Develop Mexico Future Year Emissions

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TABLE OF CONTENTS

Page

1.0 INTRODUCTION 1
2.0 2008 INEM – BACKGROUND 2
2.1 Point Sources 4
2.2 Area Sources 5
2.3 On-Road Motor Vehicles 6
2.4 Nonroad Mobile Sources 7
3.0 2008 INEM – IMPROVEMENTS 7
3.1 Point Source Improvement – Gap Fill Missing Point Source Stack Data .. 8
3.2 Point Source Improvement – Standardize and Gap Fill Required Point Source FF10 Fields 8
3.3 Point Source Improvement – Improve Incorrect Point Source Stack Locations 8
3.4 Area Source Improvement – Assign Area Source SCCs 9
3.5 On-Road Motor Vehicle Improvement – Assign On-Road Motor Vehicle SCCs 14
3.6 Nonroad Mobile Source Improvements – Assign Nonroad Mobile Source SCCs 14
3.7 2008 INEM Data Submittal 15
4.0 FUTURE YEAR PROJECTIONS 16
4.1 Pre-Projection Adjustments 16
4.1.1 Pre-Projection Adjustment – New Municipalities 16
4.1.2 Pre-Projection Adjustment – High On-Road Motor Vehicle Emissions 17
4.2 Projection Factors – Point Sources 18
4.3 Projection Factors – Area Sources 19
4.4 Projection Factors – Nonroad Mobile Sources 20
4.5 Projection Factors – On-Road Motor Vehicles 20
5.0 FUTURE YEAR PROJECTION DATA SUBMITTAL 21
6.0 RESULTS 21
7.0 REFERENCES 23

APPENDIX A – POINT SOURCE SURROGATE ASSIGNMENTS
APPENDIX B – POINT SOURCE PROJECTION FACTORS
APPENDIX C – AREA SOURCE SURROGATE ASSIGNMENTS
APPENDIX D – AREA SOURCE PROJECTION FACTORS (OTHER)
APPENDIX E – NONROAD MOBILE SOURCE SURROGATE ASSIGNMENTS
APPENDIX F – NONROAD MOBILE SOURCE PROJECTION FACTORS
APPENDIX G – ON-ROAD MOTOR VEHICLE PROJECTION FACTORS

LIST OF TABLES

Page

Table 1. 2008 INEM Pollutants by Source Type 4

Table 2. 2008 INEM Point Sources by State 10

Table 3. New Municipalities in Mexico 17

Table 4. 2008 INEM State-Level Per Capita On-Road Motor Vehicle Emissions (kg/person-year) 18

Table 5. Projected 2018, 2025, and 2030 Mexico emissions (tons/year) 22

LIST OF FIGURES

Page

Figure 1. Mexico States and the 36 km CONUS Modeling Domain 3

Figure 2. Baja California Point Sources 11

1.0 INTRODUCTION

The U.S. Environmental Protection Agency (EPA) developed an air quality modeling platform for the year 2011 based on the 2011 National Emissions Inventory, version 1 (2011NEIv1). The air quality modeling platform consists of all the emissions inventories and ancillary data files used for emissions modeling, as well as the meteorological, initial condition, and boundary condition files needed to run the air quality model. This 2011 modeling platform includes all criteria air pollutants and precursors (CAPs) and several of the hazardous air pollutants (HAPs). The modeling domain includes a 12 km national grid for the 48 contiguous states, as well as portions of Mexico and Canada. The outermost modeling domain typically used for modeling is a 36 km national grid (i.e., the CMAQ 36 km modeling domain) for the 48 contiguous states, as well as portions of Mexico and Canada – hereafter referred to as CONUS. The emissions for Mexico used in the current modeling platform are very dated – they are 1999 year data that has been grown/projected to year 2012, and include emissions for stationary point and non-point sources and for mobile on-road and nonroad sources.

Under EPA Contract No. EP-D-11-006, Work Assignment (WA) 4-09, ERG improved and replaced the Mexico emissions inventory for criteria pollutants that is currently used in EPA's 2011 emissions modeling platform – with data that are representative of more recent conditions. ERG updated the existing 2008 Mexico National Emissions Inventory (INEM) and then developed 2018, 2025, and 2030 emission projections based on the 2008 INEM.

This report summarizes the technical approach used to update the 2008 INEM and develop the future year emission projections.

The following describes how the information in this report is organized:

Section 2.0 – Background information on the 2008 INEM
Section 3.0 – Improvements made to the 2008 INEM
Section 4.0 – Development of future year projection factors
Section 5.0 – Submittal of inventory files
Section 6.0 – Results
Section 7.0 – References

2.0 2008 INEM – BACKGROUND

The focus of Task 2 of Work Assignment 4-09 was to make and document improvements to the 2008 Mexico National Emissions Inventory (*Inventario Nacional de Emisiones de México* or INEM) (SEMARNAT, 2014); however, prior to making improvements to the 2008 INEM, ERG provided an overall characterization of the 2008 INEM. This characterization is summarized below; the complete characterization is contained in a technical memorandum prepared by ERG for EPA (ERG, 2014a).

The 2008 INEM was obtained from Mexico's Secretariat of Environment and Natural Resources (*Secretaría del Medio Ambiente y Recursos Naturales* or SEMARNAT) in January 2014. The 2008 INEM represents the latest national inventory in Mexico; development of the 2011 INEM is currently underway, but that inventory was not available in time for this Work Assignment. The 2008 INEM was provided as a set of Excel spreadsheets; some limited supporting documentation was also subsequently provided (SEMARNAT, 2013). All 2008 INEM inventory emissions were in units of megagrams (Mg) per year. All emissions presented in this report are in units of U.S. short tons.

The 2008 INEM consists of separate spreadsheets for point sources, on-road motor vehicles, and nonroad mobile sources. In addition, each individual area source category has its own separate spreadsheet. Biogenic and other natural source emissions were not included in the 2008 INEM.

Mexico consists of 31 states and the Federal District (i.e., 32 federal entities); within these 32 federal entities, there are a total of 2,457 municipalities (as of 2014). Mexico municipalities are the equivalent of counties in the United States. In general, area source, on-road motor vehicle, and nonroad mobile source emissions were estimated at the municipality-level; one exception was that emissions from bus terminals were estimated at the state-level. Point source emissions were estimated at the facility- and unit-level. The 32 federal entities are displayed in Figure 1; Figure 1 also includes the southern boundary of the 36 km CONUS modeling domain.

This Work Assignment covers the entire country of Mexico. It should be noted that the two largest metropolitan areas of Mexico (i.e., Mexico City and Guadalajara) are located outside of the 36 km CONUS modeling domain. Mexico City is primarily located in Distrito Federal and the state of México, while Guadalajara is located in the central part of the state of Jalísco.

Work Assignment 4-09 specified that the pollutants to be included in the future year inventories are: nitrogen oxides (NO_x), sulfur dioxide (SO_2), volatile organic compounds (VOC), carbon monoxide (CO), particulate matter with an aerodynamic diameter of 10 micrometers (μm) or less (PM_{10}), particulate matter with an aerodynamic diameter of 2.5 μm or less ($PM_{2.5}$), ammonia (NH_3), and pyrolytic elemental carbon (PEC) (i.e., black carbon). Table 1 identifies which pollutants were included in the 2008 INEM for each source type; any pollutants listed under the "Other" header were excluded from the development of the future year inventories.

Figure 1. Mexico States and the 36 km CONUS Modeling Domain

Mexico States:

01 – Aguascalientes	09 – Distrito Federal	17 – Morelos	25 – Sinaloa
02 – Baja California	10 – Durango	18 – Nayarit	26 – Sonora
03 – Baja California Sur	11 – Guanajuato	19 – Nuevo León	27 – Tabasco
04 – Campeche	12 – Guerrero	20 – Oaxaca	28 – Tamaulipas
05 – Coahuila	13 – Hidalgo	21 – Puebla	29 – Tlaxcala
06 – Colima	14 – Jalísco	22 – Querétaro	30 – Veracruz
07 – Chiapas	15 – México	23 – Quintana Roo	31 – Yucatán
08 – Chihuahua	16 – Michoacán	24 – San Luis Potosí	32 – Zacatecas

Table 1. 2008 INEM Pollutants by Source Type

Source Type	NO_x	SO_2	VOC	CO	PM_{10}	$PM_{2.5}$	NH_3	PEC	Other
Point	✓	✓	✓	✓	✓	✓	✓	✓	
Area	✓	✓	✓	✓	✓	✓	✓	✓	
On-road	✓	✓	✓	✓	✓	✓	✓		cyanides (CN)
Nonroad	✓	✓	✓	✓	✓	✓	✓		cyanides (CN) and total hydrocarbons (THC)

2.1 Point Sources

The 2008 INEM contained point source emissions data from 7,553 facilities. Industrial facilities in Mexico are classified as being either under federal jurisdiction or state jurisdiction. The differentiation between federal and state jurisdiction point sources is not based upon an emissions threshold. Instead, federal jurisdiction point sources include facilities in the following industrial sectors:

- Petroleum extraction and petroleum/petrochemical manufacturing
- Chemical manufacturing
- Paints and inks manufacturing
- Metal products manufacturing
- Automotive parts manufacturing
- Pulp and paper manufacturing
- Cement and lime manufacturing
- Asbestos mining and manufacturing
- Glass manufacturing
- Electrical energy generation
- Hazardous waste treatment

Federal jurisdiction point sources also include industrial facilities that are located within the following types of "federal zones" (regardless of sector):

- Federal airports, train and bus stations, ports, and transportation systems
- Industrial parks located on federal land
- Within 25 km of any coastline
- Within 100 km of the Mexico-U.S. border (in accordance with the La Paz Agreement)

The 2008 INEM point source emissions data contained 2,867 federal jurisdiction facilities and 4,686 state jurisdiction facilities.

There were 20,028 stacks (i.e., emission release points) located at the 2,867 federal jurisdiction facilities. All of these facilities reported location coordinate information; however,

13 stacks located at 9 different facilities did not have any stack parameters reported. These records did not have any reported emissions data (i.e., all pollutants were blank). There were also 194 stacks that did not have reported stack gas exit velocity and temperature data; these stacks also did not have any reported emissions data (i.e., all pollutants were blank). ERG used SCC-based stack parameters to gap fill missing stack data where emissions were reported.

There were 8,961 stacks (i.e., emission release points) located at the 4,686 state jurisdiction facilities. All of these facilities reported complete coordinate information and stack parameter data.

All state jurisdiction facilities in the 2008 INEM had complete SCC information; however, there were 55 federal jurisdiction facilities that had missing SCCs. None of these emissions records with missing SCCs had any reported emissions (i.e., blank emissions). Most of these 55 facilities were in the chemical manufacturing sector (i.e., 48 facilities); the remaining facilities were in the paints and inks manufacturing sector (3 facilities), automotive parts manufacturing sector (3 facilities), and power generation sector (1 facility). These 55 facilities were located in 17 different Mexican federal entities. ERG excluded records with no SCCs and no emissions from further analysis. In general, the sectors and point source categories in the 2008 INEM were essentially the same as those in the 1999 Mexico National Emissions Inventory (1999 INEM) (ERG, 2006).

2.2 Area Sources

The 2008 INEM contained area source emissions at the municipality-level for all 32 federal entities. The data obtained from SEMARNAT included individual datasets for each of the various area source categories; however, source classification code (SCC) information was not available for many of the area source categories. ERG assigned SCCs according to the specific area source category description, after consultation with EPA. The 2008 INEM area source categories included the following:

- Fuel combustion
    - Industrial fuel combustion – diesel and LPG
    - Commercial fuel combustion – natural gas and LPG
    - Residential fuel combustion – natural gas, LPG, kerosene, and wood
    - Agricultural fuel combustion – diesel, LPG, and kerosene
- Solvent evaporation
    - Architectural coatings
    - Asphalt paving
    - Autobody refinishing
    - Consumer solvent use
    - Degreasing operations
    - Dry cleaning
    - Graphic arts
    - Industrial surface coatings
    - Traffic markings

- Fuel distribution
  - Gasoline
  - Liquid petroleum gas (LPG)
- Agricultural
  - Agricultural fertilizer application
  - Agricultural pesticide application
  - Agricultural burning/crop burning
  - Agricultural tilling
  - Cattle feedlots
- Other
  - Construction activities
  - Bakeries
  - Charbroiling
  - Domestic ammonia
  - Treated and untreated municipal wastewater
  - Structure fires
  - Forest fires/wildfires
  - Hospital sterilization operations
  - Border crossings
  - Bus terminals

After comparing the 2008 INEM to various existing U.S. inventories and the 1999 INEM, the following area source categories were identified as not being included in the 2008 INEM:

- Paved road dust
- Unpaved road dust
- Area source coal combustion
- Area source oil & gas (i.e., exploration, extraction, processing, distribution, etc.)
- Open burning
- Landfills
- Managed/prescribed burning
- Brick kilns

Of these area source categories, open burning and brick kilns were included in the final 1999 INEM (ERG, 2006). In addition, paved and unpaved road dust emissions were included in a preliminary version (but not the final version) of the 1999 INEM.

2.3 On-Road Motor Vehicles

The 2008 INEM contained on-road motor vehicle emissions from light- and heavy-duty vehicles. In addition to conventional gasoline- and diesel-fueled vehicles, the inventory also includes vehicles powered by natural gas and LPG. Similar to the area source emissions data, the on-road motor vehicle emissions data were available at the municipality level for all 32 federal entities.

The on-road motor vehicle data from the 2008 INEM consisted of 46 vehicle categories. The emissions data did not include any SCCs, so ERG assigned SCCs to the vehicle categories based on the most recent MOVES SCC list provided by EPA.

The on-road motor vehicle data included the pollutants shown in Table 1. The emissions data did not include PEC emissions, but did include cyanides emissions. The cyanides emissions were dropped from the on-road motor vehicle emissions data set since they were out of scope for this work assignment.

2.4 Nonroad Mobile Sources

The 2008 INEM contained nonroad mobile source emissions from commercial marine vessels (CMVs), locomotives, aircraft, airport ground support equipment (GSE), construction equipment, and agricultural equipment. For the construction and agricultural equipment categories, only diesel-powered equipment were included. The 2008 nonroad mobile source emissions data did not contain many of the conventional nonroad equipment categories that typically are included in U.S. emission inventories (e.g., recreational vehicles, lawn and garden equipment, industrial equipment, logging equipment, etc.).

Similar to the area source and on-road motor vehicle emissions data, the nonroad mobile source emissions data were available at the municipality-level for all 32 states. However, some municipalities had zero emissions where sources were not located within the municipality (e.g., aircraft emissions are located only in municipalities that have airports, CMV emissions are located only in municipalities that have ports, etc.).

The nonroad source emissions data obtained from SEMARNAT did not include any SCCs, so ERG assigned SCCs to the nonroad categories, after consultation with EPA.

The nonroad mobile source data included the pollutants shown in Table 1. The emissions data did not include PEC emissions, but did include cyanides and total hydrocarbon (THC) emissions. The cyanides and THC emissions were dropped from the nonroad mobile source emissions data set since they were out of scope for this work assignment.

3.0 2008 INEM – IMPROVEMENTS

The characterization of the 2008 INEM developed by ERG (ERG, 2014a) also included the identification of a number of immediate and significant improvements that could be made to the base year inventory. These improvements included the following:

- Use default SCC-based stack parameters to gap fill missing point source stack data.
- Confirm that all point source stack locations correspond with reported point source municipalities. If point source stack locations and municipalities do not correspond, use urban locality coordinates and on-line tools to improve point source locations.
- Standardize and gap fill required point source FF10 fields (e.g., FIPS, erptype, emissions data and stack parameter units, etc.).

- Assign area source SCCs according to specific area source category descriptions.
- Assign on-road motor vehicle SCCs according to specific on-road motor vehicle category descriptions.
- Assign nonroad mobile source SCCs according to specific nonroad mobile source category descriptions.
- Adjust $PM_{2.5}$ emissions that exceed PM_{10} emissions, so that they are equal.
- Quality assure data outliers (e.g., unusually high emissions, $PM_{2.5}$ emissions larger than PM_{10} emissions, inconsistent CO and NO_x emissions for combustion sources, unusual stack parameters, etc.).

Each of these improvements is discussed below in detail.

3.1 Point Source Improvement – Gap Fill Missing Point Source Stack Data

The original 2008 INEM data reported parameters for stack height, diameter, velocity, and temperature. However, this data was not reported for all the point source records. A small number of records had missing stack parameter data; SCC-based default stack parameters were used to gap-fill the missing data. A total of 41 SCCs were used to assign these default stack parameters. It should be noted that the fugitive emissions did not have any stack parameters and were not assigned any.

3.2 Point Source Improvement – Standardize and Gap Fill Required Point Source FF10 Fields

The original point source data contained emissions in Mg/yr (megagrams/year) and stack parameters in meters and degrees Celsius. Per FF10 format specifications, all emissions were converted to U.S. short tons/year and stack parameters were converted to feet and degrees Fahrenheit. The original data contained emission unit IDs, but not process IDs. Since process IDs are a required field in FF10 format, ERG used emission unit IDs for process IDs. Similarly, the original data did not include ERPTYPE and FIPS data. FIPS codes were assigned to all point source records using state and municipality names. The original data contained "Type of Emissions" field, where combustion emissions were labeled "C" and fugitive emissions were labeled "F". ERG used this data to assign ERPTYPE codes to all point source records (01 for fugitive and 02 for combustion). The country code "MX" was assigned for all the point source records.

3.3 Point Source Improvement – Improve Incorrect Point Source Stack Locations

The last identified improvement for point sources was to improve incorrect point source stack locations. ERG previously worked on two projects that used the 2008 INEM: a 2008 emissions inventory for Ciudad Juárez, Chihuahua (CEER and ERG, 2013) and 2011 and 2015 projected emissions inventories for a modeling domain that was similar to EPA's 36-km modeling domain (ERG, 2014c). In both cases, ERG identified a number of point source stack locations that were incorrectly located (i.e., the reported stack coordinates did not correspond with the reported state and municipality). In some cases, the coordinates were located in an

adjacent municipality, but in other cases the coordinates were located a great distance away – even in the United States or the ocean.

For this Work Assignment, ERG examined all of the point source stack locations within the 2008 INEM on a municipality-by-municipality basis. The results are presented in Table 2. Slightly more than 18 percent of the 7,553 point source facilities reported incorrect coordinates (i.e., coordinates that did not lie within the boundaries of the reported municipality). The states with the largest number of facilities with incorrect coordinates were Distrito Federal, México, Jalisco, Nuevo León, and Baja California. A visual presentation of Baja California point sources is presented in Figure 2. Correctly located point sources are represented by black dots, while incorrectly located point sources are represented by red dots. It can be seen that there are a small number of incorrectly located point sources in the municipalities of Tijuana, Mexicali, and Playas de Rosarito, but that there is a much larger number of incorrectly located point sources in the municipality of Tecate. There are also a number of Mexican point sources that were incorrectly located in the state of California. After examining the point source data, it appears that the vertical line of point sources stretching from Tecate into California was likely the result of some sort of copying error (i.e., identical longitudinal coordinates appear in multiple facilities).

Of the 1,367 point source facilities with incorrect coordinates, 945 facilities (i.e., slightly more than 69 percent) were located in the correct state, but in the incorrect municipality. Of the remaining 422 facilities with incorrect coordinates, 371 were located in the incorrect state, 36 were located in the U.S., and 15 were located in the ocean. It should be noted that there were a number of PEMEX Exploration and Production offshore platform facilities that were correctly located in the ocean.

Based on the fact that there were a number of coordinates that were obviously incorrectly located in the United States or the ocean, it was assumed that if reported states and municipalities and reported coordinates did not match, then the reported states and municipalities were correct (and the reported coordinates were incorrect). All incorrect location coordinates were replaced by the officially published urban locality coordinates for each municipality's respective municipal seat (INEGI, 2014a).

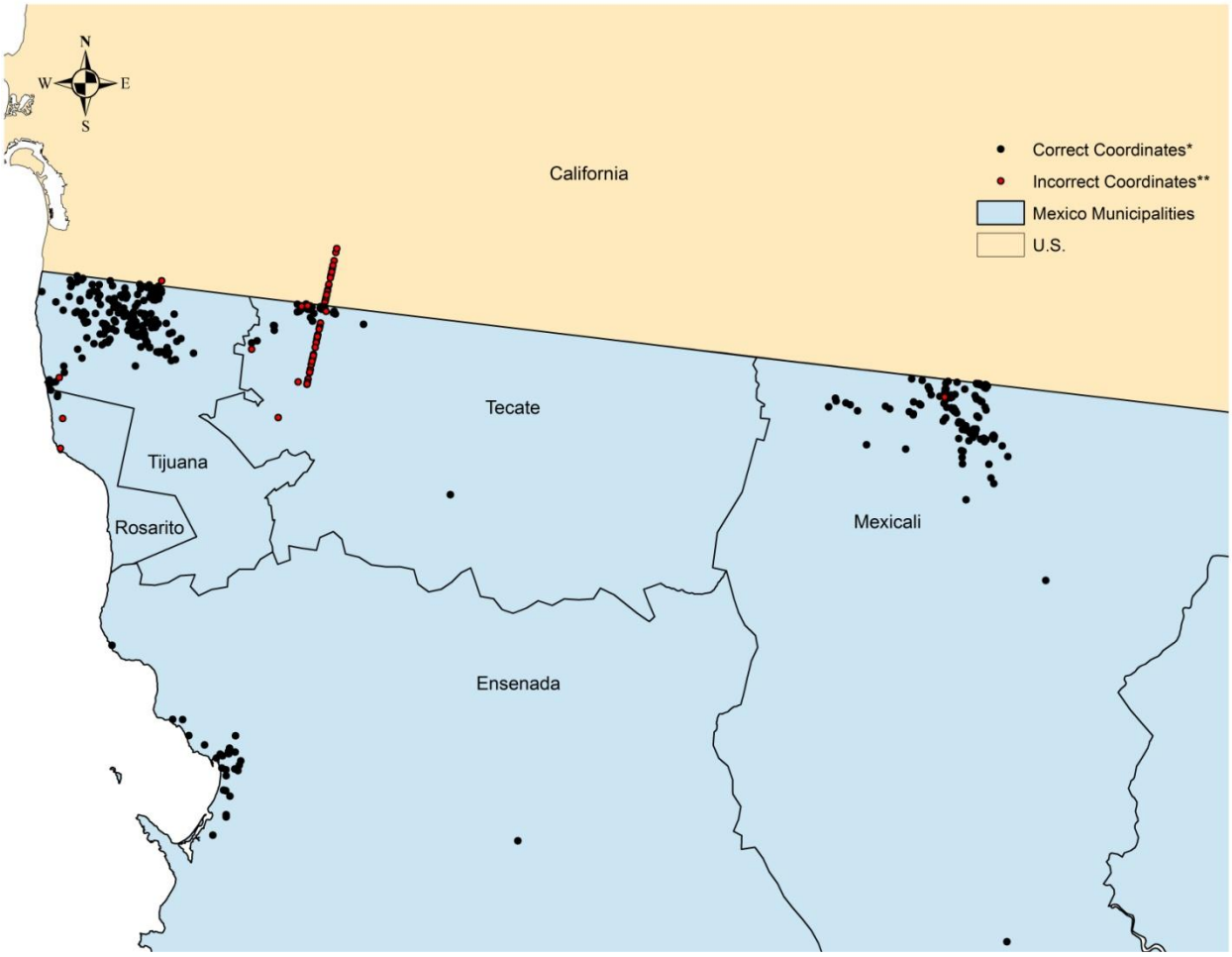
3.4 Area Source Improvement – Assign Area Source SCCs

The primary area source-specific improvement was to assign area source SCCs according to specific area source category descriptions provided in the 2008 INEM. In addition to SCC assignments, all the area source data were reviewed to identify unusual emissions data (i.e., unusually high or low emissions; $PM_{2.5}$ greater than PM_{10}; combustion emissions with missing combustion pollutants such as NO_x, CO, VOC; etc.). All SCC assignments were approved by EPA. The following list presents a summary of the review findings and actions performed to resolve identified issues:

Table 2. 2008 INEM Point Sources by State

State	Number of Facilities	Correctly Located Facilities	Incorrectly Located Facilities				
			Total Incorrect	State Correct, Municipality Incorrect	State Incorrect, Municipality Incorrect	Incorrect, In U.S.	Incorrect, In Ocean
Aguascalientes	74	65	9	7	2		
Baja California	588	510	78	51		27	
Baja California Sur	27	26	1	1			
Campeche	39	34	5	2	2		
Coahuila	214	191	23	16	6		1
Colima	34	29	5	3	1		1
Chiapas	42	31	11	5	6		
Chihuahua	367	338	29	25	1	3	
Distrito Federal	1,569	1,253	316	247	68		1
Durango	80	74	6	5	1		
Guanajuato	233	211	22	18	3		1
Guerrero	8	8					
Hidalgo	129	100	29	13	15		1
Jalisco	692	610	82	75	4	1	2
México	1,232	796	436	220	216		
Michoacán	151	129	22	18	2		2
Morelos	65	58	7	6			1
Nayarit	8	7	1		1		
Nuevo León	480	399	81	77	3		1
Oaxaca	20	19	1	1			
Puebla	252	207	45	37	8		
Querétaro	184	163	21	11	10		
Quintana Roo	11	11					
San Luis Potosí	132	121	11	8	3		
Sinaloa	62	62					
Sonora	179	172	7	5	1		1
Tabasco	104	93	11	10	1		
Tamaulipas	223	198	25	15	4	5	1
Tlaxcala	94	72	22	19	3		
Veracruz	197	147	50	43	6		1
Yucatán	51	41	10	6	4		
Zacatecas	12	11	1	1			
National Total	**7,553**	**6,186**	**1,367**	**945**	**371**	**36**	**15**

Figure 2. Baja California Point Sources



- Industrial fuel combustion – Emissions from industrial fuel combustion were included in the original 2008 INEM; however, the original data did not include SCCs. SCCs 2102007000 and 2102004000 were assigned to LPG and diesel combustions emissions, respectively.
- Commercial fuel combustion – Emissions from commercial fuel combustion were included in the original 2008 INEM. For some municipalities in Distrito Federal (state code 09), emissions records were incomplete (i.e., certain records were missing some SO_2, VOC, PM_{10}, $PM_{2.5}$, NH_3, and PEC emissions) for both natural gas and LPG combustion. For natural gas combustion, the original data reported 10300602 as the SCC; ERG reassigned 2103006000 as the SCC for natural gas commercial fuel combustion data. There was no reported SCC for LPG combustion data, so ERG assigned 2103007000 as the SCC.
- Residential fuel combustion – Emissions from residential combustion were included in the original 2008 INEM. For some municipalities in Distrito Federal (state code

09), emissions records were incomplete (i.e., certain records were missing some SO_2, VOC, PM_{10}, $PM_{2.5}$, NH_3, and PEC emissions) for natural gas and LPG combustion. For residential wood and kerosene combustion, the Distrito Federal municipalities contained zero (0) emissions for all pollutants. Valid SCC data were provided for wood and kerosene combustion. For natural gas combustion and LPG combustion, the original SCCs were 10300602 and 10301002, respectively. ERG assigned 2104006000 and 2104007000 for natural gas and LPG combustion, respectively.

- Agricultural fuel combustion – Emissions from agricultural fuel combustion were included in the original 2008 INEM. For kerosene and LPG combustion, the Distrito Federal municipalities contained blank emissions (non-zero) for all pollutants. For diesel combustion, the Distrito Federal municipalities contained incomplete emissions (i.e., certain records were missing some SO_2, VOC, PM_{10}, $PM_{2.5}$, NH_3, and PEC emissions). The original data contained 20200102 and 20400402 as the SCCs for diesel and kerosene combustion, respectively. ERG assigned SCCs 2801520004, 2801520020, and 2801520010 for diesel, kerosene, and LPG combustion, respectively.
- Fertilizer application – The original 2008 INEM data contained emissions by fertilizer type (urea, phosphates, etc.) and crop type. However, the same SCCs were reported for multiple fertilizer types and crop types. In addition, valid SCCs were not available for all the reported fertilizer and crop types. Therefore, ERG aggregated these emissions at the municipality-level and assigned SCC 2801700000.
- Pesticides – The 2008 INEM spreadsheet for the pesticides area source category contained municipality-level totals and another worksheet that was a copy/paste of a subtotal routine that contained crop type, active and inert ingredient information. Since this was a copy/paste, the original data behind the subtotals were not available. Therefore, ERG used the municipality-level totals and assigned SCC 2461850000.
- Crop dust – The crop dust spreadsheet contained PM_{10} emissions for planting and harvesting operations. No $PM_{2.5}$ emissions were available in this worksheet. However, the spreadsheet also contained municipality-level PM_{10} and $PM_{2.5}$ totals in a separate worksheet. Since $PM_{2.5}$ data were not available at the process level (i.e., planting and harvesting), ERG used the municipality-level totals (i.e., planting and harvesting) and assigned SCC 2801000000.
- Livestock NH_3 – The original 2008 INEM data contained NH_3 emissions by livestock type. Emissions were available for horses and ponies, rabbits, cattle and calves, swine production, poultry, sheep and lambs, and goats. However, the worksheet with the NH_3 emissions was a copy/paste of a subtotal routine and the original data were not available. ERG aggregated NH_3 emissions at the municipality-level and assigned SCC 2805000000.
- Feedlots (dust) – ERG assigned SCC 2805001000 to this source category.
- Residential wastewater, untreated – The original 2008 INEM data reported SCC 2630030000. This SCC corresponds to, and was reported for, treated residential wastewater. ERG assigned new SCC 2630090000 for untreated residential wastewater, after consultation with EPA.

- Domestic NH_3 – The original 2008 INEM data contained emissions disaggregated into tobacco smoke, human respiration, human transpiration, use of domestic NH_3, pets, diapers, street sources/homeless, and other wastes. Most of these sub-category emissions did not contain SCCs. In addition, no valid SCCs are available for some of these sources. Therefore, ERG aggregated emissions at the municipality-level and assigned SCC 5555555555.
- Hospitals (sterilization operations) – The original 2008 INEM data reported SCC 31502001. ERG assigned SCC 2850000010.
- Border crossings (idling vehicles) – SCC information was not available in the original 2008 INEM data. ERG assigned SCC 2222222222.
- Bus terminals – The original 2008 INEM data did not contain any SCCs and was available at state-level only (no municipality-level emissions). ERG assigned state emissions to a single municipality in each state based on the largest municipality population. ERG also assigned SCC 2202420000 with the assumption that all of the buses are diesel-powered.
- Traffic markings – The original 2008 INEM data reported SCC 2401001000. This SCC is for architectural surface coatings, so ERG assigned SCC 2850000010 for this source category.
- LPG distribution – The original 2008 INEM data contained emissions for LPG distribution and LPG storage for agricultural, transport, residential, commercial, and industrial sectors. The residential sector also contained fugitive LPG emissions from tank leaks, regulator leaks, connections and hoses, etc. However, none of these sub-categories reported SCCs. ERG aggregated all VOC emissions at the municipality-level and assigned SCC 3333333333.
- Gasoline distribution – The original 2008 INEM data contained emissions from underground tank breathing losses, Stage I, and Stage II, but were aggregated and reported using SCC 2501060000. The original data also contained transit loss emissions, but at the state-level only. The transit loss emissions for the whole country were approximately 582 Mg/yr. This corresponds to about 1 percent of the emissions reported under SCC 2501060000. ERG excluded transit loss emissions and used the municipality-level emissions reported using SCC 2501060000.
- Consumer solvents – The original 2008 INEM data contained VOC emissions from different types of consumer solvents. However, the SCCs were inconsistent and used for multiple processes/solvents. ERG aggregated VOC emissions from all consumer solvent sub-categories at the municipality-level and assigned SCC 2465000000.
- Graphic arts – The original 2008 INEM data contained VOC emissions from different processes and sub-categories (e.g., flexography, offsets, rotography, etc.). However, the reported SCCs were inconsistent and the same SCCs were used for multiple sub-categories. ERG aggregated VOC emissions from all available sub-categories at the municipality-level and assigned SCC 2425000000.
- Industrial surface coatings – The original data contained VOC emissions from various sub-categories/industry types (e.g., wood furniture coatings, metal coatings, special purpose coatings, etc.). The reported SCCs were inconsistent and same SCCs were

used for multiple sub-categories. ERG aggregated VOC emissions from all available sub-categories at the municipality-level and assigned SCC 2401990000.

- Other – No issues were identified for the following area source categories: construction dust, charbroiling, bakeries, agricultural/field burning, residential wastewater-treated, forest/wildfires, architectural surface coatings, asphalt application, autobody refinishing, dry cleaning, degreasing/solvent cleaning, and structure fires (this category does not have any reported SO_2 emissions). All of these source categories contained valid SCC data.

3.5 On-Road Motor Vehicle Improvement – Assign On-Road Motor Vehicle SCCs

The primary on-road motor vehicle-specific improvement was to assign on-road motor vehicle SCCs according to specific motor vehicle category descriptions. SCCs were assigned based on the MOVES SCC list that was provided by EPA and all SCC assignments were approved by EPA.

In addition to SCC assignments, emission records were reviewed to identify unusual emissions data (i.e., unusually high or low emissions and $PM_{2.5}$ greater than PM_{10}). ERG identified a number of instances where $PM_{2.5}$ emissions were greater than PM_{10} emissions. This happened for 140 records. The total PM_{10} emissions for all such records were 0.62 Mg, whereas $PM_{2.5}$ total emissions were 0.64 Mg. For these 140 records, ERG set $PM_{2.5}$ emissions equal to PM_{10} emissions. There were 125 records for the state of Sonora and 15 for the state of Quintana Roo. All of these records were for heavy-duty diesel vehicles (HDDV6, HDDV7, and HDDBT; SCCs 2202520000 and 2202420000).

3.6 Nonroad Mobile Source Improvements – Assign Nonroad Mobile Source SCCs

The primary nonroad mobile source-specific improvement was to assign nonroad mobile source SCCs according to specific source category descriptions. SCCs were assigned from EPA-approved SCC list.

In addition to SCC assignments, emission records were reviewed to identify unusual emissions data (i.e., unusually high or low emissions and $PM_{2.5}$ greater than PM_{10}). ERG identified a single record where $PM_{2.5}$ emissions were greater than PM10 emissions. Another issue that was identified during review was that one particular record in Chiapas reported a negative emissions quantity. This record corresponds to SCC 2270008000 and FIPS 07065. A single negative emissions quantity (-0.00234 Mg/yr) was reported each for PM_{10}, $PM_{2.5}$, SO_2, NO_x, and VOC, whereas, the CO and NH_3 emissions were reported to be zero for the same record. ERG set all pollutant emissions to zero (0) for this single record. No other issues were identified with the nonroad data.

3.7 2008 INEM Data Submittal

After implementing the improvements outlined in Sections 3.1 through 3.6, ERG prepared the improved 2008 inventory files in the required FF10 format. All data were prepared in the prescribed FF10 units of measure (e.g., annual emissions in short tons, stack diameter and height in feet, stack gas velocity in feet per second, stack gas temperature in degrees Fahrenheit, etc.). In order to ensure proper FF10 formatting, ERG prepared a sample FF10 file for each source type (i.e., point, area, on-road, and nonroad) for the state of Quintana Roo that was submitted to EPA prior to overall inventory formatting. After receiving EPA's feedback on the sample Quintana Roo FF10 files, ERG prepared the overall inventory FF10 files.

For the point source FF10 file, ERG populated the ERPTYPE field for combustion and fugitive emissions. Also, the original point source data did not contain any FIPS codes. ERG populated the FIPS codes based on state and municipality names. ERG populated the FIPS codes for area, onroad, and nonroad sources due to inconsistencies in the original 2008 INEM data (i.e., 1- and 2-digit state codes were used, leading and trailing spaces in the codes field, 5-digit FIPS in the area source data had a space between the state and the municipality code, etc.).

The fugitive emission records in the point source data did not have any stack IDs and so ERG assigned "FUG" as the stack ID for these records. There were only 151 records in the point source data that did not have any associated SCCs and all of these records had blank emissions data (non-zero). Since additional information (e.g., fuel type, process, etc.) was not available to identify relevant and valid SCCs for these records, they were excluded from the point source data (i.e., 151 records with blank emissions). In addition, there were some other records in the point source data that had blank emissions and these records were retained since the rest of the required data fields were complete.

In addition, there were 101 duplicate records in the point source data that were identified during data review. The emission totals for these records are presented below. These records were excluded prior to developing the FF10 file for point sources.

- NO_x – 2.2 tons
- SO_2 – 4.5 tons
- VOC – 0.02 tons
- CO – 0.5 tons
- PM_{10} – 0.3 tons
- $PM_{2.5}$ – 0.2 tons
- NH_3 – 0.1 tons
- PEC – 0.01 tons

ERG also identified 331 point source records where the $PM_{2.5}$ emission values exceeded the PM_{10} emission values. For these records, ERG set the $PM_{2.5}$ emission values equal to the PM_{10} emission values. The net effect of this adjustment reduced the total point source $PM_{2.5}$ emissions by 149.04 tons.

4.0 FUTURE YEAR PROJECTIONS

In general, ERG projected future year emissions by multiplying the base year 2008 INEM emissions by a projection factor as shown in the following equation:

$$E_{fy,s} = E_{2008,s} \times P_{fy,s}$$

Where: $E_{fy,s}$ = projected emissions for future year *fy* for source *s*;
$E_{2008,s}$ = estimated base year emissions for 2008 for source *s*; and
$P_{fy,s}$ = projection factor for future year *fy* for source *s*.

A projection factor greater than 1.0 represents increasing emissions, while a projection factor less than 1.0 represents decreasing emissions. A projection factor of 1.0 represents a situation of no growth (i.e., projected emissions were equal to base year emissions). The projection factors were based on "surrogates" for all sources except on-road motor vehicles, as explained below.

4.1 Pre-Projection Adjustments

Before projecting the 2008 INEM emissions forward to the future years of 2018, 2025, and 2030, two adjustments were made to the 2008 base year INEM inventory. The first adjustment addressed the creation of three new municipalities subsequent to the 2008 base year; the second adjustment addressed some suspiciously high on-road motor vehicle emissions. These two adjustments are discussed below.

4.1.1 Pre-Projection Adjustment – New Municipalities

Since 2007, three new municipalities have been created in Mexico. Two of these are in Quintana Roo (State FIPS 23) and one in Jalisco (State FIPS 14). All of these new municipalities were created from existing municipalities (i.e., one municipality split into two). Information regarding these new municipalities is summarized in Table 3.

In Jalisco, the municipality of San Ignacio Cerro Gordo (FIPS 14125) was split from the existing municipality of Arandas (FIPS 14009) in January 2007. This new municipality was included in the 2008 base year data for area sources and on-road motor vehicles, but not nonroad mobile sources. Nonroad mobile source emissions for Arandas were split between Arandas and San Ignacio Cerro Gordo based on the population ratio between both the municipalities (80-20 percent split).

In Quintana Roo, the municipality of Tulum (FIPS 23009) was split from the existing municipality of Solidaridad (FIPS 23008) in March 2008 and the municipality of Bacalar (FIPS 23010) was split from the existing municipality of Othon P. Blanco (FIPS 23004) in February 2011. Tulum was included in the 2008 base year data for area sources only, while Bacalar was

not included at all in the 2008 base year inventory. On-road motor vehicle and nonroad mobile source emissions for Solidaridad were split between Solidaridad and Tulum based on the population ratio between both municipalities (85-15 percent split). Likewise, area source, on-road motor vehicle, and nonroad mobile source emissions for Othon P. Blanco were split between Othon P. Blanco and Bacalar based on the population ratio between both municipalities (85-15 percent split).

For point sources, none of the facilities were located in the three new municipalities based upon reported facility coordinates.

Table 3. New Municipalities in Mexico

New Municipality	Existing Municipality	Existing Municipality Population Ratio (2010 pop)	New Municipality Population Ratio (2010 pop)	Included in 2008 INEM?			
				Point	Area	On-Road	Nonroad
San Ignacio Cerro Gordo (14125)	Arandas (14009)	80% (73,697)	20% (17,847)	n/a	Yes	Yes	No
Tulum (23009)	Solidaridad (23008)	85% (162,362)	15% (28,823)	n/a	Yes	No	No
Bacalar (23010)	Othon P. Blanco (23004)	85% (211,838)	15% (37,370)	n/a	No	No	No

n/a = not applicable

4.1.2 Pre-Projection Adjustment – High On-Road Motor Vehicle Emissions

After the 2008 INEM emission files were revised and submitted as described in Section 3.0, review of the emissions and comparison of these emissions to U.S. inventories and to satellite data indicated that there were some state-level on-road motor vehicle emissions that were suspiciously high (i.e., "outliers"). These outlier emissions might have been caused by overly high emission factors, overly high activity data, or some combination of the two. Multiple attempts were made to discuss these outlier data with SEMARNAT, but these attempts were ultimately unsuccessful. After consultation with the EPA Work Assignment Manager (WAM), it was decided that adjustment factors should be developed for the on-road motor vehicle emission outliers.

Examination of pollutant-specific per capita on-road motor vehicle emissions indicated that the states of Baja California, Michoacán, and Nuevo León had significantly high per capita emissions for all pollutants and should be considered to be outliers given the sensitivity of the modeling that will be conducted using the 2008 INEM data. There were some other states that had high per capita emissions for some pollutants (e.g., Jalisco, Puebla, Zacatecas, etc.); however, these states did not have high emissions for all pollutants. Pollutant-specific on-road motor vehicle adjustment factors were calculated for the states of Baja California, Michoacán, and Nuevo León using the following methodology:

- Recalculate 29-state average pollutant-specific per capita emission rates (excluding the population and estimated emissions for Baja California, Michoacán, and Nuevo León).

- Calculate state- and pollutant-specific adjustment factors by dividing the recalculated 29-state average emissions rate by the initial 2008 INEM per capita emission rates for the three states, by pollutant.

The results of this methodology are presented in Table 4.

Table 4. 2008 INEM State-Level Per Capita On-Road Motor Vehicle Emissions (kg/person-year)

State	Population (2010)	NO_x	SO_2	VOC	CO	PM_{10}	$PM_{2.5}$	NH_3
Baja California (BCN)	3,155,070	79.70	0.67	94.20	1,131.68	0.35	0.23	2.44
Michoacán (MIC)	4,351,037	41.18	0.31	65.00	993.62	0.25	0.17	1.04
Nuevo León (NLE)	4,653,458	51.33	0.54	58.49	629.90	0.38	0.28	1.47
National Total (32-state)	112,336,538	17.85	0.24	23.14	263.59	0.16	0.11	0.55
National Total (29-state)	100,176,973	13.33	0.21	17.44	187.53	0.13	0.10	0.43
Adjustment Factors								
Baja California (BCN)		0.1672	0.3070	0.1851	0.1657	0.3791	0.4261	0.1769
Michoacán (MIC)		0.3237	0.6596	0.2683	0.1887	0.5301	0.5666	0.4153
Nuevo León (NLE)		0.2597	0.3845	0.2982	0.2977	0.3580	0.3465	0.2924

These adjustment factors were used to adjust all 2008 INEM on-road motor vehicle emissions for the 5 municipalities in Baja California (FIPS 02XXX), the 113 municipalities in Michoacán (FIPS 16XXX), and the 52 municipalities in Nuevo León (FIPS 19XXX).

4.2 Projection Factors – Point Sources

ERG used the following data sources as surrogates to develop point source projection factors for Mexico:

- Electricity generation sector:
  - Petroleum products usage (i.e., distillate fuel oil, residual fuel oil, and petroleum coke) (regional-level) (SENER, 2013a)
  - Natural gas usage (regional-level) (SENER, 2013b)
  - Coal usage (regional-level) (SENER, 2013c)
- Oil and natural gas sector:
  - Crude oil production (national-level) (SENER, 2013a)
  - Crude oil refining (regional-level) (SENER, 2013a)
  - Natural gas demand (regional-level) (SENER, 2013b)
- All other sectors:
  - Gross domestic product (GDP) (national-level) (PCIF, 2014)

The regional divisions used by the Secretaría de Energía (Secretariat of Energy) (SENER) are defined as follows:

- Noroeste (Northwest) – Baja California, Baja California Sur, Sinaloa, and Sonora
- Noreste (Northeast) – Coahuila, Chihuahua, Durango, Nuevo León, and Tamaulipas
- Centro-Occidente (Central-West) – Aguascalientes, Colima, Guanajuato, Jalisco, Michoacán, Nayarit, Querétaro, San Luis Potosí, Zacatecas
- Centro (Central) – Distrito Federal, Hidalgo, México, Morelos, Puebla, and Tlaxcala
- Sur-Sureste (South-Southeast) – Campeche, Chiapas, Guerrero, Oaxaca, Quintana Roo, Tabasco, Veracruz, Yucatán

The assignment of surrogates to point source SCIAN (*Sistema de Clasificación Industrial de América del Norte*) codes is provided in Appendix A; the projection factors developed from these surrogates are presented in Appendix B.

The future surrogate forecasts in the SENER documents extend to the year 2027. The surrogate forecasts for 2018 and 2025 were used to directly develop projection factors. A surrogate forecast for 2030 was developed by applying the annual surrogate growth rate from 2025 to 2027 to the 2027 surrogate forecast.

It should be noted that projection factors were applied to the reported emissions for existing point sources in the 2008 MNEI. No attempt was made to anticipate the location of future point sources (e.g., planned electricity generation projects, planned refineries, etc.). In addition, reductions from potential future control measures were not accounted for.

4.3 Projection Factors – Area Sources

ERG used the following data sources as surrogates to develop area source projection factors for Mexico:

- Population data:
  - Census data (municipality-level) (INEGI, 2010)
  - Intracensal data (municipality-level) (INEGI, 2005)
  - Population projections (municipality-level) (CONAPO, 2012)
- Fuel usage:
  - Petroleum product usage (i.e., gasoline, distillate fuel oil, and jet fuel) (regional-level) (SENER, 2013a)
  - Natural gas and LPG usage (regional-level) (SENER, 2013b)
- GDP estimates (national-level) (PCIF, 2014)
- Agricultural acreage (SAGARPA, 2014)
- Sugarcane production quantities (INEGI, 2014b)

The assignment of surrogates to Mexico area source categories is provided in Appendix C. The area source projection factors (except for population-based projection factors) are included in Appendix D. The population-based projection factors were submitted in an Excel spreadsheet along with this final report.

Future year population projections were available from CONAPO for each of the municipalities in Mexico. However, in order to apply the 2015 population projections, an estimate of 2008 population was needed for each municipality. ERG derived 2008 population estimates using linear interpolation between the 2005 intracensal populations (INEGI, 2005) and the 2010 census populations (INEGI, 2010).

Projection of the agricultural acreage surrogate was based upon the adjustment of total 2008 state-level agricultural acreage to the long-term average from 1994 to 2012 (SAGARPA, 2014). This adjustment to the long-term average was used because agricultural acreage is somewhat cyclical and is typically not expected to continually increase. Similarly, the sugar cane production surrogate was based on the adjustment of 2008 state-level sugar cane production to the long-term average from 1994 to 2008 (INEGI, 2014b). It should also be noted that projection factors based on sugarcane production were only developed for those states that consistently produce sugarcane every year (i.e., Veracruz, Jalisco, San Luis Potosí, Oaxaca, Tamaulipas, etc.); other states also produce sugarcane, but the production is intermittent and does not occur every year.

4.4 Projection Factors – Nonroad Mobile Sources

Nonroad mobile sources in Mexico included commercial marine vessels, locomotives, aircraft, and nonroad equipment (i.e, airport ground support equipment, construction and mining equipment, and agricultural equipment). ERG used diesel and jet fuel usage projections (SENER, 2013a) and agricultural acreage (SAGARPA, 2014) as surrogates for projecting emissions from nonroad mobile sources in Mexico. The assignment of surrogates to Mexico nonroad mobile source categories is provided in Appendix E, while the projection factors are included in Appendix F.

4.5 Projection Factors – On-Road Motor Vehicles

Unlike point, area, and nonroad mobile source emissions, emissions from gasoline- and diesel-fueled on-road motor vehicles were not projected using surrogates. Instead, ERG developed future year on-road motor vehicle emissions using the 2008 INEM combined with associated information from previous inventory projections developed for 2008, 2012, and 2030 (ERG, 2009) and the initial 1999 INEM (ERG, 2006).

The 2008, 2012, and 2030 projections were based on a combined projection factor that was comprised of two separate factors. The first factor was based on the increased demand of motor vehicle fuels projected between 1999 and 2030. The second factor addressed the changes in vehicle technologies and emissions due to the anticipated turnover of the Mexican vehicle fleet. Over time, newer vehicles with improved technologies (e.g., new standards, improved catalysts, etc.) and lower emissions will enter the vehicle fleet and gradually replace older vehicles with limited or no technology. The effects of vehicle turnover were estimated using the MOBILE6-Mexico on-road motor vehicle emission factor model (ERG, 2003). The MOBILE6-Mexico model was run for all years (i.e., 1999, 2008, 2012, and 2030) and fleet average emission rates were generated. The ratio of fleet average emission rates for each future year relative to the 1999 base year was then calculated; this ratio was the "turnover" factor. The overall growth factor for each of the future years was estimated by multiplying the fuel growth factor by the fleet turnover factor.

To develop the 2018, 2025, and 2030 on-road motor vehicle emission projections, ERG revised the combined factors by updating the fuel growth factor using gasoline, diesel, LPG, and natural gas fuel usage statistics and projections (SENER, 2013a; SENER, 2013b). ERG then developed a revised fleet turnover factor by linearly interpolating the previous fleet turnover factors for 2008, 2012, and 2030. This approach maintains the assumptions made during the development of the previous projections regarding fuel and vehicle standards are still valid (i.e., the standards have not changed and the implementation schedule has not been delayed).

The on-road motor vehicle projection factors are included in Appendix G.

5.0 FUTURE YEAR PROJECTION DATA SUBMITTAL

After developing the future year projection factors as described in Section 4.0, these projection factors were applied to the 2008 base year INEM inventory resulting in projected 2018, 2025, and 2030 emissions.

ERG then prepared the projected inventory files in the required FF10 format. Because the 2008 base year INEM inventory had been cleaned up as described in Section 3.7, only minimal effort was required to develop the 2018, 2025, and 2030 FF10 files. FF10 files were then submitted to EPA.

6.0 RESULTS

The future year projected Mexico emissions for 2018, 2025, and 2030 are presented in Table 5. As shown in Table 1, PEC emissions were not estimated in the 2008 INEM inventory for on-road motor vehicles and nonroad mobile sources; therefore, projected emissions were not estimated for these sources. It should also be noted that the projected results presented in Table 5 do not exactly match the emissions submitted to EPA in FF10 format due to data truncation associated with the FF10 text format.

Table 5. Projected 2018, 2025, and 2030 Mexico emissions (tons/year)

2018	**NO_x**	**SO_2**	**VOC**	**CO**	**PM_{10}**	**$PM_{2.5}$**	**NH_3**	**PEC**
Point	696,080.4	2,048,887.5	364,136.1	810,375.8	266,315.2	184,683.8	39,229.1	23,700.0
Area	500,469.1	26,088.1	3,893,737.9	3,203,066.1	635,540.0	459,286.4	869,744.1	53,315.9
Onroad	1,179,129.1	10,598.1	1,620,208.1	15,615,086.8	18,161.4	12,904.4	72,224.9	NE
Nonroad	276,556.3	26,087.5	33,916.1	158,018.4	32,489.3	31,409.7	17.6	NE
Total	**2,652,234.9**	**2,111,661.2**	**5,911,998.2**	**19,786,547.1**	**952,505.9**	**688,284.3**	**981,215.7**	**77,015.9**
2025	**NO_x**	**SO_2**	**VOC**	**CO**	**PM_{10}**	**$PM_{2.5}$**	**NH_3**	**PEC**
Point	807,378.8	2,128,700.9	453,259.6	975,723.1	320,435.2	221,446.0	47,711.4	29,274.4
Area	522,210.0	26,445.1	4,198,303.7	3,374,340.6	660,491.3	481,786.6	880,101.3	56,196.7
Onroad	813,520.9	7,166.0	1,454,176.3	16,128,939.4	21,775.1	15,368.3	93,347.0	NE
Nonroad	313,318.8	32,135.7	36,457.7	172,267.0	34,451.1	33,281.1	18.3	NE
Total	**2,456,428.5**	**2,194,447.7**	**6,142,197.3**	**20,651,270.1**	**1,037,152.7**	**751,882.0**	**1,021,178.0**	**85,471.1**
2030	**NO_x**	**SO_2**	**VOC**	**CO**	**PM_{10}**	**$PM_{2.5}$**	**NH_3**	**PEC**
Point	909,161.3	2,217,323.3	524,752.2	1,024,911.6	367,441.8	253,618.5	54,793.5	34,174.3
Area	530,627.4	26,647.9	4,408,597.9	3,482,983.0	676,561.2	496,270.9	886,618.9	58,079.4
Onroad	348,833.9	2,801.2	1,104,212.0	14,720,732.7	23,368.5	16,452.4	104,906.4	NE
Nonroad	339,071.4	36,397.6	38,339.7	183,124.2	35,820.2	34,587.4	18.8	NE
Total	**2,127,694.0**	**2,283,170.0**	**6,075,901.8**	**19,411,751.5**	**1,103,191.7**	**800,929.2**	**1,046,337.6**	**92,253.7**

NE = Not Estimated

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APPENDIX A – POINT SOURCE SURROGATE ASSIGNMENTS

POINT SOURCE SURROGATE ASSIGNMENTS

NAICS	SCC	NAICS Definition	Surrogate
32419	All	Other petroleum and coal products manufacturing	Crude Oil Refining
211110	All	Oil and gas extraction	Crude Oil Production
221110	10100401	Electric power generation, transmission and distribution	Electricity - Residual
221110	10100405	Electric power generation, transmission and distribution	Electricity - Residual
221110	10100501	Electric power generation, transmission and distribution	Electricity - Distillate
221110	10100601	Electric power generation, transmission and distribution	Electricity - Natural Gas
221110	10200221	Electric power generation, transmission and distribution	Electricity - Coal
221110	10200401	Electric power generation, transmission and distribution	Electricity - Residual
221110	10200501	Electric power generation, transmission and distribution	Electricity - Distillate
221110	10200601	Electric power generation, transmission and distribution	Electricity - Natural Gas
221110	10200802	Electric power generation, transmission and distribution	Electricity - Coke
221110	20100101	Electric power generation, transmission and distribution	Electricity - Distillate
221110	20100102	Electric power generation, transmission and distribution	Electricity - Distillate
221110	20100201	Electric power generation, transmission and distribution	Electricity - Natural Gas
221110	20200101	Electric power generation, transmission and distribution	Electricity - Distillate
221110	20200201	Electric power generation, transmission and distribution	Electricity - Natural Gas
221110	30300310	Electric power generation, transmission and distribution	Electricity - Coke
221110	30300312	Electric power generation, transmission and distribution	Electricity - Coke
324110	All	Petroleum refining	Crude Oil Refining
324120	All	Asphalt products manufacturing	Crude Oil Refining
324191	All	Lubricating oils and greases manufacturing	Crude Oil Refining
324199	All	Coke and other products derived from refined petroleum and coal, manufacturing	Crude Oil Refining
486110	All	Pipeline transportation of crude oil	Crude Oil Refining
486210	All	Pipeline transportation of natural gas	Natural Gas Pipelines
486910	All	Pipeline transportation of refined petroleum products	Crude Oil Refining
All Others	All		GDP

APPENDIX B – POINT SOURCE PROJECTION FACTORS

POINT SOURCE PROJECTION FACTORS

State Code	State	Region	Factors	2018 Projection Factor	2025 Projection Factor	2030 Projection Factor
01	Aguascalientes	Centro-Occidente	Electricity - Residual	0.3671	0.0232	0.0232
02	Baja California	Noroeste	Electricity - Residual	0.0606	0.0081	0.0457
03	Baja California Sur	Noroeste	Electricity - Residual	0.0606	0.0081	0.0457
04	Campeche	Sur-Sureste	Electricity - Residual	0.6364	0.6411	0.2338
05	Coahuila	Noreste	Electricity - Residual	0.5491	0.0289	0.0289
06	Colima	Centro-Occidente	Electricity - Residual	0.3671	0.0232	0.0232
07	Chiapas	Sur-Sureste	Electricity - Residual	0.6364	0.6411	0.2338
08	Chihuahua	Noreste	Electricity - Residual	0.5491	0.0289	0.0289
09	Distrito Federal	Centro	Electricity - Residual	0.4118	0.1103	0.1103
10	Durango	Noreste	Electricity - Residual	0.5491	0.0289	0.0289
11	Guanajuato	Centro-Occidente	Electricity - Residual	0.3671	0.0232	0.0232
12	Guerrero	Sur-Sureste	Electricity - Residual	0.6364	0.6411	0.2338
13	Hidalgo	Centro	Electricity - Residual	0.4118	0.1103	0.1103
14	Jalisco	Centro-Occidente	Electricity - Residual	0.3671	0.0232	0.0232
15	México	Centro	Electricity - Residual	0.4118	0.1103	0.1103
16	Michoacán	Centro-Occidente	Electricity - Residual	0.3671	0.0232	0.0232
17	Morelos	Centro	Electricity - Residual	0.4118	0.1103	0.1103
18	Nayarit	Centro-Occidente	Electricity - Residual	0.3671	0.0232	0.0232
19	Nuevo León	Noreste	Electricity - Residual	0.5491	0.0289	0.0289
20	Oaxaca	Sur-Sureste	Electricity - Residual	0.6364	0.6411	0.2338
21	Puebla	Centro	Electricity - Residual	0.4118	0.1103	0.1103
22	Querétaro	Centro-Occidente	Electricity - Residual	0.3671	0.0232	0.0232
23	Quintana Roo	Sur-Sureste	Electricity - Residual	0.6364	0.6411	0.2338
24	San Luis Potosí	Centro-Occidente	Electricity - Residual	0.3671	0.0232	0.0232
25	Sinaloa	Noroeste	Electricity - Residual	0.0606	0.0081	0.0457
26	Sonora	Noroeste	Electricity - Residual	0.0606	0.0081	0.0457
27	Tabasco	Sur-Sureste	Electricity - Residual	0.6364	0.6411	0.2338
28	Tamaulipas	Noreste	Electricity - Residual	0.5491	0.0289	0.0289
29	Tlaxcala	Centro	Electricity - Residual	0.4118	0.1103	0.1103
30	Veracruz	Sur-Sureste	Electricity - Residual	0.6364	0.6411	0.2338
31	Yucatán	Sur-Sureste	Electricity - Residual	0.6364	0.6411	0.2338
32	Zacatecas	Centro-Occidente	Electricity - Residual	0.3671	0.0232	0.0232
01	Aguascalientes	Centro-Occidente	Electricity - Distillate	1.0000	0.5000	0.5000
02	Baja California	Noroeste	Electricity - Distillate	0.3913	0.4783	0.4783
03	Baja California Sur	Noroeste	Electricity - Distillate	0.3913	0.4783	0.4783
04	Campeche	Sur-Sureste	Electricity - Distillate	0.2667	0.1000	0.1000
05	Coahuila	Noreste	Electricity - Distillate	2.4000	2.6000	2.6000
06	Colima	Centro-Occidente	Electricity - Distillate	1.0000	0.5000	0.5000
07	Chiapas	Sur-Sureste	Electricity - Distillate	0.2667	0.1000	0.1000
08	Chihuahua	Noreste	Electricity - Distillate	2.4000	2.6000	2.6000
09	Distrito Federal	Centro	Electricity - Distillate	0.8000	0.8000	0.8000
10	Durango	Noreste	Electricity - Distillate	2.4000	2.6000	2.6000
11	Guanajuato	Centro-Occidente	Electricity - Distillate	1.0000	0.5000	0.5000
12	Guerrero	Sur-Sureste	Electricity - Distillate	0.2667	0.1000	0.1000
13	Hidalgo	Centro	Electricity - Distillate	0.8000	0.8000	0.8000

POINT SOURCE PROJECTION FACTORS

State Code	State	Region	Factors	2018 Projection Factor	2025 Projection Factor	2030 Projection Factor
14	Jalisco	Centro-Occidente	Electricity - Distillate	1.0000	0.5000	0.5000
15	México	Centro	Electricity - Distillate	0.8000	0.8000	0.8000
16	Michoacán	Centro-Occidente	Electricity - Distillate	1.0000	0.5000	0.5000
17	Morelos	Centro	Electricity - Distillate	0.8000	0.8000	0.8000
18	Nayarit	Centro-Occidente	Electricity - Distillate	1.0000	0.5000	0.5000
19	Nuevo León	Noreste	Electricity - Distillate	2.4000	2.6000	2.6000
20	Oaxaca	Sur-Sureste	Electricity - Distillate	0.2667	0.1000	0.1000
21	Puebla	Centro	Electricity - Distillate	0.8000	0.8000	0.8000
22	Querétaro	Centro-Occidente	Electricity - Distillate	1.0000	0.5000	0.5000
23	Quintana Roo	Sur-Sureste	Electricity - Distillate	0.2667	0.1000	0.1000
24	San Luis Potosí	Centro-Occidente	Electricity - Distillate	1.0000	0.5000	0.5000
25	Sinaloa	Noroeste	Electricity - Distillate	0.3913	0.4783	0.4783
26	Sonora	Noroeste	Electricity - Distillate	0.3913	0.4783	0.4783
27	Tabasco	Sur-Sureste	Electricity - Distillate	0.2667	0.1000	0.1000
28	Tamaulipas	Noreste	Electricity - Distillate	2.4000	2.6000	2.6000
29	Tlaxcala	Centro	Electricity - Distillate	0.8000	0.8000	0.8000
30	Veracruz	Sur-Sureste	Electricity - Distillate	0.2667	0.1000	0.1000
31	Yucatán	Sur-Sureste	Electricity - Distillate	0.2667	0.1000	0.1000
32	Zacatecas	Centro-Occidente	Electricity - Distillate	1.0000	0.5000	0.5000
01	Aguascalientes	Centro-Occidente	Electricity - Natural Gas	2.1463	4.5055	5.2434
02	Baja California	Noroeste	Electricity - Natural Gas	2.1391	2.8717	2.9822
03	Baja California Sur	Noroeste	Electricity - Natural Gas	2.1391	2.8717	2.9822
04	Campeche	Sur-Sureste	Electricity - Natural Gas	1.0556	1.2000	1.6558
05	Coahuila	Noreste	Electricity - Natural Gas	1.4561	1.6199	2.0151
06	Colima	Centro-Occidente	Electricity - Natural Gas	2.1463	4.5055	5.2434
07	Chiapas	Sur-Sureste	Electricity - Natural Gas	1.0556	1.2000	1.6558
08	Chihuahua	Noreste	Electricity - Natural Gas	1.4561	1.6199	2.0151
09	Distrito Federal	Centro	Electricity - Natural Gas	2.1010	2.9910	3.4204
10	Durango	Noreste	Electricity - Natural Gas	1.4561	1.6199	2.0151
11	Guanajuato	Centro-Occidente	Electricity - Natural Gas	2.1463	4.5055	5.2434
12	Guerrero	Sur-Sureste	Electricity - Natural Gas	1.0556	1.2000	1.6558
13	Hidalgo	Centro	Electricity - Natural Gas	2.1010	2.9910	3.4204
14	Jalisco	Centro-Occidente	Electricity - Natural Gas	2.1463	4.5055	5.2434
15	México	Centro	Electricity - Natural Gas	2.1010	2.9910	3.4204
16	Michoacán	Centro-Occidente	Electricity - Natural Gas	2.1463	4.5055	5.2434
17	Morelos	Centro	Electricity - Natural Gas	2.1010	2.9910	3.4204
18	Nayarit	Centro-Occidente	Electricity - Natural Gas	2.1463	4.5055	5.2434
19	Nuevo León	Noreste	Electricity - Natural Gas	1.4561	1.6199	2.0151
20	Oaxaca	Sur-Sureste	Electricity - Natural Gas	1.0556	1.2000	1.6558
21	Puebla	Centro	Electricity - Natural Gas	2.1010	2.9910	3.4204
22	Querétaro	Centro-Occidente	Electricity - Natural Gas	2.1463	4.5055	5.2434
23	Quintana Roo	Sur-Sureste	Electricity - Natural Gas	1.0556	1.2000	1.6558
24	San Luis Potosí	Centro-Occidente	Electricity - Natural Gas	2.1463	4.5055	5.2434
25	Sinaloa	Noroeste	Electricity - Natural Gas	2.1391	2.8717	2.9822
26	Sonora	Noroeste	Electricity - Natural Gas	2.1391	2.8717	2.9822
27	Tabasco	Sur-Sureste	Electricity - Natural Gas	1.0556	1.2000	1.6558
28	Tamaulipas	Noreste	Electricity - Natural Gas	1.4561	1.6199	2.0151

POINT SOURCE PROJECTION FACTORS

State Code	State	Region	Factors	2018 Projection Factor	2025 Projection Factor	2030 Projection Factor
29	Tlaxcala	Centro	Electricity - Natural Gas	2.1010	2.9910	3.4204
30	Veracruz	Sur-Sureste	Electricity - Natural Gas	1.0556	1.2000	1.6558
31	Yucatán	Sur-Sureste	Electricity - Natural Gas	1.0556	1.2000	1.6558
32	Zacatecas	Centro-Occidente	Electricity - Natural Gas	2.1463	4.5055	5.2434
01	Aguascalientes	Centro-Occidente	Electricity - Coke	1.8286	1.8563	1.7212
02	Baja California	Noroeste	Electricity - Coke	1.8286	1.8563	1.7212
03	Baja California Sur	Noroeste	Electricity - Coke	1.8286	1.8563	1.7212
04	Campeche	Sur-Sureste	Electricity - Coke	1.8286	1.8563	1.7212
05	Coahuila	Noreste	Electricity - Coke	1.8286	1.8563	1.7212
06	Colima	Centro-Occidente	Electricity - Coke	1.8286	1.8563	1.7212
07	Chiapas	Sur-Sureste	Electricity - Coke	1.8286	1.8563	1.7212
08	Chihuahua	Noreste	Electricity - Coke	1.8286	1.8563	1.7212
09	Distrito Federal	Centro	Electricity - Coke	1.8286	1.8563	1.7212
10	Durango	Noreste	Electricity - Coke	1.8286	1.8563	1.7212
11	Guanajuato	Centro-Occidente	Electricity - Coke	1.8286	1.8563	1.7212
12	Guerrero	Sur-Sureste	Electricity - Coke	1.8286	1.8563	1.7212
13	Hidalgo	Centro	Electricity - Coke	1.8286	1.8563	1.7212
14	Jalisco	Centro-Occidente	Electricity - Coke	1.8286	1.8563	1.7212
15	México	Centro	Electricity - Coke	1.8286	1.8563	1.7212
16	Michoacán	Centro-Occidente	Electricity - Coke	1.8286	1.8563	1.7212
17	Morelos	Centro	Electricity - Coke	1.8286	1.8563	1.7212
18	Nayarit	Centro-Occidente	Electricity - Coke	1.8286	1.8563	1.7212
19	Nuevo León	Noreste	Electricity - Coke	1.8286	1.8563	1.7212
20	Oaxaca	Sur-Sureste	Electricity - Coke	1.8286	1.8563	1.7212
21	Puebla	Centro	Electricity - Coke	1.8286	1.8563	1.7212
22	Querétaro	Centro-Occidente	Electricity - Coke	1.8286	1.8563	1.7212
23	Quintana Roo	Sur-Sureste	Electricity - Coke	1.8286	1.8563	1.7212
24	San Luis Potosí	Centro-Occidente	Electricity - Coke	1.8286	1.8563	1.7212
25	Sinaloa	Noroeste	Electricity - Coke	1.8286	1.8563	1.7212
26	Sonora	Noroeste	Electricity - Coke	1.8286	1.8563	1.7212
27	Tabasco	Sur-Sureste	Electricity - Coke	1.8286	1.8563	1.7212
28	Tamaulipas	Noreste	Electricity - Coke	1.8286	1.8563	1.7212
29	Tlaxcala	Centro	Electricity - Coke	1.8286	1.8563	1.7212
30	Veracruz	Sur-Sureste	Electricity - Coke	1.8286	1.8563	1.7212
31	Yucatán	Sur-Sureste	Electricity - Coke	1.8286	1.8563	1.7212
32	Zacatecas	Centro-Occidente	Electricity - Coke	1.8286	1.8563	1.7212
01	Aguascalientes	Centro-Occidente	Electricity - Coal	1.1759	1.2500	1.3936
02	Baja California	Noroeste	Electricity - Coal	1.1759	1.2500	1.3936
03	Baja California Sur	Noroeste	Electricity - Coal	1.1759	1.2500	1.3936
04	Campeche	Sur-Sureste	Electricity - Coal	1.1759	1.2500	1.3936
05	Coahuila	Noreste	Electricity - Coal	1.1759	1.2500	1.3936
06	Colima	Centro-Occidente	Electricity - Coal	1.1759	1.2500	1.3936
07	Chiapas	Sur-Sureste	Electricity - Coal	1.1759	1.2500	1.3936
08	Chihuahua	Noreste	Electricity - Coal	1.1759	1.2500	1.3936
09	Distrito Federal	Centro	Electricity - Coal	1.1759	1.2500	1.3936
10	Durango	Noreste	Electricity - Coal	1.1759	1.2500	1.3936
11	Guanajuato	Centro-Occidente	Electricity - Coal	1.1759	1.2500	1.3936

POINT SOURCE PROJECTION FACTORS

State Code	State	Region	Factors	2018 Projection Factor	2025 Projection Factor	2030 Projection Factor
12	Guerrero	Sur-Sureste	Electricity - Coal	1.1759	1.2500	1.3936
13	Hidalgo	Centro	Electricity - Coal	1.1759	1.2500	1.3936
14	Jalisco	Centro-Occidente	Electricity - Coal	1.1759	1.2500	1.3936
15	México	Centro	Electricity - Coal	1.1759	1.2500	1.3936
16	Michoacán	Centro-Occidente	Electricity - Coal	1.1759	1.2500	1.3936
17	Morelos	Centro	Electricity - Coal	1.1759	1.2500	1.3936
18	Nayarit	Centro-Occidente	Electricity - Coal	1.1759	1.2500	1.3936
19	Nuevo León	Noreste	Electricity - Coal	1.1759	1.2500	1.3936
20	Oaxaca	Sur-Sureste	Electricity - Coal	1.1759	1.2500	1.3936
21	Puebla	Centro	Electricity - Coal	1.1759	1.2500	1.3936
22	Querétaro	Centro-Occidente	Electricity - Coal	1.1759	1.2500	1.3936
23	Quintana Roo	Sur-Sureste	Electricity - Coal	1.1759	1.2500	1.3936
24	San Luis Potosí	Centro-Occidente	Electricity - Coal	1.1759	1.2500	1.3936
25	Sinaloa	Noroeste	Electricity - Coal	1.1759	1.2500	1.3936
26	Sonora	Noroeste	Electricity - Coal	1.1759	1.2500	1.3936
27	Tabasco	Sur-Sureste	Electricity - Coal	1.1759	1.2500	1.3936
28	Tamaulipas	Noreste	Electricity - Coal	1.1759	1.2500	1.3936
29	Tlaxcala	Centro	Electricity - Coal	1.1759	1.2500	1.3936
30	Veracruz	Sur-Sureste	Electricity - Coal	1.1759	1.2500	1.3936
31	Yucatán	Sur-Sureste	Electricity - Coal	1.1759	1.2500	1.3936
32	Zacatecas	Centro-Occidente	Electricity - Coal	1.1759	1.2500	1.3936
01	Aguascalientes	Centro-Occidente	Refining	1.0654	1.1037	1.1037
02	Baja California	Noroeste	Refining	1.0000	1.0000	1.0000
03	Baja California Sur	Noroeste	Refining	1.0000	1.0000	1.0000
04	Campeche	Sur-Sureste	Refining	1.1616	1.1777	1.1790
05	Coahuila	Noreste	Refining	1.1019	1.1012	1.0989
06	Colima	Centro-Occidente	Refining	1.0654	1.1037	1.1037
07	Chiapas	Sur-Sureste	Refining	1.1616	1.1777	1.1790
08	Chihuahua	Noreste	Refining	1.1019	1.1012	1.0989
09	Distrito Federal	Centro	Refining	1.0991	2.0122	2.0122
10	Durango	Noreste	Refining	1.1019	1.1012	1.0989
11	Guanajuato	Centro-Occidente	Refining	1.0654	1.1037	1.1037
12	Guerrero	Sur-Sureste	Refining	1.1616	1.1777	1.1790
13	Hidalgo	Centro	Refining	1.0991	2.0122	2.0122
14	Jalisco	Centro-Occidente	Refining	1.0654	1.1037	1.1037
15	México	Centro	Refining	1.0991	2.0122	2.0122
16	Michoacán	Centro-Occidente	Refining	1.0654	1.1037	1.1037
17	Morelos	Centro	Refining	1.0991	2.0122	2.0122
18	Nayarit	Centro-Occidente	Refining	1.0654	1.1037	1.1037
19	Nuevo León	Noreste	Refining	1.1019	1.1012	1.0989
20	Oaxaca	Sur-Sureste	Refining	1.1616	1.1777	1.1790
21	Puebla	Centro	Refining	1.0991	2.0122	2.0122
22	Querétaro	Centro-Occidente	Refining	1.0654	1.1037	1.1037
23	Quintana Roo	Sur-Sureste	Refining	1.1616	1.1777	1.1790
24	San Luis Potosí	Centro-Occidente	Refining	1.0654	1.1037	1.1037
25	Sinaloa	Noroeste	Refining	1.0000	1.0000	1.0000
26	Sonora	Noroeste	Refining	1.0000	1.0000	1.0000

POINT SOURCE PROJECTION FACTORS

State Code	State	Region	Factors	2018 Projection Factor	2025 Projection Factor	2030 Projection Factor
27	Tabasco	Sur-Sureste	Refining	1.1616	1.1777	1.1790
28	Tamaulipas	Noreste	Refining	1.1019	1.1012	1.0989
29	Tlaxcala	Centro	Refining	1.0991	2.0122	2.0122
30	Veracruz	Sur-Sureste	Refining	1.1616	1.1777	1.1790
31	Yucatán	Sur-Sureste	Refining	1.1616	1.1777	1.1790
32	Zacatecas	Centro-Occidente	Refining	1.0654	1.1037	1.1037
01	Aguascalientes	Centro-Occidente	Crude Oil Production	0.9600	1.0976	1.1651
02	Baja California	Noroeste	Crude Oil Production	0.9600	1.0976	1.1651
03	Baja California Sur	Noroeste	Crude Oil Production	0.9600	1.0976	1.1651
04	Campeche	Sur-Sureste	Crude Oil Production	0.9600	1.0976	1.1651
05	Coahuila	Noreste	Crude Oil Production	0.9600	1.0976	1.1651
06	Colima	Centro-Occidente	Crude Oil Production	0.9600	1.0976	1.1651
07	Chiapas	Sur-Sureste	Crude Oil Production	0.9600	1.0976	1.1651
08	Chihuahua	Noreste	Crude Oil Production	0.9600	1.0976	1.1651
09	Distrito Federal	Centro	Crude Oil Production	0.9600	1.0976	1.1651
10	Durango	Noreste	Crude Oil Production	0.9600	1.0976	1.1651
11	Guanajuato	Centro-Occidente	Crude Oil Production	0.9600	1.0976	1.1651
12	Guerrero	Sur-Sureste	Crude Oil Production	0.9600	1.0976	1.1651
13	Hidalgo	Centro	Crude Oil Production	0.9600	1.0976	1.1651
14	Jalisco	Centro-Occidente	Crude Oil Production	0.9600	1.0976	1.1651
15	México	Centro	Crude Oil Production	0.9600	1.0976	1.1651
16	Michoacán	Centro-Occidente	Crude Oil Production	0.9600	1.0976	1.1651
17	Morelos	Centro	Crude Oil Production	0.9600	1.0976	1.1651
18	Nayarit	Centro-Occidente	Crude Oil Production	0.9600	1.0976	1.1651
19	Nuevo León	Noreste	Crude Oil Production	0.9600	1.0976	1.1651
20	Oaxaca	Sur-Sureste	Crude Oil Production	0.9600	1.0976	1.1651
21	Puebla	Centro	Crude Oil Production	0.9600	1.0976	1.1651
22	Querétaro	Centro-Occidente	Crude Oil Production	0.9600	1.0976	1.1651
23	Quintana Roo	Sur-Sureste	Crude Oil Production	0.9600	1.0976	1.1651
24	San Luis Potosí	Centro-Occidente	Crude Oil Production	0.9600	1.0976	1.1651
25	Sinaloa	Noroeste	Crude Oil Production	0.9600	1.0976	1.1651
26	Sonora	Noroeste	Crude Oil Production	0.9600	1.0976	1.1651
27	Tabasco	Sur-Sureste	Crude Oil Production	0.9600	1.0976	1.1651
28	Tamaulipas	Noreste	Crude Oil Production	0.9600	1.0976	1.1651
29	Tlaxcala	Centro	Crude Oil Production	0.9600	1.0976	1.1651
30	Veracruz	Sur-Sureste	Crude Oil Production	0.9600	1.0976	1.1651
31	Yucatán	Sur-Sureste	Crude Oil Production	0.9600	1.0976	1.1651
32	Zacatecas	Centro-Occidente	Crude Oil Production	0.9600	1.0976	1.1651
01	Aguascalientes	Centro-Occidente	Natural Gas Pipelines	1.8852	3.1193	3.5517
02	Baja California	Noroeste	Natural Gas Pipelines	2.1075	2.8100	2.9304
03	Baja California Sur	Noroeste	Natural Gas Pipelines	2.1075	2.8100	2.9304
04	Campeche	Sur-Sureste	Natural Gas Pipelines	1.2157	1.1494	1.1143
05	Coahuila	Noreste	Natural Gas Pipelines	1.5430	1.7018	2.0130
06	Colima	Centro-Occidente	Natural Gas Pipelines	1.8852	3.1193	3.5517
07	Chiapas	Sur-Sureste	Natural Gas Pipelines	1.2157	1.1494	1.1143
08	Chihuahua	Noreste	Natural Gas Pipelines	1.5430	1.7018	2.0130
09	Distrito Federal	Centro	Natural Gas Pipelines	1.8182	2.5406	2.8342

POINT SOURCE PROJECTION FACTORS

State Code	State	Region	Factors	2018 Projection Factor	2025 Projection Factor	2030 Projection Factor
10	Durango	Noreste	Natural Gas Pipelines	1.5430	1.7018	2.0130
11	Guanajuato	Centro-Occidente	Natural Gas Pipelines	1.8852	3.1193	3.5517
12	Guerrero	Sur-Sureste	Natural Gas Pipelines	1.2157	1.1494	1.1143
13	Hidalgo	Centro	Natural Gas Pipelines	1.8182	2.5406	2.8342
14	Jalisco	Centro-Occidente	Natural Gas Pipelines	1.8852	3.1193	3.5517
15	México	Centro	Natural Gas Pipelines	1.8182	2.5406	2.8342
16	Michoacán	Centro-Occidente	Natural Gas Pipelines	1.8852	3.1193	3.5517
17	Morelos	Centro	Natural Gas Pipelines	1.8182	2.5406	2.8342
18	Nayarit	Centro-Occidente	Natural Gas Pipelines	1.8852	3.1193	3.5517
19	Nuevo León	Noreste	Natural Gas Pipelines	1.5430	1.7018	2.0130
20	Oaxaca	Sur-Sureste	Natural Gas Pipelines	1.2157	1.1494	1.1143
21	Puebla	Centro	Natural Gas Pipelines	1.8182	2.5406	2.8342
22	Querétaro	Centro-Occidente	Natural Gas Pipelines	1.8852	3.1193	3.5517
23	Quintana Roo	Sur-Sureste	Natural Gas Pipelines	1.2157	1.1494	1.1143
24	San Luis Potosí	Centro-Occidente	Natural Gas Pipelines	1.8852	3.1193	3.5517
25	Sinaloa	Noroeste	Natural Gas Pipelines	2.1075	2.8100	2.9304
26	Sonora	Noroeste	Natural Gas Pipelines	2.1075	2.8100	2.9304
27	Tabasco	Sur-Sureste	Natural Gas Pipelines	1.2157	1.1494	1.1143
28	Tamaulipas	Noreste	Natural Gas Pipelines	1.5430	1.7018	2.0130
29	Tlaxcala	Centro	Natural Gas Pipelines	1.8182	2.5406	2.8342
30	Veracruz	Sur-Sureste	Natural Gas Pipelines	1.2157	1.1494	1.1143
31	Yucatán	Sur-Sureste	Natural Gas Pipelines	1.2157	1.1494	1.1143
32	Zacatecas	Centro-Occidente	Natural Gas Pipelines	1.8852	3.1193	3.5517
01	Aguascalientes	Centro-Occidente	GDP	1.2787	1.6135	1.9038
02	Baja California	Noroeste	GDP	1.2787	1.6135	1.9038
03	Baja California Sur	Noroeste	GDP	1.2787	1.6135	1.9038
04	Campeche	Sur-Sureste	GDP	1.2787	1.6135	1.9038
05	Coahuila	Noreste	GDP	1.2787	1.6135	1.9038
06	Colima	Centro-Occidente	GDP	1.2787	1.6135	1.9038
07	Chiapas	Sur-Sureste	GDP	1.2787	1.6135	1.9038
08	Chihuahua	Noreste	GDP	1.2787	1.6135	1.9038
09	Distrito Federal	Centro	GDP	1.2787	1.6135	1.9038
10	Durango	Noreste	GDP	1.2787	1.6135	1.9038
11	Guanajuato	Centro-Occidente	GDP	1.2787	1.6135	1.9038
12	Guerrero	Sur-Sureste	GDP	1.2787	1.6135	1.9038
13	Hidalgo	Centro	GDP	1.2787	1.6135	1.9038
14	Jalisco	Centro-Occidente	GDP	1.2787	1.6135	1.9038
15	México	Centro	GDP	1.2787	1.6135	1.9038
16	Michoacán	Centro-Occidente	GDP	1.2787	1.6135	1.9038
17	Morelos	Centro	GDP	1.2787	1.6135	1.9038
18	Nayarit	Centro-Occidente	GDP	1.2787	1.6135	1.9038
19	Nuevo León	Noreste	GDP	1.2787	1.6135	1.9038
20	Oaxaca	Sur-Sureste	GDP	1.2787	1.6135	1.9038
21	Puebla	Centro	GDP	1.2787	1.6135	1.9038
22	Querétaro	Centro-Occidente	GDP	1.2787	1.6135	1.9038
23	Quintana Roo	Sur-Sureste	GDP	1.2787	1.6135	1.9038
24	San Luis Potosí	Centro-Occidente	GDP	1.2787	1.6135	1.9038

POINT SOURCE PROJECTION FACTORS

State Code	State	Region	Factors	2018 Projection Factor	2025 Projection Factor	2030 Projection Factor
25	Sinaloa	Noroeste	GDP	1.2787	1.6135	1.9038
26	Sonora	Noroeste	GDP	1.2787	1.6135	1.9038
27	Tabasco	Sur-Sureste	GDP	1.2787	1.6135	1.9038
28	Tamaulipas	Noreste	GDP	1.2787	1.6135	1.9038
29	Tlaxcala	Centro	GDP	1.2787	1.6135	1.9038
30	Veracruz	Sur-Sureste	GDP	1.2787	1.6135	1.9038
31	Yucatán	Sur-Sureste	GDP	1.2787	1.6135	1.9038
32	Zacatecas	Centro-Occidente	GDP	1.2787	1.6135	1.9038

APPENDIX C – AREA SOURCE SURROGATE ASSIGNMENTS

AREA SOURCE SURROGATE ASSIGNMENTS

SCC	SCC Description	Projection Profile
2102004000	Fuel Combustion - Industrial - Diesel	Diesel - Industrial
2102007000	Fuel Combustion - Industrial - LPG	LPG - Industrial
2103006000	Fuel Combustion - Commercial - Natural Gas	Natural Gas - Service
2103007000	Fuel Combustion - Commercial - LPG	LPG - Service
2104006000	Fuel Combustion - Residential - Natural Gas	Natural Gas - Residential
2104007000	Fuel Combustion - Residential - LPG	LPG - Residential
2104008001	Fuel Combustion - Residential - Wood	Population
2104011000	Fuel Combustion - Residential - Kerosene	Population
2202420000	Bus Terminals	Population
2222222222	Border Crossings	Gasoline - Transportation
2302002000	Commercial Cooking - Charbroiling	Population
2302050000	Bakeries	Population
2311010000	Residential Construction Dust	Population
2401001000	Solvent Evaporation - Architectural Coatings	Population
2401005000	Solvent Evaporation - Autobody Refinishing	Population
2401008000	Solvent Evaporation - Traffic Markings	Unchanged
2401020000	Surface Coating - Wood Furniture	Mexico GDP
2401050000	Surface Coating - Miscellaneous Finished Metals	Mexico GDP
2401055000	Surface Coating - Machinery and Equipment	Mexico GDP
2401065000	Surface Coating - Electronic and Other Electrical	Mexico GDP
2401080000	Surface Coating - Marine	Mexico GDP
2401990000	Surface Coating - Other	Mexico GDP
2415000000	Solvent Evaporation - Degreasing	Mexico GDP
2415010000	Degreasing - All	Mexico GDP
2420000055	Solvent Evaporation - Drycleaning	Population
2425000000	Graphic Arts - All General	Population
2425010000	Graphic Arts - Lithography	Population
2425030000	Graphic Arts - Rotogravure	Population
2425040000	Graphic Arts - Flexography	Population
2461020000	Solvent Evaporation - Asphalt Pavings	Unchanged
2461850000	Solvent Evaporation - Agricultural Pesticide Application	Ag Acreage - Total
2465000000	Consumer Products - General	Population
2465100000	Consumer Products - Personal Care	Population
2465200000	Consumer Products - Household	Population
2465400000	Consumer Products - Auto Aftermarket	Population
2465600000	Consumer Products - Adhesives/Sealants	Population
2465800000	Consumer Products - Pesticides	Population
2465900000	Consumer Products - Miscellaneous	Population
2501060000	Gasoline Distribution	Gasoline - Transportation
2630030000	Wastewater Treatment - Residential - Treated	Population
2630090000	Wastewater Treatment - Residential - Untreated	Population
2801000000	Agricultural Dust - Planting and Harvesting	Ag Acreage - Total
2801500250	Field Burning - Sugarcane	Sugar Cane Production
2801520004	Fuel Combustion - Agricultural - Diesel	Ag Acreage - Total
2801520010	Fuel Combustion - Agricultural - LPG	LPG - Agricultural
2801520020	Fuel Combustion - Agricultural - Kerosene	Ag Acreage - Total
2801700000	Fertilizer Application	Ag Acreage - Total

AREA SOURCE SURROGATE ASSIGNMENTS

SCC	SCC Description	Projection Profile
2805000000	Livestock Waste Ammonia	Unchanged
2805001000	Livestock Fugitive Dust	Unchanged
2810001000	Forest Wildfires	Unchanged
2810030000	Structure Fires	Population
2850000010	Hospitals - Sterilization Operations	Population
3333333333	LPG Distribution	LPG - Total
5555555555	Domestic Ammonia	Population

APPENDIX D – AREA SOURCE PROJECTION FACTORS (OTHER)

AREA SOURCE PROJECTION FACTORS (OTHER)

State Code	State	Region	Surrogate	2018 Projection Factor	2025 Projection Factor	2030 Projection Factor
01	Aguascalientes	Centro-Occidente	LPG - Industrial	0.7045	0.8182	0.8762
02	Baja California	Noroeste	LPG - Industrial	0.8378	0.9730	1.1138
03	Baja California Sur	Noroeste	LPG - Industrial	0.8378	0.9730	1.1138
04	Campeche	Sur-Sureste	LPG - Industrial	0.6316	0.6842	0.8235
05	Coahuila	Noreste	LPG - Industrial	1.0345	1.2069	1.3868
06	Colima	Centro-Occidente	LPG - Industrial	0.7045	0.8182	0.8762
07	Chiapas	Sur-Sureste	LPG - Industrial	0.6316	0.6842	0.8235
08	Chihuahua	Noreste	LPG - Industrial	1.0345	1.2069	1.3868
09	Distrito Federal	Centro	LPG - Industrial	1.1083	1.2417	1.3267
10	Durango	Noreste	LPG - Industrial	1.0345	1.2069	1.3868
11	Guanajuato	Centro-Occidente	LPG - Industrial	0.7045	0.8182	0.8762
12	Guerrero	Sur-Sureste	LPG - Industrial	0.6316	0.6842	0.8235
13	Hidalgo	Centro	LPG - Industrial	1.1083	1.2417	1.3267
14	Jalisco	Centro-Occidente	LPG - Industrial	0.7045	0.8182	0.8762
15	México	Centro	LPG - Industrial	1.1083	1.2417	1.3267
16	Michoacán	Centro-Occidente	LPG - Industrial	0.7045	0.8182	0.8762
17	Morelos	Centro	LPG - Industrial	1.1083	1.2417	1.3267
18	Nayarit	Centro-Occidente	LPG - Industrial	0.7045	0.8182	0.8762
19	Nuevo León	Noreste	LPG - Industrial	1.0345	1.2069	1.3868
20	Oaxaca	Sur-Sureste	LPG - Industrial	0.6316	0.6842	0.8235
21	Puebla	Centro	LPG - Industrial	1.1083	1.2417	1.3267
22	Querétaro	Centro-Occidente	LPG - Industrial	0.7045	0.8182	0.8762
23	Quintana Roo	Sur-Sureste	LPG - Industrial	0.6316	0.6842	0.8235
24	San Luis Potosí	Centro-Occidente	LPG - Industrial	0.7045	0.8182	0.8762
25	Sinaloa	Noroeste	LPG - Industrial	0.8378	0.9730	1.1138
26	Sonora	Noroeste	LPG - Industrial	0.8378	0.9730	1.1138
27	Tabasco	Sur-Sureste	LPG - Industrial	0.6316	0.6842	0.8235
28	Tamaulipas	Noreste	LPG - Industrial	1.0345	1.2069	1.3868
29	Tlaxcala	Centro	LPG - Industrial	1.1083	1.2417	1.3267
30	Veracruz	Sur-Sureste	LPG - Industrial	0.6316	0.6842	0.8235
31	Yucatán	Sur-Sureste	LPG - Industrial	0.6316	0.6842	0.8235
32	Zacatecas	Centro-Occidente	LPG - Industrial	0.7045	0.8182	0.8762
01	Aguascalientes	Centro-Occidente	LPG - Services	0.9186	0.8837	0.8549
02	Baja California	Noroeste	LPG - Services	1.1000	1.0750	1.0750
03	Baja California Sur	Noroeste	LPG - Services	1.1000	1.0750	1.0750
04	Campeche	Sur-Sureste	LPG - Services	1.1250	1.1071	1.1071
05	Coahuila	Noreste	LPG - Services	1.1864	1.1186	1.0768
06	Colima	Centro-Occidente	LPG - Services	0.9186	0.8837	0.8549
07	Chiapas	Sur-Sureste	LPG - Services	1.1250	1.1071	1.1071
08	Chihuahua	Noreste	LPG - Services	1.1864	1.1186	1.0768
09	Distrito Federal	Centro	LPG - Services	0.9684	0.9557	0.9400
10	Durango	Noreste	LPG - Services	1.1864	1.1186	1.0768
11	Guanajuato	Centro-Occidente	LPG - Services	0.9186	0.8837	0.8549
12	Guerrero	Sur-Sureste	LPG - Services	1.1250	1.1071	1.1071
13	Hidalgo	Centro	LPG - Services	0.9684	0.9557	0.9400
14	Jalisco	Centro-Occidente	LPG - Services	0.9186	0.8837	0.8549
15	México	Centro	LPG - Services	0.9684	0.9557	0.9400

AREA SOURCE PROJECTION FACTORS (OTHER)

State Code	State	Region	Surrogate	2018 Projection Factor	2025 Projection Factor	2030 Projection Factor
16	Michoacán	Centro-Occidente	LPG - Services	0.9186	0.8837	0.8549
17	Morelos	Centro	LPG - Services	0.9684	0.9557	0.9400
18	Nayarit	Centro-Occidente	LPG - Services	0.9186	0.8837	0.8549
19	Nuevo León	Noreste	LPG - Services	1.1864	1.1186	1.0768
20	Oaxaca	Sur-Sureste	LPG - Services	1.1250	1.1071	1.1071
21	Puebla	Centro	LPG - Services	0.9684	0.9557	0.9400
22	Querétaro	Centro-Occidente	LPG - Services	0.9186	0.8837	0.8549
23	Quintana Roo	Sur-Sureste	LPG - Services	1.1250	1.1071	1.1071
24	San Luis Potosí	Centro-Occidente	LPG - Services	0.9186	0.8837	0.8549
25	Sinaloa	Noroeste	LPG - Services	1.1000	1.0750	1.0750
26	Sonora	Noroeste	LPG - Services	1.1000	1.0750	1.0750
27	Tabasco	Sur-Sureste	LPG - Services	1.1250	1.1071	1.1071
28	Tamaulipas	Noreste	LPG - Services	1.1864	1.1186	1.0768
29	Tlaxcala	Centro	LPG - Services	0.9684	0.9557	0.9400
30	Veracruz	Sur-Sureste	LPG - Services	1.1250	1.1071	1.1071
31	Yucatán	Sur-Sureste	LPG - Services	1.1250	1.1071	1.1071
32	Zacatecas	Centro-Occidente	LPG - Services	0.9186	0.8837	0.8549
01	Aguascalientes	Centro-Occidente	LPG - Residential	0.9218	0.9259	0.9259
02	Baja California	Noroeste	LPG - Residential	0.9504	0.9929	0.9929
03	Baja California Sur	Noroeste	LPG - Residential	0.9504	0.9929	0.9929
04	Campeche	Sur-Sureste	LPG - Residential	1.0212	1.0459	1.0459
05	Coahuila	Noreste	LPG - Residential	0.8647	0.8309	0.8309
06	Colima	Centro-Occidente	LPG - Residential	0.9218	0.9259	0.9259
07	Chiapas	Sur-Sureste	LPG - Residential	1.0212	1.0459	1.0459
08	Chihuahua	Noreste	LPG - Residential	0.8647	0.8309	0.8309
09	Distrito Federal	Centro	LPG - Residential	1.0150	1.0188	1.0094
10	Durango	Noreste	LPG - Residential	0.8647	0.8309	0.8309
11	Guanajuato	Centro-Occidente	LPG - Residential	0.9218	0.9259	0.9259
12	Guerrero	Sur-Sureste	LPG - Residential	1.0212	1.0459	1.0459
13	Hidalgo	Centro	LPG - Residential	1.0150	1.0188	1.0094
14	Jalisco	Centro-Occidente	LPG - Residential	0.9218	0.9259	0.9259
15	México	Centro	LPG - Residential	1.0150	1.0188	1.0094
16	Michoacán	Centro-Occidente	LPG - Residential	0.9218	0.9259	0.9259
17	Morelos	Centro	LPG - Residential	1.0150	1.0188	1.0094
18	Nayarit	Centro-Occidente	LPG - Residential	0.9218	0.9259	0.9259
19	Nuevo León	Noreste	LPG - Residential	0.8647	0.8309	0.8309
20	Oaxaca	Sur-Sureste	LPG - Residential	1.0212	1.0459	1.0459
21	Puebla	Centro	LPG - Residential	1.0150	1.0188	1.0094
22	Querétaro	Centro-Occidente	LPG - Residential	0.9218	0.9259	0.9259
23	Quintana Roo	Sur-Sureste	LPG - Residential	1.0212	1.0459	1.0459
24	San Luis Potosí	Centro-Occidente	LPG - Residential	0.9218	0.9259	0.9259
25	Sinaloa	Noroeste	LPG - Residential	0.9504	0.9929	0.9929
26	Sonora	Noroeste	LPG - Residential	0.9504	0.9929	0.9929
27	Tabasco	Sur-Sureste	LPG - Residential	1.0212	1.0459	1.0459
28	Tamaulipas	Noreste	LPG - Residential	0.8647	0.8309	0.8309
29	Tlaxcala	Centro	LPG - Residential	1.0150	1.0188	1.0094
30	Veracruz	Sur-Sureste	LPG - Residential	1.0212	1.0459	1.0459

AREA SOURCE PROJECTION FACTORS (OTHER)

State Code	State	Region	Surrogate	2018 Projection Factor	2025 Projection Factor	2030 Projection Factor
31	Yucatán	Sur-Sureste	LPG - Residential	1.0212	1.0459	1.0459
32	Zacatecas	Centro-Occidente	LPG - Residential	0.9218	0.9259	0.9259
01	Aguascalientes	Centro-Occidente	LPG - Agricultural	1.3636	1.4545	1.6926
02	Baja California	Noroeste	LPG - Agricultural	0.6000	0.6000	0.6000
03	Baja California Sur	Noroeste	LPG - Agricultural	0.6000	0.6000	0.6000
04	Campeche	Sur-Sureste	LPG - Agricultural	3.5000	4.0000	4.0000
05	Coahuila	Noreste	LPG - Agricultural	0.9130	1.0435	1.1556
06	Colima	Centro-Occidente	LPG - Agricultural	1.3636	1.4545	1.6926
07	Chiapas	Sur-Sureste	LPG - Agricultural	3.5000	4.0000	4.0000
08	Chihuahua	Noreste	LPG - Agricultural	0.9130	1.0435	1.1556
09	Distrito Federal	Centro	LPG - Agricultural	1.0000	1.2000	1.2000
10	Durango	Noreste	LPG - Agricultural	0.9130	1.0435	1.1556
11	Guanajuato	Centro-Occidente	LPG - Agricultural	1.3636	1.4545	1.6926
12	Guerrero	Sur-Sureste	LPG - Agricultural	3.5000	4.0000	4.0000
13	Hidalgo	Centro	LPG - Agricultural	1.0000	1.2000	1.2000
14	Jalisco	Centro-Occidente	LPG - Agricultural	1.3636	1.4545	1.6926
15	México	Centro	LPG - Agricultural	1.0000	1.2000	1.2000
16	Michoacán	Centro-Occidente	LPG - Agricultural	1.3636	1.4545	1.6926
17	Morelos	Centro	LPG - Agricultural	1.0000	1.2000	1.2000
18	Nayarit	Centro-Occidente	LPG - Agricultural	1.3636	1.4545	1.6926
19	Nuevo León	Noreste	LPG - Agricultural	0.9130	1.0435	1.1556
20	Oaxaca	Sur-Sureste	LPG - Agricultural	3.5000	4.0000	4.0000
21	Puebla	Centro	LPG - Agricultural	1.0000	1.2000	1.2000
22	Querétaro	Centro-Occidente	LPG - Agricultural	1.3636	1.4545	1.6926
23	Quintana Roo	Sur-Sureste	LPG - Agricultural	3.5000	4.0000	4.0000
24	San Luis Potosí	Centro-Occidente	LPG - Agricultural	1.3636	1.4545	1.6926
25	Sinaloa	Noroeste	LPG - Agricultural	0.6000	0.6000	0.6000
26	Sonora	Noroeste	LPG - Agricultural	0.6000	0.6000	0.6000
27	Tabasco	Sur-Sureste	LPG - Agricultural	3.5000	4.0000	4.0000
28	Tamaulipas	Noreste	LPG - Agricultural	0.9130	1.0435	1.1556
29	Tlaxcala	Centro	LPG - Agricultural	1.0000	1.2000	1.2000
30	Veracruz	Sur-Sureste	LPG - Agricultural	3.5000	4.0000	4.0000
31	Yucatán	Sur-Sureste	LPG - Agricultural	3.5000	4.0000	4.0000
32	Zacatecas	Centro-Occidente	LPG - Agricultural	1.3636	1.4545	1.6926
01	Aguascalientes	Centro-Occidente	LPG - Total	0.9586	0.9616	0.9616
02	Baja California	Noroeste	LPG - Total	0.9641	0.9960	1.0161
03	Baja California Sur	Noroeste	LPG - Total	0.9641	0.9960	1.0161
04	Campeche	Sur-Sureste	LPG - Total	1.1159	1.1341	1.1398
05	Coahuila	Noreste	LPG - Total	0.9900	0.9800	0.9925
06	Colima	Centro-Occidente	LPG - Total	0.9586	0.9616	0.9616
07	Chiapas	Sur-Sureste	LPG - Total	1.1159	1.1341	1.1398
08	Chihuahua	Noreste	LPG - Total	0.9900	0.9800	0.9925
09	Distrito Federal	Centro	LPG - Total	1.0075	1.0216	1.0216
10	Durango	Noreste	LPG - Total	0.9900	0.9800	0.9925
11	Guanajuato	Centro-Occidente	LPG - Total	0.9586	0.9616	0.9616
12	Guerrero	Sur-Sureste	LPG - Total	1.1159	1.1341	1.1398
13	Hidalgo	Centro	LPG - Total	1.0075	1.0216	1.0216

AREA SOURCE PROJECTION FACTORS (OTHER)

State Code	State	Region	Surrogate	2018 Projection Factor	2025 Projection Factor	2030 Projection Factor
14	Jalisco	Centro-Occidente	LPG - Total	0.9586	0.9616	0.9616
15	México	Centro	LPG - Total	1.0075	1.0216	1.0216
16	Michoacán	Centro-Occidente	LPG - Total	0.9586	0.9616	0.9616
17	Morelos	Centro	LPG - Total	1.0075	1.0216	1.0216
18	Nayarit	Centro-Occidente	LPG - Total	0.9586	0.9616	0.9616
19	Nuevo León	Noreste	LPG - Total	0.9900	0.9800	0.9925
20	Oaxaca	Sur-Sureste	LPG - Total	1.1159	1.1341	1.1398
21	Puebla	Centro	LPG - Total	1.0075	1.0216	1.0216
22	Querétaro	Centro-Occidente	LPG - Total	0.9586	0.9616	0.9616
23	Quintana Roo	Sur-Sureste	LPG - Total	1.1159	1.1341	1.1398
24	San Luis Potosí	Centro-Occidente	LPG - Total	0.9586	0.9616	0.9616
25	Sinaloa	Noroeste	LPG - Total	0.9641	0.9960	1.0161
26	Sonora	Noroeste	LPG - Total	0.9641	0.9960	1.0161
27	Tabasco	Sur-Sureste	LPG - Total	1.1159	1.1341	1.1398
28	Tamaulipas	Noreste	LPG - Total	0.9900	0.9800	0.9925
29	Tlaxcala	Centro	LPG - Total	1.0075	1.0216	1.0216
30	Veracruz	Sur-Sureste	LPG - Total	1.1159	1.1341	1.1398
31	Yucatán	Sur-Sureste	LPG - Total	1.1159	1.1341	1.1398
32	Zacatecas	Centro-Occidente	LPG - Total	0.9586	0.9616	0.9616
01	Aguascalientes	Centro-Occidente	Natural Gas - Service	1.9048	2.5714	2.8162
02	Baja California	Noroeste	Natural Gas - Service	1.0000	2.0000	2.0000
03	Baja California Sur	Noroeste	Natural Gas - Service	1.0000	2.0000	2.0000
04	Campeche	Sur-Sureste	Natural Gas - Service	1.5000	3.0000	4.4105
05	Coahuila	Noreste	Natural Gas - Service	1.1965	1.2832	1.3123
06	Colima	Centro-Occidente	Natural Gas - Service	1.9048	2.5714	2.8162
07	Chiapas	Sur-Sureste	Natural Gas - Service	1.5000	3.0000	4.4105
08	Chihuahua	Noreste	Natural Gas - Service	1.1965	1.2832	1.3123
09	Distrito Federal	Centro	Natural Gas - Service	1.5179	1.6786	1.7236
10	Durango	Noreste	Natural Gas - Service	1.1965	1.2832	1.3123
11	Guanajuato	Centro-Occidente	Natural Gas - Service	1.9048	2.5714	2.8162
12	Guerrero	Sur-Sureste	Natural Gas - Service	1.5000	3.0000	4.4105
13	Hidalgo	Centro	Natural Gas - Service	1.5179	1.6786	1.7236
14	Jalisco	Centro-Occidente	Natural Gas - Service	1.9048	2.5714	2.8162
15	México	Centro	Natural Gas - Service	1.5179	1.6786	1.7236
16	Michoacán	Centro-Occidente	Natural Gas - Service	1.9048	2.5714	2.8162
17	Morelos	Centro	Natural Gas - Service	1.5179	1.6786	1.7236
18	Nayarit	Centro-Occidente	Natural Gas - Service	1.9048	2.5714	2.8162
19	Nuevo León	Noreste	Natural Gas - Service	1.1965	1.2832	1.3123
20	Oaxaca	Sur-Sureste	Natural Gas - Service	1.5000	3.0000	4.4105
21	Puebla	Centro	Natural Gas - Service	1.5179	1.6786	1.7236
22	Querétaro	Centro-Occidente	Natural Gas - Service	1.9048	2.5714	2.8162
23	Quintana Roo	Sur-Sureste	Natural Gas - Service	1.5000	3.0000	4.4105
24	San Luis Potosí	Centro-Occidente	Natural Gas - Service	1.9048	2.5714	2.8162
25	Sinaloa	Noroeste	Natural Gas - Service	1.0000	2.0000	2.0000
26	Sonora	Noroeste	Natural Gas - Service	1.0000	2.0000	2.0000
27	Tabasco	Sur-Sureste	Natural Gas - Service	1.5000	3.0000	4.4105
28	Tamaulipas	Noreste	Natural Gas - Service	1.1965	1.2832	1.3123

AREA SOURCE PROJECTION FACTORS (OTHER)

State Code	State	Region	Surrogate	2018 Projection Factor	2025 Projection Factor	2030 Projection Factor
29	Tlaxcala	Centro	Natural Gas - Service	1.5179	1.6786	1.7236
30	Veracruz	Sur-Sureste	Natural Gas - Service	1.5000	3.0000	4.4105
31	Yucatán	Sur-Sureste	Natural Gas - Service	1.5000	3.0000	4.4105
32	Zacatecas	Centro-Occidente	Natural Gas - Service	1.9048	2.5714	2.8162
01	Aguascalientes	Centro-Occidente	Natural Gas - Residential	2.1154	2.8654	3.0616
02	Baja California	Noroeste	Natural Gas - Residential	1.5000	1.6000	1.8618
03	Baja California Sur	Noroeste	Natural Gas - Residential	1.5000	1.6000	1.8618
04	Campeche	Sur-Sureste	Natural Gas - Residential	1.0000	1.0000	1.0000
05	Coahuila	Noreste	Natural Gas - Residential	1.1644	1.2889	1.3238
06	Colima	Centro-Occidente	Natural Gas - Residential	2.1154	2.8654	3.0616
07	Chiapas	Sur-Sureste	Natural Gas - Residential	1.0000	1.0000	1.0000
08	Chihuahua	Noreste	Natural Gas - Residential	1.1644	1.2889	1.3238
09	Distrito Federal	Centro	Natural Gas - Residential	1.5751	1.9614	2.0704
10	Durango	Noreste	Natural Gas - Residential	1.1644	1.2889	1.3238
11	Guanajuato	Centro-Occidente	Natural Gas - Residential	2.1154	2.8654	3.0616
12	Guerrero	Sur-Sureste	Natural Gas - Residential	1.0000	1.0000	1.0000
13	Hidalgo	Centro	Natural Gas - Residential	1.5751	1.9614	2.0704
14	Jalisco	Centro-Occidente	Natural Gas - Residential	2.1154	2.8654	3.0616
15	México	Centro	Natural Gas - Residential	1.5751	1.9614	2.0704
16	Michoacán	Centro-Occidente	Natural Gas - Residential	2.1154	2.8654	3.0616
17	Morelos	Centro	Natural Gas - Residential	1.5751	1.9614	2.0704
18	Nayarit	Centro-Occidente	Natural Gas - Residential	2.1154	2.8654	3.0616
19	Nuevo León	Noreste	Natural Gas - Residential	1.1644	1.2889	1.3238
20	Oaxaca	Sur-Sureste	Natural Gas - Residential	1.0000	1.0000	1.0000
21	Puebla	Centro	Natural Gas - Residential	1.5751	1.9614	2.0704
22	Querétaro	Centro-Occidente	Natural Gas - Residential	2.1154	2.8654	3.0616
23	Quintana Roo	Sur-Sureste	Natural Gas - Residential	1.0000	1.0000	1.0000
24	San Luis Potosí	Centro-Occidente	Natural Gas - Residential	2.1154	2.8654	3.0616
25	Sinaloa	Noroeste	Natural Gas - Residential	1.5000	1.6000	1.8618
26	Sonora	Noroeste	Natural Gas - Residential	1.5000	1.6000	1.8618
27	Tabasco	Sur-Sureste	Natural Gas - Residential	1.0000	1.0000	1.0000
28	Tamaulipas	Noreste	Natural Gas - Residential	1.1644	1.2889	1.3238
29	Tlaxcala	Centro	Natural Gas - Residential	1.5751	1.9614	2.0704
30	Veracruz	Sur-Sureste	Natural Gas - Residential	1.0000	1.0000	1.0000
31	Yucatán	Sur-Sureste	Natural Gas - Residential	1.0000	1.0000	1.0000
32	Zacatecas	Centro-Occidente	Natural Gas - Residential	2.1154	2.8654	3.0616
01	Aguascalientes	Centro-Occidente	Diesel - Industrial	1.2182	1.4364	1.5766
02	Baja California	Noroeste	Diesel - Industrial	1.4103	1.6410	1.7723
03	Baja California Sur	Noroeste	Diesel - Industrial	1.4103	1.6410	1.7723
04	Campeche	Sur-Sureste	Diesel - Industrial	1.0857	1.1714	1.1714
05	Coahuila	Noreste	Diesel - Industrial	1.5156	1.7969	1.9986
06	Colima	Centro-Occidente	Diesel - Industrial	1.2182	1.4364	1.5766
07	Chiapas	Sur-Sureste	Diesel - Industrial	1.0857	1.1714	1.1714
08	Chihuahua	Noreste	Diesel - Industrial	1.5156	1.7969	1.9986
09	Distrito Federal	Centro	Diesel - Industrial	0.8710	0.9839	1.1093
10	Durango	Noreste	Diesel - Industrial	1.5156	1.7969	1.9986
11	Guanajuato	Centro-Occidente	Diesel - Industrial	1.2182	1.4364	1.5766

AREA SOURCE PROJECTION FACTORS (OTHER)

State Code	State	Region	Surrogate	2018 Projection Factor	2025 Projection Factor	2030 Projection Factor
12	Guerrero	Sur-Sureste	Diesel - Industrial	1.0857	1.1714	1.1714
13	Hidalgo	Centro	Diesel - Industrial	0.8710	0.9839	1.1093
14	Jalisco	Centro-Occidente	Diesel - Industrial	1.2182	1.4364	1.5766
15	México	Centro	Diesel - Industrial	0.8710	0.9839	1.1093
16	Michoacán	Centro-Occidente	Diesel - Industrial	1.2182	1.4364	1.5766
17	Morelos	Centro	Diesel - Industrial	0.8710	0.9839	1.1093
18	Nayarit	Centro-Occidente	Diesel - Industrial	1.2182	1.4364	1.5766
19	Nuevo León	Noreste	Diesel - Industrial	1.5156	1.7969	1.9986
20	Oaxaca	Sur-Sureste	Diesel - Industrial	1.0857	1.1714	1.1714
21	Puebla	Centro	Diesel - Industrial	0.8710	0.9839	1.1093
22	Querétaro	Centro-Occidente	Diesel - Industrial	1.2182	1.4364	1.5766
23	Quintana Roo	Sur-Sureste	Diesel - Industrial	1.0857	1.1714	1.1714
24	San Luis Potosí	Centro-Occidente	Diesel - Industrial	1.2182	1.4364	1.5766
25	Sinaloa	Noroeste	Diesel - Industrial	1.4103	1.6410	1.7723
26	Sonora	Noroeste	Diesel - Industrial	1.4103	1.6410	1.7723
27	Tabasco	Sur-Sureste	Diesel - Industrial	1.0857	1.1714	1.1714
28	Tamaulipas	Noreste	Diesel - Industrial	1.5156	1.7969	1.9986
29	Tlaxcala	Centro	Diesel - Industrial	0.8710	0.9839	1.1093
30	Veracruz	Sur-Sureste	Diesel - Industrial	1.0857	1.1714	1.1714
31	Yucatán	Sur-Sureste	Diesel - Industrial	1.0857	1.1714	1.1714
32	Zacatecas	Centro-Occidente	Diesel - Industrial	1.2182	1.4364	1.5766
01	Aguascalientes	Centro-Occidente	Diesel - Transportation	1.3390	1.7373	2.0459
02	Baja California	Noroeste	Diesel - Transportation	1.2664	1.6004	1.7695
03	Baja California Sur	Noroeste	Diesel - Transportation	1.2664	1.6004	1.7695
04	Campeche	Sur-Sureste	Diesel - Transportation	1.1596	1.3779	1.5597
05	Coahuila	Noreste	Diesel - Transportation	1.2636	1.7202	2.0367
06	Colima	Centro-Occidente	Diesel - Transportation	1.3390	1.7373	2.0459
07	Chiapas	Sur-Sureste	Diesel - Transportation	1.1596	1.3779	1.5597
08	Chihuahua	Noreste	Diesel - Transportation	1.2636	1.7202	2.0367
09	Distrito Federal	Centro	Diesel - Transportation	1.2580	1.5899	1.7967
10	Durango	Noreste	Diesel - Transportation	1.2636	1.7202	2.0367
11	Guanajuato	Centro-Occidente	Diesel - Transportation	1.3390	1.7373	2.0459
12	Guerrero	Sur-Sureste	Diesel - Transportation	1.1596	1.3779	1.5597
13	Hidalgo	Centro	Diesel - Transportation	1.2580	1.5899	1.7967
14	Jalisco	Centro-Occidente	Diesel - Transportation	1.3390	1.7373	2.0459
15	México	Centro	Diesel - Transportation	1.2580	1.5899	1.7967
16	Michoacán	Centro-Occidente	Diesel - Transportation	1.3390	1.7373	2.0459
17	Morelos	Centro	Diesel - Transportation	1.2580	1.5899	1.7967
18	Nayarit	Centro-Occidente	Diesel - Transportation	1.3390	1.7373	2.0459
19	Nuevo León	Noreste	Diesel - Transportation	1.2636	1.7202	2.0367
20	Oaxaca	Sur-Sureste	Diesel - Transportation	1.1596	1.3779	1.5597
21	Puebla	Centro	Diesel - Transportation	1.2580	1.5899	1.7967
22	Querétaro	Centro-Occidente	Diesel - Transportation	1.3390	1.7373	2.0459
23	Quintana Roo	Sur-Sureste	Diesel - Transportation	1.1596	1.3779	1.5597
24	San Luis Potosí	Centro-Occidente	Diesel - Transportation	1.3390	1.7373	2.0459
25	Sinaloa	Noroeste	Diesel - Transportation	1.2664	1.6004	1.7695
26	Sonora	Noroeste	Diesel - Transportation	1.2664	1.6004	1.7695

AREA SOURCE PROJECTION FACTORS (OTHER)

State Code	State	Region	Surrogate	2018 Projection Factor	2025 Projection Factor	2030 Projection Factor
27	Tabasco	Sur-Sureste	Diesel - Transportation	1.1596	1.3779	1.5597
28	Tamaulipas	Noreste	Diesel - Transportation	1.2636	1.7202	2.0367
29	Tlaxcala	Centro	Diesel - Transportation	1.2580	1.5899	1.7967
30	Veracruz	Sur-Sureste	Diesel - Transportation	1.1596	1.3779	1.5597
31	Yucatán	Sur-Sureste	Diesel - Transportation	1.1596	1.3779	1.5597
32	Zacatecas	Centro-Occidente	Diesel - Transportation	1.3390	1.7373	2.0459
01	Aguascalientes	Centro-Occidente	Gasoline - Transportation	1.4762	2.0331	2.3073
02	Baja California	Noroeste	Gasoline - Transportation	1.4187	1.9615	2.2214
03	Baja California Sur	Noroeste	Gasoline - Transportation	1.4187	1.9615	2.2214
04	Campeche	Sur-Sureste	Gasoline - Transportation	1.4145	1.7799	2.0499
05	Coahuila	Noreste	Gasoline - Transportation	1.1810	1.5352	1.7014
06	Colima	Centro-Occidente	Gasoline - Transportation	1.4762	2.0331	2.3073
07	Chiapas	Sur-Sureste	Gasoline - Transportation	1.4145	1.7799	2.0499
08	Chihuahua	Noreste	Gasoline - Transportation	1.1810	1.5352	1.7014
09	Distrito Federal	Centro	Gasoline - Transportation	1.2603	1.5179	1.6671
10	Durango	Noreste	Gasoline - Transportation	1.1810	1.5352	1.7014
11	Guanajuato	Centro-Occidente	Gasoline - Transportation	1.4762	2.0331	2.3073
12	Guerrero	Sur-Sureste	Gasoline - Transportation	1.4145	1.7799	2.0499
13	Hidalgo	Centro	Gasoline - Transportation	1.2603	1.5179	1.6671
14	Jalisco	Centro-Occidente	Gasoline - Transportation	1.4762	2.0331	2.3073
15	México	Centro	Gasoline - Transportation	1.2603	1.5179	1.6671
16	Michoacán	Centro-Occidente	Gasoline - Transportation	1.4762	2.0331	2.3073
17	Morelos	Centro	Gasoline - Transportation	1.2603	1.5179	1.6671
18	Nayarit	Centro-Occidente	Gasoline - Transportation	1.4762	2.0331	2.3073
19	Nuevo León	Noreste	Gasoline - Transportation	1.1810	1.5352	1.7014
20	Oaxaca	Sur-Sureste	Gasoline - Transportation	1.4145	1.7799	2.0499
21	Puebla	Centro	Gasoline - Transportation	1.2603	1.5179	1.6671
22	Querétaro	Centro-Occidente	Gasoline - Transportation	1.4762	2.0331	2.3073
23	Quintana Roo	Sur-Sureste	Gasoline - Transportation	1.4145	1.7799	2.0499
24	San Luis Potosí	Centro-Occidente	Gasoline - Transportation	1.4762	2.0331	2.3073
25	Sinaloa	Noroeste	Gasoline - Transportation	1.4187	1.9615	2.2214
26	Sonora	Noroeste	Gasoline - Transportation	1.4187	1.9615	2.2214
27	Tabasco	Sur-Sureste	Gasoline - Transportation	1.4145	1.7799	2.0499
28	Tamaulipas	Noreste	Gasoline - Transportation	1.1810	1.5352	1.7014
29	Tlaxcala	Centro	Gasoline - Transportation	1.2603	1.5179	1.6671
30	Veracruz	Sur-Sureste	Gasoline - Transportation	1.4145	1.7799	2.0499
31	Yucatán	Sur-Sureste	Gasoline - Transportation	1.4145	1.7799	2.0499
32	Zacatecas	Centro-Occidente	Gasoline - Transportation	1.4762	2.0331	2.3073
01	Aguascalientes	Centro-Occidente	Unchanged	1.0000	1.0000	1.0000
02	Baja California	Noroeste	Unchanged	1.0000	1.0000	1.0000
03	Baja California Sur	Noroeste	Unchanged	1.0000	1.0000	1.0000
04	Campeche	Sur-Sureste	Unchanged	1.0000	1.0000	1.0000
05	Coahuila	Noreste	Unchanged	1.0000	1.0000	1.0000
06	Colima	Centro-Occidente	Unchanged	1.0000	1.0000	1.0000
07	Chiapas	Sur-Sureste	Unchanged	1.0000	1.0000	1.0000
08	Chihuahua	Noreste	Unchanged	1.0000	1.0000	1.0000
09	Distrito Federal	Centro	Unchanged	1.0000	1.0000	1.0000

AREA SOURCE PROJECTION FACTORS (OTHER)

State Code	State	Region	Surrogate	2018 Projection Factor	2025 Projection Factor	2030 Projection Factor
10	Durango	Noreste	Unchanged	1.0000	1.0000	1.0000
11	Guanajuato	Centro-Occidente	Unchanged	1.0000	1.0000	1.0000
12	Guerrero	Sur-Sureste	Unchanged	1.0000	1.0000	1.0000
13	Hidalgo	Centro	Unchanged	1.0000	1.0000	1.0000
14	Jalisco	Centro-Occidente	Unchanged	1.0000	1.0000	1.0000
15	México	Centro	Unchanged	1.0000	1.0000	1.0000
16	Michoacán	Centro-Occidente	Unchanged	1.0000	1.0000	1.0000
17	Morelos	Centro	Unchanged	1.0000	1.0000	1.0000
18	Nayarit	Centro-Occidente	Unchanged	1.0000	1.0000	1.0000
19	Nuevo León	Noreste	Unchanged	1.0000	1.0000	1.0000
20	Oaxaca	Sur-Sureste	Unchanged	1.0000	1.0000	1.0000
21	Puebla	Centro	Unchanged	1.0000	1.0000	1.0000
22	Querétaro	Centro-Occidente	Unchanged	1.0000	1.0000	1.0000
23	Quintana Roo	Sur-Sureste	Unchanged	1.0000	1.0000	1.0000
24	San Luis Potosí	Centro-Occidente	Unchanged	1.0000	1.0000	1.0000
25	Sinaloa	Noroeste	Unchanged	1.0000	1.0000	1.0000
26	Sonora	Noroeste	Unchanged	1.0000	1.0000	1.0000
27	Tabasco	Sur-Sureste	Unchanged	1.0000	1.0000	1.0000
28	Tamaulipas	Noreste	Unchanged	1.0000	1.0000	1.0000
29	Tlaxcala	Centro	Unchanged	1.0000	1.0000	1.0000
30	Veracruz	Sur-Sureste	Unchanged	1.0000	1.0000	1.0000
31	Yucatán	Sur-Sureste	Unchanged	1.0000	1.0000	1.0000
32	Zacatecas	Centro-Occidente	Unchanged	1.0000	1.0000	1.0000
01	Aguascalientes	Centro-Occidente	GDP	1.2787	1.6135	1.9038
02	Baja California	Noroeste	GDP	1.2787	1.6135	1.9038
03	Baja California Sur	Noroeste	GDP	1.2787	1.6135	1.9038
04	Campeche	Sur-Sureste	GDP	1.2787	1.6135	1.9038
05	Coahuila	Noreste	GDP	1.2787	1.6135	1.9038
06	Colima	Centro-Occidente	GDP	1.2787	1.6135	1.9038
07	Chiapas	Sur-Sureste	GDP	1.2787	1.6135	1.9038
08	Chihuahua	Noreste	GDP	1.2787	1.6135	1.9038
09	Distrito Federal	Centro	GDP	1.2787	1.6135	1.9038
10	Durango	Noreste	GDP	1.2787	1.6135	1.9038
11	Guanajuato	Centro-Occidente	GDP	1.2787	1.6135	1.9038
12	Guerrero	Sur-Sureste	GDP	1.2787	1.6135	1.9038
13	Hidalgo	Centro	GDP	1.2787	1.6135	1.9038
14	Jalisco	Centro-Occidente	GDP	1.2787	1.6135	1.9038
15	México	Centro	GDP	1.2787	1.6135	1.9038
16	Michoacán	Centro-Occidente	GDP	1.2787	1.6135	1.9038
17	Morelos	Centro	GDP	1.2787	1.6135	1.9038
18	Nayarit	Centro-Occidente	GDP	1.2787	1.6135	1.9038
19	Nuevo León	Noreste	GDP	1.2787	1.6135	1.9038
20	Oaxaca	Sur-Sureste	GDP	1.2787	1.6135	1.9038
21	Puebla	Centro	GDP	1.2787	1.6135	1.9038
22	Querétaro	Centro-Occidente	GDP	1.2787	1.6135	1.9038
23	Quintana Roo	Sur-Sureste	GDP	1.2787	1.6135	1.9038
24	San Luis Potosí	Centro-Occidente	GDP	1.2787	1.6135	1.9038

AREA SOURCE PROJECTION FACTORS (OTHER)

State Code	State	Region	Surrogate	2018 Projection Factor	2025 Projection Factor	2030 Projection Factor
25	Sinaloa	Noroeste	GDP	1.2787	1.6135	1.9038
26	Sonora	Noroeste	GDP	1.2787	1.6135	1.9038
27	Tabasco	Sur-Sureste	GDP	1.2787	1.6135	1.9038
28	Tamaulipas	Noreste	GDP	1.2787	1.6135	1.9038
29	Tlaxcala	Centro	GDP	1.2787	1.6135	1.9038
30	Veracruz	Sur-Sureste	GDP	1.2787	1.6135	1.9038
31	Yucatán	Sur-Sureste	GDP	1.2787	1.6135	1.9038
32	Zacatecas	Centro-Occidente	GDP	1.2787	1.6135	1.9038
01	Aguascalientes	Centro-Occidente	Ag Acreage - Total	0.9497	0.9497	0.9497
02	Baja California	Noroeste	Ag Acreage - Total	1.0272	1.0272	1.0272
03	Baja California Sur	Noroeste	Ag Acreage - Total	1.1249	1.1249	1.1249
04	Campeche	Sur-Sureste	Ag Acreage - Total	0.9351	0.9351	0.9351
05	Coahuila	Noreste	Ag Acreage - Total	1.0339	1.0339	1.0339
06	Colima	Centro-Occidente	Ag Acreage - Total	0.9595	0.9595	0.9595
07	Chiapas	Sur-Sureste	Ag Acreage - Total	1.0455	1.0455	1.0455
08	Chihuahua	Noreste	Ag Acreage - Total	0.9862	0.9862	0.9862
09	Distrito Federal	Centro	Ag Acreage - Total	1.0512	1.0512	1.0512
10	Durango	Noreste	Ag Acreage - Total	0.9739	0.9739	0.9739
11	Guanajuato	Centro-Occidente	Ag Acreage - Total	0.9585	0.9585	0.9585
12	Guerrero	Sur-Sureste	Ag Acreage - Total	0.9586	0.9586	0.9586
13	Hidalgo	Centro	Ag Acreage - Total	1.0083	1.0083	1.0083
14	Jalisco	Centro-Occidente	Ag Acreage - Total	0.9567	0.9567	0.9567
15	México	Centro	Ag Acreage - Total	1.0031	1.0031	1.0031
16	Michoacán	Centro-Occidente	Ag Acreage - Total	1.0093	1.0093	1.0093
17	Morelos	Centro	Ag Acreage - Total	1.0369	1.0369	1.0369
18	Nayarit	Centro-Occidente	Ag Acreage - Total	0.9395	0.9395	0.9395
19	Nuevo León	Noreste	Ag Acreage - Total	1.0329	1.0329	1.0329
20	Oaxaca	Sur-Sureste	Ag Acreage - Total	0.9203	0.9203	0.9203
21	Puebla	Centro	Ag Acreage - Total	0.9990	0.9990	0.9990
22	Querétaro	Centro-Occidente	Ag Acreage - Total	0.9922	0.9922	0.9922
23	Quintana Roo	Sur-Sureste	Ag Acreage - Total	1.0192	1.0192	1.0192
24	San Luis Potosí	Centro-Occidente	Ag Acreage - Total	0.9666	0.9666	0.9666
25	Sinaloa	Noroeste	Ag Acreage - Total	0.9606	0.9606	0.9606
26	Sonora	Noroeste	Ag Acreage - Total	1.0240	1.0240	1.0240
27	Tabasco	Sur-Sureste	Ag Acreage - Total	1.1392	1.1392	1.1392
28	Tamaulipas	Noreste	Ag Acreage - Total	1.0468	1.0468	1.0468
29	Tlaxcala	Centro	Ag Acreage - Total	1.0189	1.0189	1.0189
30	Veracruz	Sur-Sureste	Ag Acreage - Total	1.0129	1.0129	1.0129
31	Yucatán	Sur-Sureste	Ag Acreage - Total	0.9809	0.9809	0.9809
32	Zacatecas	Centro-Occidente	Ag Acreage - Total	0.9896	0.9896	0.9896
01	Aguascalientes	Centro-Occidente	Sugar Cane Production	0.0000	0.0000	0.0000
02	Baja California	Noroeste	Sugar Cane Production	0.0000	0.0000	0.0000
03	Baja California Sur	Noroeste	Sugar Cane Production	0.0000	0.0000	0.0000
04	Campeche	Sur-Sureste	Sugar Cane Production	0.7477	0.7477	0.7477
05	Coahuila	Noreste	Sugar Cane Production	0.0000	0.0000	0.0000
06	Colima	Centro-Occidente	Sugar Cane Production	0.8797	0.8797	0.8797
07	Chiapas	Sur-Sureste	Sugar Cane Production	0.8527	0.8527	0.8527

AREA SOURCE PROJECTION FACTORS (OTHER)

State Code	State	Region	Surrogate	2018 Projection Factor	2025 Projection Factor	2030 Projection Factor
08	Chihuahua	Noreste	Sugar Cane Production	0.0000	0.0000	0.0000
09	Distrito Federal	Centro	Sugar Cane Production	0.0000	0.0000	0.0000
10	Durango	Noreste	Sugar Cane Production	0.0000	0.0000	0.0000
11	Guanajuato	Centro-Occidente	Sugar Cane Production	0.0000	0.0000	0.0000
12	Guerrero	Sur-Sureste	Sugar Cane Production	0.0000	0.0000	0.0000
13	Hidalgo	Centro	Sugar Cane Production	0.0000	0.0000	0.0000
14	Jalisco	Centro-Occidente	Sugar Cane Production	0.9140	0.9140	0.9140
15	México	Centro	Sugar Cane Production	0.0000	0.0000	0.0000
16	Michoacán	Centro-Occidente	Sugar Cane Production	1.0439	1.0439	1.0439
17	Morelos	Centro	Sugar Cane Production	0.9294	0.9294	0.9294
18	Nayarit	Centro-Occidente	Sugar Cane Production	0.7151	0.7151	0.7151
19	Nuevo León	Noreste	Sugar Cane Production	0.0000	0.0000	0.0000
20	Oaxaca	Sur-Sureste	Sugar Cane Production	0.8993	0.8993	0.8993
21	Puebla	Centro	Sugar Cane Production	0.8907	0.8907	0.8907
22	Querétaro	Centro-Occidente	Sugar Cane Production	0.0000	0.0000	0.0000
23	Quintana Roo	Sur-Sureste	Sugar Cane Production	1.0082	1.0082	1.0082
24	San Luis Potosí	Centro-Occidente	Sugar Cane Production	0.8955	0.8955	0.8955
25	Sinaloa	Noroeste	Sugar Cane Production	0.7885	0.7885	0.7885
26	Sonora	Noroeste	Sugar Cane Production	0.0000	0.0000	0.0000
27	Tabasco	Sur-Sureste	Sugar Cane Production	1.1288	1.1288	1.1288
28	Tamaulipas	Noreste	Sugar Cane Production	0.8663	0.8663	0.8663
29	Tlaxcala	Centro	Sugar Cane Production	0.0000	0.0000	0.0000
30	Veracruz	Sur-Sureste	Sugar Cane Production	0.9562	0.9562	0.9562
31	Yucatán	Sur-Sureste	Sugar Cane Production	0.0000	0.0000	0.0000
32	Zacatecas	Centro-Occidente	Sugar Cane Production	0.0000	0.0000	0.0000

APPENDIX E – NONROAD MOBILE SOURCE SURROGATE ASSIGNMENTS

NONROAD MOBILE SOURCE SURROGATE ASSIGNMENTS

SCC	SCC Description	Projection Profile
2270002000	Off-highway Diesel - Construction and Mining Equipment	Diesel - Transportation
2270005000	Off-highway Diesel - Agricultural Equipment	Ag Acreage - Total
2270008010	Off-highway Diesel - Airport Ground Support Equipment	Jet Fuel - Aviation
2275000000	Aircraft	Jet Fuel - Aviation
2280000000	Commercial Marine Vessels	Diesel - Transportation
2285000000	Locomotives	Diesel - Transportation

APPENDIX F – NONROAD MOBILE SOURCE PROJECTION FACTORS

NONROAD MOBILE SOURCE PROJECTION FACTORS

State Code	State	Region	Surrogate	2018 Projection Factor	2025 Projection Factor	2030 Projection Factor
01	Aguascalientes	Centro-Occidente	Diesel - Transportation	1.3390	1.7373	2.0459
02	Baja California	Noroeste	Diesel - Transportation	1.2664	1.6004	1.7695
03	Baja California Sur	Noroeste	Diesel - Transportation	1.2664	1.6004	1.7695
04	Campeche	Sur-Sureste	Diesel - Transportation	1.1596	1.3779	1.5597
05	Coahuila	Noreste	Diesel - Transportation	1.2636	1.7202	2.0367
06	Colima	Centro-Occidente	Diesel - Transportation	1.3390	1.7373	2.0459
07	Chiapas	Sur-Sureste	Diesel - Transportation	1.1596	1.3779	1.5597
08	Chihuahua	Noreste	Diesel - Transportation	1.2636	1.7202	2.0367
09	Distrito Federal	Centro	Diesel - Transportation	1.2580	1.5899	1.7967
10	Durango	Noreste	Diesel - Transportation	1.2636	1.7202	2.0367
11	Guanajuato	Centro-Occidente	Diesel - Transportation	1.3390	1.7373	2.0459
12	Guerrero	Sur-Sureste	Diesel - Transportation	1.1596	1.3779	1.5597
13	Hidalgo	Centro	Diesel - Transportation	1.2580	1.5899	1.7967
14	Jalisco	Centro-Occidente	Diesel - Transportation	1.3390	1.7373	2.0459
15	México	Centro	Diesel - Transportation	1.2580	1.5899	1.7967
16	Michoacán	Centro-Occidente	Diesel - Transportation	1.3390	1.7373	2.0459
17	Morelos	Centro	Diesel - Transportation	1.2580	1.5899	1.7967
18	Nayarit	Centro-Occidente	Diesel - Transportation	1.3390	1.7373	2.0459
19	Nuevo León	Noreste	Diesel - Transportation	1.2636	1.7202	2.0367
20	Oaxaca	Sur-Sureste	Diesel - Transportation	1.1596	1.3779	1.5597
21	Puebla	Centro	Diesel - Transportation	1.2580	1.5899	1.7967
22	Querétaro	Centro-Occidente	Diesel - Transportation	1.3390	1.7373	2.0459
23	Quintana Roo	Sur-Sureste	Diesel - Transportation	1.1596	1.3779	1.5597
24	San Luis Potosí	Centro-Occidente	Diesel - Transportation	1.3390	1.7373	2.0459
25	Sinaloa	Noroeste	Diesel - Transportation	1.2664	1.6004	1.7695
26	Sonora	Noroeste	Diesel - Transportation	1.2664	1.6004	1.7695
27	Tabasco	Sur-Sureste	Diesel - Transportation	1.1596	1.3779	1.5597
28	Tamaulipas	Noreste	Diesel - Transportation	1.2636	1.7202	2.0367
29	Tlaxcala	Centro	Diesel - Transportation	1.2580	1.5899	1.7967
30	Veracruz	Sur-Sureste	Diesel - Transportation	1.1596	1.3779	1.5597
31	Yucatán	Sur-Sureste	Diesel - Transportation	1.1596	1.3779	1.5597
32	Zacatecas	Centro-Occidente	Diesel - Transportation	1.3390	1.7373	2.0459
01	Aguascalientes	Centro-Occidente	Jet Fuel - Aviation	1.4519	1.7788	2.0291
02	Baja California	Noroeste	Jet Fuel - Aviation	1.6667	2.0952	2.4708
03	Baja California Sur	Noroeste	Jet Fuel - Aviation	1.6667	2.0952	2.4708
04	Campeche	Sur-Sureste	Jet Fuel - Aviation	0.8586	1.0314	1.1815
05	Coahuila	Noreste	Jet Fuel - Aviation	1.1642	1.4179	1.6119
06	Colima	Centro-Occidente	Jet Fuel - Aviation	1.4519	1.7788	2.0291
07	Chiapas	Sur-Sureste	Jet Fuel - Aviation	0.8586	1.0314	1.1815
08	Chihuahua	Noreste	Jet Fuel - Aviation	1.1642	1.4179	1.6119
09	Distrito Federal	Centro	Jet Fuel - Aviation	1.2756	1.5511	1.7709
10	Durango	Noreste	Jet Fuel - Aviation	1.1642	1.4179	1.6119
11	Guanajuato	Centro-Occidente	Jet Fuel - Aviation	1.4519	1.7788	2.0291
12	Guerrero	Sur-Sureste	Jet Fuel - Aviation	0.8586	1.0314	1.1815
13	Hidalgo	Centro	Jet Fuel - Aviation	1.2756	1.5511	1.7709

NONROAD MOBILE SOURCE PROJECTION FACTORS

State Code	State	Region	Surrogate	2018 Projection Factor	2025 Projection Factor	2030 Projection Factor
14	Jalisco	Centro-Occidente	Jet Fuel - Aviation	1.4519	1.7788	2.0291
15	México	Centro	Jet Fuel - Aviation	1.2756	1.5511	1.7709
16	Michoacán	Centro-Occidente	Jet Fuel - Aviation	1.4519	1.7788	2.0291
17	Morelos	Centro	Jet Fuel - Aviation	1.2756	1.5511	1.7709
18	Nayarit	Centro-Occidente	Jet Fuel - Aviation	1.4519	1.7788	2.0291
19	Nuevo León	Noreste	Jet Fuel - Aviation	1.1642	1.4179	1.6119
20	Oaxaca	Sur-Sureste	Jet Fuel - Aviation	0.8586	1.0314	1.1815
21	Puebla	Centro	Jet Fuel - Aviation	1.2756	1.5511	1.7709
22	Querétaro	Centro-Occidente	Jet Fuel - Aviation	1.4519	1.7788	2.0291
23	Quintana Roo	Sur-Sureste	Jet Fuel - Aviation	0.8586	1.0314	1.1815
24	San Luis Potosí	Centro-Occidente	Jet Fuel - Aviation	1.4519	1.7788	2.0291
25	Sinaloa	Noroeste	Jet Fuel - Aviation	1.6667	2.0952	2.4708
26	Sonora	Noroeste	Jet Fuel - Aviation	1.6667	2.0952	2.4708
27	Tabasco	Sur-Sureste	Jet Fuel - Aviation	0.8586	1.0314	1.1815
28	Tamaulipas	Noreste	Jet Fuel - Aviation	1.1642	1.4179	1.6119
29	Tlaxcala	Centro	Jet Fuel - Aviation	1.2756	1.5511	1.7709
30	Veracruz	Sur-Sureste	Jet Fuel - Aviation	0.8586	1.0314	1.1815
31	Yucatán	Sur-Sureste	Jet Fuel - Aviation	0.8586	1.0314	1.1815
32	Zacatecas	Centro-Occidente	Jet Fuel - Aviation	1.4519	1.7788	2.0291
01	Aguascalientes	Centro-Occidente	Ag Acreage - Total	0.9497	0.9497	0.9497
02	Baja California	Noroeste	Ag Acreage - Total	1.0272	1.0272	1.0272
03	Baja California Sur	Noroeste	Ag Acreage - Total	1.1249	1.1249	1.1249
04	Campeche	Sur-Sureste	Ag Acreage - Total	0.9351	0.9351	0.9351
05	Coahuila	Noreste	Ag Acreage - Total	1.0339	1.0339	1.0339
06	Colima	Centro-Occidente	Ag Acreage - Total	0.9595	0.9595	0.9595
07	Chiapas	Sur-Sureste	Ag Acreage - Total	1.0455	1.0455	1.0455
08	Chihuahua	Noreste	Ag Acreage - Total	0.9862	0.9862	0.9862
09	Distrito Federal	Centro	Ag Acreage - Total	1.0512	1.0512	1.0512
10	Durango	Noreste	Ag Acreage - Total	0.9739	0.9739	0.9739
11	Guanajuato	Centro-Occidente	Ag Acreage - Total	0.9585	0.9585	0.9585
12	Guerrero	Sur-Sureste	Ag Acreage - Total	0.9586	0.9586	0.9586
13	Hidalgo	Centro	Ag Acreage - Total	1.0083	1.0083	1.0083
14	Jalisco	Centro-Occidente	Ag Acreage - Total	0.9567	0.9567	0.9567
15	México	Centro	Ag Acreage - Total	1.0031	1.0031	1.0031
16	Michoacán	Centro-Occidente	Ag Acreage - Total	1.0093	1.0093	1.0093
17	Morelos	Centro	Ag Acreage - Total	1.0369	1.0369	1.0369
18	Nayarit	Centro-Occidente	Ag Acreage - Total	0.9395	0.9395	0.9395
19	Nuevo León	Noreste	Ag Acreage - Total	1.0329	1.0329	1.0329
20	Oaxaca	Sur-Sureste	Ag Acreage - Total	0.9203	0.9203	0.9203
21	Puebla	Centro	Ag Acreage - Total	0.9990	0.9990	0.9990
22	Querétaro	Centro-Occidente	Ag Acreage - Total	0.9922	0.9922	0.9922
23	Quintana Roo	Sur-Sureste	Ag Acreage - Total	1.0192	1.0192	1.0192
24	San Luis Potosí	Centro-Occidente	Ag Acreage - Total	0.9666	0.9666	0.9666
25	Sinaloa	Noroeste	Ag Acreage - Total	0.9606	0.9606	0.9606
26	Sonora	Noroeste	Ag Acreage - Total	1.0240	1.0240	1.0240
27	Tabasco	Sur-Sureste	Ag Acreage - Total	1.1392	1.1392	1.1392
28	Tamaulipas	Noreste	Ag Acreage - Total	1.0468	1.0468	1.0468

NONROAD MOBILE SOURCE PROJECTION FACTORS

State Code	State	Region	Surrogate	2018 Projection Factor	2025 Projection Factor	2030 Projection Factor
29	Tlaxcala	Centro	Ag Acreage - Total	1.0189	1.0189	1.0189
30	Veracruz	Sur-Sureste	Ag Acreage - Total	1.0129	1.0129	1.0129
31	Yucatán	Sur-Sureste	Ag Acreage - Total	0.9809	0.9809	0.9809
32	Zacatecas	Centro-Occidente	Ag Acreage - Total	0.9896	0.9896	0.9896

APPENDIX G – ON-ROAD MOTOR VEHICLE PROJECTION FACTORS

ON-ROAD MOTOR VEHICLE PROJECTION FACTORS

State Code	State	Region	Source	Poll.	Projection Factor - 2018	Projection Factor - 2025	Projection Factor - 2030
	Aguascalientes	Centro-Occidente	Gasoline - Onroad	NOx	0.7933	0.5809	0.2444
02	Baja California	Noroeste	Gasoline - Onroad	NOx	0.1275	0.0937	0.0393
03	Baja California Sur	Noroeste	Gasoline - Onroad	NOx	0.7624	0.5604	0.2353
04	Campeche	Sur-Sureste	Gasoline - Onroad	NOx	0.7601	0.5085	0.2171
05	Coahuila	Noreste	Gasoline - Onroad	NOx	0.6347	0.4386	0.1802
06	Colima	Centro-Occidente	Gasoline - Onroad	NOx	0.7933	0.5809	0.2444
07	Chiapas	Sur-Sureste	Gasoline - Onroad	NOx	0.7601	0.5085	0.2171
08	Chihuahua	Noreste	Gasoline - Onroad	NOx	0.6347	0.4386	0.1802
09	Distrito Federal	Centro	Gasoline - Onroad	NOx	0.6773	0.4336	0.1766
10	Durango	Noreste	Gasoline - Onroad	NOx	0.6347	0.4386	0.1802
11	Guanajuato	Centro-Occidente	Gasoline - Onroad	NOx	0.7933	0.5809	0.2444
12	Guerrero	Sur-Sureste	Gasoline - Onroad	NOx	0.7601	0.5085	0.2171
13	Hidalgo	Centro	Gasoline - Onroad	NOx	0.6773	0.4336	0.1766
14	Jalisco	Centro-Occidente	Gasoline - Onroad	NOx	0.7933	0.5809	0.2444
15	México	Centro	Gasoline - Onroad	NOx	0.6773	0.4336	0.1766
16	Michoacán	Centro-Occidente	Gasoline - Onroad	NOx	0.2568	0.1880	0.0791
17	Morelos	Centro	Gasoline - Onroad	NOx	0.6773	0.4336	0.1766
18	Nayarit	Centro-Occidente	Gasoline - Onroad	NOx	0.7933	0.5809	0.2444
19	Nuevo León	Noreste	Gasoline - Onroad	NOx	0.1648	0.1139	0.0468
20	Oaxaca	Sur-Sureste	Gasoline - Onroad	NOx	0.7601	0.5085	0.2171
21	Puebla	Centro	Gasoline - Onroad	NOx	0.6773	0.4336	0.1766
22	Querétaro	Centro-Occidente	Gasoline - Onroad	NOx	0.7933	0.5809	0.2444
23	Quintana Roo	Sur-Sureste	Gasoline - Onroad	NOx	0.7601	0.5085	0.2171
24	San Luis Potosí	Centro-Occidente	Gasoline - Onroad	NOx	0.7933	0.5809	0.2444
25	Sinaloa	Noroeste	Gasoline - Onroad	NOx	0.7624	0.5604	0.2353
26	Sonora	Noroeste	Gasoline - Onroad	NOx	0.7624	0.5604	0.2353
27	Tabasco	Sur-Sureste	Gasoline - Onroad	NOx	0.7601	0.5085	0.2171
28	Tamaulipas	Noreste	Gasoline - Onroad	NOx	0.6347	0.4386	0.1802
29	Tlaxcala	Centro	Gasoline - Onroad	NOx	0.6773	0.4336	0.1766
30	Veracruz	Sur-Sureste	Gasoline - Onroad	NOx	0.7601	0.5085	0.2171
31	Yucatán	Sur-Sureste	Gasoline - Onroad	NOx	0.7601	0.5085	0.2171
32	Zacatecas	Centro-Occidente	Gasoline - Onroad	NOx	0.7933	0.5809	0.2444
01	Aguascalientes	Centro-Occidente	Gasoline - Onroad	SO2	0.4616	0.3319	0.1303
02	Baja California	Noroeste	Gasoline - Onroad	SO2	0.1362	0.0983	0.0385
03	Baja California Sur	Noroeste	Gasoline - Onroad	SO2	0.4436	0.3202	0.1254
04	Campeche	Sur-Sureste	Gasoline - Onroad	SO2	0.4423	0.2905	0.1157
05	Coahuila	Noreste	Gasoline - Onroad	SO2	0.3693	0.2506	0.0961
06	Colima	Centro-Occidente	Gasoline - Onroad	SO2	0.4616	0.3319	0.1303
07	Chiapas	Sur-Sureste	Gasoline - Onroad	SO2	0.4423	0.2905	0.1157
08	Chihuahua	Noreste	Gasoline - Onroad	SO2	0.3693	0.2506	0.0961
09	Distrito Federal	Centro	Gasoline - Onroad	SO2	0.3941	0.2478	0.0941
10	Durango	Noreste	Gasoline - Onroad	SO2	0.3693	0.2506	0.0961
11	Guanajuato	Centro-Occidente	Gasoline - Onroad	SO2	0.4616	0.3319	0.1303
12	Guerrero	Sur-Sureste	Gasoline - Onroad	SO2	0.4423	0.2905	0.1157
13	Hidalgo	Centro	Gasoline - Onroad	SO2	0.3941	0.2478	0.0941

ON-ROAD MOTOR VEHICLE PROJECTION FACTORS

State Code	State	Region	Source	Poll.	Projection Factor - 2018	Projection Factor - 2025	Projection Factor - 2030
14	Jalisco	Centro-Occidente	Gasoline - Onroad	SO2	0.4616	0.3319	0.1303
15	México	Centro	Gasoline - Onroad	SO2	0.3941	0.2478	0.0941
16	Michoacán	Centro-Occidente	Gasoline - Onroad	SO2	0.3045	0.2189	0.0859
17	Morelos	Centro	Gasoline - Onroad	SO2	0.3941	0.2478	0.0941
18	Nayarit	Centro-Occidente	Gasoline - Onroad	SO2	0.4616	0.3319	0.1303
19	Nuevo León	Noreste	Gasoline - Onroad	SO2	0.1420	0.0963	0.0369
20	Oaxaca	Sur-Sureste	Gasoline - Onroad	SO2	0.4423	0.2905	0.1157
21	Puebla	Centro	Gasoline - Onroad	SO2	0.3941	0.2478	0.0941
22	Querétaro	Centro-Occidente	Gasoline - Onroad	SO2	0.4616	0.3319	0.1303
23	Quintana Roo	Sur-Sureste	Gasoline - Onroad	SO2	0.4423	0.2905	0.1157
24	San Luis Potosí	Centro-Occidente	Gasoline - Onroad	SO2	0.4616	0.3319	0.1303
25	Sinaloa	Noroeste	Gasoline - Onroad	SO2	0.4436	0.3202	0.1254
26	Sonora	Noroeste	Gasoline - Onroad	SO2	0.4436	0.3202	0.1254
27	Tabasco	Sur-Sureste	Gasoline - Onroad	SO2	0.4423	0.2905	0.1157
28	Tamaulipas	Noreste	Gasoline - Onroad	SO2	0.3693	0.2506	0.0961
29	Tlaxcala	Centro	Gasoline - Onroad	SO2	0.3941	0.2478	0.0941
30	Veracruz	Sur-Sureste	Gasoline - Onroad	SO2	0.4423	0.2905	0.1157
31	Yucatán	Sur-Sureste	Gasoline - Onroad	SO2	0.4423	0.2905	0.1157
32	Zacatecas	Centro-Occidente	Gasoline - Onroad	SO2	0.4616	0.3319	0.1303
01	Aguascalientes	Centro-Occidente	Gasoline - Onroad	VOC	0.8100	0.7639	0.5818
02	Baja California	Noroeste	Gasoline - Onroad	VOC	0.1441	0.1364	0.1037
03	Baja California Sur	Noroeste	Gasoline - Onroad	VOC	0.7784	0.7369	0.5601
04	Campeche	Sur-Sureste	Gasoline - Onroad	VOC	0.7761	0.6687	0.5169
05	Coahuila	Noreste	Gasoline - Onroad	VOC	0.6480	0.5768	0.4290
06	Colima	Centro-Occidente	Gasoline - Onroad	VOC	0.8100	0.7639	0.5818
07	Chiapas	Sur-Sureste	Gasoline - Onroad	VOC	0.7761	0.6687	0.5169
08	Chihuahua	Noreste	Gasoline - Onroad	VOC	0.6480	0.5768	0.4290
09	Distrito Federal	Centro	Gasoline - Onroad	VOC	0.6915	0.5703	0.4204
10	Durango	Noreste	Gasoline - Onroad	VOC	0.6480	0.5768	0.4290
11	Guanajuato	Centro-Occidente	Gasoline - Onroad	VOC	0.8100	0.7639	0.5818
12	Guerrero	Sur-Sureste	Gasoline - Onroad	VOC	0.7761	0.6687	0.5169
13	Hidalgo	Centro	Gasoline - Onroad	VOC	0.6915	0.5703	0.4204
14	Jalisco	Centro-Occidente	Gasoline - Onroad	VOC	0.8100	0.7639	0.5818
15	México	Centro	Gasoline - Onroad	VOC	0.6915	0.5703	0.4204
16	Michoacán	Centro-Occidente	Gasoline - Onroad	VOC	0.2173	0.2049	0.1561
17	Morelos	Centro	Gasoline - Onroad	VOC	0.6915	0.5703	0.4204
18	Nayarit	Centro-Occidente	Gasoline - Onroad	VOC	0.8100	0.7639	0.5818
19	Nuevo León	Noreste	Gasoline - Onroad	VOC	0.1932	0.1720	0.1279
20	Oaxaca	Sur-Sureste	Gasoline - Onroad	VOC	0.7761	0.6687	0.5169
21	Puebla	Centro	Gasoline - Onroad	VOC	0.6915	0.5703	0.4204
22	Querétaro	Centro-Occidente	Gasoline - Onroad	VOC	0.8100	0.7639	0.5818
23	Quintana Roo	Sur-Sureste	Gasoline - Onroad	VOC	0.7761	0.6687	0.5169
24	San Luis Potosí	Centro-Occidente	Gasoline - Onroad	VOC	0.8100	0.7639	0.5818
25	Sinaloa	Noroeste	Gasoline - Onroad	VOC	0.7784	0.7369	0.5601
26	Sonora	Noroeste	Gasoline - Onroad	VOC	0.7784	0.7369	0.5601
27	Tabasco	Sur-Sureste	Gasoline - Onroad	VOC	0.7761	0.6687	0.5169
28	Tamaulipas	Noreste	Gasoline - Onroad	VOC	0.6480	0.5768	0.4290

ON-ROAD MOTOR VEHICLE PROJECTION FACTORS

State Code	State	Region	Source	Poll.	Projection Factor - 2018	Projection Factor - 2025	Projection Factor - 2030
29	Tlaxcala	Centro	Gasoline - Onroad	VOC	0.6915	0.5703	0.4204
30	Veracruz	Sur-Sureste	Gasoline - Onroad	VOC	0.7761	0.6687	0.5169
31	Yucatán	Sur-Sureste	Gasoline - Onroad	VOC	0.7761	0.6687	0.5169
32	Zacatecas	Centro-Occidente	Gasoline - Onroad	VOC	0.8100	0.7639	0.5818
01	Aguascalientes	Centro-Occidente	Gasoline - Onroad	CO	0.7287	0.7930	0.7292
02	Baja California	Noroeste	Gasoline - Onroad	CO	0.1160	0.1268	0.1163
03	Baja California Sur	Noroeste	Gasoline - Onroad	CO	0.7003	0.7651	0.7021
04	Campeche	Sur-Sureste	Gasoline - Onroad	CO	0.6982	0.6942	0.6478
05	Coahuila	Noreste	Gasoline - Onroad	CO	0.5830	0.5988	0.5377
06	Colima	Centro-Occidente	Gasoline - Onroad	CO	0.7287	0.7930	0.7292
07	Chiapas	Sur-Sureste	Gasoline - Onroad	CO	0.6982	0.6942	0.6478
08	Chihuahua	Noreste	Gasoline - Onroad	CO	0.5830	0.5988	0.5377
09	Distrito Federal	Centro	Gasoline - Onroad	CO	0.6221	0.5920	0.5269
10	Durango	Noreste	Gasoline - Onroad	CO	0.5830	0.5988	0.5377
11	Guanajuato	Centro-Occidente	Gasoline - Onroad	CO	0.7287	0.7930	0.7292
12	Guerrero	Sur-Sureste	Gasoline - Onroad	CO	0.6982	0.6942	0.6478
13	Hidalgo	Centro	Gasoline - Onroad	CO	0.6221	0.5920	0.5269
14	Jalisco	Centro-Occidente	Gasoline - Onroad	CO	0.7287	0.7930	0.7292
15	México	Centro	Gasoline - Onroad	CO	0.6221	0.5920	0.5269
16	Michoacán	Centro-Occidente	Gasoline - Onroad	CO	0.1375	0.1496	0.1376
17	Morelos	Centro	Gasoline - Onroad	CO	0.6221	0.5920	0.5269
18	Nayarit	Centro-Occidente	Gasoline - Onroad	CO	0.7287	0.7930	0.7292
19	Nuevo León	Noreste	Gasoline - Onroad	CO	0.1735	0.1783	0.1601
20	Oaxaca	Sur-Sureste	Gasoline - Onroad	CO	0.6982	0.6942	0.6478
21	Puebla	Centro	Gasoline - Onroad	CO	0.6221	0.5920	0.5269
22	Querétaro	Centro-Occidente	Gasoline - Onroad	CO	0.7287	0.7930	0.7292
23	Quintana Roo	Sur-Sureste	Gasoline - Onroad	CO	0.6982	0.6942	0.6478
24	San Luis Potosí	Centro-Occidente	Gasoline - Onroad	CO	0.7287	0.7930	0.7292
25	Sinaloa	Noroeste	Gasoline - Onroad	CO	0.7003	0.7651	0.7021
26	Sonora	Noroeste	Gasoline - Onroad	CO	0.7003	0.7651	0.7021
27	Tabasco	Sur-Sureste	Gasoline - Onroad	CO	0.6982	0.6942	0.6478
28	Tamaulipas	Noreste	Gasoline - Onroad	CO	0.5830	0.5988	0.5377
29	Tlaxcala	Centro	Gasoline - Onroad	CO	0.6221	0.5920	0.5269
30	Veracruz	Sur-Sureste	Gasoline - Onroad	CO	0.6982	0.6942	0.6478
31	Yucatán	Sur-Sureste	Gasoline - Onroad	CO	0.6982	0.6942	0.6478
32	Zacatecas	Centro-Occidente	Gasoline - Onroad	CO	0.7287	0.7930	0.7292
01	Aguascalientes	Centro-Occidente	Gasoline - Onroad	PM10	1.2323	1.5809	1.6998
02	Baja California	Noroeste	Gasoline - Onroad	PM10	0.4490	0.5782	0.6204
03	Baja California Sur	Noroeste	Gasoline - Onroad	PM10	1.1843	1.5252	1.6365
04	Campeche	Sur-Sureste	Gasoline - Onroad	PM10	1.1808	1.3840	1.5102
05	Coahuila	Noreste	Gasoline - Onroad	PM10	0.9859	1.1937	1.2535
06	Colima	Centro-Occidente	Gasoline - Onroad	PM10	1.2323	1.5809	1.6998
07	Chiapas	Sur-Sureste	Gasoline - Onroad	PM10	1.1808	1.3840	1.5102
08	Chihuahua	Noreste	Gasoline - Onroad	PM10	0.9859	1.1937	1.2535
09	Distrito Federal	Centro	Gasoline - Onroad	PM10	1.0520	1.1802	1.2282
10	Durango	Noreste	Gasoline - Onroad	PM10	0.9859	1.1937	1.2535
11	Guanajuato	Centro-Occidente	Gasoline - Onroad	PM10	1.2323	1.5809	1.6998

ON-ROAD MOTOR VEHICLE PROJECTION FACTORS

State Code	State	Region	Source	Poll.	Projection Factor - 2018	Projection Factor - 2025	Projection Factor - 2030
12	Guerrero	Sur-Sureste	Gasoline - Onroad	PM10	1.1808	1.3840	1.5102
13	Hidalgo	Centro	Gasoline - Onroad	PM10	1.0520	1.1802	1.2282
14	Jalisco	Centro-Occidente	Gasoline - Onroad	PM10	1.2323	1.5809	1.6998
15	México	Centro	Gasoline - Onroad	PM10	1.0520	1.1802	1.2282
16	Michoacán	Centro-Occidente	Gasoline - Onroad	PM10	0.6533	0.8380	0.9011
17	Morelos	Centro	Gasoline - Onroad	PM10	1.0520	1.1802	1.2282
18	Nayarit	Centro-Occidente	Gasoline - Onroad	PM10	1.2323	1.5809	1.6998
19	Nuevo León	Noreste	Gasoline - Onroad	PM10	0.3529	0.4273	0.4487
20	Oaxaca	Sur-Sureste	Gasoline - Onroad	PM10	1.1808	1.3840	1.5102
21	Puebla	Centro	Gasoline - Onroad	PM10	1.0520	1.1802	1.2282
22	Querétaro	Centro-Occidente	Gasoline - Onroad	PM10	1.2323	1.5809	1.6998
23	Quintana Roo	Sur-Sureste	Gasoline - Onroad	PM10	1.1808	1.3840	1.5102
24	San Luis Potosí	Centro-Occidente	Gasoline - Onroad	PM10	1.2323	1.5809	1.6998
25	Sinaloa	Noroeste	Gasoline - Onroad	PM10	1.1843	1.5252	1.6365
26	Sonora	Noroeste	Gasoline - Onroad	PM10	1.1843	1.5252	1.6365
27	Tabasco	Sur-Sureste	Gasoline - Onroad	PM10	1.1808	1.3840	1.5102
28	Tamaulipas	Noreste	Gasoline - Onroad	PM10	0.9859	1.1937	1.2535
29	Tlaxcala	Centro	Gasoline - Onroad	PM10	1.0520	1.1802	1.2282
30	Veracruz	Sur-Sureste	Gasoline - Onroad	PM10	1.1808	1.3840	1.5102
31	Yucatán	Sur-Sureste	Gasoline - Onroad	PM10	1.1808	1.3840	1.5102
32	Zacatecas	Centro-Occidente	Gasoline - Onroad	PM10	1.2323	1.5809	1.6998
01	Aguascalientes	Centro-Occidente	Gasoline - Onroad	PM2.5	1.2175	1.5542	1.6644
02	Baja California	Noroeste	Gasoline - Onroad	PM2.5	0.4985	0.6389	0.6828
03	Baja California Sur	Noroeste	Gasoline - Onroad	PM2.5	1.1700	1.4994	1.6024
04	Campeche	Sur-Sureste	Gasoline - Onroad	PM2.5	1.1665	1.3606	1.4787
05	Coahuila	Noreste	Gasoline - Onroad	PM2.5	0.9740	1.1735	1.2273
06	Colima	Centro-Occidente	Gasoline - Onroad	PM2.5	1.2175	1.5542	1.6644
07	Chiapas	Sur-Sureste	Gasoline - Onroad	PM2.5	1.1665	1.3606	1.4787
08	Chihuahua	Noreste	Gasoline - Onroad	PM2.5	0.9740	1.1735	1.2273
09	Distrito Federal	Centro	Gasoline - Onroad	PM2.5	1.0393	1.1603	1.2026
10	Durango	Noreste	Gasoline - Onroad	PM2.5	0.9740	1.1735	1.2273
11	Guanajuato	Centro-Occidente	Gasoline - Onroad	PM2.5	1.2175	1.5542	1.6644
12	Guerrero	Sur-Sureste	Gasoline - Onroad	PM2.5	1.1665	1.3606	1.4787
13	Hidalgo	Centro	Gasoline - Onroad	PM2.5	1.0393	1.1603	1.2026
14	Jalisco	Centro-Occidente	Gasoline - Onroad	PM2.5	1.2175	1.5542	1.6644
15	México	Centro	Gasoline - Onroad	PM2.5	1.0393	1.1603	1.2026
16	Michoacán	Centro-Occidente	Gasoline - Onroad	PM2.5	0.6898	0.8806	0.9431
17	Morelos	Centro	Gasoline - Onroad	PM2.5	1.0393	1.1603	1.2026
18	Nayarit	Centro-Occidente	Gasoline - Onroad	PM2.5	1.2175	1.5542	1.6644
19	Nuevo León	Noreste	Gasoline - Onroad	PM2.5	0.3375	0.4066	0.4253
20	Oaxaca	Sur-Sureste	Gasoline - Onroad	PM2.5	1.1665	1.3606	1.4787
21	Puebla	Centro	Gasoline - Onroad	PM2.5	1.0393	1.1603	1.2026
22	Querétaro	Centro-Occidente	Gasoline - Onroad	PM2.5	1.2175	1.5542	1.6644
23	Quintana Roo	Sur-Sureste	Gasoline - Onroad	PM2.5	1.1665	1.3606	1.4787
24	San Luis Potosí	Centro-Occidente	Gasoline - Onroad	PM2.5	1.2175	1.5542	1.6644
25	Sinaloa	Noroeste	Gasoline - Onroad	PM2.5	1.1700	1.4994	1.6024
26	Sonora	Noroeste	Gasoline - Onroad	PM2.5	1.1700	1.4994	1.6024

ON-ROAD MOTOR VEHICLE PROJECTION FACTORS

State Code	State	Region	Source	Poll.	Projection Factor - 2018	Projection Factor - 2025	Projection Factor - 2030
27	Tabasco	Sur-Sureste	Gasoline - Onroad	PM2.5	1.1665	1.3606	1.4787
28	Tamaulipas	Noreste	Gasoline - Onroad	PM2.5	0.9740	1.1735	1.2273
29	Tlaxcala	Centro	Gasoline - Onroad	PM2.5	1.0393	1.1603	1.2026
30	Veracruz	Sur-Sureste	Gasoline - Onroad	PM2.5	1.1665	1.3606	1.4787
31	Yucatán	Sur-Sureste	Gasoline - Onroad	PM2.5	1.1665	1.3606	1.4787
32	Zacatecas	Centro-Occidente	Gasoline - Onroad	PM2.5	1.2175	1.5542	1.6644
01	Aguascalientes	Centro-Occidente	Gasoline - Onroad	NH3	1.4841	2.0431	2.3179
02	Baja California	Noroeste	Gasoline - Onroad	NH3	0.2523	0.3487	0.3948
03	Baja California Sur	Noroeste	Gasoline - Onroad	NH3	1.4262	1.9711	2.2316
04	Campeche	Sur-Sureste	Gasoline - Onroad	NH3	1.4220	1.7886	2.0592
05	Coahuila	Noreste	Gasoline - Onroad	NH3	1.1873	1.5427	1.7092
06	Colima	Centro-Occidente	Gasoline - Onroad	NH3	1.4841	2.0431	2.3179
07	Chiapas	Sur-Sureste	Gasoline - Onroad	NH3	1.4220	1.7886	2.0592
08	Chihuahua	Noreste	Gasoline - Onroad	NH3	1.1873	1.5427	1.7092
09	Distrito Federal	Centro	Gasoline - Onroad	NH3	1.2670	1.5253	1.6748
10	Durango	Noreste	Gasoline - Onroad	NH3	1.1873	1.5427	1.7092
11	Guanajuato	Centro-Occidente	Gasoline - Onroad	NH3	1.4841	2.0431	2.3179
12	Guerrero	Sur-Sureste	Gasoline - Onroad	NH3	1.4220	1.7886	2.0592
13	Hidalgo	Centro	Gasoline - Onroad	NH3	1.2670	1.5253	1.6748
14	Jalisco	Centro-Occidente	Gasoline - Onroad	NH3	1.4841	2.0431	2.3179
15	México	Centro	Gasoline - Onroad	NH3	1.2670	1.5253	1.6748
16	Michoacán	Centro-Occidente	Gasoline - Onroad	NH3	0.6164	0.8485	0.9626
17	Morelos	Centro	Gasoline - Onroad	NH3	1.2670	1.5253	1.6748
18	Nayarit	Centro-Occidente	Gasoline - Onroad	NH3	1.4841	2.0431	2.3179
19	Nuevo León	Noreste	Gasoline - Onroad	NH3	0.3472	0.4511	0.4998
20	Oaxaca	Sur-Sureste	Gasoline - Onroad	NH3	1.4220	1.7886	2.0592
21	Puebla	Centro	Gasoline - Onroad	NH3	1.2670	1.5253	1.6748
22	Querétaro	Centro-Occidente	Gasoline - Onroad	NH3	1.4841	2.0431	2.3179
23	Quintana Roo	Sur-Sureste	Gasoline - Onroad	NH3	1.4220	1.7886	2.0592
24	San Luis Potosí	Centro-Occidente	Gasoline - Onroad	NH3	1.4841	2.0431	2.3179
25	Sinaloa	Noroeste	Gasoline - Onroad	NH3	1.4262	1.9711	2.2316
26	Sonora	Noroeste	Gasoline - Onroad	NH3	1.4262	1.9711	2.2316
27	Tabasco	Sur-Sureste	Gasoline - Onroad	NH3	1.4220	1.7886	2.0592
28	Tamaulipas	Noreste	Gasoline - Onroad	NH3	1.1873	1.5427	1.7092
29	Tlaxcala	Centro	Gasoline - Onroad	NH3	1.2670	1.5253	1.6748
30	Veracruz	Sur-Sureste	Gasoline - Onroad	NH3	1.4220	1.7886	2.0592
31	Yucatán	Sur-Sureste	Gasoline - Onroad	NH3	1.4220	1.7886	2.0592
32	Zacatecas	Centro-Occidente	Gasoline - Onroad	NH3	1.4841	2.0431	2.3179
01	Aguascalientes	Centro-Occidente	Diesel - Onroad	NOx	0.7196	0.4963	0.2167
02	Baja California	Noroeste	Diesel - Onroad	NOx	0.1138	0.0764	0.0313
03	Baja California Sur	Noroeste	Diesel - Onroad	NOx	0.6806	0.4572	0.1874
04	Campeche	Sur-Sureste	Diesel - Onroad	NOx	0.6232	0.3936	0.1652
05	Coahuila	Noreste	Diesel - Onroad	NOx	0.6790	0.4915	0.2157
06	Colima	Centro-Occidente	Diesel - Onroad	NOx	0.7196	0.4963	0.2167
07	Chiapas	Sur-Sureste	Diesel - Onroad	NOx	0.6232	0.3936	0.1652
08	Chihuahua	Noreste	Diesel - Onroad	NOx	0.6790	0.4915	0.2157
09	Distrito Federal	Centro	Diesel - Onroad	NOx	0.6760	0.4542	0.1903

ON-ROAD MOTOR VEHICLE PROJECTION FACTORS

State Code	State	Region	Source	Poll.	Projection Factor - 2018	Projection Factor - 2025	Projection Factor - 2030
10	Durango	Noreste	Diesel - Onroad	NOx	0.6790	0.4915	0.2157
11	Guanajuato	Centro-Occidente	Diesel - Onroad	NOx	0.7196	0.4963	0.2167
12	Guerrero	Sur-Sureste	Diesel - Onroad	NOx	0.6232	0.3936	0.1652
13	Hidalgo	Centro	Diesel - Onroad	NOx	0.6760	0.4542	0.1903
14	Jalisco	Centro-Occidente	Diesel - Onroad	NOx	0.7196	0.4963	0.2167
15	México	Centro	Diesel - Onroad	NOx	0.6760	0.4542	0.1903
16	Michoacán	Centro-Occidente	Diesel - Onroad	NOx	0.2329	0.1607	0.0701
17	Morelos	Centro	Diesel - Onroad	NOx	0.6760	0.4542	0.1903
18	Nayarit	Centro-Occidente	Diesel - Onroad	NOx	0.7196	0.4963	0.2167
19	Nuevo León	Noreste	Diesel - Onroad	NOx	0.1763	0.1276	0.0560
20	Oaxaca	Sur-Sureste	Diesel - Onroad	NOx	0.6232	0.3936	0.1652
21	Puebla	Centro	Diesel - Onroad	NOx	0.6760	0.4542	0.1903
22	Querétaro	Centro-Occidente	Diesel - Onroad	NOx	0.7196	0.4963	0.2167
23	Quintana Roo	Sur-Sureste	Diesel - Onroad	NOx	0.6232	0.3936	0.1652
24	San Luis Potosí	Centro-Occidente	Diesel - Onroad	NOx	0.7196	0.4963	0.2167
25	Sinaloa	Noroeste	Diesel - Onroad	NOx	0.6806	0.4572	0.1874
26	Sonora	Noroeste	Diesel - Onroad	NOx	0.6806	0.4572	0.1874
27	Tabasco	Sur-Sureste	Diesel - Onroad	NOx	0.6232	0.3936	0.1652
28	Tamaulipas	Noreste	Diesel - Onroad	NOx	0.6790	0.4915	0.2157
29	Tlaxcala	Centro	Diesel - Onroad	NOx	0.6760	0.4542	0.1903
30	Veracruz	Sur-Sureste	Diesel - Onroad	NOx	0.6232	0.3936	0.1652
31	Yucatán	Sur-Sureste	Diesel - Onroad	NOx	0.6232	0.3936	0.1652
32	Zacatecas	Centro-Occidente	Diesel - Onroad	NOx	0.7196	0.4963	0.2167
01	Aguascalientes	Centro-Occidente	Diesel - Onroad	SO2	0.4187	0.2836	0.1155
02	Baja California	Noroeste	Diesel - Onroad	SO2	0.1216	0.0802	0.0307
03	Baja California Sur	Noroeste	Diesel - Onroad	SO2	0.3960	0.2612	0.0999
04	Campeche	Sur-Sureste	Diesel - Onroad	SO2	0.3626	0.2249	0.0881
05	Coahuila	Noreste	Diesel - Onroad	SO2	0.3951	0.2808	0.1150
06	Colima	Centro-Occidente	Diesel - Onroad	SO2	0.4187	0.2836	0.1155
07	Chiapas	Sur-Sureste	Diesel - Onroad	SO2	0.3626	0.2249	0.0881
08	Chihuahua	Noreste	Diesel - Onroad	SO2	0.3951	0.2808	0.1150
09	Distrito Federal	Centro	Diesel - Onroad	SO2	0.3934	0.2595	0.1014
10	Durango	Noreste	Diesel - Onroad	SO2	0.3951	0.2808	0.1150
11	Guanajuato	Centro-Occidente	Diesel - Onroad	SO2	0.4187	0.2836	0.1155
12	Guerrero	Sur-Sureste	Diesel - Onroad	SO2	0.3626	0.2249	0.0881
13	Hidalgo	Centro	Diesel - Onroad	SO2	0.3934	0.2595	0.1014
14	Jalisco	Centro-Occidente	Diesel - Onroad	SO2	0.4187	0.2836	0.1155
15	México	Centro	Diesel - Onroad	SO2	0.3934	0.2595	0.1014
16	Michoacán	Centro-Occidente	Diesel - Onroad	SO2	0.2762	0.1870	0.0762
17	Morelos	Centro	Diesel - Onroad	SO2	0.3934	0.2595	0.1014
18	Nayarit	Centro-Occidente	Diesel - Onroad	SO2	0.4187	0.2836	0.1155
19	Nuevo León	Noreste	Diesel - Onroad	SO2	0.1519	0.1080	0.0442
20	Oaxaca	Sur-Sureste	Diesel - Onroad	SO2	0.3626	0.2249	0.0881
21	Puebla	Centro	Diesel - Onroad	SO2	0.3934	0.2595	0.1014
22	Querétaro	Centro-Occidente	Diesel - Onroad	SO2	0.4187	0.2836	0.1155
23	Quintana Roo	Sur-Sureste	Diesel - Onroad	SO2	0.3626	0.2249	0.0881
24	San Luis Potosí	Centro-Occidente	Diesel - Onroad	SO2	0.4187	0.2836	0.1155

ON-ROAD MOTOR VEHICLE PROJECTION FACTORS

State Code	State	Region	Source	Poll.	Projection Factor - 2018	Projection Factor - 2025	Projection Factor - 2030
25	Sinaloa	Noroeste	Diesel - Onroad	SO2	0.3960	0.2612	0.0999
26	Sonora	Noroeste	Diesel - Onroad	SO2	0.3960	0.2612	0.0999
27	Tabasco	Sur-Sureste	Diesel - Onroad	SO2	0.3626	0.2249	0.0881
28	Tamaulipas	Noreste	Diesel - Onroad	SO2	0.3951	0.2808	0.1150
29	Tlaxcala	Centro	Diesel - Onroad	SO2	0.3934	0.2595	0.1014
30	Veracruz	Sur-Sureste	Diesel - Onroad	SO2	0.3626	0.2249	0.0881
31	Yucatán	Sur-Sureste	Diesel - Onroad	SO2	0.3626	0.2249	0.0881
32	Zacatecas	Centro-Occidente	Diesel - Onroad	SO2	0.4187	0.2836	0.1155
01	Aguascalientes	Centro-Occidente	Diesel - Onroad	VOC	0.7347	0.6527	0.5159
02	Baja California	Noroeste	Diesel - Onroad	VOC	0.1286	0.1113	0.0826
03	Baja California Sur	Noroeste	Diesel - Onroad	VOC	0.6948	0.6013	0.4462
04	Campeche	Sur-Sureste	Diesel - Onroad	VOC	0.6362	0.5177	0.3933
05	Coahuila	Noreste	Diesel - Onroad	VOC	0.6933	0.6463	0.5136
06	Colima	Centro-Occidente	Diesel - Onroad	VOC	0.7347	0.6527	0.5159
07	Chiapas	Sur-Sureste	Diesel - Onroad	VOC	0.6362	0.5177	0.3933
08	Chihuahua	Noreste	Diesel - Onroad	VOC	0.6933	0.6463	0.5136
09	Distrito Federal	Centro	Diesel - Onroad	VOC	0.6902	0.5973	0.4530
10	Durango	Noreste	Diesel - Onroad	VOC	0.6933	0.6463	0.5136
11	Guanajuato	Centro-Occidente	Diesel - Onroad	VOC	0.7347	0.6527	0.5159
12	Guerrero	Sur-Sureste	Diesel - Onroad	VOC	0.6362	0.5177	0.3933
13	Hidalgo	Centro	Diesel - Onroad	VOC	0.6902	0.5973	0.4530
14	Jalisco	Centro-Occidente	Diesel - Onroad	VOC	0.7347	0.6527	0.5159
15	México	Centro	Diesel - Onroad	VOC	0.6902	0.5973	0.4530
16	Michoacán	Centro-Occidente	Diesel - Onroad	VOC	0.1971	0.1751	0.1384
17	Morelos	Centro	Diesel - Onroad	VOC	0.6902	0.5973	0.4530
18	Nayarit	Centro-Occidente	Diesel - Onroad	VOC	0.7347	0.6527	0.5159
19	Nuevo León	Noreste	Diesel - Onroad	VOC	0.2067	0.1927	0.1531
20	Oaxaca	Sur-Sureste	Diesel - Onroad	VOC	0.6362	0.5177	0.3933
21	Puebla	Centro	Diesel - Onroad	VOC	0.6902	0.5973	0.4530
22	Querétaro	Centro-Occidente	Diesel - Onroad	VOC	0.7347	0.6527	0.5159
23	Quintana Roo	Sur-Sureste	Diesel - Onroad	VOC	0.6362	0.5177	0.3933
24	San Luis Potosí	Centro-Occidente	Diesel - Onroad	VOC	0.7347	0.6527	0.5159
25	Sinaloa	Noroeste	Diesel - Onroad	VOC	0.6948	0.6013	0.4462
26	Sonora	Noroeste	Diesel - Onroad	VOC	0.6948	0.6013	0.4462
27	Tabasco	Sur-Sureste	Diesel - Onroad	VOC	0.6362	0.5177	0.3933
28	Tamaulipas	Noreste	Diesel - Onroad	VOC	0.6933	0.6463	0.5136
29	Tlaxcala	Centro	Diesel - Onroad	VOC	0.6902	0.5973	0.4530
30	Veracruz	Sur-Sureste	Diesel - Onroad	VOC	0.6362	0.5177	0.3933
31	Yucatán	Sur-Sureste	Diesel - Onroad	VOC	0.6362	0.5177	0.3933
32	Zacatecas	Centro-Occidente	Diesel - Onroad	VOC	0.7347	0.6527	0.5159
01	Aguascalientes	Centro-Occidente	Diesel - Onroad	CO	0.6610	0.6776	0.6466
02	Baja California	Noroeste	Diesel - Onroad	CO	0.1036	0.1034	0.0927
03	Baja California Sur	Noroeste	Diesel - Onroad	CO	0.6251	0.6242	0.5592
04	Campeche	Sur-Sureste	Diesel - Onroad	CO	0.5724	0.5374	0.4929
05	Coahuila	Noreste	Diesel - Onroad	CO	0.6237	0.6710	0.6437
06	Colima	Centro-Occidente	Diesel - Onroad	CO	0.6610	0.6776	0.6466
07	Chiapas	Sur-Sureste	Diesel - Onroad	CO	0.5724	0.5374	0.4929

ON-ROAD MOTOR VEHICLE PROJECTION FACTORS

State Code	State	Region	Source	Poll.	Projection Factor - 2018	Projection Factor - 2025	Projection Factor - 2030
08	Chihuahua	Noreste	Diesel - Onroad	CO	0.6237	0.6710	0.6437
09	Distrito Federal	Centro	Diesel - Onroad	CO	0.6210	0.6201	0.5678
10	Durango	Noreste	Diesel - Onroad	CO	0.6237	0.6710	0.6437
11	Guanajuato	Centro-Occidente	Diesel - Onroad	CO	0.6610	0.6776	0.6466
12	Guerrero	Sur-Sureste	Diesel - Onroad	CO	0.5724	0.5374	0.4929
13	Hidalgo	Centro	Diesel - Onroad	CO	0.6210	0.6201	0.5678
14	Jalisco	Centro-Occidente	Diesel - Onroad	CO	0.6610	0.6776	0.6466
15	México	Centro	Diesel - Onroad	CO	0.6210	0.6201	0.5678
16	Michoacán	Centro-Occidente	Diesel - Onroad	CO	0.1247	0.1279	0.1220
17	Morelos	Centro	Diesel - Onroad	CO	0.6210	0.6201	0.5678
18	Nayarit	Centro-Occidente	Diesel - Onroad	CO	0.6610	0.6776	0.6466
19	Nuevo León	Noreste	Diesel - Onroad	CO	0.1857	0.1997	0.1916
20	Oaxaca	Sur-Sureste	Diesel - Onroad	CO	0.5724	0.5374	0.4929
21	Puebla	Centro	Diesel - Onroad	CO	0.6210	0.6201	0.5678
22	Querétaro	Centro-Occidente	Diesel - Onroad	CO	0.6610	0.6776	0.6466
23	Quintana Roo	Sur-Sureste	Diesel - Onroad	CO	0.5724	0.5374	0.4929
24	San Luis Potosí	Centro-Occidente	Diesel - Onroad	CO	0.6610	0.6776	0.6466
25	Sinaloa	Noroeste	Diesel - Onroad	CO	0.6251	0.6242	0.5592
26	Sonora	Noroeste	Diesel - Onroad	CO	0.6251	0.6242	0.5592
27	Tabasco	Sur-Sureste	Diesel - Onroad	CO	0.5724	0.5374	0.4929
28	Tamaulipas	Noreste	Diesel - Onroad	CO	0.6237	0.6710	0.6437
29	Tlaxcala	Centro	Diesel - Onroad	CO	0.6210	0.6201	0.5678
30	Veracruz	Sur-Sureste	Diesel - Onroad	CO	0.5724	0.5374	0.4929
31	Yucatán	Sur-Sureste	Diesel - Onroad	CO	0.5724	0.5374	0.4929
32	Zacatecas	Centro-Occidente	Diesel - Onroad	CO	0.6610	0.6776	0.6466
01	Aguascalientes	Centro-Occidente	Diesel - Onroad	PM10	1.1177	1.3509	1.5073
02	Baja California	Noroeste	Diesel - Onroad	PM10	0.4008	0.4718	0.4942
03	Baja California Sur	Noroeste	Diesel - Onroad	PM10	1.0572	1.2444	1.3036
04	Campeche	Sur-Sureste	Diesel - Onroad	PM10	0.9680	1.0714	1.1490
05	Coahuila	Noreste	Diesel - Onroad	PM10	1.0548	1.3376	1.5005
06	Colima	Centro-Occidente	Diesel - Onroad	PM10	1.1177	1.3509	1.5073
07	Chiapas	Sur-Sureste	Diesel - Onroad	PM10	0.9680	1.0714	1.1490
08	Chihuahua	Noreste	Diesel - Onroad	PM10	1.0548	1.3376	1.5005
09	Distrito Federal	Centro	Diesel - Onroad	PM10	1.0501	1.2362	1.3237
10	Durango	Noreste	Diesel - Onroad	PM10	1.0548	1.3376	1.5005
11	Guanajuato	Centro-Occidente	Diesel - Onroad	PM10	1.1177	1.3509	1.5073
12	Guerrero	Sur-Sureste	Diesel - Onroad	PM10	0.9680	1.0714	1.1490
13	Hidalgo	Centro	Diesel - Onroad	PM10	1.0501	1.2362	1.3237
14	Jalisco	Centro-Occidente	Diesel - Onroad	PM10	1.1177	1.3509	1.5073
15	México	Centro	Diesel - Onroad	PM10	1.0501	1.2362	1.3237
16	Michoacán	Centro-Occidente	Diesel - Onroad	PM10	0.5925	0.7161	0.7990
17	Morelos	Centro	Diesel - Onroad	PM10	1.0501	1.2362	1.3237
18	Nayarit	Centro-Occidente	Diesel - Onroad	PM10	1.1177	1.3509	1.5073
19	Nuevo León	Noreste	Diesel - Onroad	PM10	0.3776	0.4789	0.5372
20	Oaxaca	Sur-Sureste	Diesel - Onroad	PM10	0.9680	1.0714	1.1490
21	Puebla	Centro	Diesel - Onroad	PM10	1.0501	1.2362	1.3237
22	Querétaro	Centro-Occidente	Diesel - Onroad	PM10	1.1177	1.3509	1.5073

ON-ROAD MOTOR VEHICLE PROJECTION FACTORS

State Code	State	Region	Source	Poll.	Projection Factor - 2018	Projection Factor - 2025	Projection Factor - 2030
23	Quintana Roo	Sur-Sureste	Diesel - Onroad	PM10	0.9680	1.0714	1.1490
24	San Luis Potosí	Centro-Occidente	Diesel - Onroad	PM10	1.1177	1.3509	1.5073
25	Sinaloa	Noroeste	Diesel - Onroad	PM10	1.0572	1.2444	1.3036
26	Sonora	Noroeste	Diesel - Onroad	PM10	1.0572	1.2444	1.3036
27	Tabasco	Sur-Sureste	Diesel - Onroad	PM10	0.9680	1.0714	1.1490
28	Tamaulipas	Noreste	Diesel - Onroad	PM10	1.0548	1.3376	1.5005
29	Tlaxcala	Centro	Diesel - Onroad	PM10	1.0501	1.2362	1.3237
30	Veracruz	Sur-Sureste	Diesel - Onroad	PM10	0.9680	1.0714	1.1490
31	Yucatán	Sur-Sureste	Diesel - Onroad	PM10	0.9680	1.0714	1.1490
32	Zacatecas	Centro-Occidente	Diesel - Onroad	PM10	1.1177	1.3509	1.5073
01	Aguascalientes	Centro-Occidente	Diesel - Onroad	PM2.5	1.1043	1.3280	1.4758
02	Baja California	Noroeste	Diesel - Onroad	PM2.5	0.4450	0.5213	0.5439
03	Baja California Sur	Noroeste	Diesel - Onroad	PM2.5	1.0444	1.2234	1.2764
04	Campeche	Sur-Sureste	Diesel - Onroad	PM2.5	0.9563	1.0533	1.1251
05	Coahuila	Noreste	Diesel - Onroad	PM2.5	1.0421	1.3150	1.4692
06	Colima	Centro-Occidente	Diesel - Onroad	PM2.5	1.1043	1.3280	1.4758
07	Chiapas	Sur-Sureste	Diesel - Onroad	PM2.5	0.9563	1.0533	1.1251
08	Chihuahua	Noreste	Diesel - Onroad	PM2.5	1.0421	1.3150	1.4692
09	Distrito Federal	Centro	Diesel - Onroad	PM2.5	1.0374	1.2153	1.2961
10	Durango	Noreste	Diesel - Onroad	PM2.5	1.0421	1.3150	1.4692
11	Guanajuato	Centro-Occidente	Diesel - Onroad	PM2.5	1.1043	1.3280	1.4758
12	Guerrero	Sur-Sureste	Diesel - Onroad	PM2.5	0.9563	1.0533	1.1251
13	Hidalgo	Centro	Diesel - Onroad	PM2.5	1.0374	1.2153	1.2961
14	Jalisco	Centro-Occidente	Diesel - Onroad	PM2.5	1.1043	1.3280	1.4758
15	México	Centro	Diesel - Onroad	PM2.5	1.0374	1.2153	1.2961
16	Michoacán	Centro-Occidente	Diesel - Onroad	PM2.5	0.6257	0.7525	0.8362
17	Morelos	Centro	Diesel - Onroad	PM2.5	1.0374	1.2153	1.2961
18	Nayarit	Centro-Occidente	Diesel - Onroad	PM2.5	1.1043	1.3280	1.4758
19	Nuevo León	Noreste	Diesel - Onroad	PM2.5	0.3611	0.4556	0.5091
20	Oaxaca	Sur-Sureste	Diesel - Onroad	PM2.5	0.9563	1.0533	1.1251
21	Puebla	Centro	Diesel - Onroad	PM2.5	1.0374	1.2153	1.2961
22	Querétaro	Centro-Occidente	Diesel - Onroad	PM2.5	1.1043	1.3280	1.4758
23	Quintana Roo	Sur-Sureste	Diesel - Onroad	PM2.5	0.9563	1.0533	1.1251
24	San Luis Potosí	Centro-Occidente	Diesel - Onroad	PM2.5	1.1043	1.3280	1.4758
25	Sinaloa	Noroeste	Diesel - Onroad	PM2.5	1.0444	1.2234	1.2764
26	Sonora	Noroeste	Diesel - Onroad	PM2.5	1.0444	1.2234	1.2764
27	Tabasco	Sur-Sureste	Diesel - Onroad	PM2.5	0.9563	1.0533	1.1251
28	Tamaulipas	Noreste	Diesel - Onroad	PM2.5	1.0421	1.3150	1.4692
29	Tlaxcala	Centro	Diesel - Onroad	PM2.5	1.0374	1.2153	1.2961
30	Veracruz	Sur-Sureste	Diesel - Onroad	PM2.5	0.9563	1.0533	1.1251
31	Yucatán	Sur-Sureste	Diesel - Onroad	PM2.5	0.9563	1.0533	1.1251
32	Zacatecas	Centro-Occidente	Diesel - Onroad	PM2.5	1.1043	1.3280	1.4758
01	Aguascalientes	Centro-Occidente	Diesel - Onroad	NH3	1.3461	1.7458	2.0553
02	Baja California	Noroeste	Diesel - Onroad	NH3	0.2252	0.2845	0.3145
03	Baja California Sur	Noroeste	Diesel - Onroad	NH3	1.2732	1.6082	1.7776
04	Campeche	Sur-Sureste	Diesel - Onroad	NH3	1.1658	1.3846	1.5668
05	Coahuila	Noreste	Diesel - Onroad	NH3	1.2703	1.7287	2.0461

ON-ROAD MOTOR VEHICLE PROJECTION FACTORS

State Code	State	Region	Source	Poll.	Projection Factor - 2018	Projection Factor - 2025	Projection Factor - 2030
06	Colima	Centro-Occidente	Diesel - Onroad	NH3	1.3461	1.7458	2.0553
07	Chiapas	Sur-Sureste	Diesel - Onroad	NH3	1.1658	1.3846	1.5668
08	Chihuahua	Noreste	Diesel - Onroad	NH3	1.2703	1.7287	2.0461
09	Distrito Federal	Centro	Diesel - Onroad	NH3	1.2647	1.5976	1.8049
10	Durango	Noreste	Diesel - Onroad	NH3	1.2703	1.7287	2.0461
11	Guanajuato	Centro-Occidente	Diesel - Onroad	NH3	1.3461	1.7458	2.0553
12	Guerrero	Sur-Sureste	Diesel - Onroad	NH3	1.1658	1.3846	1.5668
13	Hidalgo	Centro	Diesel - Onroad	NH3	1.2647	1.5976	1.8049
14	Jalisco	Centro-Occidente	Diesel - Onroad	NH3	1.3461	1.7458	2.0553
15	México	Centro	Diesel - Onroad	NH3	1.2647	1.5976	1.8049
16	Michoacán	Centro-Occidente	Diesel - Onroad	NH3	0.5590	0.7250	0.8536
17	Morelos	Centro	Diesel - Onroad	NH3	1.2647	1.5976	1.8049
18	Nayarit	Centro-Occidente	Diesel - Onroad	NH3	1.3461	1.7458	2.0553
19	Nuevo León	Noreste	Diesel - Onroad	NH3	0.3714	0.5055	0.5983
20	Oaxaca	Sur-Sureste	Diesel - Onroad	NH3	1.1658	1.3846	1.5668
21	Puebla	Centro	Diesel - Onroad	NH3	1.2647	1.5976	1.8049
22	Querétaro	Centro-Occidente	Diesel - Onroad	NH3	1.3461	1.7458	2.0553
23	Quintana Roo	Sur-Sureste	Diesel - Onroad	NH3	1.1658	1.3846	1.5668
24	San Luis Potosí	Centro-Occidente	Diesel - Onroad	NH3	1.3461	1.7458	2.0553
25	Sinaloa	Noroeste	Diesel - Onroad	NH3	1.2732	1.6082	1.7776
26	Sonora	Noroeste	Diesel - Onroad	NH3	1.2732	1.6082	1.7776
27	Tabasco	Sur-Sureste	Diesel - Onroad	NH3	1.1658	1.3846	1.5668
28	Tamaulipas	Noreste	Diesel - Onroad	NH3	1.2703	1.7287	2.0461
29	Tlaxcala	Centro	Diesel - Onroad	NH3	1.2647	1.5976	1.8049
30	Veracruz	Sur-Sureste	Diesel - Onroad	NH3	1.1658	1.3846	1.5668
31	Yucatán	Sur-Sureste	Diesel - Onroad	NH3	1.1658	1.3846	1.5668
32	Zacatecas	Centro-Occidente	Diesel - Onroad	NH3	1.3461	1.7458	2.0553
01	Aguascalientes	Centro-Occidente	LPG - Onroad	NOx	1.5200	1.4600	1.4105
02	Baja California	Noroeste	LPG - Onroad	NOx	0.1791	0.1672	0.1672
03	Baja California Sur	Noroeste	LPG - Onroad	NOx	1.0714	1.0000	1.0000
04	Campeche	Sur-Sureste	LPG - Onroad	NOx	1.1379	1.1379	1.1379
05	Coahuila	Noreste	LPG - Onroad	NOx	1.2453	1.1321	1.0401
06	Colima	Centro-Occidente	LPG - Onroad	NOx	1.5200	1.4600	1.4105
07	Chiapas	Sur-Sureste	LPG - Onroad	NOx	1.1379	1.1379	1.1379
08	Chihuahua	Noreste	LPG - Onroad	NOx	1.2453	1.1321	1.0401
09	Distrito Federal	Centro	LPG - Onroad	NOx	0.9098	0.9016	0.9016
10	Durango	Noreste	LPG - Onroad	NOx	1.2453	1.1321	1.0401
11	Guanajuato	Centro-Occidente	LPG - Onroad	NOx	1.5200	1.4600	1.4105
12	Guerrero	Sur-Sureste	LPG - Onroad	NOx	1.1379	1.1379	1.1379
13	Hidalgo	Centro	LPG - Onroad	NOx	0.9098	0.9016	0.9016
14	Jalisco	Centro-Occidente	LPG - Onroad	NOx	1.5200	1.4600	1.4105
15	México	Centro	LPG - Onroad	NOx	0.9098	0.9016	0.9016
16	Michoacán	Centro-Occidente	LPG - Onroad	NOx	0.4920	0.4726	0.4566
17	Morelos	Centro	LPG - Onroad	NOx	0.9098	0.9016	0.9016
18	Nayarit	Centro-Occidente	LPG - Onroad	NOx	1.5200	1.4600	1.4105
19	Nuevo León	Noreste	LPG - Onroad	NOx	0.3234	0.2940	0.2701
20	Oaxaca	Sur-Sureste	LPG - Onroad	NOx	1.1379	1.1379	1.1379

ON-ROAD MOTOR VEHICLE PROJECTION FACTORS

State Code	State	Region	Source	Poll.	Projection Factor - 2018	Projection Factor - 2025	Projection Factor - 2030
21	Puebla	Centro	LPG - Onroad	NOx	0.9098	0.9016	0.9016
22	Querétaro	Centro-Occidente	LPG - Onroad	NOx	1.5200	1.4600	1.4105
23	Quintana Roo	Sur-Sureste	LPG - Onroad	NOx	1.1379	1.1379	1.1379
24	San Luis Potosí	Centro-Occidente	LPG - Onroad	NOx	1.5200	1.4600	1.4105
25	Sinaloa	Noroeste	LPG - Onroad	NOx	1.0714	1.0000	1.0000
26	Sonora	Noroeste	LPG - Onroad	NOx	1.0714	1.0000	1.0000
27	Tabasco	Sur-Sureste	LPG - Onroad	NOx	1.1379	1.1379	1.1379
28	Tamaulipas	Noreste	LPG - Onroad	NOx	1.2453	1.1321	1.0401
29	Tlaxcala	Centro	LPG - Onroad	NOx	0.9098	0.9016	0.9016
30	Veracruz	Sur-Sureste	LPG - Onroad	NOx	1.1379	1.1379	1.1379
31	Yucatán	Sur-Sureste	LPG - Onroad	NOx	1.1379	1.1379	1.1379
32	Zacatecas	Centro-Occidente	LPG - Onroad	NOx	1.5200	1.4600	1.4105
01	Aguascalientes	Centro-Occidente	LPG - Onroad	SO2	1.5200	1.4600	1.4105
02	Baja California	Noroeste	LPG - Onroad	SO2	0.3289	0.3070	0.3070
03	Baja California Sur	Noroeste	LPG - Onroad	SO2	1.0714	1.0000	1.0000
04	Campeche	Sur-Sureste	LPG - Onroad	SO2	1.1379	1.1379	1.1379
05	Coahuila	Noreste	LPG - Onroad	SO2	1.2453	1.1321	1.0401
06	Colima	Centro-Occidente	LPG - Onroad	SO2	1.5200	1.4600	1.4105
07	Chiapas	Sur-Sureste	LPG - Onroad	SO2	1.1379	1.1379	1.1379
08	Chihuahua	Noreste	LPG - Onroad	SO2	1.2453	1.1321	1.0401
09	Distrito Federal	Centro	LPG - Onroad	SO2	0.9098	0.9016	0.9016
10	Durango	Noreste	LPG - Onroad	SO2	1.2453	1.1321	1.0401
11	Guanajuato	Centro-Occidente	LPG - Onroad	SO2	1.5200	1.4600	1.4105
12	Guerrero	Sur-Sureste	LPG - Onroad	SO2	1.1379	1.1379	1.1379
13	Hidalgo	Centro	LPG - Onroad	SO2	0.9098	0.9016	0.9016
14	Jalisco	Centro-Occidente	LPG - Onroad	SO2	1.5200	1.4600	1.4105
15	México	Centro	LPG - Onroad	SO2	0.9098	0.9016	0.9016
16	Michoacán	Centro-Occidente	LPG - Onroad	SO2	1.0026	0.9630	0.9304
17	Morelos	Centro	LPG - Onroad	SO2	0.9098	0.9016	0.9016
18	Nayarit	Centro-Occidente	LPG - Onroad	SO2	1.5200	1.4600	1.4105
19	Nuevo León	Noreste	LPG - Onroad	SO2	0.4788	0.4353	0.3999
20	Oaxaca	Sur-Sureste	LPG - Onroad	SO2	1.1379	1.1379	1.1379
21	Puebla	Centro	LPG - Onroad	SO2	0.9098	0.9016	0.9016
22	Querétaro	Centro-Occidente	LPG - Onroad	SO2	1.5200	1.4600	1.4105
23	Quintana Roo	Sur-Sureste	LPG - Onroad	SO2	1.1379	1.1379	1.1379
24	San Luis Potosí	Centro-Occidente	LPG - Onroad	SO2	1.5200	1.4600	1.4105
25	Sinaloa	Noroeste	LPG - Onroad	SO2	1.0714	1.0000	1.0000
26	Sonora	Noroeste	LPG - Onroad	SO2	1.0714	1.0000	1.0000
27	Tabasco	Sur-Sureste	LPG - Onroad	SO2	1.1379	1.1379	1.1379
28	Tamaulipas	Noreste	LPG - Onroad	SO2	1.2453	1.1321	1.0401
29	Tlaxcala	Centro	LPG - Onroad	SO2	0.9098	0.9016	0.9016
30	Veracruz	Sur-Sureste	LPG - Onroad	SO2	1.1379	1.1379	1.1379
31	Yucatán	Sur-Sureste	LPG - Onroad	SO2	1.1379	1.1379	1.1379
32	Zacatecas	Centro-Occidente	LPG - Onroad	SO2	1.5200	1.4600	1.4105
01	Aguascalientes	Centro-Occidente	LPG - Onroad	VOC	1.5200	1.4600	1.4105
02	Baja California	Noroeste	LPG - Onroad	VOC	0.1983	0.1851	0.1851
03	Baja California Sur	Noroeste	LPG - Onroad	VOC	1.0714	1.0000	1.0000

ON-ROAD MOTOR VEHICLE PROJECTION FACTORS

State Code	State	Region	Source	Poll.	Projection Factor - 2018	Projection Factor - 2025	Projection Factor - 2030
04	Campeche	Sur-Sureste	LPG - Onroad	VOC	1.1379	1.1379	1.1379
05	Coahuila	Noreste	LPG - Onroad	VOC	1.2453	1.1321	1.0401
06	Colima	Centro-Occidente	LPG - Onroad	VOC	1.5200	1.4600	1.4105
07	Chiapas	Sur-Sureste	LPG - Onroad	VOC	1.1379	1.1379	1.1379
08	Chihuahua	Noreste	LPG - Onroad	VOC	1.2453	1.1321	1.0401
09	Distrito Federal	Centro	LPG - Onroad	VOC	0.9098	0.9016	0.9016
10	Durango	Noreste	LPG - Onroad	VOC	1.2453	1.1321	1.0401
11	Guanajuato	Centro-Occidente	LPG - Onroad	VOC	1.5200	1.4600	1.4105
12	Guerrero	Sur-Sureste	LPG - Onroad	VOC	1.1379	1.1379	1.1379
13	Hidalgo	Centro	LPG - Onroad	VOC	0.9098	0.9016	0.9016
14	Jalisco	Centro-Occidente	LPG - Onroad	VOC	1.5200	1.4600	1.4105
15	México	Centro	LPG - Onroad	VOC	0.9098	0.9016	0.9016
16	Michoacán	Centro-Occidente	LPG - Onroad	VOC	0.4078	0.3917	0.3784
17	Morelos	Centro	LPG - Onroad	VOC	0.9098	0.9016	0.9016
18	Nayarit	Centro-Occidente	LPG - Onroad	VOC	1.5200	1.4600	1.4105
19	Nuevo León	Noreste	LPG - Onroad	VOC	0.3713	0.3376	0.3102
20	Oaxaca	Sur-Sureste	LPG - Onroad	VOC	1.1379	1.1379	1.1379
21	Puebla	Centro	LPG - Onroad	VOC	0.9098	0.9016	0.9016
22	Querétaro	Centro-Occidente	LPG - Onroad	VOC	1.5200	1.4600	1.4105
23	Quintana Roo	Sur-Sureste	LPG - Onroad	VOC	1.1379	1.1379	1.1379
24	San Luis Potosí	Centro-Occidente	LPG - Onroad	VOC	1.5200	1.4600	1.4105
25	Sinaloa	Noroeste	LPG - Onroad	VOC	1.0714	1.0000	1.0000
26	Sonora	Noroeste	LPG - Onroad	VOC	1.0714	1.0000	1.0000
27	Tabasco	Sur-Sureste	LPG - Onroad	VOC	1.1379	1.1379	1.1379
28	Tamaulipas	Noreste	LPG - Onroad	VOC	1.2453	1.1321	1.0401
29	Tlaxcala	Centro	LPG - Onroad	VOC	0.9098	0.9016	0.9016
30	Veracruz	Sur-Sureste	LPG - Onroad	VOC	1.1379	1.1379	1.1379
31	Yucatán	Sur-Sureste	LPG - Onroad	VOC	1.1379	1.1379	1.1379
32	Zacatecas	Centro-Occidente	LPG - Onroad	VOC	1.5200	1.4600	1.4105
01	Aguascalientes	Centro-Occidente	LPG - Onroad	CO	1.5200	1.4600	1.4105
02	Baja California	Noroeste	LPG - Onroad	CO	0.1775	0.1657	0.1657
03	Baja California Sur	Noroeste	LPG - Onroad	CO	1.0714	1.0000	1.0000
04	Campeche	Sur-Sureste	LPG - Onroad	CO	1.1379	1.1379	1.1379
05	Coahuila	Noreste	LPG - Onroad	CO	1.2453	1.1321	1.0401
06	Colima	Centro-Occidente	LPG - Onroad	CO	1.5200	1.4600	1.4105
07	Chiapas	Sur-Sureste	LPG - Onroad	CO	1.1379	1.1379	1.1379
08	Chihuahua	Noreste	LPG - Onroad	CO	1.2453	1.1321	1.0401
09	Distrito Federal	Centro	LPG - Onroad	CO	0.9098	0.9016	0.9016
10	Durango	Noreste	LPG - Onroad	CO	1.2453	1.1321	1.0401
11	Guanajuato	Centro-Occidente	LPG - Onroad	CO	1.5200	1.4600	1.4105
12	Guerrero	Sur-Sureste	LPG - Onroad	CO	1.1379	1.1379	1.1379
13	Hidalgo	Centro	LPG - Onroad	CO	0.9098	0.9016	0.9016
14	Jalisco	Centro-Occidente	LPG - Onroad	CO	1.5200	1.4600	1.4105
15	México	Centro	LPG - Onroad	CO	0.9098	0.9016	0.9016
16	Michoacán	Centro-Occidente	LPG - Onroad	CO	0.2868	0.2755	0.2662
17	Morelos	Centro	LPG - Onroad	CO	0.9098	0.9016	0.9016
18	Nayarit	Centro-Occidente	LPG - Onroad	CO	1.5200	1.4600	1.4105

ON-ROAD MOTOR VEHICLE PROJECTION FACTORS

State Code	State	Region	Source	Poll.	Projection Factor - 2018	Projection Factor - 2025	Projection Factor - 2030
19	Nuevo León	Noreste	LPG - Onroad	CO	0.3707	0.3370	0.3096
20	Oaxaca	Sur-Sureste	LPG - Onroad	CO	1.1379	1.1379	1.1379
21	Puebla	Centro	LPG - Onroad	CO	0.9098	0.9016	0.9016
22	Querétaro	Centro-Occidente	LPG - Onroad	CO	1.5200	1.4600	1.4105
23	Quintana Roo	Sur-Sureste	LPG - Onroad	CO	1.1379	1.1379	1.1379
24	San Luis Potosí	Centro-Occidente	LPG - Onroad	CO	1.5200	1.4600	1.4105
25	Sinaloa	Noroeste	LPG - Onroad	CO	1.0714	1.0000	1.0000
26	Sonora	Noroeste	LPG - Onroad	CO	1.0714	1.0000	1.0000
27	Tabasco	Sur-Sureste	LPG - Onroad	CO	1.1379	1.1379	1.1379
28	Tamaulipas	Noreste	LPG - Onroad	CO	1.2453	1.1321	1.0401
29	Tlaxcala	Centro	LPG - Onroad	CO	0.9098	0.9016	0.9016
30	Veracruz	Sur-Sureste	LPG - Onroad	CO	1.1379	1.1379	1.1379
31	Yucatán	Sur-Sureste	LPG - Onroad	CO	1.1379	1.1379	1.1379
32	Zacatecas	Centro-Occidente	LPG - Onroad	CO	1.5200	1.4600	1.4105
01	Aguascalientes	Centro-Occidente	LPG - Onroad	PM10	1.5200	1.4600	1.4105
02	Baja California	Noroeste	LPG - Onroad	PM10	0.4062	0.3791	0.3791
03	Baja California Sur	Noroeste	LPG - Onroad	PM10	1.0714	1.0000	1.0000
04	Campeche	Sur-Sureste	LPG - Onroad	PM10	1.1379	1.1379	1.1379
05	Coahuila	Noreste	LPG - Onroad	PM10	1.2453	1.1321	1.0401
06	Colima	Centro-Occidente	LPG - Onroad	PM10	1.5200	1.4600	1.4105
07	Chiapas	Sur-Sureste	LPG - Onroad	PM10	1.1379	1.1379	1.1379
08	Chihuahua	Noreste	LPG - Onroad	PM10	1.2453	1.1321	1.0401
09	Distrito Federal	Centro	LPG - Onroad	PM10	0.9098	0.9016	0.9016
10	Durango	Noreste	LPG - Onroad	PM10	1.2453	1.1321	1.0401
11	Guanajuato	Centro-Occidente	LPG - Onroad	PM10	1.5200	1.4600	1.4105
12	Guerrero	Sur-Sureste	LPG - Onroad	PM10	1.1379	1.1379	1.1379
13	Hidalgo	Centro	LPG - Onroad	PM10	0.9098	0.9016	0.9016
14	Jalisco	Centro-Occidente	LPG - Onroad	PM10	1.5200	1.4600	1.4105
15	México	Centro	LPG - Onroad	PM10	0.9098	0.9016	0.9016
16	Michoacán	Centro-Occidente	LPG - Onroad	PM10	0.8058	0.7739	0.7477
17	Morelos	Centro	LPG - Onroad	PM10	0.9098	0.9016	0.9016
18	Nayarit	Centro-Occidente	LPG - Onroad	PM10	1.5200	1.4600	1.4105
19	Nuevo León	Noreste	LPG - Onroad	PM10	0.4458	0.4053	0.3723
20	Oaxaca	Sur-Sureste	LPG - Onroad	PM10	1.1379	1.1379	1.1379
21	Puebla	Centro	LPG - Onroad	PM10	0.9098	0.9016	0.9016
22	Querétaro	Centro-Occidente	LPG - Onroad	PM10	1.5200	1.4600	1.4105
23	Quintana Roo	Sur-Sureste	LPG - Onroad	PM10	1.1379	1.1379	1.1379
24	San Luis Potosí	Centro-Occidente	LPG - Onroad	PM10	1.5200	1.4600	1.4105
25	Sinaloa	Noroeste	LPG - Onroad	PM10	1.0714	1.0000	1.0000
26	Sonora	Noroeste	LPG - Onroad	PM10	1.0714	1.0000	1.0000
27	Tabasco	Sur-Sureste	LPG - Onroad	PM10	1.1379	1.1379	1.1379
28	Tamaulipas	Noreste	LPG - Onroad	PM10	1.2453	1.1321	1.0401
29	Tlaxcala	Centro	LPG - Onroad	PM10	0.9098	0.9016	0.9016
30	Veracruz	Sur-Sureste	LPG - Onroad	PM10	1.1379	1.1379	1.1379
31	Yucatán	Sur-Sureste	LPG - Onroad	PM10	1.1379	1.1379	1.1379
32	Zacatecas	Centro-Occidente	LPG - Onroad	PM10	1.5200	1.4600	1.4105
01	Aguascalientes	Centro-Occidente	LPG - Onroad	PM2.5	1.5200	1.4600	1.4105

ON-ROAD MOTOR VEHICLE PROJECTION FACTORS

State Code	State	Region	Source	Poll.	Projection Factor - 2018	Projection Factor - 2025	Projection Factor - 2030
02	Baja California	Noroeste	LPG - Onroad	PM2.5	0.4565	0.4261	0.4261
03	Baja California Sur	Noroeste	LPG - Onroad	PM2.5	1.0714	1.0000	1.0000
04	Campeche	Sur-Sureste	LPG - Onroad	PM2.5	1.1379	1.1379	1.1379
05	Coahuila	Noreste	LPG - Onroad	PM2.5	1.2453	1.1321	1.0401
06	Colima	Centro-Occidente	LPG - Onroad	PM2.5	1.5200	1.4600	1.4105
07	Chiapas	Sur-Sureste	LPG - Onroad	PM2.5	1.1379	1.1379	1.1379
08	Chihuahua	Noreste	LPG - Onroad	PM2.5	1.2453	1.1321	1.0401
09	Distrito Federal	Centro	LPG - Onroad	PM2.5	0.9098	0.9016	0.9016
10	Durango	Noreste	LPG - Onroad	PM2.5	1.2453	1.1321	1.0401
11	Guanajuato	Centro-Occidente	LPG - Onroad	PM2.5	1.5200	1.4600	1.4105
12	Guerrero	Sur-Sureste	LPG - Onroad	PM2.5	1.1379	1.1379	1.1379
13	Hidalgo	Centro	LPG - Onroad	PM2.5	0.9098	0.9016	0.9016
14	Jalisco	Centro-Occidente	LPG - Onroad	PM2.5	1.5200	1.4600	1.4105
15	México	Centro	LPG - Onroad	PM2.5	0.9098	0.9016	0.9016
16	Michoacán	Centro-Occidente	LPG - Onroad	PM2.5	0.8612	0.8272	0.7992
17	Morelos	Centro	LPG - Onroad	PM2.5	0.9098	0.9016	0.9016
18	Nayarit	Centro-Occidente	LPG - Onroad	PM2.5	1.5200	1.4600	1.4105
19	Nuevo León	Noreste	LPG - Onroad	PM2.5	0.4315	0.3923	0.3604
20	Oaxaca	Sur-Sureste	LPG - Onroad	PM2.5	1.1379	1.1379	1.1379
21	Puebla	Centro	LPG - Onroad	PM2.5	0.9098	0.9016	0.9016
22	Querétaro	Centro-Occidente	LPG - Onroad	PM2.5	1.5200	1.4600	1.4105
23	Quintana Roo	Sur-Sureste	LPG - Onroad	PM2.5	1.1379	1.1379	1.1379
24	San Luis Potosí	Centro-Occidente	LPG - Onroad	PM2.5	1.5200	1.4600	1.4105
25	Sinaloa	Noroeste	LPG - Onroad	PM2.5	1.0714	1.0000	1.0000
26	Sonora	Noroeste	LPG - Onroad	PM2.5	1.0714	1.0000	1.0000
27	Tabasco	Sur-Sureste	LPG - Onroad	PM2.5	1.1379	1.1379	1.1379
28	Tamaulipas	Noreste	LPG - Onroad	PM2.5	1.2453	1.1321	1.0401
29	Tlaxcala	Centro	LPG - Onroad	PM2.5	0.9098	0.9016	0.9016
30	Veracruz	Sur-Sureste	LPG - Onroad	PM2.5	1.1379	1.1379	1.1379
31	Yucatán	Sur-Sureste	LPG - Onroad	PM2.5	1.1379	1.1379	1.1379
32	Zacatecas	Centro-Occidente	LPG - Onroad	PM2.5	1.5200	1.4600	1.4105
01	Aguascalientes	Centro-Occidente	LPG - Onroad	NH3	1.5200	1.4600	1.4105
02	Baja California	Noroeste	LPG - Onroad	NH3	0.1895	0.1769	0.1769
03	Baja California Sur	Noroeste	LPG - Onroad	NH3	1.0714	1.0000	1.0000
04	Campeche	Sur-Sureste	LPG - Onroad	NH3	1.1379	1.1379	1.1379
05	Coahuila	Noreste	LPG - Onroad	NH3	1.2453	1.1321	1.0401
06	Colima	Centro-Occidente	LPG - Onroad	NH3	1.5200	1.4600	1.4105
07	Chiapas	Sur-Sureste	LPG - Onroad	NH3	1.1379	1.1379	1.1379
08	Chihuahua	Noreste	LPG - Onroad	NH3	1.2453	1.1321	1.0401
09	Distrito Federal	Centro	LPG - Onroad	NH3	0.9098	0.9016	0.9016
10	Durango	Noreste	LPG - Onroad	NH3	1.2453	1.1321	1.0401
11	Guanajuato	Centro-Occidente	LPG - Onroad	NH3	1.5200	1.4600	1.4105
12	Guerrero	Sur-Sureste	LPG - Onroad	NH3	1.1379	1.1379	1.1379
13	Hidalgo	Centro	LPG - Onroad	NH3	0.9098	0.9016	0.9016
14	Jalisco	Centro-Occidente	LPG - Onroad	NH3	1.5200	1.4600	1.4105
15	México	Centro	LPG - Onroad	NH3	0.9098	0.9016	0.9016
16	Michoacán	Centro-Occidente	LPG - Onroad	NH3	0.6313	0.6063	0.5858

ON-ROAD MOTOR VEHICLE PROJECTION FACTORS

State Code	State	Region	Source	Poll.	Projection Factor - 2018	Projection Factor - 2025	Projection Factor - 2030
17	Morelos	Centro	LPG - Onroad	NH3	0.9098	0.9016	0.9016
18	Nayarit	Centro-Occidente	LPG - Onroad	NH3	1.5200	1.4600	1.4105
19	Nuevo León	Noreste	LPG - Onroad	NH3	0.3641	0.3310	0.3041
20	Oaxaca	Sur-Sureste	LPG - Onroad	NH3	1.1379	1.1379	1.1379
21	Puebla	Centro	LPG - Onroad	NH3	0.9098	0.9016	0.9016
22	Querétaro	Centro-Occidente	LPG - Onroad	NH3	1.5200	1.4600	1.4105
23	Quintana Roo	Sur-Sureste	LPG - Onroad	NH3	1.1379	1.1379	1.1379
24	San Luis Potosí	Centro-Occidente	LPG - Onroad	NH3	1.5200	1.4600	1.4105
25	Sinaloa	Noroeste	LPG - Onroad	NH3	1.0714	1.0000	1.0000
26	Sonora	Noroeste	LPG - Onroad	NH3	1.0714	1.0000	1.0000
27	Tabasco	Sur-Sureste	LPG - Onroad	NH3	1.1379	1.1379	1.1379
28	Tamaulipas	Noreste	LPG - Onroad	NH3	1.2453	1.1321	1.0401
29	Tlaxcala	Centro	LPG - Onroad	NH3	0.9098	0.9016	0.9016
30	Veracruz	Sur-Sureste	LPG - Onroad	NH3	1.1379	1.1379	1.1379
31	Yucatán	Sur-Sureste	LPG - Onroad	NH3	1.1379	1.1379	1.1379
32	Zacatecas	Centro-Occidente	LPG - Onroad	NH3	1.5200	1.4600	1.4105
01	Aguascalientes	Centro-Occidente	Natural Gas - Onroad	NOx	1.0000	1.0000	1.0000
02	Baja California	Noroeste	Natural Gas - Onroad	NOx	0.1672	0.1672	0.1672
03	Baja California Sur	Noroeste	Natural Gas - Onroad	NOx	1.0000	1.0000	1.0000
04	Campeche	Sur-Sureste	Natural Gas - Onroad	NOx	1.0000	1.0000	1.0000
05	Coahuila	Noreste	Natural Gas - Onroad	NOx	1.0000	1.0000	1.0000
06	Colima	Centro-Occidente	Natural Gas - Onroad	NOx	1.0000	1.0000	1.0000
07	Chiapas	Sur-Sureste	Natural Gas - Onroad	NOx	1.0000	1.0000	1.0000
08	Chihuahua	Noreste	Natural Gas - Onroad	NOx	1.0000	1.0000	1.0000
09	Distrito Federal	Centro	Natural Gas - Onroad	NOx	1.0000	1.0000	1.0000
10	Durango	Noreste	Natural Gas - Onroad	NOx	1.0000	1.0000	1.0000
11	Guanajuato	Centro-Occidente	Natural Gas - Onroad	NOx	1.0000	1.0000	1.0000
12	Guerrero	Sur-Sureste	Natural Gas - Onroad	NOx	1.0000	1.0000	1.0000
13	Hidalgo	Centro	Natural Gas - Onroad	NOx	1.0000	1.0000	1.0000
14	Jalisco	Centro-Occidente	Natural Gas - Onroad	NOx	1.0000	1.0000	1.0000
15	México	Centro	Natural Gas - Onroad	NOx	1.0000	1.0000	1.0000
16	Michoacán	Centro-Occidente	Natural Gas - Onroad	NOx	0.3237	0.3237	0.3237
17	Morelos	Centro	Natural Gas - Onroad	NOx	1.0000	1.0000	1.0000
18	Nayarit	Centro-Occidente	Natural Gas - Onroad	NOx	1.0000	1.0000	1.0000
19	Nuevo León	Noreste	Natural Gas - Onroad	NOx	0.2597	0.2597	0.2597
20	Oaxaca	Sur-Sureste	Natural Gas - Onroad	NOx	1.0000	1.0000	1.0000
21	Puebla	Centro	Natural Gas - Onroad	NOx	1.0000	1.0000	1.0000
22	Querétaro	Centro-Occidente	Natural Gas - Onroad	NOx	1.0000	1.0000	1.0000
23	Quintana Roo	Sur-Sureste	Natural Gas - Onroad	NOx	1.0000	1.0000	1.0000
24	San Luis Potosí	Centro-Occidente	Natural Gas - Onroad	NOx	1.0000	1.0000	1.0000
25	Sinaloa	Noroeste	Natural Gas - Onroad	NOx	1.0000	1.0000	1.0000
26	Sonora	Noroeste	Natural Gas - Onroad	NOx	1.0000	1.0000	1.0000
27	Tabasco	Sur-Sureste	Natural Gas - Onroad	NOx	1.0000	1.0000	1.0000
28	Tamaulipas	Noreste	Natural Gas - Onroad	NOx	1.0000	1.0000	1.0000
29	Tlaxcala	Centro	Natural Gas - Onroad	NOx	1.0000	1.0000	1.0000
30	Veracruz	Sur-Sureste	Natural Gas - Onroad	NOx	1.0000	1.0000	1.0000
31	Yucatán	Sur-Sureste	Natural Gas - Onroad	NOx	1.0000	1.0000	1.0000

ON-ROAD MOTOR VEHICLE PROJECTION FACTORS

State Code	State	Region	Source	Poll.	Projection Factor - 2018	Projection Factor - 2025	Projection Factor - 2030
32	Zacatecas	Centro-Occidente	Natural Gas - Onroad	NOx	1.0000	1.0000	1.0000
01	Aguascalientes	Centro-Occidente	Natural Gas - Onroad	SO2	1.0000	1.0000	1.0000
02	Baja California	Noroeste	Natural Gas - Onroad	SO2	0.3070	0.3070	0.3070
03	Baja California Sur	Noroeste	Natural Gas - Onroad	SO2	1.0000	1.0000	1.0000
04	Campeche	Sur-Sureste	Natural Gas - Onroad	SO2	1.0000	1.0000	1.0000
05	Coahuila	Noreste	Natural Gas - Onroad	SO2	1.0000	1.0000	1.0000
06	Colima	Centro-Occidente	Natural Gas - Onroad	SO2	1.0000	1.0000	1.0000
07	Chiapas	Sur-Sureste	Natural Gas - Onroad	SO2	1.0000	1.0000	1.0000
08	Chihuahua	Noreste	Natural Gas - Onroad	SO2	1.0000	1.0000	1.0000
09	Distrito Federal	Centro	Natural Gas - Onroad	SO2	1.0000	1.0000	1.0000
10	Durango	Noreste	Natural Gas - Onroad	SO2	1.0000	1.0000	1.0000
11	Guanajuato	Centro-Occidente	Natural Gas - Onroad	SO2	1.0000	1.0000	1.0000
12	Guerrero	Sur-Sureste	Natural Gas - Onroad	SO2	1.0000	1.0000	1.0000
13	Hidalgo	Centro	Natural Gas - Onroad	SO2	1.0000	1.0000	1.0000
14	Jalisco	Centro-Occidente	Natural Gas - Onroad	SO2	1.0000	1.0000	1.0000
15	México	Centro	Natural Gas - Onroad	SO2	1.0000	1.0000	1.0000
16	Michoacán	Centro-Occidente	Natural Gas - Onroad	SO2	0.6596	0.6596	0.6596
17	Morelos	Centro	Natural Gas - Onroad	SO2	1.0000	1.0000	1.0000
18	Nayarit	Centro-Occidente	Natural Gas - Onroad	SO2	1.0000	1.0000	1.0000
19	Nuevo León	Noreste	Natural Gas - Onroad	SO2	0.3845	0.3845	0.3845
20	Oaxaca	Sur-Sureste	Natural Gas - Onroad	SO2	1.0000	1.0000	1.0000
21	Puebla	Centro	Natural Gas - Onroad	SO2	1.0000	1.0000	1.0000
22	Querétaro	Centro-Occidente	Natural Gas - Onroad	SO2	1.0000	1.0000	1.0000
23	Quintana Roo	Sur-Sureste	Natural Gas - Onroad	SO2	1.0000	1.0000	1.0000
24	San Luis Potosí	Centro-Occidente	Natural Gas - Onroad	SO2	1.0000	1.0000	1.0000
25	Sinaloa	Noroeste	Natural Gas - Onroad	SO2	1.0000	1.0000	1.0000
26	Sonora	Noroeste	Natural Gas - Onroad	SO2	1.0000	1.0000	1.0000
27	Tabasco	Sur-Sureste	Natural Gas - Onroad	SO2	1.0000	1.0000	1.0000
28	Tamaulipas	Noreste	Natural Gas - Onroad	SO2	1.0000	1.0000	1.0000
29	Tlaxcala	Centro	Natural Gas - Onroad	SO2	1.0000	1.0000	1.0000
30	Veracruz	Sur-Sureste	Natural Gas - Onroad	SO2	1.0000	1.0000	1.0000
31	Yucatán	Sur-Sureste	Natural Gas - Onroad	SO2	1.0000	1.0000	1.0000
32	Zacatecas	Centro-Occidente	Natural Gas - Onroad	SO2	1.0000	1.0000	1.0000
01	Aguascalientes	Centro-Occidente	Natural Gas - Onroad	VOC	1.0000	1.0000	1.0000
02	Baja California	Noroeste	Natural Gas - Onroad	VOC	0.1851	0.1851	0.1851
03	Baja California Sur	Noroeste	Natural Gas - Onroad	VOC	1.0000	1.0000	1.0000
04	Campeche	Sur-Sureste	Natural Gas - Onroad	VOC	1.0000	1.0000	1.0000
05	Coahuila	Noreste	Natural Gas - Onroad	VOC	1.0000	1.0000	1.0000
06	Colima	Centro-Occidente	Natural Gas - Onroad	VOC	1.0000	1.0000	1.0000
07	Chiapas	Sur-Sureste	Natural Gas - Onroad	VOC	1.0000	1.0000	1.0000
08	Chihuahua	Noreste	Natural Gas - Onroad	VOC	1.0000	1.0000	1.0000
09	Distrito Federal	Centro	Natural Gas - Onroad	VOC	1.0000	1.0000	1.0000
10	Durango	Noreste	Natural Gas - Onroad	VOC	1.0000	1.0000	1.0000
11	Guanajuato	Centro-Occidente	Natural Gas - Onroad	VOC	1.0000	1.0000	1.0000
12	Guerrero	Sur-Sureste	Natural Gas - Onroad	VOC	1.0000	1.0000	1.0000
13	Hidalgo	Centro	Natural Gas - Onroad	VOC	1.0000	1.0000	1.0000
14	Jalisco	Centro-Occidente	Natural Gas - Onroad	VOC	1.0000	1.0000	1.0000

ON-ROAD MOTOR VEHICLE PROJECTION FACTORS

State Code	State	Region	Source	Poll.	Projection Factor - 2018	Projection Factor - 2025	Projection Factor - 2030
15	México	Centro	Natural Gas - Onroad	VOC	1.0000	1.0000	1.0000
16	Michoacán	Centro-Occidente	Natural Gas - Onroad	VOC	0.2683	0.2683	0.2683
17	Morelos	Centro	Natural Gas - Onroad	VOC	1.0000	1.0000	1.0000
18	Nayarit	Centro-Occidente	Natural Gas - Onroad	VOC	1.0000	1.0000	1.0000
19	Nuevo León	Noreste	Natural Gas - Onroad	VOC	0.2982	0.2982	0.2982
20	Oaxaca	Sur-Sureste	Natural Gas - Onroad	VOC	1.0000	1.0000	1.0000
21	Puebla	Centro	Natural Gas - Onroad	VOC	1.0000	1.0000	1.0000
22	Querétaro	Centro-Occidente	Natural Gas - Onroad	VOC	1.0000	1.0000	1.0000
23	Quintana Roo	Sur-Sureste	Natural Gas - Onroad	VOC	1.0000	1.0000	1.0000
24	San Luis Potosí	Centro-Occidente	Natural Gas - Onroad	VOC	1.0000	1.0000	1.0000
25	Sinaloa	Noroeste	Natural Gas - Onroad	VOC	1.0000	1.0000	1.0000
26	Sonora	Noroeste	Natural Gas - Onroad	VOC	1.0000	1.0000	1.0000
27	Tabasco	Sur-Sureste	Natural Gas - Onroad	VOC	1.0000	1.0000	1.0000
28	Tamaulipas	Noreste	Natural Gas - Onroad	VOC	1.0000	1.0000	1.0000
29	Tlaxcala	Centro	Natural Gas - Onroad	VOC	1.0000	1.0000	1.0000
30	Veracruz	Sur-Sureste	Natural Gas - Onroad	VOC	1.0000	1.0000	1.0000
31	Yucatán	Sur-Sureste	Natural Gas - Onroad	VOC	1.0000	1.0000	1.0000
32	Zacatecas	Centro-Occidente	Natural Gas - Onroad	VOC	1.0000	1.0000	1.0000
01	Aguascalientes	Centro-Occidente	Natural Gas - Onroad	CO	1.0000	1.0000	1.0000
02	Baja California	Noroeste	Natural Gas - Onroad	CO	0.1657	0.1657	0.1657
03	Baja California Sur	Noroeste	Natural Gas - Onroad	CO	1.0000	1.0000	1.0000
04	Campeche	Sur-Sureste	Natural Gas - Onroad	CO	1.0000	1.0000	1.0000
05	Coahuila	Noreste	Natural Gas - Onroad	CO	1.0000	1.0000	1.0000
06	Colima	Centro-Occidente	Natural Gas - Onroad	CO	1.0000	1.0000	1.0000
07	Chiapas	Sur-Sureste	Natural Gas - Onroad	CO	1.0000	1.0000	1.0000
08	Chihuahua	Noreste	Natural Gas - Onroad	CO	1.0000	1.0000	1.0000
09	Distrito Federal	Centro	Natural Gas - Onroad	CO	1.0000	1.0000	1.0000
10	Durango	Noreste	Natural Gas - Onroad	CO	1.0000	1.0000	1.0000
11	Guanajuato	Centro-Occidente	Natural Gas - Onroad	CO	1.0000	1.0000	1.0000
12	Guerrero	Sur-Sureste	Natural Gas - Onroad	CO	1.0000	1.0000	1.0000
13	Hidalgo	Centro	Natural Gas - Onroad	CO	1.0000	1.0000	1.0000
14	Jalisco	Centro-Occidente	Natural Gas - Onroad	CO	1.0000	1.0000	1.0000
15	México	Centro	Natural Gas - Onroad	CO	1.0000	1.0000	1.0000
16	Michoacán	Centro-Occidente	Natural Gas - Onroad	CO	0.1887	0.1887	0.1887
17	Morelos	Centro	Natural Gas - Onroad	CO	1.0000	1.0000	1.0000
18	Nayarit	Centro-Occidente	Natural Gas - Onroad	CO	1.0000	1.0000	1.0000
19	Nuevo León	Noreste	Natural Gas - Onroad	CO	0.2977	0.2977	0.2977
20	Oaxaca	Sur-Sureste	Natural Gas - Onroad	CO	1.0000	1.0000	1.0000
21	Puebla	Centro	Natural Gas - Onroad	CO	1.0000	1.0000	1.0000
22	Querétaro	Centro-Occidente	Natural Gas - Onroad	CO	1.0000	1.0000	1.0000
23	Quintana Roo	Sur-Sureste	Natural Gas - Onroad	CO	1.0000	1.0000	1.0000
24	San Luis Potosí	Centro-Occidente	Natural Gas - Onroad	CO	1.0000	1.0000	1.0000
25	Sinaloa	Noroeste	Natural Gas - Onroad	CO	1.0000	1.0000	1.0000
26	Sonora	Noroeste	Natural Gas - Onroad	CO	1.0000	1.0000	1.0000
27	Tabasco	Sur-Sureste	Natural Gas - Onroad	CO	1.0000	1.0000	1.0000
28	Tamaulipas	Noreste	Natural Gas - Onroad	CO	1.0000	1.0000	1.0000
29	Tlaxcala	Centro	Natural Gas - Onroad	CO	1.0000	1.0000	1.0000

ON-ROAD MOTOR VEHICLE PROJECTION FACTORS

State Code	State	Region	Source	Poll.	Projection Factor - 2018	Projection Factor - 2025	Projection Factor - 2030
30	Veracruz	Sur-Sureste	Natural Gas - Onroad	CO	1.0000	1.0000	1.0000
31	Yucatán	Sur-Sureste	Natural Gas - Onroad	CO	1.0000	1.0000	1.0000
32	Zacatecas	Centro-Occidente	Natural Gas - Onroad	CO	1.0000	1.0000	1.0000
01	Aguascalientes	Centro-Occidente	Natural Gas - Onroad	PM10	1.0000	1.0000	1.0000
02	Baja California	Noroeste	Natural Gas - Onroad	PM10	0.3791	0.3791	0.3791
03	Baja California Sur	Noroeste	Natural Gas - Onroad	PM10	1.0000	1.0000	1.0000
04	Campeche	Sur-Sureste	Natural Gas - Onroad	PM10	1.0000	1.0000	1.0000
05	Coahuila	Noreste	Natural Gas - Onroad	PM10	1.0000	1.0000	1.0000
06	Colima	Centro-Occidente	Natural Gas - Onroad	PM10	1.0000	1.0000	1.0000
07	Chiapas	Sur-Sureste	Natural Gas - Onroad	PM10	1.0000	1.0000	1.0000
08	Chihuahua	Noreste	Natural Gas - Onroad	PM10	1.0000	1.0000	1.0000
09	Distrito Federal	Centro	Natural Gas - Onroad	PM10	1.0000	1.0000	1.0000
10	Durango	Noreste	Natural Gas - Onroad	PM10	1.0000	1.0000	1.0000
11	Guanajuato	Centro-Occidente	Natural Gas - Onroad	PM10	1.0000	1.0000	1.0000
12	Guerrero	Sur-Sureste	Natural Gas - Onroad	PM10	1.0000	1.0000	1.0000
13	Hidalgo	Centro	Natural Gas - Onroad	PM10	1.0000	1.0000	1.0000
14	Jalisco	Centro-Occidente	Natural Gas - Onroad	PM10	1.0000	1.0000	1.0000
15	México	Centro	Natural Gas - Onroad	PM10	1.0000	1.0000	1.0000
16	Michoacán	Centro-Occidente	Natural Gas - Onroad	PM10	0.5301	0.5301	0.5301
17	Morelos	Centro	Natural Gas - Onroad	PM10	1.0000	1.0000	1.0000
18	Nayarit	Centro-Occidente	Natural Gas - Onroad	PM10	1.0000	1.0000	1.0000
19	Nuevo León	Noreste	Natural Gas - Onroad	PM10	0.3580	0.3580	0.3580
20	Oaxaca	Sur-Sureste	Natural Gas - Onroad	PM10	1.0000	1.0000	1.0000
21	Puebla	Centro	Natural Gas - Onroad	PM10	1.0000	1.0000	1.0000
22	Querétaro	Centro-Occidente	Natural Gas - Onroad	PM10	1.0000	1.0000	1.0000
23	Quintana Roo	Sur-Sureste	Natural Gas - Onroad	PM10	1.0000	1.0000	1.0000
24	San Luis Potosí	Centro-Occidente	Natural Gas - Onroad	PM10	1.0000	1.0000	1.0000
25	Sinaloa	Noroeste	Natural Gas - Onroad	PM10	1.0000	1.0000	1.0000
26	Sonora	Noroeste	Natural Gas - Onroad	PM10	1.0000	1.0000	1.0000
27	Tabasco	Sur-Sureste	Natural Gas - Onroad	PM10	1.0000	1.0000	1.0000
28	Tamaulipas	Noreste	Natural Gas - Onroad	PM10	1.0000	1.0000	1.0000
29	Tlaxcala	Centro	Natural Gas - Onroad	PM10	1.0000	1.0000	1.0000
30	Veracruz	Sur-Sureste	Natural Gas - Onroad	PM10	1.0000	1.0000	1.0000
31	Yucatán	Sur-Sureste	Natural Gas - Onroad	PM10	1.0000	1.0000	1.0000
32	Zacatecas	Centro-Occidente	Natural Gas - Onroad	PM10	1.0000	1.0000	1.0000
01	Aguascalientes	Centro-Occidente	Natural Gas - Onroad	PM2.5	1.0000	1.0000	1.0000
02	Baja California	Noroeste	Natural Gas - Onroad	PM2.5	0.4261	0.4261	0.4261
03	Baja California Sur	Noroeste	Natural Gas - Onroad	PM2.5	1.0000	1.0000	1.0000
04	Campeche	Sur-Sureste	Natural Gas - Onroad	PM2.5	1.0000	1.0000	1.0000
05	Coahuila	Noreste	Natural Gas - Onroad	PM2.5	1.0000	1.0000	1.0000
06	Colima	Centro-Occidente	Natural Gas - Onroad	PM2.5	1.0000	1.0000	1.0000
07	Chiapas	Sur-Sureste	Natural Gas - Onroad	PM2.5	1.0000	1.0000	1.0000
08	Chihuahua	Noreste	Natural Gas - Onroad	PM2.5	1.0000	1.0000	1.0000
09	Distrito Federal	Centro	Natural Gas - Onroad	PM2.5	1.0000	1.0000	1.0000
10	Durango	Noreste	Natural Gas - Onroad	PM2.5	1.0000	1.0000	1.0000
11	Guanajuato	Centro-Occidente	Natural Gas - Onroad	PM2.5	1.0000	1.0000	1.0000
12	Guerrero	Sur-Sureste	Natural Gas - Onroad	PM2.5	1.0000	1.0000	1.0000

ON-ROAD MOTOR VEHICLE PROJECTION FACTORS

State Code	State	Region	Source	Poll.	Projection Factor - 2018	Projection Factor - 2025	Projection Factor - 2030
13	Hidalgo	Centro	Natural Gas - Onroad	PM2.5	1.0000	1.0000	1.0000
14	Jalisco	Centro-Occidente	Natural Gas - Onroad	PM2.5	1.0000	1.0000	1.0000
15	México	Centro	Natural Gas - Onroad	PM2.5	1.0000	1.0000	1.0000
16	Michoacán	Centro-Occidente	Natural Gas - Onroad	PM2.5	0.5666	0.5666	0.5666
17	Morelos	Centro	Natural Gas - Onroad	PM2.5	1.0000	1.0000	1.0000
18	Nayarit	Centro-Occidente	Natural Gas - Onroad	PM2.5	1.0000	1.0000	1.0000
19	Nuevo León	Noreste	Natural Gas - Onroad	PM2.5	0.3465	0.3465	0.3465
20	Oaxaca	Sur-Sureste	Natural Gas - Onroad	PM2.5	1.0000	1.0000	1.0000
21	Puebla	Centro	Natural Gas - Onroad	PM2.5	1.0000	1.0000	1.0000
22	Querétaro	Centro-Occidente	Natural Gas - Onroad	PM2.5	1.0000	1.0000	1.0000
23	Quintana Roo	Sur-Sureste	Natural Gas - Onroad	PM2.5	1.0000	1.0000	1.0000
24	San Luis Potosí	Centro-Occidente	Natural Gas - Onroad	PM2.5	1.0000	1.0000	1.0000
25	Sinaloa	Noroeste	Natural Gas - Onroad	PM2.5	1.0000	1.0000	1.0000
26	Sonora	Noroeste	Natural Gas - Onroad	PM2.5	1.0000	1.0000	1.0000
27	Tabasco	Sur-Sureste	Natural Gas - Onroad	PM2.5	1.0000	1.0000	1.0000
28	Tamaulipas	Noreste	Natural Gas - Onroad	PM2.5	1.0000	1.0000	1.0000
29	Tlaxcala	Centro	Natural Gas - Onroad	PM2.5	1.0000	1.0000	1.0000
30	Veracruz	Sur-Sureste	Natural Gas - Onroad	PM2.5	1.0000	1.0000	1.0000
31	Yucatán	Sur-Sureste	Natural Gas - Onroad	PM2.5	1.0000	1.0000	1.0000
32	Zacatecas	Centro-Occidente	Natural Gas - Onroad	PM2.5	1.0000	1.0000	1.0000
01	Aguascalientes	Centro-Occidente	Natural Gas - Onroad	NH3	1.0000	1.0000	1.0000
02	Baja California	Noroeste	Natural Gas - Onroad	NH3	0.1769	0.1769	0.1769
03	Baja California Sur	Noroeste	Natural Gas - Onroad	NH3	1.0000	1.0000	1.0000
04	Campeche	Sur-Sureste	Natural Gas - Onroad	NH3	1.0000	1.0000	1.0000
05	Coahuila	Noreste	Natural Gas - Onroad	NH3	1.0000	1.0000	1.0000
06	Colima	Centro-Occidente	Natural Gas - Onroad	NH3	1.0000	1.0000	1.0000
07	Chiapas	Sur-Sureste	Natural Gas - Onroad	NH3	1.0000	1.0000	1.0000
08	Chihuahua	Noreste	Natural Gas - Onroad	NH3	1.0000	1.0000	1.0000
09	Distrito Federal	Centro	Natural Gas - Onroad	NH3	1.0000	1.0000	1.0000
10	Durango	Noreste	Natural Gas - Onroad	NH3	1.0000	1.0000	1.0000
11	Guanajuato	Centro-Occidente	Natural Gas - Onroad	NH3	1.0000	1.0000	1.0000
12	Guerrero	Sur-Sureste	Natural Gas - Onroad	NH3	1.0000	1.0000	1.0000
13	Hidalgo	Centro	Natural Gas - Onroad	NH3	1.0000	1.0000	1.0000
14	Jalisco	Centro-Occidente	Natural Gas - Onroad	NH3	1.0000	1.0000	1.0000
15	México	Centro	Natural Gas - Onroad	NH3	1.0000	1.0000	1.0000
16	Michoacán	Centro-Occidente	Natural Gas - Onroad	NH3	0.4153	0.4153	0.4153
17	Morelos	Centro	Natural Gas - Onroad	NH3	1.0000	1.0000	1.0000
18	Nayarit	Centro-Occidente	Natural Gas - Onroad	NH3	1.0000	1.0000	1.0000
19	Nuevo León	Noreste	Natural Gas - Onroad	NH3	0.2924	0.2924	0.2924
20	Oaxaca	Sur-Sureste	Natural Gas - Onroad	NH3	1.0000	1.0000	1.0000
21	Puebla	Centro	Natural Gas - Onroad	NH3	1.0000	1.0000	1.0000
22	Querétaro	Centro-Occidente	Natural Gas - Onroad	NH3	1.0000	1.0000	1.0000
23	Quintana Roo	Sur-Sureste	Natural Gas - Onroad	NH3	1.0000	1.0000	1.0000
24	San Luis Potosí	Centro-Occidente	Natural Gas - Onroad	NH3	1.0000	1.0000	1.0000
25	Sinaloa	Noroeste	Natural Gas - Onroad	NH3	1.0000	1.0000	1.0000
26	Sonora	Noroeste	Natural Gas - Onroad	NH3	1.0000	1.0000	1.0000
27	Tabasco	Sur-Sureste	Natural Gas - Onroad	NH3	1.0000	1.0000	1.0000

ON-ROAD MOTOR VEHICLE PROJECTION FACTORS

State Code	State	Region	Source	Poll.	Projection Factor - 2018	Projection Factor - 2025	Projection Factor - 2030
28	Tamaulipas	Noreste	Natural Gas - Onroad	NH3	1.0000	1.0000	1.0000
29	Tlaxcala	Centro	Natural Gas - Onroad	NH3	1.0000	1.0000	1.0000
30	Veracruz	Sur-Sureste	Natural Gas - Onroad	NH3	1.0000	1.0000	1.0000
31	Yucatán	Sur-Sureste	Natural Gas - Onroad	NH3	1.0000	1.0000	1.0000
32	Zacatecas	Centro-Occidente	Natural Gas - Onroad	NH3	1.0000	1.0000	1.0000