year								
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	29.3	16.7	16.2	9.9	9.9	9.9	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	-8.6
Production	24.7	12.4	16.2	9.9	9.9	9.9	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	-7.5
Cadereyta	11.9	7.7	9.5	2.0	2.0	2.0	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	-9.8
Madero	12.7	4.7	6.7	7.8	7.8	7.8	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	-6.0
Tula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nueva capacidad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
From other regions	3.7	4.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Destination	29.3	16.7	16.2	9.9	9.9	9.9	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	-8.6
Domestic demand	12.4	16.7	4.1	4.0	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	4.5	3.9	3.9	3.9	-7.4
Transportation sector	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Electricity sector	9.2	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	0.6	-	-	-	n.a.
Industrial sector	1.2	0.3	0.2	0.1	0.0	0.0	-	-	-	-	-	-	-	-	-	-	n.a.
Oil sector	2.0	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	4.7
Export	14.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	2.8	-	12.1	5.9	6.0	6.0	3.7	3.7	3.7	3.7	3.7	3.7	3.2	3.7	3.7	3.7	1.8
Inventories variation	- 0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

n.a.: not applicable.
Source: Prepared by the IMP, based on information from BANXICO, CFE, CNIAA, CONAGUA, CONUEE, CRE, EIA, EPA, IEA, INE, INEGI, PEMEX, SE, SEMARNAT, SENER and private companies.

TABLE C. 69
FUEL-OIL BALANCE 2015-2030, CENTRAL-EASTERN REGION

								)ata pe	r year								
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	58.8	41.7	41.7	31.8	31.8	31.8	2.8	2.8	2.8	2.8	2.8	2.8	4.8	2.8	2.8	2.8	-18.4
Production	36.4	41.7	41.7	31.8	31.8	31.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.a.
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	36.4	41.7	41.7	31.8	31.8	31.79	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nueva capacidad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import	3.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
From other regions	18.8	-	-	-	-	-	2.8	2.8	2.8	2.8	2.8	2.8	4.8	2.8	2.8	2.8	-11.9
Destination	60.1	41.7	41.7	31.8	31.8	31.8	2.8	2.8	2.8	2.8	2.8	2.8	4.8	2.8	2.8	2.8	-18.5
Domestic demand	25.9	17.6	3.9	3.4	3.0	2.8	2.8	2.8	2.8	2.8	2.8	2.8	4.8	2.8	2.8	2.8	-13.8
Transportation sector	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.0
Electricity sector	17.4	13.2	-	-	-	-	-	-	-	-	-	-	2.1	-	-	-	n.a.
Industrial sector	5.2	1.6	1.1	0.6	0.2	0.0	-	-	-	-	-	-	-	-	-	-	n.a.
Oil sector	2.9	2.5	2.5	2.5	2.5	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	-1.1
Export	34.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	0.0	24.1	37.8	28.4	28.8	29.0	-	-	-	-	-	-	-	-	-	-	n.a.
Inventories variation	- 1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

n.a.: not applicable.

Source: Prepared by the IMP, based on information from BANXICO, CFE, CNIAA, CONAGUA, CONUEE, CRE, EIA, EPA, IEA, INE, INEGI, PEMEX, SE, SEMARNAT, SENER and private companies.

### TABLE C. 70 FUEL-OIL BALANCE 2015-2030, CENTRAL REGION

(thousand barrels per day)

								Data po	er year								
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	72.1	68.2	75.7	60.9	60.9	60.9	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	-11.8
Production	72.1	68.2	75.7	60.9	60.9	60.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.a.
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	72.1	68.2	75.7	60.9	60.9	60.9	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nueva capacidad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
From other regions	-	-	-	-	-	-	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	n.a.
Destination	72.7	68.2	75.7	60.9	60.9	60.9	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	-11.8
Domestic demand	27.1	34.9	12.0	11.8	11.6	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	-5.8
Transportation sector	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Electricity sector	19.0	22.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Industrial sector	2.8	1.2	1.0	0.8	0.6	-	-	-	-	-	-	-	-	-	-	-	n.a.
Oil sector	5.4	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	4.9
Export	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	45.5	33.2	63.7	49.1	49.2	49.9	-	-	-	-	-	-	-	-	-	-	n.a.
Inventories variation	-0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

n.a.: not applicable.

Source: Prepared by the IMP, based on information from BANXICO, CFE, CNIAA, CONAGUA, CONUEE, CRE, EIA, EPA, IEA, INE, INEGI, PEMEX, SE, SEMARNAT, SENER and private companies.

### TABLE C. 71 FUEL-OIL BALANCE, 2015-2030 SOUTH-SOUTHEAST REGION

(thousand barrels per day)

							D	ata per y	/ear								
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	117.4	130.0	222.2	188.5	191.7	193.2	34.1	34.2	34.2	34.3	34.4	34.4	34.5	34.5	34.1	34.1	-7.9
Production	104.2	104.9	112.5	108.8	109.3	109.8	34.1	34.2	34.2	34.3	34.4	34.4	34.5	34.5	34.1	34.1	-7.2
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	20.7	11.8	19.1	20.4	20.9	21.7	20.6	20.7	20.8	20.8	20.9	21.0	21.0	21.1	20.6	20.6	0.0
Nueva capacidad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	83.5	93.1	93.4	88.4	88.4	88.1	13.5	13.48	13.48	13.45	13.48	13.48	13.5	13.4	13.5	13.5	-11.4
Import	5.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
From other regions	7.7	25.2	109.7	79.8	82.4	83.4	-	-	-	-	-	-	-	-	-	-	n.a.
Destination	119.2	130.0	222.2	188.5	191.7	193.2	34.1	34.2	34.2	34.3	34.4	34.4	34.5	34.5	34.1	34.1	-8.0
Domestic demand	39.8	22.5	7.4	7.2	6.9	6.7	6.7	6.7	6.7	6.7	6.7	6.7	11.6	6.7	6.7	6.7	-11.2
Transportation sector	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
Electricity sector	27.2	15.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	5.0	0.2	0.2	0.2	-29.2
Industrial sector	0.0	0.8	0.7	0.5	0.2	-	-	-	-	-	-	-	-	-	-	-	n.a.
Oil sector	12.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	-4.3
Export	75.6	107.5	214.9	181.4	184.8	186.5	16.0	16.0	16.0	15.9	16.0	16.2	9.1	16.6	16.1	16.1	-9.8
To other regions	3.7	-	-	-	-	-	11.4	11.4	11.6	11.7	11.7	11.6	13.9	11.3	11.3	11.3	7.7
Inventories variation	-1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

n.a.: not applicable.
Source: Prepared by the IMP, based on information from BANXICO, CFE, CNIAA, CONAGUA, CONUEE, CRE, EIA, EPA, IEA, INE, INEGI, PEMEX, SE, SEMARNAT, SENER and private companies.

### TABLE C. 72 PETROLEUM-COKE DOMESTIC BALANCE, 2015-2030

(thousand tons per year)

								Data po	er year								
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	5,430.7	5,252.0	5,361.6	5,652.6	5,554.7	5,590.0	8,405.9	8,410.3	10,341.5	10,370.0	10,350.4	10,354.9	10,359.3	10,387.8	10,332.6	10,332.6	4.4
Production	2,658.3	1,880.9	2,718.9	3,667.4	3,701.1	3,759.3	8,405.9	8,410.3	10,341.5	10,370.0	10,350.4	10,354.9	10,359.3	10,387.8	10,332.6	10,332.6	9.5
Cadereyta	823.5	585.6	720.8	1,453.8	1,453.8	1,457.8	1,762.8	1,762.8	1,762.8	1,767.7	1,762.8	1,762.8	1,762.8	1,767.7	1,762.8	1,762.8	5.2
Madero	923.4	536.4	767.3	901.1	901.1	903.6	1,459.4	1,459.4	1,459.4	1,463.4	1,459.4	1,459.4	1,459.4	1,463.4	1,459.4	1,459.4	3.1
Tula	-	-	-	-	-	-	1,418.4	1,418.4	1,418.4	1,422.3	1,418.4	1,418.4	1,418.4	1,422.3	1,418.4	1,418.4	n.a.
Salamanca	-	-	-	-	-	-	852.7	852.7	852.7	855.1	852.7	852.7	852.7	855.1	852.7	852.7	n.a.
Minatitlán	911.4	758.9	1,230.9	1,312.5	1,346.2	1,397.9	1,326.6	1,331.1	1,335.5	1,343.7	1,344.4	1,348.9	1,353.3	1,361.5	1,326.6	1,326.6	2.5
Nueva capacidad	-	-	-	-	-	-	-	-	1,926.8	1,932.1	1,926.8	1,926.8	1,926.8	1,932.1	1,926.8	1,926.8	n.a.
Salina Cruz	-	-	-	-	-	-	1,585.9	1,585.9	1,585.9	1,585.9	1,585.9	1,585.9	1,585.9	1,585.9	1,585.9	1,585.9	n.a.
Import*	2,772.4	3,371.1	2,642.7	1,985.2	1,853.6	1,830.7	-	-	-	-	-	-	-	-	-	-	n.a.
Destination	5,260.1	5,252.0	5,361.6	5,652.6	5,554.7	5,590.0	8,405.9	8,410.3	10,341.5	10,370.0	10,350.4	10,354.9	10,359.3	10,387.8	10,332.6	10,332.6	4.6
Domestic demand	5,260.1	5,252.0	5,361.6	5,652.6	5,554.7	5,590.0	5,619.1	5,662.2	5,683.2	5,684.0	5,646.5	5,652.0	5,609.1	5,558.8	5,495.1	5,426.9	0.2
Electricity sector	1,204.6	1,267.5	1,264.1	1,264.1	1,264.1	1,267.5	1,264.1	1,264.1	1,264.1	1,267.5	1,264.1	1,264.1	1,264.1	1,267.5	1,264.1	1,264.1	0.3
Industrial sector	4,055.5	3,984.4	4,097.5	4,388.5	4,290.7	4,322.4	4,355.0	4,398.1	4,419.1	4,416.5	4,382.4	4,388.0	4,345.0	4,291.2	4,231.0	4,162.9	0.2
Hydraulic cement	3,788.3	3,711.3	3,819.2	4,102.0	4,010.1	4,042.2	4,066.5	4,102.0	4,115.7	4,106.6	4,069.5	4,068.9	4,023.1	3,967.9	3,906.3	3,838.8	0.1
Basic metals industry	52.5	51.8	52.2	53.6	51.6	50.7	51.3	51.8	52.4	52.8	52.5	52.6	52.0	51.1	50.8	49.4	-0.4
Chemistry, rubber and plastic	59.5	60.6	62.1	64.2	63.4	63.8	66.2	68.4	70.9	73.1	73.9	76.2	77.5	78.3	79.1	79.3	1.9
Machinery and appliances	41.3	41.8	42.8	44.7	44.3	44.6	46.6	48.1	48.9	49.5	50.3	51.1	52.1	52.3	52.1	52.0	1.5
Glass	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	2.7
Rest of the industry	113.7	118.6	121.0	123.8	120.9	120.8	124.1	127.5	130.9	134.2	136.0	138.9	140.1	141.3	142.4	143.0	1.5
Export	0.0	-	-	-	-	-	2,786.7	2,748.1	4,658.4	4,685.9	4,704.0	4,702.8	4,750.2	4,829.1	4,837.6	4,905.7	131.1
Inventories variation	170.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

n.a.: not applicable.

\* Includes PEMEX and private parties.

## TABLE C. 73 PETROLEUM-COKE BALANCE 2015-2030, NORTHWEST REGION

(thousand tons per year)

								Data pe	r year								
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	306.8	357.1	364.0	428.4	421.2	464.8	469.7	478.5	486.2	484.4	485.0	491.3	493.6	490.7	485.2	479.7	3.0
Production	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nueva capacidad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import*	1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
From other regions	305.5	357.1	364.0	428.4	421.2	464.8	469.7	478.5	486.2	484.4	485.0	491.3	493.6	490.7	485.2	479.7	3.1
Destination	306.8	357.1	364.0	428.4	421.2	464.8	469.7	478.5	486.2	484.4	485.0	491.3	493.6	490.7	485.2	479.7	3.0
Domestic demand	306.8	357.1	364.0	428.4	421.2	464.8	469.7	478.5	486.2	484.4	485.0	491.3	493.6	490.7	485.2	479.7	3.0
Electricity sector	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		n.a.
Industrial sector	306.8	357.1	364.0	428.4	421.2	464.8	469.7	478.5	486.2	484.4	485.0	491.3	493.6	490.7	485.2	479.7	3.0
Hydraulic cement	305.5	355.7	362.6	426.9	419.8	463.3	468.2	477.0	484.6	482.8	483.4	489.6	491.9	489.0	483.4	477.9	3.0
Basic metals industry	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Chemistry, rubber and plastic	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.6
Machinery and appliances	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Glass	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	3.7
Rest of the industry	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Export	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Inventories variation	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

n.a.: not applicable.

Source: Prepared by the IMP, based on CFE, CNIC, EIA, IEA, INEGI, PEMEX, SE, SENER and private companies.

## TABLE C. 74 PETROLEUM-COKE BALANCE 2015-2030, NORTHEAST REGION

(thousand tons per year)

								Data pe	r year								
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	4,506.6	4,493.0	4,130.7	4,340.1	4,208.6	4,192.1	3,222.3	3,222.3	3,222.3	3,231.1	3,222.3	3,222.3	3,222.3	3,231.1	3,222.3	3,222.3	-2.2
Production	1,746.9	1,122.0	1,488.0	2,354.9	2,354.9	2,361.4	3,222.3	3,222.3	3,222.3	3,231.1	3,222.3	3,222.3	3,222.3	3,231.1	3,222.3	3,222.3	4.2
Cadereyta	823.5	585.6	720.8	1,453.8	1,453.8	1,457.8	1,762.8	1,762.8	1,762.8	1,767.7	1,762.8	1,762.8	1,762.8	1,767.7	1,762.8	1,762.8	5.2
Madero	923.4	536.4	767.3	901.1	901.1	903.6	1,459.4	1,459.4	1,459.4	1,463.4	1,459.4	1,459.4	1,459.4	1,463.4	1,459.4	1,459.4	3.1
Tula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nueva capacidad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import*	2,759.7	3,371.1	2,642.7	1,985.2	1,853.6	1,830.72	-	-	-	-	-	-	-	-	-	-	n.a.
From other regions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Destination	4,376.6	4,493.0	4,130.7	4,340.1	4,208.6	4,192.1	3,222.3	3,222.3	3,222.3	3,231.1	3,222.3	3,222.3	3,222.3	3,231.1	3,222.3	3,222.3	-2.0
Domestic demand	391.5	416.9	474.3	539.4	531.5	534.1	546.4	557.3	568.5	575.9	577.2	585.5	586.0	585.0	582.6	577.6	2.6
Electricity sector	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Industrial sector	391.5	416.9	474.3	539.4	531.5	534.1	546.4	557.3	568.5	575.9	577.2	585.5	586.0	585.0	582.6	577.6	2.6
Hydraulic cement	244.6	268.9	323.4	383.0	377.9	380.4	387.7	394.3	401.5	405.5	405.3	410.2	408.9	407.6	404.6	400.6	3.3
Basic metals industry	50.8	50.2	50.5	51.9	50.0	49.2	49.7	50.2	50.7	51.1	50.9	51.0	50.4	49.5	49.2	47.9	-0.4
Chemistry, rubber and	49.4	50.3	51.9	53.9	53.5	54.1	56.4	58.5	61.0	63.3	64.1	66.3	67.8	68.6	69.6	70.1	2.4
Machinery and appliant	41.3	41.8	42.8	44.7	44.3	44.6	46.6	48.1	48.9	49.5	50.3	51.1	52.1	52.3	52.1	52.0	1.5
Glass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Rest of the industry	5.5	5.6	5.8	5.9	5.8	5.8	6.0	6.2	6.3	6.5	6.6	6.8	6.9	6.9	7.0	7.1	1.7
Export	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	3,985.0	4,076.2	3,656.4	3,800.8	3,677.1	3,658.0	2,675.9	2,665.0	2,653.8	2,655.2	2,645.1	2,636.8	2,636.2	2,646.1	2,639.7	2,644.6	-2.7
Inventories variation	130.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

n.a.: not applicable.

<sup>\*</sup> Includes PEMEX and private parties.

<sup>\*</sup> Includes PEMEX and private parties.

## TABLE C. 75 PETROLEUM-COKE BALANCE 2015-2030, CENTRAL-EASTERN REGION

(thousand tons per year)

								Data pe	er year								
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	2,251.1	2,309.1	2,313.5	2,291.3	2,265.8	2,264.2	2,253.4	2,248.7	2,236.4	2,222.8	2,195.4	2,176.5	2,153.4	2,129.6	2,101.7	2,076.4	-0.5
Production	-	-	-	-	-	-	852.7	852.7	852.7	855.1	852.7	852.7	852.7	855.1	852.7	852.7	n.a.
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salamanca	-	-	-	-	-	-	852.7	852.7	852.7	855.1	852.7	852.7	852.7	855.1	852.7	852.7	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nueva capacidad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import*	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
From other regions	2,250.8	2,309.1	2,313.5	2,291.3	2,265.8	2,264.2	1,400.7	1,396.0	1,383.7	1,367.7	1,342.7	1,323.8	1,300.7	1,274.6	1,249.0	1,223.7	-4.0
Destination	2,251.1	2,309.1	2,313.5	2,291.3	2,265.8	2,264.2	2,253.4	2,248.7	2,236.4	2,222.8	2,195.4	2,176.5	2,153.4	2,129.6	2,101.7	2,076.4	-0.5
Domestic demand	2,251.1	2,309.1	2,313.5	2,291.3	2,265.8	2,264.2	2,253.4	2,248.7	2,236.4	2,222.8	2,195.4	2,176.5	2,153.4	2,129.6	2,101.7	2,076.4	-0.5
Electricity sector	1,204.6	1,267.5	1,264.1	1,264.1	1,264.1	1,267.5	1,264.1	1,264.1	1,264.1	1,267.5	1,264.1	1,264.1	1,264.1	1,267.5	1,264.1	1,264.1	0.3
Industrial sector	1,046.4	1,041.6	1,049.4	1,027.2	1,001.7	996.7	989.4	984.6	972.3	955.3	931.4	912.4	889.4	862.1	837.7	812.4	-1.7
Hydraulic cement	1,046.0	1,041.1	1,048.9	1,026.7	1,001.2	996.2	988.8	984.0	971.7	954.6	930.7	911.8	888.7	861.4	836.9	811.6	-1.7
Basic metals industry	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	4.7
Chemistry, rubber and plastic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Machinery and appliances	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Glass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Rest of the industry	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	1.9
Export	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Inventories variation	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

n.a.: not applicable.

Source: Prepared by the IMP, based on CFE, CNIC, EIA, IEA, INEGI, PEMEX, SE, SENER and private companies.

# TABLE C. 76 PETROLEUM-COKE BALANCE 2015-2030, CENTRAL REGION

(thousand tons per year)

	Data per year																
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	1,656.6	1,582.3	1,617.6	1,784.2	1,747.5	1,746.6	1,763.9	1,782.6	1,790.4	1,796.4	1,784.9	1,787.8	1,762.7	1,740.4	1,718.1	1,687.3	0.1
Production	-	-	-	-	-	-	1,418	1,418	1,418	1,422	1,418	1,418	1,418	1,422	1,418	1,418	n.a.
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Madero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Tula	-	-	-	-	-	-	1,418	1,418	1,418	1,422	1,418.4	1,418.4	1,418.4	1,422.3	1,418.4	1,418.4	n.a.
Salamanca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Minatitlán	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Nueva capacidad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Salina Cruz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Import*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
From other regions	1,656.6	1,582.3	1,617.6	1,784.2	1,747.5	1,746.6	345.5	364.2	372.0	374.1	366.5	369.5	344.3	318.2	299.7	268.9	-11.4
Destination	1,707.2	1,582.3	1,617.6	1,784.2	1,747.5	1,746.6	1,763.9	1,782.6	1,790.4	1,796.4	1,784.9	1,787.8	1,762.7	1,740.4	1,718.1	1,687.3	-0.1
Domestic demand	1,707.2	1,582.3	1,617.6	1,784.2	1,747.5	1,746.6	1,763.9	1,782.6	1,790.4	1,796.4	1,784.9	1,787.8	1,762.7	1,740.4	1,718.1	1,687.3	-0.1
Electricity sector	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Industrial sector	1,707.2	1,582.3	1,617.6	1,784.2	1,747.5	1,746.6	1,763.9	1,782.6	1,790.4	1,796.4	1,784.9	1,787.8	1,762.7	1,740.4	1,718.1	1,687.3	-0.1
Hydraulic cement	1,590.0	1,460.3	1,493.4	1,657.4	1,623.8	1,623.2	1,637.3	1,652.8	1,657.4	1,660.3	1,647.3	1,647.5	1,621.4	1,598.1	1,574.9	1,543.8	-0.2
Basic metals industry	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	-1.8
Chemistry, rubber and plastic	8.9	9.0	9.0	9.0	8.6	8.4	8.5	8.5	8.5	8.4	8.3	8.3	8.2	8.1	7.9	7.7	-1.0
Machinery and appliances	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Glass	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
Rest of the industry	108.0	112.7	114.9	117.6	114.9	114.7	117.8	121.1	124.3	127.4	129.0	131.7	132.9	134.0	135.0	135.6	1.5
Export	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
To other regions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
Inventories variation	-50.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.

n.a.: not applicable.

<sup>\*</sup> Includes PEMEX and private parties.

<sup>\*</sup> Includes PEMEX and private parties.

## TABLE C. 77 PETROLEUM-COKE BALANCE 2015-2030, SOUTH-SOUTHEAST REGION

(thousand tons per year)

	Data per year																
Concept	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	AAGR
Origin	993.0	758.9	1,230.9	1,312.5	1,346.2	1,397.9	3,372.5	3,343.2	5,260.0	5,290.5	5,307.9	5,313.8	5,363.6	5,442.0	5,445.1	5,511.6	12.
Production	911	759	1,231	1,312	1,346	1,398	2,912	2,917	4,848	4,862	4,857	4,862	4,866	4,879	4,839	4,839	11.8
Cadereyta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Madero	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Tula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Salamanca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Minatitlán	911	759	1,231	1,312	1,346	1,398	1,327	1,331	1,336	1,344	1,344	1,349	1,353	1,361	1,327	1,327	2.5
Nueva capacidad	-	-	-	-	-	-	-	-	1,927	1,932	1,927	1,927	1,927	1,932	1,927	1,927	n.a
Salina Cruz	-	-	-	-	-	-	1,586	1,586	1,586	1,586	1,586	1,586	1,586	1,586	1,586	1,586	n.a
Import*	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
From other regions	71	-	-	-	-	0.0	460.0	426	412	429	451	452	498	562.6	605.8	672.3	16.2
Destination	901.8	758.9	1,230.9	1,312.5	1,346.2	1,397.9	3,372.5	3,343.2	5,260.0	5,290.5	5,307.9	5,313.8	5,363.6	5,442.0	5,445.1	5,511.6	12.8
Domestic demand	603.5	586.6	592.2	609.4	588.7	580.2	585.8	595.0	601.7	604.6	603.9	611.0	613.4	613.0	607.5	605.9	0.0
Electricity sector	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Industrial sector	603.5	586.6	592.2	609.4	588.7	580.2	585.8	595.0	601.7	604.6	603.9	611.0	613.4	613.0	607.5	605.9	0.0
Hydraulic cement	602.2	585.3	590.9	608.0	587.4	579.0	584.5	593.8	600.4	603.3	602.7	609.8	612.2	611.8	606.4	604.8	0.0
Basic metals industry	1.3	1.2	1.2	1.3	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.0	-1.5
Chemistry, rubber and plasti	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	-0.2
Machinery and appliances	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Glass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a
Rest of the industry	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3
Export	0	-	-	-	-	-	2,787	2,748	4,658	4,686	4,704	4,703	4,750	4,829	4,838	4,906	151.
To other regions	298	172	639	703	757	818	-	-	-	-	-	-	-	-	-	-	n.a
Inventories variation	91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a

n.a.: not applicable.

\* Includes PEMEX and private parties.

## TABLE C. 78 DOMESTIC DEMAND OF GASOLINES PER STATE, 2015-2030

(thousand barrels per day)

								Data pe	er year							
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total	794.6	810.4	834.3	851.2	868.4	885.6	907.7	929.2	953.2	969.0	987.1	1,011.6	1,027.4	1,035.5	1,047.7	1,064.6
Aguascalientes	10.4	10.6	10.8	10.9	11.1	11.3	11.6	11.9	12.2	12.4	12.7	13.1	13.4	13.6	13.8	14.1
Baja California	38.2	39.0	40.7	41.9	43.3	44.3	45.3	46.3	47.4	47.9	48.6	49.7	50.4	50.6	51.1	51.5
Baja California Sur	8.7	9.0	9.4	9.7	10.0	10.2	10.5	10.7	11.0	11.1	11.2	11.5	11.7	11.7	11.8	11.9
Campeche	5.1	5.5	5.6	5.7	5.8	5.9	6.0	6.1	6.3	6.4	6.5	6.6	6.7	6.8	6.9	7.1
Chiapas	16.8	17.1	18.0	18.6	19.2	19.6	20.4	21.1	21.9	22.4	23.1	23.9	23.9	23.7	23.7	23.6
Chihuahua	18.4	18.8	19.2	19.3	19.9	20.1	20.6	21.2	21.8	22.2	22.6	23.3	23.8	24.2	24.6	25.1
Coahuila	17.1	17.4	17.9	18.2	18.6	19.1	19.5	20.0	20.5	20.8	21.2	21.7	22.2	22.5	22.9	23.6
Colima	33.0	33.3	35.2	36.2	37.4	38.1	39.7	41.2	42.7	43.7	45.0	46.7	46.7	46.3	46.2	46.0
Ciudad de México	104.9	106.1	108.3	110.5	110.2	113.0	115.2	117.1	119.7	121.9	123.5	125.4	126.8	127.7	128.2	130.6
Durango	21.8	22.2	23.4	24.2	24.9	25.4	26.4	27.5	28.5	29.2	30.0	31.1	31.1	30.8	30.8	30.7
Guanajuato	36.3	37.0	37.6	38.0	39.0	39.4	40.5	41.6	42.8	43.5	44.4	45.7	46.8	47.4	48.4	49.3
Guerrero	13.5	14.0	14.3	14.6	14.9	15.3	15.7	16.0	16.4	16.7	17.0	17.4	17.8	18.1	18.4	18.9
Hidalgo	28.8	29.5	30.2	30.9	31.6	32.3	32.8	33.4	34.1	34.7	35.2	36.1	36.8	37.3	37.9	38.6
Jalisco	40.4	41.1	41.8	42.2	43.3	43.8	45.0	46.3	47.5	48.4	49.4	50.8	52.0	52.7	53.8	54.8
México	53.4	54.3	55.4	56.5	56.3	57.8	58.9	59.9	61.2	62.3	63.2	64.1	64.9	65.3	65.6	66.8
Michoacán	28.3	28.9	29.4	29.7	30.4	30.7	31.6	32.5	33.4	34.0	34.7	35.7	36.5	37.0	37.8	38.5
Morelos	15.1	15.6	16.0	16.3	16.7	17.0	17.4	17.7	18.0	18.3	18.6	19.1	19.4	19.7	20.0	20.4
Nayarit	4.8	5.0	5.1	5.2	5.3	5.4	5.5	5.7	5.8	5.9	6.0	6.2	6.4	6.4	6.6	6.7
Nuevo León	47.1	48.2	49.9	51.0	51.4	52.1	52.7	53.6	54.5	54.9	55.6	56.7	57.7	58.2	59.2	60.4
Oaxaca	14.3	14.7	15.1	15.4	15.7	16.1	16.5	16.9	17.3	17.6	17.9	18.3	18.7	19.0	19.4	19.9
Puebla	29.3	30.0	30.8	31.4	32.2	32.9	33.5	34.0	34.8	35.3	35.9	36.8	37.5	37.9	38.6	39.3
Querétaro	17.0	17.4	17.7	17.8	18.3	18.5	19.0	19.5	20.1	20.4	20.9	21.4	21.9	22.3	22.7	23.1
San Luis Potosí	16.1	16.2	16.5	16.7	17.1	17.3	17.8	18.3	18.8	19.1	19.5	20.1	20.5	20.8	21.3	21.7
Sinaloa	27.0	27.6	28.8	29.7	30.6	31.3	32.1	32.7	33.5	33.9	34.4	35.2	35.7	35.8	36.1	36.4
Sonora	23.9	24.4	25.5	26.2	27.1	27.7	28.3	28.9	29.6	29.9	30.4	31.1	31.5	31.6	31.9	32.2
Tabasco	9.5	9.8	10.1	10.3	10.5	10.8	11.0	11.3	11.5	11.7	12.0	12.3	12.5	12.7	12.9	13.3
Tamaulipas	32.3	32.5	34.3	35.4	36.5	37.2	38.7	40.2	41.7	42.7	43.9	45.5	45.5	45.1	45.0	44.9
Veracruz	51.2	52.7	54.0	55.0	56.2	57.7	59.0	60.4	61.9	62.8	64.0	65.6	67.1	68.0	69.3	71.3
Yucatán	26.6	27.3	28.0	28.5	29.1	29.9	30.6	31.3	32.1	32.6	33.2	34.0	34.8	35.3	35.9	37.0
Zacatecas	5.4	5.3	5.4	5.4	5.6	5.6	5.8	6.0	6.1	6.2	6.4	6.5	6.7	6.8	6.9	7.1

Source: Prepared by the IMP, based on AMDA, AMIA, ANPACT, BANXICO, CONUEE, CRE, EIA, EPA, INEGI, PEMEX, SENER and private companies.

## TABLE C. 79 DOMESTIC DEMAND OF DIESEL PER STATE, 2015-2030

(thousand barrels per day)

								Data pe	r year							
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total	404.6	407.6	416.8	426.2	436.5	450.0	467.2	483.3	498.3	511.5	522.7	538.3	551.6	563.4	574.9	587.6
Aguascalientes	4.4	4.5	4.7	4.8	5.0	5.2	5.4	5.6	5.8	6.0	6.2	6.4	6.6	6.8	7.0	7.2
Baja California	13.0	13.1	13.2	13.5	14.1	14.7	15.3	16.0	16.4	16.7	17.0	17.4	17.6	17.9	18.1	18.4
Baja California Sur	5.6	5.4	5.6	4.7	4.0	4.1	4.3	4.4	4.5	4.7	5.1	5.0	5.0	5.3	5.7	6.0
Campeche	19.6	22.0	22.1	22.1	22.2	22.2	22.3	22.4	22.4	22.5	22.6	22.6	22.7	22.7	22.8	22.8
Chiapas	4.8	8.7	9.1	9.4	9.5	9.8	10.3	10.7	11.1	11.4	11.7	12.1	12.4	12.6	12.9	13.2
Chihuahua	16.6	15.4	15.7	15.9	16.3	16.8	17.5	18.2	18.8	19.4	19.6	20.6	21.3	21.9	22.2	23.0
Coahuila	10.4	6.1	6.2	6.3	6.5	6.7	6.9	7.2	7.5	7.7	7.8	8.2	8.5	8.7	8.8	9.2
Colima	13.5	15.6	16.0	16.4	17.0	17.5	18.3	18.9	19.6	20.2	20.8	21.5	22.1	22.7	23.3	23.8
Ciudad de México	25.4	25.1	25.7	26.4	26.7	27.5	28.5	29.4	30.2	31.0	31.6	32.4	33.1	33.8	34.4	35.0
Durango	14.8	15.1	15.5	15.7	16.1	16.6	17.4	18.1	18.8	19.4	19.6	20.7	21.4	22.0	22.4	23.2
Guanajuato	17.1	17.5	18.0	18.6	19.2	19.9	20.8	21.6	22.5	23.2	23.9	24.7	25.5	26.2	26.9	27.6
Guerrero	4.2	4.1	4.3	4.4	4.5	4.7	4.9	5.1	5.3	5.4	5.6	5.7	5.9	6.0	6.2	6.3
Hidalgo	20.0	20.5	21.2	22.1	22.7	23.5	24.4	25.2	26.1	26.8	27.5	28.3	29.0	29.7	30.4	31.1
Jalisco	16.3	16.6	17.2	17.7	18.3	19.0	19.8	20.6	21.4	22.1	22.8	23.6	24.3	24.9	25.6	26.3
México	16.4	16.8	17.2	17.7	17.9	18.4	19.1	19.7	20.3	20.8	21.3	21.8	22.3	22.7	23.2	23.6
Michoacán	12.4	13.0	13.4	13.8	14.2	14.7	15.4	16.0	16.6	17.1	17.6	18.2	18.8	19.3	19.8	20.3
Morelos	3.9	4.0	4.1	4.3	4.4	4.6	4.8	4.9	5.1	5.3	5.4	5.6	5.7	5.9	6.0	6.1
Nayarit	1.6	1.7	1.7	1.8	1.8	1.9	2.0	2.1	2.1	2.2	2.3	2.4	2.4	2.5	2.6	2.6
Nuevo León	28.6	29.2	29.8	30.6	31.1	31.6	32.3	32.9	33.5	34.0	34.5	35.1	35.6	36.1	36.7	37.2
Oaxaca	5.6	5.8	5.9	6.1	6.2	6.4	6.7	6.9	7.1	7.3	7.5	7.8	8.0	8.1	8.3	8.4
Puebla	11.4	11.7	12.1	12.6	13.0	13.5	14.0	14.5	15.0	15.5	15.9	16.4	16.8	17.2	17.6	18.0
Querétaro	9.2	9.4	9.7	10.0	10.3	10.7	11.2	11.6	12.1	12.5	12.8	13.3	13.7	14.1	14.5	14.8
Quintana Roo	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
San Luis Potosí	10.6	10.7	11.0	11.3	12.0	12.3	12.8	13.3	13.7	14.1	14.5	15.0	15.4	15.8	16.1	16.5
Sinaloa	20.5	20.3	20.3	20.7	21.5	22.3	23.2	24.2	24.8	25.3	25.7	26.1	26.5	26.9	27.2	27.5
Sonora	21.0	21.1	21.3	21.7	22.6	23.5	24.5	25.5	26.2	26.8	27.2	27.8	28.2	28.7	29.1	29.4
Tabasco	3.1	3.2	3.3	3.4	3.5	3.6	3.8	3.9	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8
Tamaulipas	22.2	23.0	23.3	23.6	24.3	25.1	26.2	27.3	28.4	29.3	29.7	31.3	32.4	33.3	33.9	35.2
Tlaxcala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Veracruz	34.0	34.1	34.8	35.8	36.4	37.4	38.8	40.2	41.5	42.6	43.7	44.9	46.1	47.0	48.0	48.9
Yucatán	13.7	9.9	10.2	10.5	10.6	11.0	11.4	11.8	12.2	12.6	12.9	13.3	13.6	13.9	14.2	14.5
Zacatecas	4.0	4.1	4.3	4.4	4.6	4.7	4.9	5.1	5.3	5.5	5.7	5.9	6.0	6.2	6.4	6.5

Source: Prepared by the IMP, based on AMDA, AMIA, ANPACT, BANXICO, CFE, CNIAA, CONAGUA, CONUEE, CRE, EIA, EPA, IEA, INE, INEGI, PEMEX, SE, SEMARNAT, SCT, SENER and private companies.

## TABLE C. 80 DOMESTIC DEMAND OF FUEL OIL PER STATE, 2015-2030

(thousand barrels per day)

State								Data pe	er year							
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total	134.3	119.6	31.2	29.9	27.0	25.8	25.7	25.7	25.9	26.0	26.0	25.9	33.1	25.6	25.6	25.6
Aguascalientes	-	0.1	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-
Baja California	0.0	0.1	0.1	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-
Baja California Sur	3.7	9.6	3.6	3.4	1.6	1.4	1.4	1.4	1.5	1.6	1.6	1.5	1.2	1.2	1.2	1.2
Campeche	4.4	6.2	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-
Chiapas	-	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-
Chihuahua	2.1	2.8	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-
Coahuila	0.0	0.1	0.1	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-
Colima	7.3	4.8	0.1	0.0	0.0	-	-	-	-	-	-	-	0.1	-	-	-
Ciudad de México	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Durango	3.0	3.9	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-
Guanajuato	9.0	3.3	2.7	2.6	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Guerrero	-	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-
Hidalgo	27.1	34.2	11.4	11.3	11.3	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Jalisco	0.3	0.3	0.2	0.1	0.0	-	-	-	-	-	-	-	1.9	-	-	-
México	-	0.2	0.2	0.1	0.0	-	-	-	-	-	-	-	-	-	-	-
Michoacán	0.7	0.8	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Morelos	0.0	0.3	0.2	0.2	0.2	-	-	-	-	-	-	-	-	-	-	-
Nayarit	-	0.1	0.1	0.1	0.0	-	-	-	-	-	-	-	-	-	-	-
Nuevo León	2.6	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Oaxaca	11.6	5.1	5.1	5.1	5.0	4.9	4.9	4.9	4.9	4.9	4.9	4.9	5.2	4.9	4.9	4.9
Puebla	-	0.2	0.2	0.1	0.1	-	-	-	-	-	-	-	-	-	-	-
Querétaro	0.3	0.1	0.1	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-
Quintana Roo	-	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-
San Luis Potosí	8.1	8.0	0.1	0.1	0.1	-	-	-	-	-	-	-	-	-	-	-
Sinaloa	22.1	15.8	0.1	0.1	0.0	-	-	-	-	-	-	-	-	-	-	-
Sonora	3.3	2.4	0.1	0.1	0.0	-	-	-	-	-	-	-	-	-	-	-
Tabasco	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-
Tamaulipas	4.7	7.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.5	1.9	1.9	1.9
Tlaxcala	-	0.1	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-
Veracruz	22.0	10.9	2.2	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	6.4	1.8	1.8	1.8
Yucatán	1.8	0.2	0.0	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-
Zacatecas	_	0.2	0.1	0.1	0.0	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by the IMP, based on information from BANXICO, CFE, CNIAA, CONAGUA, CONUEE, CRE, EIA, EPA, IEA, INE, INEGI, PEMEX, SE, SEMARNAT, SENER and private companies.

# TABLE C. 81 DOMESTIC DEMAND OF PETROLEUM COKE PER STATE, 2015-2030

(thousand tons per year)

<b>6.</b> .	Data per year															
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total	5,260.1	5,252.0	5,361.6	5,652.6	5,554.7	5,590.0	5,619.1	5,662.2	5,683.2	5,684.0	5,646.5	5,652.0	5,609.1	5,558.8	5,495.1	5,426.9
Aguascalientes	242.8	242.8	242.8	242.8	233.1	228.2	223.1	219.3	214.5	206.9	198.2	192.1	183.5	176.7	170.3	162.2
Baja California	39.2	39.9	40.2	52.0	51.9	52.8	54.7	56.7	59.1	60.9	61.9	63.9	65.4	66.9	68.5	69.8
Chihuahua	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Coahuila	131.8	142.1	150.9	173.8	170.3	170.3	171.7	173.3	174.6	174.1	171.8	170.9	168.3	164.9	162.1	159.5
Colima	135.1	123.3	128.4	128.4	123.3	120.7	118.5	116.6	114.3	110.1	106.3	102.7	98.0	94.4	90.7	85.7
Ciudad de Méxic	9.1	9.2	9.2	9.2	8.8	8.5	8.6	8.7	8.7	8.6	8.5	8.5	8.4	8.3	8.2	8.0
Guanajuato	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Guerrero	20.1	24.9	24.9	24.9	23.9	23.4	24.9	26.2	27.6	28.8	29.9	31.4	32.8	34.2	35.1	36.2
Hidalgo	917.5	823.2	821.2	853.9	835.6	834.5	842.8	855.0	866.4	873.1	868.6	868.2	856.6	853.0	846.3	832.7
Jalisco	191.2	192.7	192.3	190.7	190.4	193.8	189.2	184.1	177.0	170.6	162.9	157.3	148.6	141.4	134.2	127.1
México	198.3	204.6	208.9	205.1	200.4	199.8	195.8	191.5	188.4	182.9	177.2	172.0	164.2	156.3	148.7	142.7
Michoacán	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4
Morelos	257.3	184.6	184.6	184.6	177.2	173.5	176.1	177.2	175.9	175.9	173.1	173.4	170.5	168.5	165.3	163.5
Nuevo León	216.8	229.6	276.8	316.9	312.7	314.6	323.1	330.3	337.7	343.3	346.1	352.9	354.6	356.0	355.3	352.4
Oaxaca	200.6	200.6	200.6	200.6	192.6	188.5	193.7	199.0	204.6	209.7	214.4	221.7	225.6	229.8	230.1	233.3
Puebla	325.0	360.7	393.7	531.5	525.5	530.2	540.6	550.3	550.9	555.9	557.5	565.7	562.9	554.3	549.6	540.5
Querétaro	0.14	0.15	0.15	0.16	0.15	0.15	0.16	0.16	0.17	0.17	0.18	0.18	0.18	0.19	0.19	0.19
Quintana Roo	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
San Luis Potosí	1,681.7	1,750.1	1,749.7	1,729.1	1,718.7	1,721.1	1,722.3	1,728.3	1,730.2	1,734.8	1,727.6	1,724.0	1,722.8	1,716.6	1,705.9	1,700.9
Sonora	267.6	317.2	323.8	376.4	369.3	411.9	415.0	421.9	427.1	423.5	423.2	427.4	428.2	423.9	416.6	409.8
Tabasco	45.1	56.0	56.0	56.0	53.8	52.6	54.8	57.5	59.3	61.2	62.2	64.7	66.7	68.6	70.2	71.0
Tamaulipas	42.6	44.9	46.4	48.4	48.2	49.0	51.3	53.4	55.8	58.1	59.0	61.3	62.8	63.8	64.8	65.4
Veracruz	267.4	229.0	229.6	230.5	221.3	216.7	216.5	218.8	219.0	216.5	213.0	211.0	209.2	205.5	201.4	197.7
Yucatán	70.3	76.1	81.1	97.4	97.2	99.0	95.9	93.5	91.2	88.4	84.5	82.1	79.1	74.9	70.7	67.7

# TABLE C. 82 DOMESTIC DEMAND OF NATIONAL JET FUEL PER STATE, 2015-2030

(thousand barrels per day)

	Data per year															
State	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total	70.8	73.4	76.0	78.1	80.1	81.8	83.4	85.2	87.1	89.0	90.9	92.7	94.6	96.5	98.4	100.3
Baja California	3.5	3.8	4.0	4.2	4.3	4.5	4.6	4.7	4.9	5.0	5.2	5.3	5.4	5.6	5.7	5.9
Baja California Sur	2.4	2.6	2.7	2.9	3.0	3.1	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0
Ciudad de México	16.2	19.8	20.3	20.7	21.2	21.4	21.7	22.0	22.3	22.6	22.9	23.2	23.6	23.9	24.2	24.5
Guanajuato	9.7	13.4	13.7	14.1	14.5	15.0	15.4	15.8	16.3	16.7	17.2	17.7	18.1	18.6	19.1	19.6
Guerrero	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hidalgo	2.1	2.6	2.6	2.7	2.8	2.8	2.8	2.9	2.9	2.9	3.0	3.0	3.1	3.1	3.1	3.2
Nuevo León	3.2	3.0	3.1	3.2	3.3	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3
Oaxaca	6.8	5.5	5.7	5.9	6.0	6.1	6.3	6.4	6.5	6.6	6.8	6.9	7.0	7.2	7.3	7.4
Sonora	2.4	2.7	2.8	3.0	3.1	3.2	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.2
Tamaulipas	3.6	3.4	3.5	3.6	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.6	4.7	4.8
Veracruz	11.1	8.9	9.3	9.5	9.8	10.0	10.2	10.4	10.6	10.8	11.0	11.2	11.4	11.6	11.8	12.0
Yucatán	9.7	7.8	8.2	8.4	8.6	8.7	8.9	9.1	9.3	9.5	9.6	9.8	10.0	10.2	10.4	10.6

Source: Prepared by the IMP, based on information from ASA, BANXICO, INEGI, PEMEX, PEMEX and SENER.

### GLOSSARY

Additions

Increase on the reserve as a result of exploratory activity. It is integrated by the discoveries and delineations of a field during the period of study.

Alkane

Product obtained by the reaction of alkylation, generally of isobutane with butylene, to form branched hydrocarbons, mainly iso-octane and other octane's isomers, with an octane number of about 94, being thus very appreciated for preparing high octane gasoline.

**Alkylation** 

Alkylation processes comprise the combination of an olefin with a paraffin or aromatic hydrocarbon in a catalyzer. In refining, this process involves the union or propylene or butylene, mainly in catalytic disintegration plants, as well as in hydro disintegration, viscosity reducing, and coking plants; with isobutane using hydrofluoric or sulfuric acid as a catalyzer, and thus form an isoparaffin called light alkane. The latter is basically composed by isoheptane or iso-octane, according to the load that has been used, which are excellent products for elaborating high-octane gasolines due to their low steam pressure and high octane number. This process is considered as opposite to disintegration, since from its small molecules can produce bigger molecules.

**API Density** 

Indirect measure of the density of liquid products used within the oil industry; it is derived from relative density according to the following equation:

API density = (141.5 / relative density) - 131.5

This equation is used for liquids less dense than water. API density is expressed in degrees; a relative density of 1.0 is equal to 10 API degrees.

**Aromatic** 

Family of hydrocarbons containing in its molecule one or several nuclei of six-carbon-atoms rings and hexagonal shape, possessing in its structure three double bonds (benzenic rings).

Associated natural gas

Natural gas in a contact with crude oil within an oil reservoir. It can be balanced with this crude oil or dissolved in the crude oil under the reservoir's temperature and pressure conditions. Free gas in contact with

crude oil forms what is known as gas cap.

#### Atmospheric distillation

First stage on crude oil distillation; of oil is sent to the atmospheric distillation unit after desalting and heating. The purpose of atmospheric distillation is primary separation of various 'cuts' of hydrocarbons namely, fuel gases, LPG, naphtha, kerosene, diesel and fuel oil. The heavy hydrocarbon residue left at the bottom of the atmospheric distillation column is sent to vacuum distillation column for further separation of hydrocarbons under reduced pressure.

#### Atmospheric residue

Product obtained from the bottom of the fracking towers in the primary distillation after the extraction of gasolines, kerosenes, and primary gasoils.

#### Catalytic Plant (FCC)

Plant used for producing mostly high-octane stabilized gasoline (59% in volume), residual gas added to the gas-fuel used in the refinery, propane-propylene, butane-butylene, light cyclic oil, and heavy cyclic oil, having as load primary heavy gasoil and the gasoils from the vacuum plant.

#### Coking

Refining process for producing light and intermediate distillates through the thermal cracking of high-molecular weight; petroleum coke is obtained as a sub product of this process.

#### Combustion

Chemical change or phenomenon in which materials are quickly combined with oxygen and which produce light and heat. It is also known as quick oxidation.

#### Condensates

Liquid hydrocarbons in natural gas recovered in the separation facilities of fields producing associated and non-associated gas, generally pentanes and heavier compounds Include liquid hydrocarbons recovered from gas pipelines, which are formed through condensation during the NG transportation.

#### Condensates recovery factor (crf)

Factor used to obtain liquid fractions which are recovered from NG in distribution and transportation ground facilities. It is obtained from the statistics on the operation of gas and condensate handling of the last annual period in the area corresponding to the area of study.

#### Crude oil

It does not include the production of condensates and NG liquids from liquefiable extraction plants. In Mexico, there are three varieties of crude oil which are prepared for the exports market:

MAYA: Heavy crude oil with a density of 22°API and a maximum of 3.3% sulfur weight.

ISTMO: Light crude oil with a density of 33.6°API and a maximum of 1.3% sulfur weight.

OLMECA: Ultra-light crude oil with a density of 39.3°API and a maximum of 0.8% sulfur weight.

#### Crude oil topping

Distillation process that separates lighter compounds such as naphtha and kerosene. Naphtha is extracted and subjected to other processes such as manufacturing petrochemical products or to be treated for obtaining gasoline. Kerosene is separated to produce lineal paraffins, raw material for manufacturing biodegradable detergents. The remaining residue is called topped crude oil.

## Density

Matter intensive property related to the mass of a substance and its volume through the coefficient of these two amounts. It is expressed in kilogram per cubic meter (international system), in grams per cubic centimeter (metric system), or in pounds per gallon (English system).

#### Desulfured diesel

Liquid fuel with an oil-like smell and light yellow color (2.5 maximum, ASTM D 1500), produced from a blend of paraffin, olefine, naphthene, and aromatic hydrocarbons through crude oil processing. It is insoluble in water and is mainly used as a fuel for the engines (diesel fueled) of motor carrier, locomotive, turbines, and mechanical equipment engines. Some meaningful additional properties are:

Boiling point (rank) at 760 mm Hg: 216-371°C

Steam pressure: 30 mm Hg @ 20 °C

Steam density (Air=1): 4

Specific gravity (20/40 °C): 0.850

Flash point: 41° minimum

Cetane index: 45 minimum

Cinematic viscosity to 40 °C: 1.9 to 4.1 centistokes

Sulfur total weight percentage: 0.5 maximum

Flammability limit in air, volume %: low 0.7%, superior 5%.

Development

Activity which increases or decreases the number of reserves through drilling exploitation wells.

**Development wells** 

Wells drilled in a producing field for producing hydrocarbons; it includes injection wells for secondary recovery.

**Diesel (PEMEX Diesel)** 

Fuel derived from the distillation of crude oil. It is obtained from a complex blend of paraffin, olefine, naphthene, and aromatic hydrocarbons, through the processing of oil. It is an oil-like smell, insoluble in water with a light-yellow color. It is mainly consumed in highly-efficient internal combustion machines, with high performance. It is mainly used in diesel-fueled vehicle fleet such as light and heavy service lorries, passengers' buses, locomotives, vessels, agricultural machines, industrial machines, and construction machines. Its main properties are:

Boiling point (rank) at 760 mm Hg: 216-371°C

Steam pressure: 30 mm Hg @ 20 °C

Steam density (Air=1): 4

Specific gravity (20/40 °C): 0.850

Flash point: 41° minimum

Cetane index: 45 minimum

Cinematic viscosity to 40 °C: 1.9 to 4.1 centistokes

Sulfur total weight percentage: 0.5 maximum

Flammability limit in air, volume %: low 0.7%, superior 5%.

Discovered resource

Volume of hydrocarbons which have become evident through drilled wells.

Discovery

Incorporation or reserves attributable to the drilling of exploratory wells proving hydrocarbons producing formations.

Disintegration (cracking)

Process consisting on the decomposition of the biggest and heaviest molecules of hydrocarbons into lighter and simpler ones Disintegration is carried out by applying heat and pressure and, in more advanced techniques, by the use of catalyzers. The use of this process enables the increase of gasoline and other products yields like dry gas, propane, propylene, butane-butylene, gasolines, cyclic and decant oils, etc.), which are variously used in the oil industry. The most common kind of disintegration units are catalytic cracking, hydrocracking, residual cracking (coking), thermal cracking, visbreaking, and steam cracking.

Distillate

Distillation product coming from the steaming and subsequent condensation of a blend of miscible substances, into individual, groups of, or fractions of compounds lighter than the original blend

Dry natural gas

NG containing meaningful amounts of hydrocarbons heavier than methane. It is obtained from NG processing centers.

**Economic reserves** 

Volume of hydrocarbons at atmospheric conditions which are expected to be recovered from the specific date in which the reserve is determined, until the end of the reservoir's exploitation, using the exploitation methods and systems economically applicable to that date.

**Energy** 

Capacity for producing work.

Enhanced oil recovery (EOR)

Oil recovery through the injection of materials which are not generally found in the reservoir and which modify the dynamic behavior of the resident fluids. Enhanced recovery is not constrained to a particular life stage of the well (primary, secondary, or tertiary).

**Equipment under operation** 

Average per day, in a given period (month or year), of the number of equipment used in the drilling of wells or related activities, such as dismantling, transportation, or maintenance.

Equivalent oil

Total of crude oil, condensates, plants liquids, and dry NG expressed in

equivalent units of oil.

Stimulation

Process of acidification or fracking carried out to widen the existing pipes

or create new ones in the productive formation of a well.

**Exploratory** wells

Wells drilled for obtaining detailed information of the characteristics of a reservoir to determine if it contains hydrocarbons economically

recoverable. Includes stratigraphic test wells.

Extra-heavy crude oil

Crude oil with relatively high fractions of heavy components, high specific

density (low API density) and high viscosity. This crude's production presents difficulties due to its extraction and high costs.

Fossil fuels

Blend of organic compounds extracted from the subsoil for producing

energy through combustion. Coal, oil, as well as the NG coming from living organisms fossilized by geological phenomena are considered fossil fuels.

Fracking

Process through which small fractions are separated from a hydrocarbons'

blend by distillation.

**Fuel** 

Material that, when combined with oxygen, it ignites producing heat. A

substance able to produce energy through non-oxidation processes (such as a chemical reaction), including fissionable and fusionable materials.

Gasoil

Product refined from oil whose density is higher than the one from gasolines and kerosenes, but lower than residuals'. It generally comprises

hydrocarbons distilled between 190 and 370 °C whose specific weights (20/4 °C) range between 0.820 and 0.890. This blend has two main uses:

Fuel for small diesel-fueled machines

Fuel for ovens and heaters, from where it acquires it popular names, diesel

and oil for ovens.

#### Gasoline

Commercial term use to commercially name the lightest products for oil distillation. From the distillation process, gasoline is the first cut which is obtained. It is a volatile blend of liquid hydrocarbons and small amounts of additives, suitable to be used as a fuel in internal combustion engines with electric ignition, and a distillation range of 27 to 225 °C. Due to its volume and value in the market it is undoubtedly the most important oil product. The different degrees of gasolines are mainly referred to their octane number and to their steam of water, which are fixed according to the relation of the engines compression and the geographical zone in which they are sold.

#### Heavy crude oil

Crude oil whose density is below or equal to 27°API.

#### Heavy fuel oil

Viscous dark liquid with a characteristic tar-like smell, with a complex composition of heavy hydrocarbons, obtained from the blend of vacuum residual currents, heavy oil, and light oil from the catalytic disintegration. As this kind of chemical compound, it is insoluble to water. This product is one of the main fuels used in the industry for generating steam and electricity (intensive use, mostly, like CFE, sugar mill industry, cement industry, etc.). Other significant characteristics are:

Boiling point (rank) at 760 mm Hg: 315-545°C

Steam density (Air=1): 20

Volatility Percentage: Low

Flash point: 66° minimum

Pour point: 15 °C maximum

Sulfur weight percentage: 4.0 maximum

Flammability limit in air, volume %: low 1%, superior 5%.

# H-Oil Plant (hydrodesulfurization of residuals)

Plant used in oil refining for processing hydrocarbons with a high molecular weight (vacuum residuals, etc.). An H-Oil unit is intended to elaborate low-molecular-weight products and low boiling points, with reduced sulfur levels, with good profits.

## Hydrocarbons

Family of chemical compounds mainly formed by carbon and hydrogen. In a smaller extent, it can contain other elements like oxygen, nitrogen, sulfur, halogens (chlorine, bromine, iodine, and fluorine), phosphorous, among others. Is physical state, under environmental conditions, can be in form of gas, liquid, or solid, according to the number of carbon atoms and the other elements it may contain.

#### Hydrocarbons reserves

Volume of hydrocarbons measured at atmospheric conditions, which will be economically produced through any exploitation method or system applicable to the assessment date.

## Hydrodesulfurization

Process through which sulfur is eliminated from hydrocarbons such as gasoline, jet fuel, diesel, lubricants, and residuals. Hydrodesulfurization is carried out in a reactor under pressure and temperature conditions, hydrogen, and a catalyzer that speeds up the reaction to eliminate the sulfur from the hydrocarbons than come into the reactor. Catalyzers have a base of nickel- and cobalt-molibdene.

#### Hydrotreatment

Process whose aim is to catalytically stabilize hydrocarbons, besides eliminating their polluting components, by making them react with hydrogen at temperatures ranging from 315 and 430 °C and pressures which vary from 7 to 120 kg/cm2, and using catalysts like nickel-oxide or nickel-thiomolybdate, tungsten- and nickel-sulfurs and vanadium oxide. Among the reactions, stabilization ones comprise the conversion of unsaturated hydrocarbons like olefines, low-stability diolefines which are gum forming precursors, in saturated compounds by hydrogeneration or disintegration.

#### Industrial low sulfur diesel

Light yellow, oil-like fuel exclusively used for open-flame burners, insoluble in water. It is obtained through fracking crude oils in the cut corresponding to light gas oil. The latter is treated to reduce its total sulfur content to 0.05% of weight, and used mainly in boilers, electricity generators, steam generators, ovens, and industrial heaters. Its main properties are:

Boiling point (rank) at 760 mm Hg: 216-371°C

Steam pressure: 30 mm Hg @ 20 °C

Steam density (Air=1): 4

Specific gravity (20/40 °C): 0.850

Flash point: 52° minimum

Cinematic viscosity to 40 °C: 1.9 to 5.8 centistokes

Sulfur total weight percentage: 0.05 maximum

Flammability limit in air, volume %: low 0.7%, superior 5%.

#### Intermediate distillate

Fraction of crude oil or hydrocarbons which are distilled between 175  $^{\circ}$ C and 330  $^{\circ}$ C, and which correspond to a fraction of naphtha, kerosene, and diesel fuel; the last two products are used in some countries as fuels for air conditioning.

#### Intermediate fuel oil 15 (IFO 15)

Liquid with a complex composition of heavy hydrocarbons, obtained from the blend of vacuum residual currents, heavy oil, and light oil from the catalytic disintegration. It is a dark substance, viscous, with a tar-like smell, and insoluble to water. Other main characteristics are:

Boiling point (rank) at 760 mm Hg: 315-545°C

Steam density (Air=1): 20

Volatility Percentage: Low

Specific gravity (20/4 °C): 0.9877 maximum

Flash point: 66° minimum

Pour point: 30 °C maximum

Sulfur weight percentage: 4.0 maximum

## Isomerization

Process which alters the arrangement of atoms in a molecule without adding or subtracting anything from the original molecule. For instance, butane is isomerized into isobutane to be used in the alkylation of isobutylene and other olefines for producing high-octane hydrocarbons.

## Istmo crude oil

Light Mexican crude oil with an API gravity of 33 to 34° API. Its main characteristics are:

Specific weight (20/4 °C): 0.858

Viscosity, SSU to 15.6 °C: 60

Sulfur content (%): 1.3

Metals, vanadium: 39.5

Gasoline: 26.0

Intermediate distillates: 32.0

Gasoils: 18.0

Residual: 23.0

#### Jet fuel

Fuel used for aircrafts; it is an oil derivative similar to kerosene, clear to straw-colored fuel, with an oil-fuel smell, insoluble in water. It is also known as aviation turbine fuel. Important properties:

Boiling point (rank) at 760 mm Hg: 149-300°C

Steam pressure: 30 mm Hg @ 20 °C

Specific gravity (20/40 °C): 0.810

Flash point: 38° minimum

Freezing point: -47 °C maximum

Flammability limit in air, volume %: low 0.6%, superior 3.7%.

## Light crude oil

Crude oil whose density is higher than 27°API, but below or equal to 38°.

#### Low-sulfur fuel oil

Liquid with a complex composition of heavy hydrocarbons, obtained from the blend of vacuum residual currents, heavy oil, and light oil from the catalytic disintegration. It is a dark substance, viscous, with a tar-like smell, and insoluble to water. Other main characteristics are:

Boiling point (rank) at 760 mm Hg: 315-545°C

Steam density (Air=1): 20

Volatility Percentage: Low

Specific gravity (20/4 °C): 1.02 maximum

Flash point: 60° minimum

Pour point: + 15 °C maximum

Sulfur weight percentage: 2.0 maximum

LP Gas (LPG)

In the oil industry, it refers to the blend of propane and butane compressed and liquefied. It can come from NG and gasoline liquids from crude oil refining processes.

Maya crude oil

Heavy Mexican crude oil produced mainly in the sea. Its API gravity is of 21.4 to 22.3 °API. Its main characteristics are:

Specific weight (20/4 °C): 0.920

Viscosity, SSU to 15.6 °C: 1288

Sulfur content (%): 3.3

Metals, vanadium: 343.0

Gasoline: 17.0

Intermediate distillates: 28.0

Gasoils: 16.0

Residual: 38.0

## Natural gas (NG)

Blend of light paraffin hydrocarbons with methane as their main constituent. Additionally, it may contain ethane, propane, and other heavier paraffin hydrocarbons in decreasing proportions, as well as variable proportions of nitrogen, carbon dioxide, sulfuric acid, and water steam. NG can be found associated with crude oil or alone in non-associated gas wells.

## Natural gasoline

Gasoline found in form of dew within NG and which, as other condensates recovered from NG through cooling o compression. it is a liquid similar to gasoline but lighter, more volatile and unstable, due to its smaller molecular weight and that it contains pentane, butane, and propane steams dissolved; it also has low octane, so it is generally subjected to fracking, reforming, or isomerization processes, before being blended as a gasoline component.

#### Non-associated gas

NG located in oil-free reservoirs.

#### Non-discovered resource

Volume of hydrocarbons under uncertainty, but whose existence is inferred within geological basins through favorable factors resulting from geological, geophysical, and geochemical interpretation. If it is economically viable it is called prospective resource.

#### Oil

Greasy liquid, immiscible in water. It could be from vegetal, animal, or mineral origin. Within the group of mineral oils there is the crude oil (petroleum) which is a complex blend of various chemical components.

#### Oil barrel

Unit of volume based on the measure of the barrel used in the oil industry. It is equal to 158.9873 liters (42 USA gallons).

#### Oil original volume

Amount of oil estimated to originally exist in the reservoir, and which is confined by geological and fluid limits, and which can be expressed to reservoir conditions as well as to ground conditions.

## Oil product(s)

Products obtained through oil refining. These can be finished products (gasoline, diesel, liquefied gas, etc.), semi-finished, or subproducts (naphthas).

## Oil reservoir

Any geological or porous stratum which contains or may contain any of the hydrocarbons from the oil group. Reservoirs can be classified according to the type and amount of fluid they contain (gas, oil, or blends).

#### Oil tanker

Generalized name to design vessels that transport oil or its derivatives, though nowadays the term is also used to design a vessel that transport bulk liquids.

#### Olmeca crude oil

Blend of ultra-light crude oils produced in the Mesozoic region of Chiapas and Tabasco, with an API gravity of 39.3 °API or higher. Its main characteristics are:

Specific weight (20/4 °C): 0.825

Viscosity, SSU to 15.6 °C: 43.6

Sulfur content (%): 0.77

Metals, vanadium: 2.5

Gasoline: 38.0

Intermediate distillates: 33.7

Gasoils: 20.5

Residual: 5.4

## Original reserve

Volume of hydrocarbons at atmospheric conditions, originally available in a reservoir before beginning its commercial exploitation, and which is expected to be economically recovered through any exploitation method or system applicable to a specific date. It is the fraction of the discovered and economic resource which can be obtained since the beginning of the commercial exploitation until the end of its exploitation.

#### PEMEX franchise

Trading system through which PEMEX delegates the use of its trademark to individual or legal entities, and in which PEMEX provides technical as well as any other kind of assistance regarding operating methods, as established in the franchise concept legal framework.

## PEMEX Magna gasoline

Unleaded gasoline elaborated by PEMEX Refining with an octane number of minimum 87, and whose formulation has been modified to reduce its volatility and content of toxic substances or ozone precursors, like sulfur, olefines, aromatics, and benzene.

#### **PEMEX Premium gasoline**

Unleaded gasoline elaborated by PEMEX Refining for engines which demand an octane number higher than the Magna gasoline one, and more constrictions in its content of toxic substances or ozone precursors such as olefins, aromatics, and benzene. Its octane number is of 93.

#### Petroleum coke (oil coke/petcoke)

Blackish product which is solid, porous, whose density is of approximately 1.2 g/cm2. It is obtained from the thermal decomposition of high-molecular weight hydrocarbons found in the heavier or residual fractions from the oil refining process. Their most important properties are their heating power, sulfur content, ashes, and volatile materials. It is used as an industrial fuel; purified, it can be used as a reductant agent or on anodes in metallurgic processes, as abrasives, artificial graphite, pigments, fuel, among others.

#### Phase

Part of the system which differs, in its intensive properties, from another part of the system Hydrocarbons systems generally display two phases: gas and liquid. When oil comes mixed with water, it is separated into two liquid phases or, in two liquid phases and a gas one.

#### **Pipeline**

Piping destined for transporting oils, gas, gasolines, and other oil products to storage, embarking, and distribution terminals; or from one plant and/or refinery to another. Its width varies between 2" and 48" according to their use, geographical conditions, and the weather of their location. There are different kind of pipelines depending on the product they transport:

gas pipeline

gasoline pipeline

oil pipeline

polyduct

jet-fuel pipeline

#### Plant liquids

NG liquids recovered in gas processing plants, mostly ethane, propane, butane, and natural gasolines.

## Play

Group of fields and/or prospects in a given region, which are controlled by the same general geological characteristics (reservoir rock, seal, source rock, and type of trap).

#### Possible reserves

Number of hydrocarbons estimated to a specific date in traps not drilled, defined by geological and geophysical methods, localized in areas far away from producing ones, but within the same geological province, which can possibly obtain technical and economically hydrocarbons production, at the same stratigraphic level where there are proven reserves.

#### Primary recovery

Oil extraction by using only the natural energy available in the reservoirs to displace fluids through the reservoir formation towards the wells.

#### Probable reserves

Number of hydrocarbons estimated to a specific date, in drilled traps and not drilled ones, defined by geological and geophysical methods, localized in areas close to producing reservoirs in which it is considered there are probabilities to obtain, technically and economically, hydrocarbons production, at the same stratigraphic level where there are proven reserves.

#### **Production fields**

Fields with exploitation wells, that is, which are not plugged. Includes wells operating as producers or injectors, as well as closed wells with possibility to be exploited.

## Prospective resource

Number of hydrocarbons assessed to a given date of accumulations which are not discovered yet, but have been inferred through geological, geophysical, and geochemical information available from the zone, and that are estimated to be recoverable

#### Proven reserves

Volume of reserves measured at atmospheric conditions which can be economically produced with the exploitation methods and systems applicable to the time of the assessment, primary as well as secondary.

#### Recovery factor (rf)

Ratio between the original volume of gas or oil and the original reserve in a field, measured under the same conditions of temperature and pressure.

## Refinery

Industrial facility where crude oil refining is carried out through different processes.

## Refining

Group of chemical and physical processes to which crude oils are subjected in drilling works in order to convert them into products with desirable commercial features. To achieve these different methods are employed such as distillation (atmospheric and vacuum), hydrotreatment, hydrodesulfurization, catalytic reforming, isomerization, alkylation, production of oxygenates (MTBE and TAME), among many others which allow a better use of the hydrocarbons which form oil.

## Refining capacity

Capacity per day of operation, not to the capacity per calendar day. The capacity per day of operation in a plant is the maximum volume which can be processed working uninterruptedly, while the capacity per calendar day

considers the stoppages normally demanded due to maintenance and other events.

#### Reforming

Processing technique by which the molecular structure of a hydrocarbon is rearranged to alter its properties. The process is frequently applied to low-quality gasoline stocks to improve their combustion characteristics. When it is carried out through heating it is called thermal reforming, and when it is assisted through a catalyzer, catalytic reforming.

#### Region

Geographic scope corresponding to the administrative division of PEMEX Exploration and Production. Regional offices are located throughout the coast of the Gulf of Mexico: Poza Rica, Ver. (North Region), Villahermosa, Tab. (South Region), and Ciudad del Carmen, Cam. (Northeast Marine Region and Northwest Marine Region).

COMPREHENSIVE ASSET: Administrative subdivision of each region. Regions were restructured around their main comprehensive assets as follows:

NORTHEAST MARINE REGION: Cantarell and Ku-Maloob-Zaap.

SOUTHWEST MARINE REGION: Abkatun-Pol-Chuc and Litoral of Tabasco.

SOUTH REGION: Bellota-Jujo, Cinco Presidentes, Macuspana, Muspac, and Samaria-Luna.

NORTH REGION: Burgos, Poza Rica-Altamira, and Veracruz.

## Relative density

Regarding solids and liquids, it is the ratio between the density of a liquids and that of water, at the same temperature; regarding liquids, is the ratio between that gas density and the air density at the same temperature and pressure conditions.

#### Remnant reserves

Volume of hydrocarbons measured at atmospheric conditions, which remains to be economically produced within a reservoir to a specific date, with the applicable exploitation techniques. It is the difference between the original reserve and the hydrocarbons cumulative production to a

specific date.

#### Reserves restitution rate (RRR)

Points out the number of hydrocarbons which are replaced or incorporated through new discoveries regarding those produced in a given period. It is the coefficient resultant from dividing the new discoveries between their productions during the analyzed period. It is generally referred annually and expressed in percentage terms.

Reservoir

Portion of a geological trap containing hydrocarbons, which is share by a system hydraulically interconnected, and where hydrocarbons are found at high temperature and pressure taking up the porous spaces.

Resource

Total volume of hydrocarbons existing in the subsoil formations It is also known as original volume *in situ*.

Sea freight forwarding center

Storage plant supplied by sea. This type of plant shall have the necessary facilities for receiving the total load from vessels.

Facility which execute sales and distribution operations of products for clients.

Secondary recovery

Additional extraction techniques used after primary recovery. This includes the injection of water or gas to keep the reservoir's pressure and facilitate the flowing of oil from the embedded formation towards the production well.

Service station

Physical space where the products manufactured by the refining industry are sold. Its characteristics may vary according to the image given by the station managers.

Special marine diesel

Fuel liquid, green colored, with oil-like smell and insoluble in water. It is obtained from the blend of paraffin, olefine, and naphthene hydrocarbons derived from oil processing. Its main properties are:

Boiling point (rank) at 760 mm Hg: 216-371°C

Steam pressure: 30 mm Hg @ 20 °C

Steam density (Air=1): 4

Specific gravity (20/40 °C): 0.850

Flash point: 60° minimum

Cetane index: 40 minimum

Cinematic viscosity to 40 °C: 1.9 to 4.1 centistokes

Sulfur total weight percentage: 0.5 maximum

Flammability limit in air, volume %: low 0.7%, superior 5%.

Tank car

Container designed to perform under pressurized or at atmospheric conditions assembled over a platform or directly over wheels to be transported over railways.

Topped crude oil

Crude oil from which it has been eliminated, generally by distillation, the lightest fractions like dry gas, liquefied gas, and naphtha.

Ultra-light crude oil

Crude oil whose density is higher than 38°API.

Unproven reserves

Volume of hydrocarbons and associated substances, assessed at atmospheric conditions resulting from the extrapolation of the features and parameters of the reservoir beyond the limits of reasonable certainty, or assuming future production scenarios based on technical or economic conditions which do not prevail at the time of the assessment.

Vacuum distillation

Crude-oil distillation process at vacuum pressure which is used as an intermediate step for extracting, from the atmospheric residue, the gasoil used as a load for FCC catalytic disintegration plants, and fractions to elaborate lubricating oils.

Vacuum gasoil

Distillate with relatively high boiling point, generally obtained from the vacuum distillation of the primary residue and from which vacuum light and heavy gasoil is produced; mixed with the heavy gasoil extracted from the crude-oil atmospheric distillation is used a load for catalytic plants.

#### Vacuum residue

Residue obtained from a vacuum distillation plant. It is the result of extracting the gasoils contained in the atmospheric residue from a vacuum distillation tower. It is composed by complex hydrocarbons with a high molecular weight and concentrated impurities like sulfur, nickel, and vanadium. Afterwards, this vacuum residue is converted into asphalt, bitumen, or in oil coke through refining processes.

#### Visbreaking plant

Process used in oil refining to obtain hydrocarbons with a low molecular weight such as gases, gasoline, gasoils, and low-viscosity residuals from high-viscosity residuals.

## Viscosity

Resistance of a liquid to flow. A high-viscosity hydrocarbon, for instance, flows with difficulty, while the less thick ones are more mobile. Viscosity decreases with temperature.

#### Volatility

Tendency of a liquid to vaporize. Volatile substances release vapors at environmental temperatures. In the oil refining industry, this is a very important property of crude oils as well as of their products. Hydrocarbons blends like gasoline, can be classified as volatile since they contain components will evaporate easily. Thereby, their steam pressure is controlled, a determination which reflects the crude volatility as well as the volatility of its products.

#### Wells

According to its objective or function, wells are classified as exploratory and development ones. Regarding their degree of completion, they are classified as drilled or completed.

DRILLED: Wells which were drilled with a drilling rig and has already been concluded, and has already been cased and cemented, but it has not undergone the necessary operations which will enable it to produce hydrocarbons.

COMPLETED: Drilled wells in which there has already been performed completion operations, such as: running the production tubing; firing bullets into the sides of the casing to allow the connection between the well bore and the formation; and cleaning and stimulation of the rock formation to allow the flowing of hydrocarbons.

#### Wells record

Displays information of subsoil formations obtained by means of tools introduced into the wells, and which can be electric, acoustic, and radioactive. The record also includes information on drilling, mud and cut

analysis, nucleus analysis, and formation proves.

## Wet natural gas

Blend of hydrocarbons in gaseous form containing significant amounts of hydrocarbons heavier than methane and which can be commercially recovered, but is free from other components.

# **ACRONYMS**

AAGR Average annual growth rate

AMDA Asociación Mexicana de Distribuidores Automotor

AMIA Asociación Mexicana de la Industria Automotriz

ANPACT Asociación Nacional de Productores de Autobuses, Camiones y Tractocamiones

ASA Aeropuertos y Servicios Auxiliares

ATG Aceite Terciario del Golfo

BBL Barrel

BBOE Billion barrels of oil equivalent

BD Barrels per day

BP British Petroleum

BTU British Thermal Unit

CC Combined Cycle

CFE Electricity Federal Commission

CIEP Comprehensive Contracts for Exploration and Production

CNG Compressed Natural Gas

CNGM Costa Norteamericana del Golfo de México

CONAPO Consejo Nacional de Población

CONUEE Comisión Nacional para el Uso Eficiente de la Energía

CRE Energy Regulatory Commission

DGAC Dirección General DE Aeronáutica Civil

DOE U.S. Department of Energy

DOF Official Journal of the Federation

EIA Energy Information Administration (U.S.)

EPA Environmental Protection Agency

EPS Productive State Enterprise



GDP Gross Domestic Product

GN Natural gas

GWh Gigawatts hour

HDS Hydrodesulfurization

IEA International Energy Agency

IEP Independent Energy Producers

IEPS Impuesto Especial sobre Productos y Servicios

IMP Instituto Mexicano del Petróleo

INEGI Instituto Nacional de Estadística Geografía e Informática

IVA Value-Added Tax

Km Kilometer

Km/l Kilometer per liter

KTAP Thousand tons per day

LPG Liquefied Petroleum Gas

MB Thousand barrels

MBCOE Thousand barrels of crude oil equivalent

MBD Thousand barrels per day

MBDCOE Thousand barrels of crude oil equivalent per day

MMB Million barrels

MMBCOE Million barrels of crude oil equivalent

MMBDCOE Million barrels per day of crude oil equivalent

MMBD Million barrels per day

MMCFD Million cubic feet per day

MMT Million tons

MMTON Million tons

MW Megawatts

n.a. Not applicable

n.d. Not available

NOM Mexican Standard

OECD Organization for Economic Co-operation and Development

OPEC Organization of Petroleum Exporting Countries

PEMEX Petróleos Mexicanos

PEP PEMEX Exploration and Production

PGPB PEMEX Gas and Basic Petrochemistry

POT Quarterly Operative Program

PR PEMEX Refining

RP Rest of the country

SCT Secretariat of Communications and Transportation

SE Secretariat of Economy

SENER Secretariat of Energy

SFM Mexican Rail System

SNR Refining National System

UAE United Arab Emirates

ULS Ultra Low Sulfur

USD American Dollars

WTI West Texas Intermediate

# **CONVERSION FACTORS**

Volume Amount	Base Unit	Conversion Factor	New Unit
1	cubic meter	6.2898104	barrels
1	cubic meter	35.31467	cubic feet
1	cubic meter	1,000	liters
1	million cubic meter	6,289.80	thousand barrels
1	million cubic feet	178.107	thousand barrels
1	cubic feet	0.0283168	cubic meter
1	Gallon	0.0238	barrels
1	barrel	42	Gallons
1	barrel	158.987304	liters

Energy Amount	Base Unit	Conversion Factor	New Unit
1	million tons of oil	40.4	MBTU (10 <sup>12</sup> BTU)
1	ton of crude oil equivalent	41.868 x 109	GJ (10 <sup>9</sup> Joules)
1	million tons of crude oil equivalent	41.868	PJ (10 <sup>15</sup> Joules)
1	metric ton of crude oil	7.3	barrels of oil
1	barrel of oil	5,000	cubic feet of natural gas
1	million cubic meter of natural gas	0.9	thousand tons of crude oil
1	million cubic feet of natural gas	0.026	thousand tons of crude oil
1	cubic meter of natural gas	8,460,000	calories (for purposes of dry-gas invoicing)
1	cubic meter of natural gas	8,967,600	calories (with a 1.06 calorific-value correction factor)
1	cubic meter of kerosene	8,841,586	Kilocalories
1	cubic meter of blast- furnace gas	8,825	Kilocalories
1	cubic meter of coke gas	4,400	Kilocalories
1	barrel of heavy fuel-oil	1,593,000	Kilocalories
1	ton of petroleum coke	7,465,500	Kilocalories
1	kilogram of LPG (domestic mixture)	11,823.86	Kilocalories
1	kilogram of LPG (imports mixture)	11,917.30	Kilocalories
1	ton of bagasse	1,684,990	Kilocalories
1	ton of coal	4,662,000	Kilocalories





1	ton of coal coke	6,933,000	Kilocalories
1	BTU	1,055.06	Joules
1	BTU	252	Calories
1	Calorie	4.1868	Joules
1	Kilocalorie	3.968254	BTU
1	Gigajoule (1 x109 joules)	0.94708	Million BTU
1	Gigajoule	239,000,000	calories
1	Petacalorie	132.76	megawatts
1	watt-hour	3,600	Jo

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## **References for comments**

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