

# 2007

SUSTAINABLE DEVELOPMENT







**PROCESSING CENTER AKAL LIMA**  
Sonda de Campeche



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Sonda de Campeche

# Management

Director General  
Director General, Pemex-Exploration and Production  
Director General, Pemex-Refining  
Director General, Pemex-Gas and Basic Petrochemicals  
Director General, Pemex-Petrochemicals  
Corporate Director of Operations  
Corporate Director of Engineering and Project Development  
Corporate Director of Administration  
Chief Financial Officer  
General Counsel  
Internal Control Body  
Director General, International Commerce  
Director General, Mexican Petroleum Institute

Mr. Jesús Reyes Heróles G.G.  
Mr. Carlos Morales Gil  
Mr. José Antonio Ceballos Soberanis  
Mr. Roberto Ramírez Soberón  
Mr. Rafael Beverido Lomelín  
Mr. Raúl Livas Elizondo  
Mr. Jorge Borja Navarrete  
Mr. Rosendo Villarreal Dávila  
Mr. Esteban Levín Balcells  
Mr. José Néstor García Reza  
Mr. José Fortunato Álvarez Martínez  
Mr. Rosendo Zambrano Fernández  
Mr. Heber Cinco Ley



**DIRECTORS GROUP**  
Corporate Offices  
Mexico City

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**INTEGRAL COMPLEX SAMARIA LUNA**  
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# Message from the Director General

In order to obtain the highest economic value from the nation's hydrocarbons and their byproducts – and in so doing to contribute to the sustainable development of Mexico – Petróleos Mexicanos must promptly and successfully address several challenges which encompass all aspects of its operations. The actions required to face these challenges are both internal and external in nature.

The internal aspects are of an economic, social and environmental nature. The main economic challenges for Pemex are maintaining its production platform --and thus compensating for the decline in the production of crude oil at Cantarell and other oil fields--, replenishing the level of its reserves, and guaranteeing the supply of quality fuels at competitive prices, all of this while improving its financial position.

During 2007, total hydrocarbon production remained at approximately 4.4 million barrels of crude oil equivalent per day, the level of reserves dropped for the eighth consecutive year, and gasoline imports continued to surpass 40% of domestic consumption. Pemex reported sales in the amount of \$1,134 billion pesos and paid \$677.3 billion pesos in taxes, or 59.6% of its total sales for the year. And even though Pemex reduced its debt balance in 2007, pursuant to the established objectives, external financing through the Pidiregas scheme continues to be imperative in sustaining its investments.

Concerning the environment, climate change poses new challenges for Petróleos Mexicanos. In keeping with Federal Government guidelines to combat global warming, Pemex continues its actions to reduce greenhouse gas emissions under the Clean Development Mechanism, especially through co-generation initiatives. However, the burning of offshore gas caused by operational problems and by project delays led to a 9% increase in carbon dioxide emissions. Furthermore, the company also faces great challenges in improving the quality of its fuels, increasing sulfur recovery in refinery processes and reducing its historic environmental liabilities.

The company's comprehensive focus on environmental challenges includes working jointly with communities in areas where Pemex operates. Mindful of its relevance as a promoter for regional development, Pemex has updated the criteria and mechanisms to grant endowments and donations in areas where Mexico's oil activity is concentrated. The Board of Directors approved new guidelines in this regard, ensuring fully transparent, impartial delivery of resources and allowing for timely follow-up to these resources, thus improving

accountability on the use of said donations. During 2007, Pemex subscribed several agreements with the governments of oil-producing states. These wide-ranging agreements encompass social and economic aspects, as well as environmental sustainability and infrastructure, among others. They also provide cohesion for Pemex's social development strategy with the plans and objectives of these oil-producing entities.

Regarding its workers, the revision of the Collective Bargaining Agreement was concluded in July 2007. The negotiations transpired in a cordial, mutually respectful environment --without a call to strike-- in which the Mexican Oil Workers Union (STPRM, for its acronym in Spanish) and Pemex agreed on economic changes in line with earlier revisions, and settled on opening up new ways to make better use and development of Petróleos Mexicanos' human resources.

Despite an overall improvement in accident rate indexes during 2007, results were clearly unsatisfactory due to several fatal accidents, in which 18 Pemex employees and 23 contractor workers lost their lives. Amongst these accidents, the collision of the Usumacinta platform with the oil rig KAB-121 is one of the worst Pemex has ever experienced. These events caused profound institutional mourning and set the ground for unprecedented joint investigations, by the company, federal government, and civil society, in order to avoid such tragedies from ever happening again.

In July and September of last year, several of Pemex' pipelines were the target of sabotage acts, causing losses for the company and costly damages to the national economy. Regrettably, complete regions were affected by a supply shortage for several days, a situation that could have been much worse, had it not been for the prompt and determined response of Pemex employees to restore supply.

The actions that Pemex needs to undertake in order to face its internal challenges are outlined in 15 strategic initiatives, which encompass improving productivity, efficiency and project management, enhancing security and environmental protection, strengthening management and accountability, as well as modernizing its commercial relations.

In addition to the internal efforts required, it is essential to increase the flexibility of the company's external framework, which constrains Pemex's performance. Said aspects include multiple and complex budgetary, financial,

**DR. JESÚS REYES HEROLES G.G.**  
Director General



procurement and public works procedures that Pemex is duty-bound to follow, even for the simplest of operations; an oversight and control model that focuses more on processes than on results; a severe lack of flexibility in subscribing the agreements that Petróleos Mexicanos needs to develop its activities; a tax and budgetary regime that does not allow for sustainable multi-annual support to Pemex operations, and which does not foster the development of highly complex projects.

In light of this situation, President Felipe Calderon presented a bill to comprehensively reform several of the aspects behind the company's problems. While it is clear that the efforts of Pemex employees and directors are fundamental, the internal effort is insufficient. The amount of change needed in the regulatory and legal framework, the bureaucracy and the administrative obstacles that stand in the way are far too great; hence the importance of the reform to Pemex.

This reform will allow, among other aspects, the strengthening of Pemex's Board of Directors; it will grant flexibility to the company in procurement and public works for major projects; it will enable greater leeway in carrying out budgetary adjustments; it will gradually increase Pemex's use of its own additional income and greater freedom in handling its debt. Furthermore, should such reforms be approved, Pemex's regulatory regime would be strengthened, thus increasing transparency and accountability in all departments of the company.

Petróleos Mexicanos Sustainable Development Report 2007 provides useful, objective and straightforward information on Pemex's activities. It is an exercise in transparency and accountability, as all figures and data quoted within have been audited. Moreover, it establishes a bridge between society and the company because it was produced with the participation of an independent group of citizens with experience in the issues covered by this report. This citizen group formulated questions on the report and queried Petróleos Mexicanos on its activities. The questions posed by the Citizen Participation Group (GPC, for its acronym in Spanish), the answers provided by Petróleos Mexicanos and the independent assessment to these answers are all published in full in this Report.

This publication complies with the indicators set forth in the Global Reporting Initiative (GRI). It is with great satisfaction that Pemex presents the first Mexican GRI Application Level A+ report, the highest level possible awarded by this initiative. Moreover, the Report meets the guidelines of the United Nations Organization Global Compact for communication in progress.

Through the publication of this Report, Pemex reiterates its commitment to sustainable development, full transparency and accountability for all its actions.

**Jesús Reyes Heróles G.G.**  
Director General of Petróleos Mexicanos







**PROCESSING CENTER-KU-SIERRA**  
Campeche Sound

maturity is understood as the level of attention companies in the sector pay to a certain issue. Both the “Materiality Study” and the process carried out with the Citizen Participation Group (described in the Annex on the Citizen Participation Group) have contributed to complying with the criteria mentioned above, and composing a response (third principle of the AA 1000 AS) to the primary concerns expressed by Pemex’s stakeholders.

The KPMG Cárdenas Dosal, S.C. Firm verified the information contained in this report, according to the scope and conditions established in the assurance letter that forms part of this document.

This activity was completed with an international group of KPMG examiners from its Mexico and Spain offices. The assurance process included visits to ten work centers, where the examiners reviewed the information generation process that feeds the Pemex systems, interviewed employees at the corporate units and subsidiary entities, and examined the accounting methods of the security and environmental protection data. The conclusions of the findings obtained throughout the course of the review are included in the assurance letter in the document. Recommendations for improvements are included in a report KPMG submitted for analysis by Pemex’s Head Office of Operations.

The Company implemented the SISPA system in 2001. This system is used to prepare a monthly on-line report on Industrial Safety and Environmental Protection for each work center. The information is uploaded at each center and processed and compiled for all of the entities. Said report provided the statistical base for gas emission data herein reported, as well as greenhouse gas emission effect, and the production and consumption of raw water. In the same manner, the Pemex-SSPA management system facilitated consolidation and compilation of the information on the matters of safety, security, and environmental protection.

The financial data was obtained mainly from Pemex’s public information, such as Pemex Financial Results Report as of December 31, 2007. Please visit [www.pemex.com](http://www.pemex.com) for additional information.

Pemex developed a information technology tool to facilitate the data consolidation process, which includes the GRI indicators, and questions concerning compliance with the Global Compact and the EITI. This is the first time the Company has used said tool to consolidate the information with satisfactory results obtained from the information provided by the data suppliers and the quality of such information. Pemex will continue to work on perfecting and strengthening this tool in 2008.

## GPC.2

It is important to point out that in the environmental performance , each one of the core areas that comprise the environmental protection strategy 2007-2012 are reflected in the Sustainable Development Report. Most of the core area related to the capture of operational opportunities is contained under the sections on climate change and environmental performance, while the initiatives in the core area related to the sustainability of the investments are described under the section that addresses Pemex’s role as a promoter of development in Mexico, and those related to community environmental responsibility are expressed under the section on the biodiversity conservation.



### SCOPE OF THE 2007 SUSTAINABILITY REPORT

The non-financial information included in this Sustainable Development report corresponds to the Head Office and the Company's four Subsidiary Entities, except for environmental data that is limited to information derived from the industrial operations performed by the Subsidiary Entities, and other specific cases described in this report. This report does not contain non-financial information on the "Subsidiary Entities" based on the description provided in the Annual Report.

### LIMITATIONS ON THE INFORMATION

The techniques defined in Version G3 of the Global Reporting Initiative (GRI) were used (as far as possible) to measure data from Pemex's calculations and respond to each of Pemex's Head Office's guidelines and indicators. The following bears noting concerning the above:

**Air emissions:** The air emissions are estimates based on the year 2000 Supplement F to the EPA AP-42 emission factors, and the schiometric calculations based on the composition of the thermal oxidation flows at each one of the sulfur recovery plants and in the vent and burn processes.

**Spills:** This report only provides information on hydrocarbon spills that occurred in the pipelines and facilities the work centers have registered in SISPA. Spilled volumes are based on estimates and do not include intermittent leaks in pipelines or equipment.

**Frequency and severity indexes:** The frequency and severity indexes do not include accidents that occurred on the way to and from work and those work-related accidents that were caused by third parties and/or unsafe conditions that are outside of Pemex's control. The reported indexes do not include the overtime worked by non-union employees.

**Data related to the case studies:** The information contained in the case studies is based on estimates made by the responsible parties in the subsidiary entities, to the best of their technical knowledge. Pemex does not have any other support documentation for the case studies other than the documentation contained in its critical review.

**Data concerning previous years:** The continuous inventory improvement process could lead to corrections to information published in reports on prior years. These corrections are due mainly to improved estimate calculation factors or the inclusion of data from other sources that were not then accounted for.

### CACTUS GAS PROCESSING CENTER Reforma Municipality, Chiapas





# Citizen participation

## BACKGROUND

Petróleos Mexicanos has included again in the 2007 Sustainable Development Report the transparency exercise performed for the first time in the 2005 Report, in which representative members of the civil society evaluated and qualified the contents of this report, through Transparencia Mexicana A.C.

For the 2006 Report it was not possible to perform this exercise with Transparencia Mexicana, A.C. due to the fact that a potential conflict of interest could be interpreted among the head offices of both institutions, so Pemex elaborated a response proposal to the questions that didn't have a satisfactory grade in the former report.

In the 2007 Report, the company decided to summon distinguished persons from some sectors of the civil society related to Petróleos Mexicanos, environmental issues experts and sustainable development experts to integrate a Citizen Participation Group with the purpose of defining and evaluating the most interesting topics to present in such report.

## MEMBERS OF THE CITIZEN PARTICIPATION GROUP (GPC FROM THE SPANISH ACRONYM)

The GPC was integrated by Dr. Exequiel Ezcurra, Director to the Biodiversity Investigation Center of the Californias from the San Diego Natural History Museum; Dr. Pablo Mulás, Executive Director of the Mexican Association for Energy and Sustainable Development, Mexican Chapter of the World Energy Council; Ing. Jaime Lomelin, President to the Private Sector Studies Commission for Sustainable Development, Mexican Chapter of the World Business Council for Sustainable Development; Dr. Boris Graizbord Coordinator to the Advanced Sustainable Development and Environment Studies Program, Mexico LEAD of the Mexico College; and Dr. Lawrence Harrington Representative in México to the Interamerican Development Bank (IDB).

Several other persons also summoned this group like, M.C. Irene Pisanty from the UNAM's Sciences Faculty, Lic. Juan Carlos de la Hoz, under representative to the IDB in México, Lic. Pedro Buonomo, Infrastructure specialist to the IDB, Dr. David Wilk, from the Washington's IDB office and Ing. Alejandro Lorea, executive director of CESPEDS as technical secretary to the GPC.

## GPC OPERATION

The Citizen Participation Group met formally five times, three of them with Petróleos Mexicanos executives, holding an analysis process that led to the integration of a questionnaire on the most relevant issues to an institution whose aspiration is to become a socially responsible world class company.

In such sense, the GPC formulated 25 questions related to topics such as energy, climate change, biodiversity conservation, social development and transparency, among others, which Pemex addressed with the information included in the 2007 report. These answers were firstly audited by the KPMG company and later evaluated and qualified by the members of the GPC.

The questions and the qualification obtained with the answers can be inquired in the citizen participation group annex. The answers to each question are integrated in the body of the report and can be identified by the orange highlight.



**CORPORATE OFFICES**  
2007 Sustainable Development Report working group  
Mexico City

# 1. Pemex in summary

## 1.1 Context

Pemex is a government controlled body that was created as a decentralized government agency of the Federal Public Administration, in conformity with Mexican law and in accordance with the Decree published on June 7, 1938. Pemex's Corporate Office is located in Mexico City<sup>3</sup> with its own legal identity and patrimony, and its central purpose is to drive the nation's central and strategic development activities in the state's petroleum industry. The Company's Corporate Office is responsible for Pemex's institutional strategy.

Pemex is comprised of four subsidiary entities that are engaged in exploration, production, transformation and marketing activities related to crude oil and natural gas in the domestic and international markets, as well as refined products, liquefied petroleum gas and petrochemicals. It also performs its internal trade activities through PMI Internacional Commerce.

The Company represents the most important source of taxes for the Federal Government nationwide, as the only business that is legally authorized to produce crude oil, natural gas, refined products and basic petrochemicals, and the only business responsible for the first-hand commercialization of fossil fuels. Based on said fact, Pemex competes with other producers in the international market, where it holds the number 11 position as crude oil producer and one of the three main suppliers of crude oil for the U.S. market.

The production of crude oil was 3,082 Mbd. Production of liquid hydrocarbons (crude, heavy, light and extra-light oil, as well as natural gas liquids) was 3,486 Mbd. Exports for 2007 were 1,686 Mbd of crude oil, 139 MMcfd of natural gas, 176 Mbd of petroleum products and 746 Mt of petrochemicals. Total sales amounted to approximately to \$1,136 billion pesos (\$104.5 billion USD). Active personnel at Pemex at the end of the year 2007 rose to 154,802 workers.

Petróleos Mexicanos (Pemex) is a decentralized government agency that is solely responsible for carrying out strategic activities in the field of hydrocarbons which are reserved in the Mexican Constitution.

Based on the guidelines set forth by the Secretary of Energy, Pemex performs its activities for the purpose of maximizing the economic value of hydrocarbons for the country in harmony with both the community and the environment.

- Pemex is the largest company in Mexico and Latin America and the country's largest taxpayer.
- Total production of liquid hydrocarbons was 3,486 Mbd (including crude oil and natural gas liquids) and 6,058 MMcfd of natural gas.
- Exports for 2007 were 1,686 Mbd of crude oil, 139 MMcfd of natural gas, 176 Mbd of petroleum products and 746 Mt of petrochemicals.
- The amount of total sales increased 2.9% in respect to 2006, to approximately \$1,136 billion pesos (\$104.5 billion USD).





ROSARITO SECTOR DUCTS  
Baja California

## 1.2 Operations

### OPERATING STRUCTURE OF THE COMPANY

The four subsidiary entities that comprise Pemex are responsible for the following functions:

**Pemex-Exploration and Production (PEP).** Explores and approves the crude oil and natural gas reserves in Mexico's four exploration and production regions: North and South in the continental territory, Northeast and Southeast marine oil platforms in the maritime territory of the Gulf of Mexico

**Pemex-Refining (PREF).** Converts the crude oil into general-use fuels such as gasoline, turbosine, diesel and fuel oil in the six refineries located in the states of Nuevo León, Tamaulipas, Guanajuato, Hidalgo, Veracruz, and Oaxaca and distributes these fuels across the country through 77 supply and distribution terminals.

**Pemex-Gas and Basic Petrochemicals (PGPB).** Processes natural gas and develops basic petrochemicals products and liquefied gas in its ten Gas Processing Centers (CPG) in the states of Tamaulipas, Veracruz, Tabasco and Chiapas, and is responsible for transporting and marketing these products.

**Pemex-Petrochemicals (PPQ).** Develops and commercializes a variety of raw materials for the country's chemical and petrochemical industries, including methane and ethane byproducts, manufactured in the eight Petrochemicals Complexes (CPQ) in the states of Chihuahua, Veracruz, Hidalgo, and Puebla, and is responsible for transporting and marketing these byproducts.

Pemex is an integrated business that participates in the entire value chain of the petroleum industry that ranges from exploration through the distribution and commercialization of the final products. It satisfies 100% of the demand for the country's petroleum products.



North Region

Northeastern Marine Region

Southwestern  
Marine Region

South Region

Exploration and  
Production



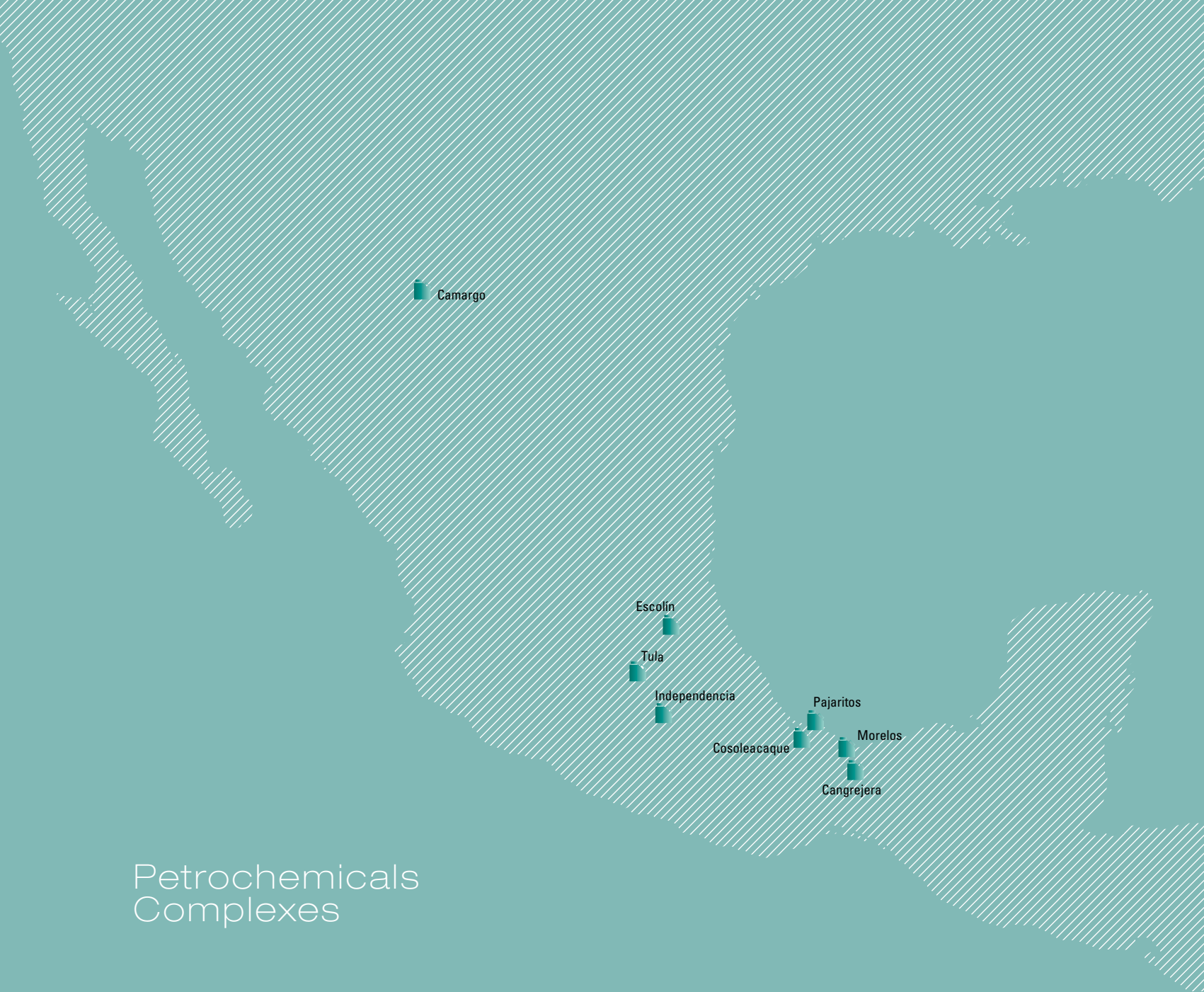
Refineries



Petroleum products  
storage and distribution  
terminals







## Petrochemicals Complexes



## Pipelines

Pemex relies on a hydrocarbon transportation system comprised of more than 60,000 kilometers of pipelines across Mexico to promote the products it develops, described as follows:

### PEMEX PRODUCTION INFRASTRUCTURE

	Length (KM)
Production Pipelines	22,009
Oil Pipelines	9,407
Gas Pipelines	16,693
Petroleum Products Pipelines	9,105
Basic and Secondary Petrochemicals	2,096
Others	2,463
Total	61,773

## RELEVANT OPERATION AND PRODUCTION DATA IN 2007 WITH RESPECT TO 2006

Production of:

**Crude Oil** at 3,082 Mbd decreased 174 Mbd (5.3% less than 2006), mainly from the decline of the Cantarell oil field and adverse weather conditions.

**Natural gas** was at 6,058 MMcfd, 13.1% greater than 2006 due to production increase in the Cuenca de Burgos.

**Petroleum products** decreased 34 Mbd, reaching an average of 1,511 Mbd.

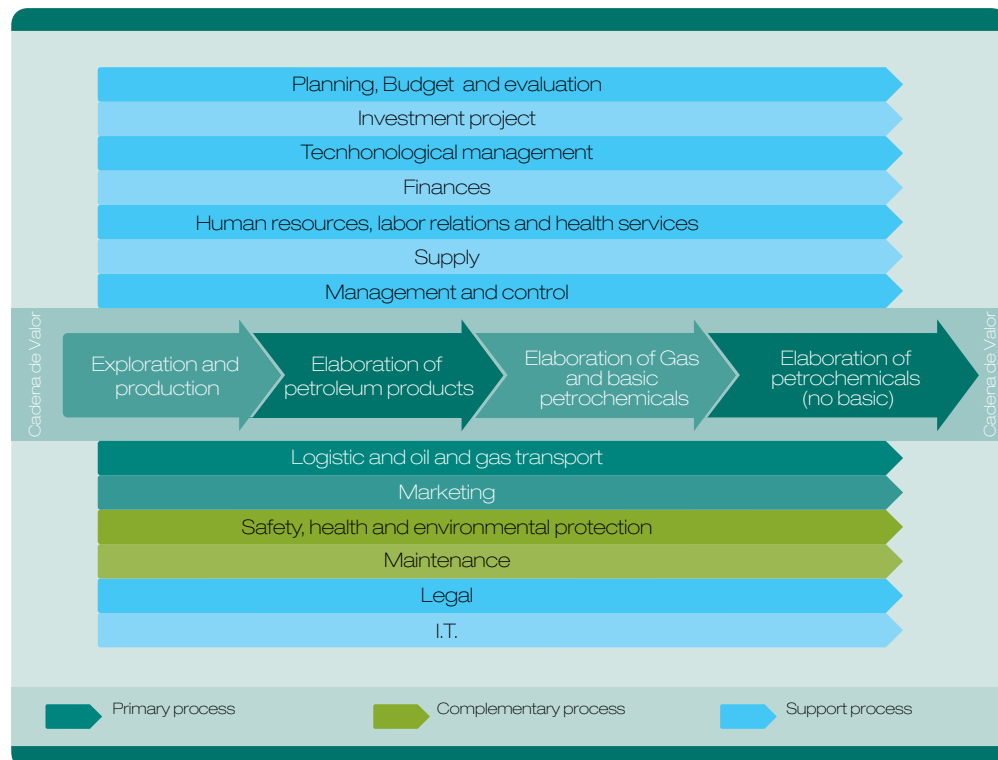
**Fuel oil** decreased 7.3% and LP Gas decreased 6.3% as a result of lower crude oil processing levels.

**Petrochemicals** were at 11,756 Mt, 7.3% greater than 2006, mainly due to the increase in the development of ammonia, vinyl chloride, hexane and hydrochloric acid.

## PEMEX PRODUCTION INFRASTRUCTURE

Type of Infrastructure	2005 Quantity	2006 Quantity	2007 Quantity
Production fields	357	364	352
Extraction wells	5,682	6,080	6,280
Ocean platforms	193	199	215
Refineries	6	6	6
Gas Processing Centers	12	12	12
Petrochemicals Complexes	8	8	8
Petroleum products storage and distribution terminals	77	77	77
LPG distribution terminals	20	20	21

## THE PROCESS

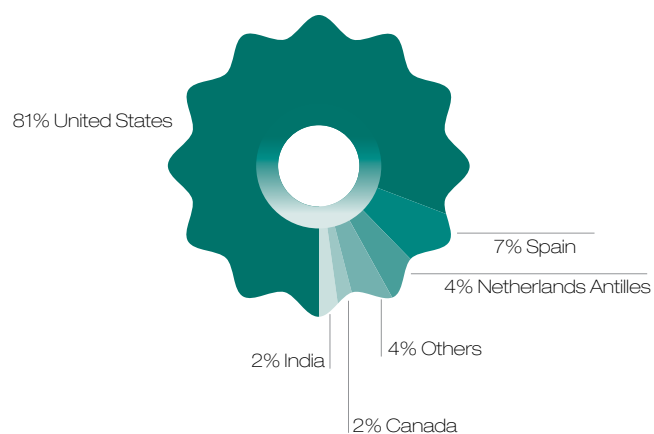


## FOREIGN MARKETS

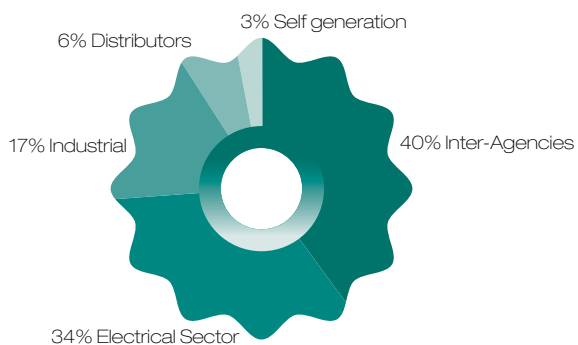
Crude Oil Process and Exports (Mbd)



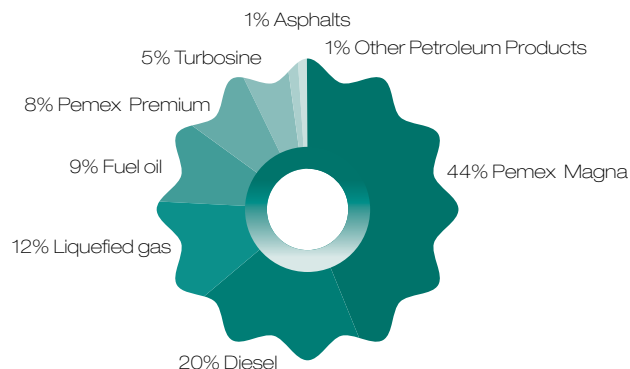
Crude Oil Exports by Country



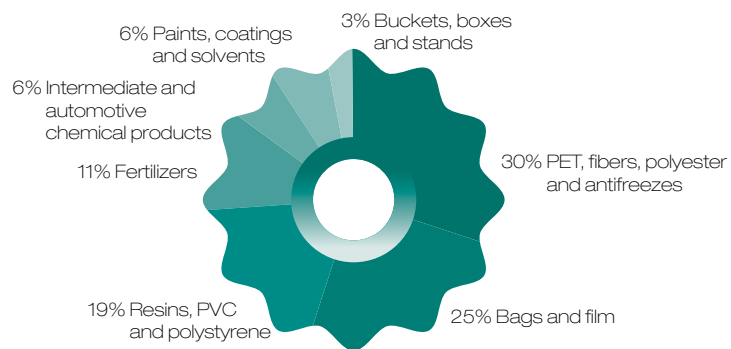
Natural Gas Sales by Sector



Domestic Sales of Petroleum Products



Sale of Petrochemicals by Sector





## 1.3 Other relevant aspects

During 2007, the company did not have significant changes in its structure nor organization.

### INFRASTRUCTURE WORKS<sup>4</sup>

The Yuum K'ak' Náab (Lord of the Sea) floating production, storage and offloading (FPSO) unit entered into operation on June 18, equipping Pemex with a greater capacity for on-site processing and storing crude oil extracted from the Ku-Maloob-Zaap oil field.

The 12" diameter Burgos-Monterrey pipeline started operations with a capacity of 30 Mbd to supply LP Gas demanded in the Monterrey, Saltillo and La Laguna region.

The cryogenic plants number 5 and 6 construction was initiated, each with a processing capacity of 200 MMcfd at the Burgos Gas Processing Center.

The company Gasoductos de Chihuahua S. de R.L. de C.V., in which PGPB holds shares, began the commercial operation of the Burgos-Monterrey liquefied petroleum gas (LPG) transportation system.

The Swing Plant from the Morelos Petrochemicals Complex began the commercial production of high and/or low-density linear polyethylene, with an annual capacity of 300 Mt and a total investment of \$2,200 million pesos.

### COLLABORATION AGREEMENTS

Pemex entered into non-commercial collaboration agreements with BP, Petrobras, Statoil, Chevron, Shell, Nexen and Maersk Olie Oq gas, ExxonMobil Ventures México to exchange technology, scientific and technological investigation and development and other topics related to petroleum industry development.

### FIGHTING THE WAR AGAINST THE ILLEGAL MARKET

5,500 Mb of fuel was recovered through the Central Program for the combat against the illegal fuel market.

### RECONFIGURATION

By December 31, 2007, physical progress made at the Minatitlan Refinery Reconfiguration was at 75%. The completion of program is still scheduled for February 2009, with an estimated total investment of \$3.1 billion USD.

### FRANCHISES

By the end of the year, the number of franchises for service stations was 7,940, 5.1% above the 7,554 that existed at the end of 2006.

## 1.4 Awards received and current certifications

### CURRENT CERTIFICATIONS

**Clean Industry:** Pemex obtained 51 new Clean Industry Certifications and 39 recertifications through compliance with the prevailing environmental legislation and the implementation and maintenance of the Environmental Management System at its facilities, which allowed it to obtain 422 Clean Industry Certifications, representing a 15% increase with respect to the prior year.

**ISO 9001, ISO 14001, and OSHAS 18000:** Pemex tends to group the certification of its facilities and installations with similar functions or by business policies into multi-site systems, ensuring the validity of the following Clean Industry Certifications, quality, environmental, OSHAS, 19001, ISM and PBIP.

### AWARDS RECEIVED

Pemex received the **National Award for Energy Savings in the Energy Sector** at the Héctor R. Lara Sosa refinery for modernization of its direct flame heaters and the catalytic plant's refrigeration tower, and the **National Award for Renewable Energy Savings** at the Och-Uech-Kax marine oil platforms from the Active Coast of Tabasco in the Southeast Marine Region.

The Gas and Basic Petrochemicals entity renewed its **ISO-9001:2000 Quality Management System certification** for production, transportation, marketing, planning, human resources, maintenance, safety, supply, financing, accounting, and cost processes.

### CURRENT CERTIFICATIONS

Subsidiary	Clean Industry	ISO 9001	ISO 14001	OSHAS 18001	ISM	PBIP
Pemex-Exploration and Production	278	13	2	2	-	-
Pemex-Refining	97	8	9	-	37	26
Pemex-Gas and Basic Petrochemicals	41	21	16	1	-	-
Pemex-Petrochemicals	6	1	1	-	-	-
Totals	422	43	28	3	37	26

4. Source: Pemex Financial Results Report as of december 31, 2007.





FRANCISCO I. MADERO REFINERY  
Cd. Madero, Tamaulipas

## 2.2 Pemex's commitment to sustainable development

The Company's commitment to performance in the field of sustainable development conforms to the priorities of the Mexican Government as well as the information that comes from the different dialogue channels that the company maintains with its stakeholders.

### CASE STUDY

#### INCLUSION OF SUSTAINABLE DEVELOPMENT INITIATIVES IN THE TERTIARY GULF OIL PROJECT

One of Pemex's main challenges is the maintenance of the international production platform, considering the decline of the Cantarell oil field that requires a technical effort and greater investments. These efforts are concentrated in the Tertiary Gulf Oil Project (PATG, acronym in Spanish) and in the deep deposits in the Gulf of Mexico. These oil basins are characterized by the fact that they are located in environmentally sensitive regions, and in the case of PATG, in an area subject to enormous socioeconomic complexities.

Pemex designed the Tertiary Gulf Oil Project for the Sustainable Development strategy's, based on the following main actions:

- Creation of the first Coordinator's Office for Sustainable Development in production activities.
- Formalization of the first inter-institutional agreement entered into by and between Pemex and the United Nations (UNDP).
- Integration of a multidisciplinary team of experts: UNDP, UNAM, UV, University of Calgary, the Mario Molina Center, and ERM-Mexico
- Development of the first environmental and socioeconomic baseline for the 12 municipalities that house the project (UNDP, UV).
- PATG sustainable development strategy paper (UNDP, ERM, University of Calgary).
- Training workshops on Sustainable Development: with 30% coverage of key staff members at Pemex Exploration and Production and the major contractors.
- Communications materials: overall presentation of the Project and the frequently asked questions (FAQ) strategy.
- Brochure on responsible actions.

### STAKEHOLDERS' PRIORITIES AND EXPECTATIONS

In the case of external stakeholders, the identification and selection process is based on the relationship between the company's operations and regulatory matters, encumbrances, claims, conservation and compensation activities, research, and legislation, among others. In regard to internal stakeholders, the scope is determined by unionized and non-union workers, and retirees, as well as their families.

The stakeholders relevant issues have been identified by the material study and the interaction with the GPC.

#### GPC 1

Petróleos Mexicanos' lines of action in the field of sustainable development are part of a policy framework that includes the 2007-2012 National Development Plan (NDP), the Energy Sector Program (Programa Sectorial de Energía) Prosener, the Sectorial Program of Environment and Natural Resources, the 2006-2015 Pemex Institutional Strategy, and the company's own safety, health, and environmental protection policy.

The NDP frames the orientation of all Federal Government policies, and its focus on environmental sustainability determines priorities for sector programs in the field of sustainable development.

Prosener sets out the objectives of sustainable development for the hydrocarbon sector, particularly in terms of ensuring that investments consider the costs of social and environmental externalities, in selecting investment options best suited to sustainable development, and participating in ecological land use planning code process, in order to provide greater territorial certainty to crude oil development plans. The Prosener also defines objectives on climate change, energy efficiency, bio-fuels, and atmospheric emissions, particularly those concerning the mitigation of greenhouse gas emissions, the use of co-generation, the development of bio-fuels that are technically, economically, environmentally, and socially viable, and growth in availability of fuels with low sulfur contents.

Management at Petróleos Mexicanos has embarked on a strategy articulated on the following three core areas that are in line with this planning context:

1. Seize operational opportunities with the purpose of regulatory compliance and the elimination of environmental hazards. This core objective is comprised of over 90 projects in the field of air emissions, fuel quality, energy efficiency, and co-generation, the mitigation of GHG emissions, efficient water use, and environmental liability reductions.
2. The sustainability of investments, whose objective is to strengthen the viability of socioeconomic development in the oil sector. This core objective envisions the incorporation of external factors in the investment planning and evaluation process, the adoption of the standards that are needed to ensure access to financial markets, and the design of sustainable development strategies specific to large crude oil projects.
3. Environmental community responsibility seeks to reduce dependence on the company's activities by establishing shared responsibility links with local actors, driving the participatory process with respect to the ecological land use planning code, along with conservation initiatives and compensations that ensure the owners are able to sustainably leverage exploration of the natural capital found in the oil basins.



The approaches adopted to include stakeholders opinion are related to the operation of the company itself. Frequency of interaction is determined by the type of relationship the Company establishes with them.

Interest group	Who are they	Means of involvement
Active workers	Unionized and non-union workers	Intranet, "Nuestra Empresa [Our Company]" bulletin, internal communications, opinion surveys, TV programs streamed over the Intranet, Internal Control Body, Mixed Commissions, Office of the Assistant Manager of Human Resources, Union (STPRM), surveys from the Comb and Transparency Programs
Retired workers	Workers retired from the company	Intranet, labor relations, customer service centers, healthcare services, retirement centers, community centers
Government	Federal, State, and Municipal	Periodic meetings, requests for support, reports of account balances
Investors	Financial institutions	Telephone conferences, periodic reports, press releases
Suppliers	Contractors and suppliers	Service contracts, supply of goods, participation in industrial chambers of commerce, work meetings, publications, PTCC surveys
Customers	National and international markets, end-consumers, distributors, franchiser	Customer satisfaction surveys, remote customer service (Web, phone), PTCC surveys
Civil society and communities in oil-producing areas	Society in general, national and international civil society organizations, communities in areas of involvement, associations and industrial and commercial chambers of commerce, universities and research centers	Requests for support, work meetings, surveys and studies of opinions and transparency, campaigns, corporate Web site, Intranet, letters to the Board of Directors
Communication media	Regional, national, and international	Press reports, interviews, conferences, press releases



**ROSARITO SECTOR DUCTS**  
North Baja California

## 2.3 Communication channels and dialogue

### CASE STUDY

#### MATERIALITY STUDY

Materiality refers to the corporate relevance of different aspects related to sustainability. The challenge consists of identifying and justifying which matters are relevant to its stakeholders, to which end Pemex reviewed close to 1100 briefing notes, among other sources. The analysis developed through the study of materiality allows us to understand aspects of sustainable development that are relevant for the sector and for Pemex.

The following conclusions were reached upon analyzing the matters that are considered material for the oil sector:

- The most relevant matters are the practices of corporate governance, climate change, exploration and production operations, and the management of waste, leakage, and spills. These topics require careful management in order to inform the public.
- Particular attention must also be paid to the points concerning brand management and customer relations.

### CASE STUDY

#### INTERNAL MEETINGS FOR THE INTEGRATION OF THE REPORT

Meetings were organized with the Pemex management team in different business units to identify core concerns regarding the selection of the material aspects that were to be published in Pemex's Sustainable Development Report, the results of which list as follows:

- The company is aware of the impact it has on the community and devotes a specific section to address these issues in an effective manner, on a sound foundation and without discretionary criteria.
- Pemex needs to modernize the installed plant and invest resources to improve reliability, availability and customer service levels.
- Improve operational discipline and integrate technological advances to improve product quality, increase safety and supervision to contractors improving processes to achieve significant savings.
- Increase production capacity to reduce imports and develop new business models.
- Closely monitor and update the environmental protection strategy, the emissions profile, and carbon bond strategies.
- Reinforce communication activities related to the Pemex's Sustainable Development Report, both internally and among society as a whole.
- Strengthen the strategic lines of communication to internalize the Pemex's vision of sustainability throughout the entire organization.
- The cornerstone of the organization is its people, and it promotes their personal development within a safe environment and framework of equity.

### GPC 3

#### STRATEGIES TO INTERNALIZE AND SOCIALIZATE THE SUSTAINABILITY CRITERIA

Pemex uses the 2007-2012 Environmental Protection Strategy as the reference framework to disseminate sustainability criteria among its workers, employees, and officers. Said strategy consists of the following three core areas that are driven by Petróleos Mexicanos management in regard to this topic: seize operational opportunities, sustainability of investments, and community environmental responsibility.

The Company uses the Transversality Agenda for Public Policy on Sustainable Development to internalize this strategy's sustainability criteria, which is contained in 2007-2012 Sectorial Programs on the Environment and Natural Resources. The Cross-Cutting Agenda establishes the obligation of periodic reporting and accountability, which is in line with the Company's internal strategy.

Thirty-two of the Federal Government's institutions participate in the Transversality Agenda, with the purpose of promoting sustainable development in this field. Pemex and Semarnat work together on this agenda with the development of the following principal 15 topics: climate change, the production of cleaner fuels, sulfur recovery in refineries, and ecological land use planning code. An integral part of the Transversality Agenda includes environmental management systems, which include the Sustainable Management Program that consists of the following programs: Efficient and Rational Use of Water; Energy Savings; and the Responsible Consumption of Office Supplies; these programs are coordinated inside Pemex by the Inter-Agency Advisory Commission for Environmental Management (CAIMA, acronym in Spanish).

Pemex uses the Annual Sustainable Development Report as the instrument to socialize this strategy's sustainability criteria, which the Company has published since 1999 and covers safety, health, environmental, and sustainable development issues. The Company improved the contents of the report in 2006, and broadened its scope by incorporating international criteria for the following standards and initiatives: the Global Reporting Initiative Guide G3 (the international standard for preparing records on corporate social responsibility) and the Global Compact. In the same manner, the Sustainable Development portal, which has been operating since 2007, has served as a key element for spreading the criteria of sustainability, as evidenced by the following figures: the total number of hits between June 1 and December 31, 2007, is 28,153. It should be noted that an internal Pemex outreach campaign was conducted during the month of October, which has resulted in an increase in daily hits to approximately 600 per day. This campaign included press releases, posters, brochures, and Internet advertising.

On the other hand, the 2006 printed edition of the Sustainable Development Report was distributed within the areas in Pemex that are related to its content, both on a regional and central basis, while also being distributed abroad to civil society organizations, government agencies, embassies, universities, research centers, and others.

#### COMMUNICATION CHANNELS OF COMPLAINTS AND NON-COMPLIANCE

Pemex's Internal Control Body includes the Citizen Service System for gathering complaints, accusations and recognitions, for the purpose of supporting the investigation of irregular conduct incurred by public servants, and implementing preventive and corrective actions that provide transparency to its public function. The complaint gathering means can be found at <http://www.PEMEX.com> or by writing to the following email address: [satciucgc@cgc.PEMEX.com](mailto:satciucgc@cgc.PEMEX.com)

#### PEMEX SUSTAINABLE DEVELOPMENT REPORTS

Pemex published its Sustainable Development Report for the January 1 through December 31, 2007 period for the purpose of maintaining the practice of informing stakeholders about its performance. This report includes the opinion issued by the Citizen Participation Group (GPC) as external observers, for the purpose of evaluating the degree to which the company responds to specific concerns of diverse sectors of society (See Annex Citizen Participation Group (GPC) at the end of the present Report).

Go to [www.pemex.com](http://www.pemex.com) to view these reports and other documents the company publishes regarding the performance of its operations.

#### GPC 17

##### CONSULTATION PROCESSES WITH STAKEHOLDERS AND SPECIFIC COMMUNITIES

Pemex participates in the public consultations the Semarnat organizes to obtain the approval of environmental impact statements for its projects and the corresponding Ecological Land use planning (OET acronym in Spanish) it conducts in oil production regions. In this regard, Pemex has participated in OETs for the Oil Production Zone of Region V of the northern state of Chiapas, the state of Tabasco, and the Lower Basin of the Coatzacoalcos River, processes which were completed in 2006; the Burgos Basin, which is undergoing the validation process in public workshops, and in the OET of the Tuxpan River Basin and the Regional Ecological land use planning and Marine zone in the Gulf of Mexico and the Caribbean Sea, which are in their early stages and in which Pemex is an active participant.

Public consultation processes for the aforesaid projects have included the participation of representatives from production organizations in the business sector, civil society organizations (CSOs), environmental groups, academics, investigators, business men and women, and authorities from the three levels of government.

In addition, Pemex has recently incorporated consultation processes with communities and stakeholders related to the registration of Clean Development Mechanism (CDM) projects into its activities.

An example of the above can be found in the public consultation process that was successfully performed for the Tres Hermanos field project, in the state of Veracruz, a process Pemex plans to replicate in 2008 for its CDM projects that are currently in the documentation phase.

#### GPC 18

The cases mentioned above have mechanisms to certify the consultations carried out and to integrate the documents that are produced from these consultations. Opinions expressed by the general population are systematically considered in the consultations that take place during the Environmental Impact Statement and Ecological Land use planning code processes.

The registration of CDM projects needs a process of public consultation and later attention to its results.

## GPC 14

## REPORTING SYSTEM FOR COMMUNICATING ENVIRONMENTAL IMPACTS OF ITS ACTIVITIES AND COMPENSATION

Ever since 1999, the Annual Sustainable Development Report, as well as the Sustainable Development portal, which has been in operation since 2007, are the main channels the Company uses to ensure its corporate communication and inform the public about the results of its environmental performance and its conservation and compensation projects. Both mechanisms receive information from the Safety and Environmental Protection Information System (SISPA, acronym in Spanish).

With regard to compensation, the environmental authority regulates the operations that Pemex carries out in the field of exploration or the construction of new facilities, requesting the company to implement restoration activities that benefit the environment. In this sense, Petróleos Mexicanos has carried out reforestation activities, the development of aquaculture production projects, training, and environmental stewardship; it has also opened nurseries, constructed demonstration plots, while cultivating plantations and seedbeds for mangroves, among other activities.

These activities are implemented through “environmental accreditation” processes, which is a determining factor for authorizations regarding environmental impacts and risk. This certifies before the environmental authorities, that the actions Pemex Exploration and Production and its contractors perform as they carry out their oil-related activities it performs within the project area, in compliance with the management measures, prevention, mitigation, restoration and compensation units, as well as monitoring, advisory and information consolidation activities to support any lack of compliance.

## CASE STUDY

## PEMEX.COM

Pemex uses its Internet website as an electronic means to inform the community and stakeholders of the Company's performance. The website features an evaluation survey on its operation, and links to the main sites of related interests. It also includes a free subscription to an information service that allows public users to stay informed of the Company's activities through the updates Pemex posts on its Press Section in an RSS format (Really Simple Syndication).



**PETROCHEMICAL COMPLEX CANGREJERA**  
Veracruz



## 2.4 Pledged policies and commitments

### CODE OF CONDUCT

Pemex has a Code of Conduct that is based on the Federal Government's concern to fight and prevent corruption derived from illegal practices in public management within its Program for Transparency and War on Corruption.

The establishment and dissemination of the Code of Conduct allows Pemex to promote and direct the actions performed by Pemex employees and employees, impelling the internal change that the industry needs in favor of efficient ethical public servants, with a human touch.

Read the Pemex code of conduct at: <http://www.pemex.com/index.cfm?action=content&sectionID=1&catID=9>

### AGREEMENTS WITH OTHERS INSTITUTIONS AND COMPANIES

During 2007, Pemex - Exploration and Production (PEP) entered into six non-commercial Cooperation Agreements with international oil companies in order to perform technological, scientific and training exchange in the fields of exploration and exploitation of crude oil and gas. Said Cooperation Agreements comply with the Mexican legal structure and their fundamental purpose is to exchange technological knowhow on key topics to develop projects such as deep water exploration and operation, heavy crude oil production and increase of the recovery factor in onshore and offshore fields through the application of recovery technologies, and do not entail a commitment to transfer resources between the parties. International oil companies with which PEP subscribed Cooperation Agreements in 2007 were: BP, Petrobras, Statoil, Chevron, Shell and Nexen. At the end of 2007, Pemex and Maersk Olie & Gas entered into a non-commercial cooperation agreement in the area of scientific and technological research and development, which the parties signed in February of 2008.

PEP entered into a specific agreement by and between Statoil on the topic of Industrial Security, Environmental Protection and Quality (SIPAC). It also subscribed a specific agreement with Shell on the subject of Sustainable Development. The idea is to share best practices and approaches to improve management efficiencies of the concept.

### MAIN POLICIES AND GUIDELINES

The primary policies, terms and guidelines regarding its conduct in the social, environmental and economic areas, include:

- Policy for Industrial Safety and Environmental Protection of Petróleos Mexicanos and its Subsidiary Entities.
- General Policy for Physical Security at Petróleos Mexicanos facilities and those of its Subsidiary Entities.
- General Guidelines for the Coordination of Actions in the Implementation of the Sub-system of Industrial Safety and Environmental Protection Information (SISPA) at Petróleos Mexicanos and its Subsidiary Entities.
- Guidelines on the Topic of Grants and Donations awarded by Petróleos Mexicanos and its Subsidiary Entities.
- Guidelines on the Subject of Incorporation of Employees of Petróleos Mexicanos and its Subsidiary Entities.
- Guidelines for the Development of Human Resources of Petróleos Mexicanos and its Subsidiary Entities' employees.
- Guidelines for the Social Services and Professionals Practices Program at Petróleos Mexicanos and its Subsidiary Entities.
- Guidelines for Investment Projects of Petróleos Mexicanos and its Subsidiary Entities.
- General Rules and Operational Guidelines of Petróleos Mexicanos for the Pemex Project Funding Master Trust.
- General Guidelines on the Subject of Rationality, Austerity and Budgetary Discipline for Petróleos Mexicanos and its Subsidiary Entities during Fiscal Year 2007.
- Policies, Terms and General Guidelines for Provisions on the Subject of Acquisitions, Leasing and Services for Petróleos Mexicanos, and its Subsidiary Entities and Companies.

These Pemex policies and guidelines are of the public domain and can be queried at: <http://oic.Pemex.com/normateca5/normateca.html>

### MAIN INITIATIVES AND ORGANIZATIONS THAT INVOLVE PEMEX PARTICIPATION

#### INITIATIVES

- UN Global Compact
- Energy Industry Partnership (EIP) of the World Economic Forum (WEF)
- Extractive Industries Transparency Initiative (EITI) - Board Member
- Methane to Markets (M2M)
- GHG emission Program in Mexico
- Kyoto Protocol (CMD)

#### ORGANIZATIONS

- Comisión de Estudios del Sector Privado para el Desarrollo Sustentable (CESPEDES).
- Asociación Mexicana para la Energía y el Desarrollo Sustentable (AMEDES).
- Association of Petroleum and Gas Companies of Latin America and the Caribbean (ARPEL)
- International Maritime Organization (OMI)
- The International Fuel Quality Center (IFQC)
- Chemical Distribution Institute (CDI)
- Oil Companies International Marine Forum (OCIMF)
- European Barge Inspection Scheme (EBIS)
- International Association of Independent Tanker Owners (Intertanko)
- International Tanker Owners Pollution Federation (ITOPF)



# 3. Pemex, development promoter in Mexico

28

PEMEX: DEVELOPMENT PROMOTER IN MEXICO

## 3.1 Value generation

### AN EFFICIENT COMPANY

Pemex is one of the main generators of economic value for Mexicans. The company creates and distributes the value generated during its production chain in its different forms.

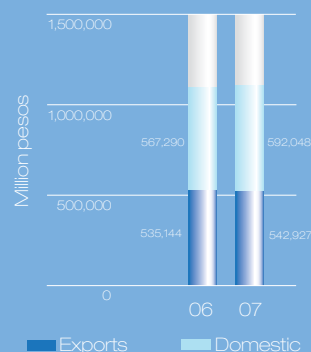
During 2007, total sales increased 2.9% in relation to 2006, reaching \$1,136 billion pesos (\$104.5 billion USD). Domestic sales rose 4.4% and exports rose 1.5% compared with 2006.

### SALES VOLUMES IN MEXICO

Product	2006	2007	Var. %
Natural Gas (MMcfd)	2,955	3,071	3.9%
Petroleum products (Mbd)	1,763	1,817	3.0%
Gasoline	718	760	5.9%
Diesel	345	358	3.9%
LP Gas	306	301	(1.6)%
Others	394	397	0.7%
Petrochemicals products (Mt)	3,826	3,992	4.4%

Source: Pemex Audited Financial Results Report as of December 31, 2007

### Total sales



Source: Pemex Audited Financial Results Report as of December 31, 2007 and 2006 Annual Report on Sustainable Development.

Net income	2006 million pesos	2007 million pesos
Export sales	535,144	542,927
Domestic sales	567,290	592,048
Revenue from services	1,076	1,061
Total sales	1,103,510	1,136,035



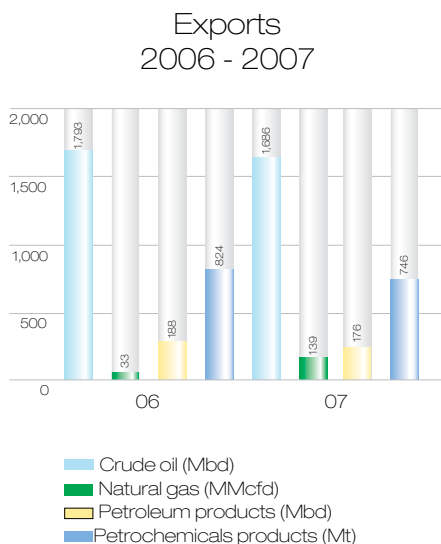
**CACTUS GAS PROCESSING CENTER**  
Reforma Municipality, Chiapas

#### EXPORTS 2006-2007

During 2007, crude oil exports averaged 1,686 Mbd, 5.9% less than in 2006, as the result of reduced production. The average price of the Mexican export mixture was set at \$61.6 USD per barrel, compared with \$53 USD per barrel during 2006, which represents an increase of 16.2%.

During 2007, petroleum product exports were at 176 Mbd, 6.4% less than in 2006, as a result of smaller sales of naphtha and fuel oil, partially compensated by increased diesel sales.

Petrochemicals exports fell 9.5% (78 Mt), ending at 746 Mt, due to reduced sales of sulfur, low density polyethylene, benzene, ethylene and glycols, partially compensated by increased ammonia exports. During 2007, natural gas exports were 139 MMcf compared with 33 MMcf during 2006, the result of an increase in their production.



#### ECONOMIC IMPACT OF THE COMPANY'S TAX CONTRIBUTIONS

Pemex's contribution to taxes and duties during 2007 amounted to \$677.3 billion pesos, which represent 12% increase over 2006.

This contribution was higher than the total amount of contributions to States and Municipalities during 2007 Expenditures Budget

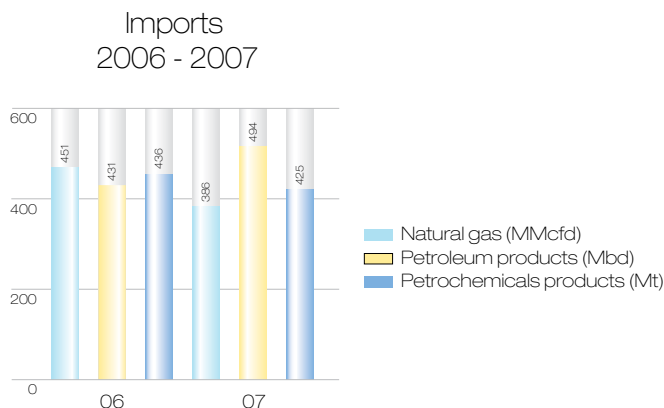
It should be noted that, due to the Company's unique characteristics, Pemex only receives resources from the Federal Government for its annual investment and operating budget.

Source: Pemex Audited Financial Results Report as of December 31, 2007 and <http://www.apartados.hacienda.gob.mx/presupuesto/temas/pef/2007/index.html>

#### IMPORTS 2006-2007

During 2007, natural gas imports averaged 386 MMcf, 14.5% less than those registered during 2006, due to increased natural gas production in the country.

Imports of petroleum products rose 14.6%, from 431 to 494 Mbd, with 308 Mbd corresponding to gasoline imports, to guarantee the supply of the nacional demand.



## A COMPANY THAT GENERATES VALUE FOR SOCIETY AS A WHOLE

Economic Value Generated and Distributed in Million Pesos		
Concept	2006	2007
Total sales	1,103,510	1,136,035
Cost of sales *	418,258	460,666
Gross income	685,252	675,370
General expenses	80,975	84,939
Operating income (loss)	604,277	590,431
Net Other revenues (expenses)	61,214	83,019
Comprehensive financing result	(23,847)	(20,047)
Participation in results of subsidiaries and associates	10,074	5,545
Income before taxes and duties	651,718	658,948
Taxes and duties	604,765	677,256
Net income (loss)	46,953	(18,308)

\*Includes cost for labor reserve. Notes: The 2006 data was restated, in order to correspond the terms with the company's financial report. Amounts may not coincide due to rounding. Source: Pemex Audited Financial Results Report as of December 31, 2007

## ADVANTAGES FOR SMALL AND MEDIUM-SIZED SUPPLIERS

Pemex has a program that concentrates on purchasing component parts and services from local suppliers that provide the best quality conditions, prices and delivery times.

This strategy considers the following actions:

- Electronic invoicing for supplier procedures
- Support the business incubator strategy, together with the Mexican Petroleum Institute and the Secretary of Economy.
- Provide training courses and organize seminars in coordination with industrial chambers to present the requirements and characteristics that are needed to become a Pemex supplier.
- Install Nacional Financiera (Nafin, or the National Development Bank) modules to serve suppliers at trade shows or conventions and coordinate events in the main localities where the state company operates.
- Analyze, with the National Foreign Trade Bank (Bancomext) the possibility of helping suppliers that service Pemex to access commercial bank financing.

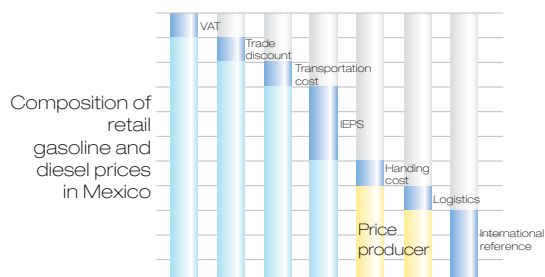
Distributed value of specific categories Million pesos		
		2007
Labor*	69,280	78,630
Operation	68,879	78,422
Investment	401	208
Industrial Safety and Environmental Protection**	19,107	27,476
Operation	14,780	23,485
Investment	4,327	3,992
Acquisitions	10,249	11,719

Note: \* The items of Manpower and Acquisitions were taken from the Exercise of Public Account 2007 in January – December cash flow. Any variation with respect to 2006 is due to the calculation methodology used.

## PRICE POLICY

The prices of the products and rates for the services are determined according to what is established in article 26 of the Regulation of the Federal Law of State-run Organizations, by means of the Committee for Prices of crude oil, Natural Gas, Petrochemicals and Interagency products, in which the Secretary of Finance and Public Credit sanctions the mechanisms proposed by the organism.

Price policy



Note: IVA: Value-Added Tax, IEPS: Special Tax on Production and Services. Source: Secretary of Finance and Public Credit and Petróleos Mexicanos.



## PGPB, SUPERVISORY CONTROL AND DATA ACQUISITION (SCADA)

The price, without considering the above categories, is a producer price, which is obtained by means of an international reference, the application of logistics (transport adjustments) by Pemex and the inclusion of handling costs. The international reference that is used corresponds to the average spot price that is observed on Gulf Coast of the United States of America.

The increase registered in the 2005 – 2007 period in the price of Premium gasoline grew from \$7.5 to \$8.5 pesos per liter, which represents a average annual change of 4%, whereas the price for Magna gasoline in the same period rose from \$6.3 pesos per liter during 2005 to \$7.2 pesos per liter during 2007, equivalent to an annual average increase of 5%<sup>5</sup>.

## 3.2 Technological innovation

### CHALLENGES

The challenge of deep water exploration and operation requires having the appropriate technology, timely and sufficient investments, and capacity for execution and market conditions that contribute to making Pemex a more profitable company.

The biggest challenges in deep water exploration and operation are related to the construction of wells and production infrastructure in special conditions of sea currents and extreme temperatures and pressure.

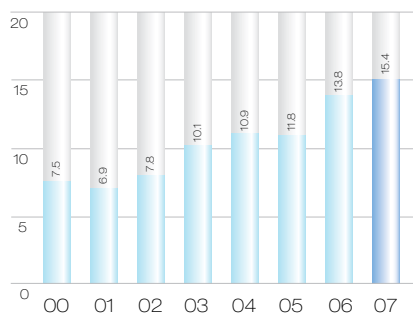
### PEMEX AND DEEP WATER EXPLORATION

Pemex has allocated over \$6,700 million pesos to exploration activities over the last six years, mainly in the acquisition of tri-dimensional seismic information and in drilling five wells.

### INVESTMENT PROGRAMS

Pemex has registered a growing investment trend in recent years, with a 2007 budget of \$16 billion USD.

Total Pemex investment  
(billion USD)



5. Note: Pemex uses prices on the Northern Mexican border and the rest of the country to calculate its average prices.

#### CASE STUDY

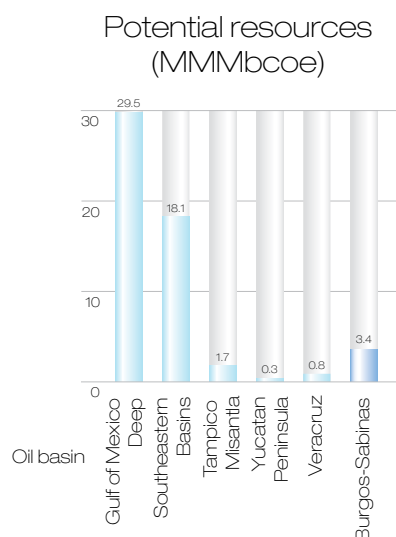
##### KNOWN DEEP-WATER RESERVES AND POTENTIAL RESOURCES

Mexico currently operates its offshore wells in depths of water of less than 100 meters. Nevertheless, it is estimated that the Gulf of Mexico Basin holds potential resources located at depths of more than 500 meters, whose volumes of estimated hydrocarbons are equivalent to 29.5 billion barrels of crude oil equivalent. At December 31, 2007 3P reserves (proven plus probable plus possible) amounted to the equivalent of 549 million barrels of crude oil equivalent.

#### CASE STUDY

##### RECORD VOLUME OF NATURAL GAS PRODUCTION

As a result of the discovery of new deposits, the extraction of this hydrocarbon in Mexico has registered significant growth as of 2002, growing from 4,423 MMcfd in that year to record high production of 6,461 MMcfd in October of 2007, which represents an increase of 46% over that period.



## 3.3 Social development activities

Pemex, as a company that contributes to the development of Mexico, in addition to its tax contributions to the Federal Government for the Federation's expenditures budget, contributes resources through a grants and donations mechanism that serve to improve the way of living of the people who live in the communities in which the Company operates.

The Corporate Social Development Division analyzes grants and donation requests made by States, Municipalities and Non-profit organizations based on the guidelines established for Grants and Donations by Petróleos Mexicanos and its Subsidiary Entities, in an effort to ensure that the projects presented have the greatest social impact for the well-being of the population and adhere to diverse indicators.

These indicators are weighed according to the characteristics of the oil activity in the locations in order to facilitate the operation and eliminate discretion in the distribution of resources. The states of Chiapas, Coahuila, Guanajuato, Hidalgo, Nuevo Leon, Oaxaca, Tabasco, Tamaulipas and Veracruz have been identified as priority zones.

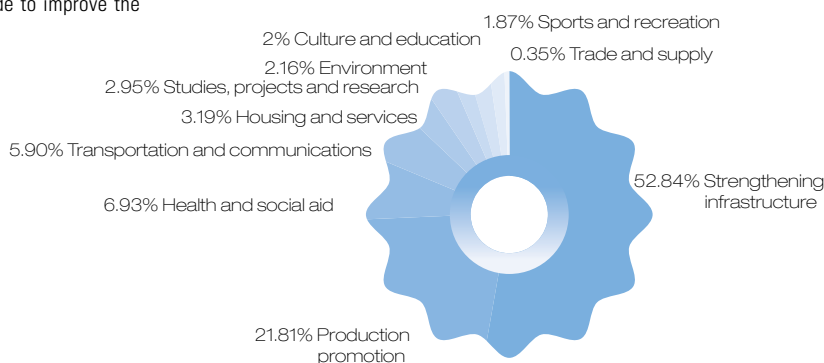
Currently, indicators are being developed to evaluate the social impact of the actions conducted by the company, based on the new guidelines on the matter of Pemex's grants and donations.

The indicators are developed from two perspectives. The first is internal, evaluating the economic impact represented by not having conflicts that stop the activities of the industry and the reduction of fuel theft, among others, and the second consists of evaluating the direct impact on the residents of the communities. Therefore, during 2008, efforts will be made to improve the development of these indicators.

#### DISTRIBUTION OF 2007 DONATIONS AND GRANTS BY SOCIAL DEVELOPMENT ITEM

CONCEPT	2007 (MMS)
Production promotion	371,184,765
Infrastructure reinforcement	899,334,873
Culture and education	34,060,535
Health and social aid	117,931,241
Sports and recreation	31,821,392
Trade and supply	6,000,000
Communications and transportation	100,408,834
Housing and services	54,343,103
Environment	36,754,161
Studies, projects and research	50,220,428
<b>Total</b>	<b>1,702,059,330</b>

#### Distribution of grants and donations 2007



Source: Corporate Social Development Management.





**PALOMOS CRUDE OIL DISTRIBUTION CENTER**  
Nuevo Teapa, Veracruz

### NEW EFFICIENCY PROCEDURES

The Pemex Corporate Social Development Management has developed mechanisms to evaluate the needs of the communities in which it operates, in order to ensure a more rational application of these resources and serve the largest number of requests possible.

At least 90% of the total of the authorized budget for grants and donations is allocated to the states and municipalities identified as a high-priority for Pemex operations, as a result of the application of the methodology indicated above. The remaining 10% goes to non-priority states and municipalities that have relative importance in the development of crude oil producing activity.

Pemex is concerned about establishing relationships that provide the mutual benefit of the communities that house its operations, allowing it to execute business and wealth-generation strategies while contributing to the development and social welfare of the surrounding communities in a framework of Sustainable Development.

One of the main challenges in the matter of Pemex Social Development is the resolution of conflicts that puts the activity of the oil industry and the development of the communities where it operates at risk. Thus, Pemex seeks to coordinate its activities with these communities by means of dialogue that provides mutual benefit and development. During 2008, one of the main challenges will be the generation of a social policy on an Institutional level that allows for homogenizing the procedures of the company.

Within the grants and donations mechanism, it is provided that the granting of these supports contributes to the viable development of the communities where there is a presence of the state oil industry.

### MAIN SOCIAL DEVELOPMENT ACTIONS DURING 2007

One of the main achievements in the matter of social development has been the optimization of the Pemex Guidelines for Grants and Donations, which will regulate their drafting, authorization, documentation, granting and monitoring, starting in 2008.

A cost control, physical verification and monitoring mechanism were introduced for the application of the supports. It should be noted that the grants and donations delivered by Pemex maintain their legal stature as Federal Public Resources for purposes of their control and transparency, in accordance with Federal Law of Budget and Treasury Responsibility.

### 98% OF THE GRANTS AND DONATIONS RESOURCES WERE ALLOCATED TO OIL- PRODUCING ZONES

- \$1,702 million pesos in resources exercised during 2007
- 52% used for infrastructure fortification
- 21% used for promoting local production

### FROM 2005 TO 2007, THE CONTRIBUTION TO THE COMMUNITIES HAS INCREASED 44.8%

- 2005: \$1,175 million pesos
- 2006: \$1,632 million pesos
- 2007: \$1,702 million pesos

### GPC 19

#### IMPLEMENTATION OF GOVERNMENT PARTICIPATION FOR DESIGN AND IMPLEMENTATION OF SUSTAINABLE DEVELOPMENT PROGRAMS

PEMEX has subscribed the design and implementation of Cooperation Programs with states and municipalities in the crude oil-producing zone, where there is the creation of a multi-year work alliance based on communication, cooperation, joint responsibility, transparency and accountability. The objective of this alliance is to promote sustainable development of the producing communities and at the same time ensure the optimal operation of PEMEX in the region.

This effort requires strategies that are coordinated between the company and local government agencies. The design, implementation and monitoring of these strategies is part of the cooperation mechanism. The definition and implementation of a Program of this nature considers long term viability and promotes permanent communication and evaluation processes. These elements have been incorporated in the Program by means of the contributions from the different state and municipal government agencies in oil-producing states.

Under the Law of Transparency and Access to Public Governmental Information, the Social Development page was launched, which is has been available on the Pemex portal as of November 2007.

#### SUPPORT PROGRAMS, GRANTS AND DONATIONS TO THE COMMUNITY

During 2007, \$899.3 million pesos were used for infrastructure works in the ten states with the greatest impact of the oil industry. Some of the infrastructure and support works completed are listed as follows:

##### Chiapas

Construction of sanitary sewage system, first. stage, municipal head of Juárez. Construction of the urban solid waste transfer station in Reforma.

##### Campeche

Paving with hydraulic concrete of Av. Ballena/C. Coral and Jurel. "November 20" Sports Unit in CD. del Carmen. Establishment of an artificial reef field in front of the costal zone of Isla Aguada, Carmen, and another in Champotón.

##### Hidalgo

Second stage for the construction of Pemex-Tula social development center, where an auditorium and library will be built.

##### Veracruz

Actions in the area of public services infrastructure: Equipping of 21 Courtrooms in the municipalities of Coatzacoalcos and Xalapa." Donation of \$42 million pesos to the Government of the State of Veracruz. "Rehabilitation and paving of the Highway Network.

##### Oaxaca

Financial support to pave Av. Ferrocarril with hydraulic concrete; the construction of a vehicle bridge on Mazatlán and Guaymas street, in the Municipality of Salina Cruz, Oaxaca. Performance of maintenance works and infrastructure construction.

##### Tamaulipas

Construction of a bridge in the municipality of Reynosa.

#### GPC 20

##### EVALUATION OF THE EFFECTIVENESS OF THE AGREEMENTS

Within the framework of the re-definition of the cooperation criteria and guidelines between PEMEX and the states and municipalities, mechanisms have been designed to evaluate the policies, procedures and processes, as well as their impact, which are derived from the actions taken by the Cooperation Programs. Based on the monitoring and evaluation of these activities, there will be accountability to society and transparency regarding the use of resources.

In order to determine the degree of effectiveness in the fulfillment of the agreements reached, the following evaluation standards will be used: relevance, efficiency, effectiveness, viability and impact. In order to establish permanent evaluation processes and to have elements to increase transparency and accountability with society, public evaluation reports will be made.

In common agreement, the governments of oil producing states and Pemex have agreed to create a an Inter-institutional Evaluation and Monitoring Group made up of representatives of the State Government, municipal governments, Petróleos Mexicanos and its Subsidiary entities and, when the parties agree, other agencies related to different aspects of this instrument.

Among the main functions of the Inter-institutional Group of Evaluation and Monitoring are the following:

- To propose strategies and priorities on the agendas for the fulfillment of the objectives of the Cooperation Program.
- To evaluate the progress of the commitments and the efficiency of the actions taken.
- To follow up on the actions committed to in the Cooperation Agreements.
- To integrate an information system with public data and documents.
- To inform and be accountable to society.

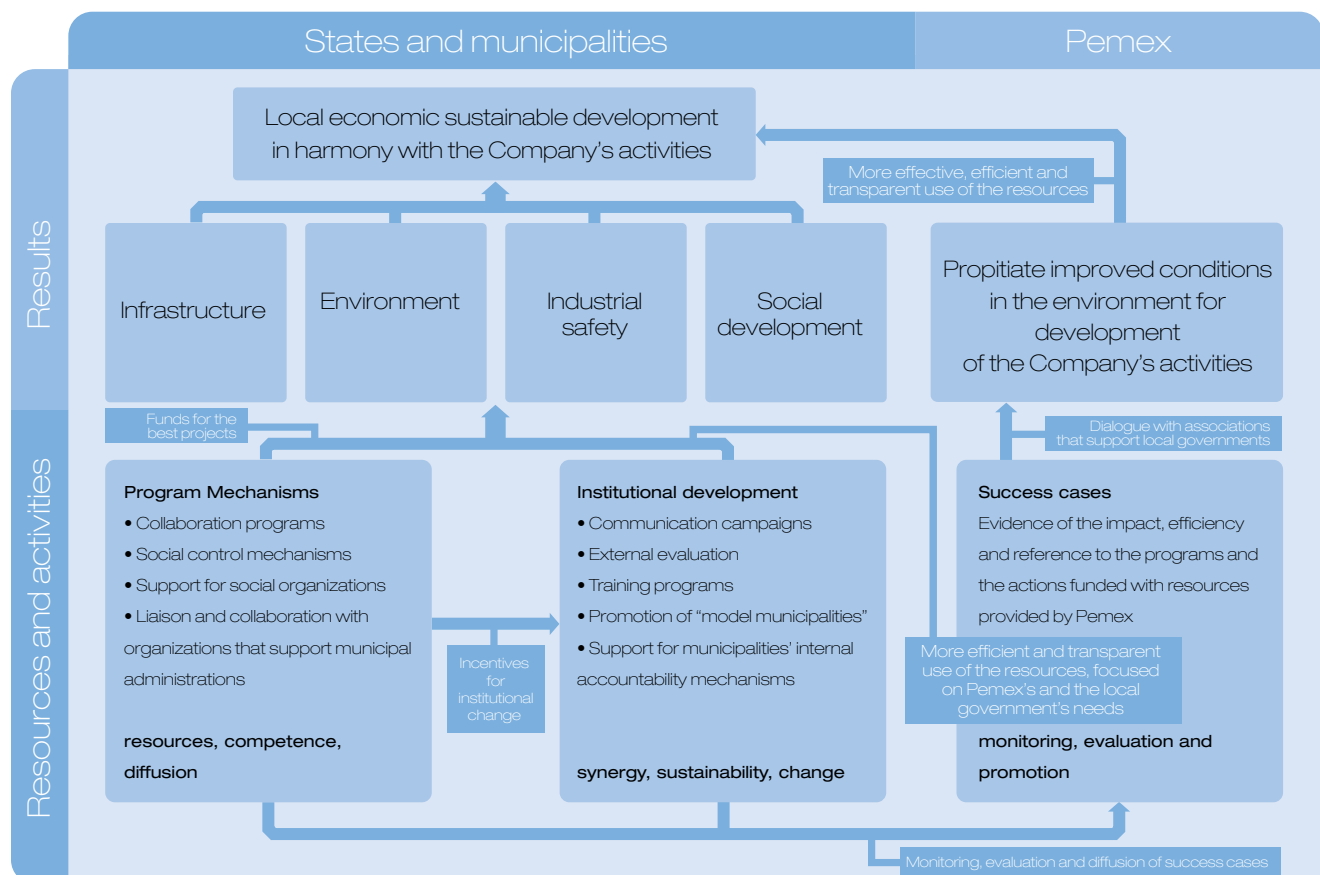
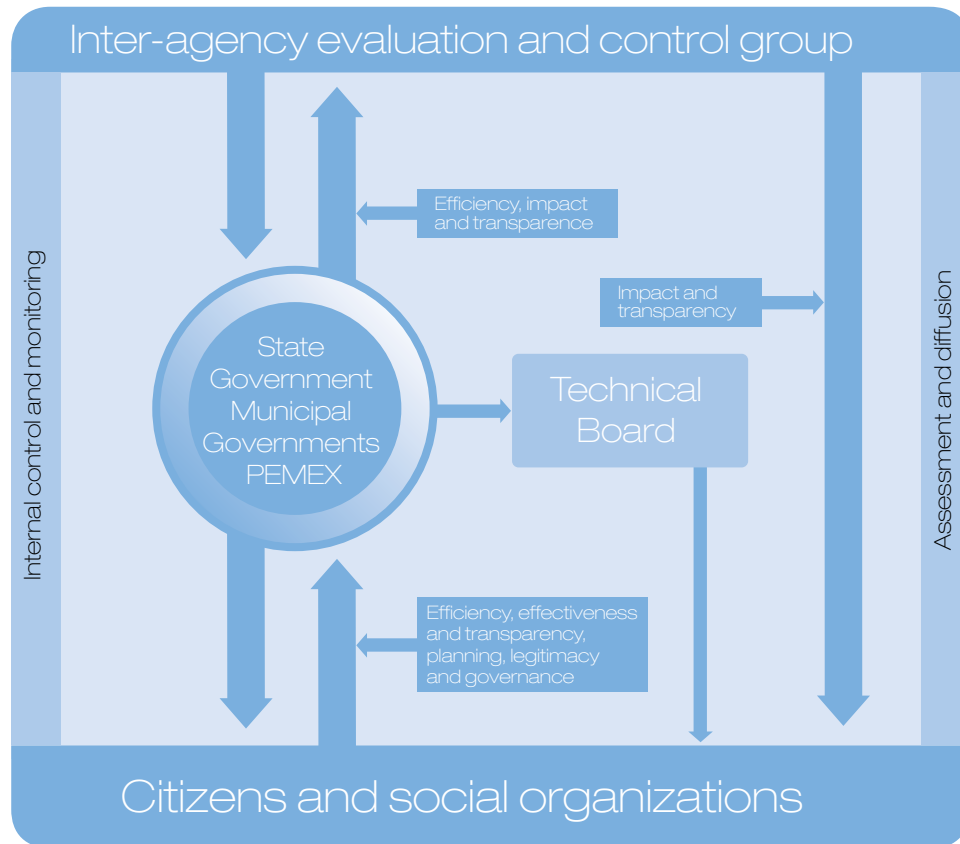


**CAYO ARCAS DISTRIBUTION TERMINAL**  
Campeche Sound



**MORELOS PETROCHEMICAL COMPLEX**  
Coatzacoalcos, Veracruz

## TRANSPARENCY AND ACCOUNTABILITY MECHANISMS





#### PEMEX AND THE MILLENNIUM GOALS

Pemex's contributions to the community were related, to a great degree, to the fulfillment of the United Nations Millennium Development Goals (ODM acronym in Spanish) Mexico has subscribed to.

The eight Millennium Development Goals for 2015 constitute a plan agreed by all the nations of the world and the most important development institutions on a global level:

- 1: Eradicate extreme poverty and hunger
- 2: Achieve universal primary education
- 3: Promote gender equality and women empowerment
- 4: Reduce child mortality
- 5: Improve maternal health
- 6: Combat HIV/AIDS, malaria and other diseases
- 7: Ensure environmental sustainability
- 8: Develop a global partnership for development

Go to [www.undp.org.mx/](http://www.undp.org.mx/) to learn about Mexico's level of fulfillment of the United Nations millennium goals.

#### CASE STUDY

##### PEMEX'S PARTICIPATION DURING THE FLOOD IN VILLAHERMOSA, TABASCO AREA.

Pemex orchestrated measures to prevent impact on the populations bordering the sites for hydrocarbon production and processing. In order to reduce the impact during the emergency in the company's facilities, the following actions were carried out:

- Closing of 192 wells
- Stopping 70 drilling rigs and well repairs
- Stopping operation of four pipelines as a preventive measure

Pemex acted on the premise of guaranteeing the safety of its personnel, as well as the continuity of critical operations and fuel supply in the zone and support of the population in general.

The immediate actions included collaboration with civil defense authorities, medical attention for the population,

With regard to civil defense and attention to the population, Pemex aid consisted of the following, among other activities:

- Wall reinforcements
- Rescue of people, food transportation and monitoring by means of the use of 71 boats
- Provision of 24 special pumping units
- Donation of fuel for boats and motor vehicles, operation of water treatment and electrical energy plants
- Vaccination campaigns for the general population
- An electrical plant to provide energy supplies
- The provision of potable water through 31 water pipes
- A 100,000 liter water-treatment plant
- Transportation of rescued people, food and construction material, with 44 motor vehicles
- Donation of 1,700 food packages
- \$2.5 million pesos were given to the city councils for emergency support purposes, based on the Pemex-Tabasco Coordination Agreement.
- The Board of Directors approved a grant in the amount of \$15 million pesos for emergency aid



**CACTUS GAS PROCESSING CENTER**  
Reforma Municipality, Chiapas

## GPC 21

### ACTIVITIES TO INCREASE ACCESS TO PRODUCTS IN MARGINALIZED RURAL ZONES

It is estimated that in Mexico, firewood represents close to 6% of final energy consumption and 29% of consumption in the residential sector (National Energy Balance 2006, Sener).

It is recognized in different publications that use of firewood as fuel in rural homes brings about health problems and represents an important amount of time and physical effort for harvesting.

In *Firewood Use in Mexico: Current Situation, Challenges and Opportunities*, Masera and Díaz Jiménez recommend, for all the firewood consuming sectors, the need to promote efficient technologies and to combine them with other energy sources, preferably renewable, such as solar, micro-hydraulic and wind.

This study also says that the use of firewood is not a generalized cause of deforestation in the country, since, "... generally, a large amount of firewood comes from dead wood and trees located outside the forest zones..."

Petróleos Mexicanos considers that the socially and environmentally sustainable solution to the problems associated with firewood use is through greater efficiency of the stoves based on this fuel and by means of the complementary introduction of renewable energy.

In addition, the expansion of access of fossil fuels to the marginalized rural zones of the country with the purpose of reducing consumption of firewood would be a suboptimal solution in economic terms:

- Natural gas is not a suitable product for supplying the demand for rural fuel, because its distribution requires the building of gas pipelines for transport and distribution networks, for which it is necessary to have to a minimum critical volume of potential consumption, which makes the investment in this infrastructure feasible and profitable and which, at the same time, after considering the associated costs, results in a final price of fuel competitive with other products. Given the low volume and the geographic

dispersal of the demand, the development of an attractive market for participants in the industry is considered to be unlikely.

- As far as gas LP, on a national level, there are more than 850 distribution plants. Private distributors, who are responsible for delivery to the final consumer, cover the regions near the distribution plants, by means of tankers which supply LP gas to domestic user gas tanks, or by means of trucks that distribute 30- or 40-kilo cylinders. It is considered that the rural areas near the cities are well supplied, because the distributors can satisfy the existing demand in these zones without incurring greater distribution costs. That is to say, they supply the towns and small villages located in the area of influence of their storage plant with supply routes designed for that purpose.
- In relation to the substitution of firewood with gas LP in rural regions, Masera and Díaz Jiménez observe that "the total consumption of firewood has not notably fallen since 1960. Rather than total substitution of firewood for another fuel, a mixed use of fuels is presented (firewood-LP gas). The firewood savings that are obtained by mixed users is relatively small, 16% on average. This minimum difference owes to the fact that the main fuel-using tasks (tortilla preparation, cooking of beans and other traditional dishes) continue to be done with firewood, and gas is only used for heating food and preparing some foods with low fuel requirements."

**DOS Bocas MARITIME TERMINAL**  
Tabasco



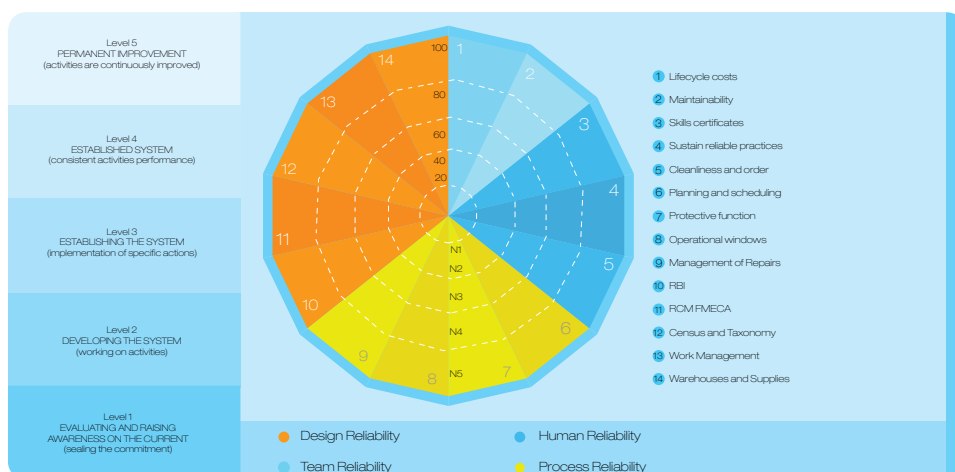






**BURGOS-MONTERREY DISTRIBUTION TERMINAL**  
Reynosa, Tamaulipas

## BEST PRACTICES THAT SUPPORT OPERATIONAL RELIABILITY



## PIPELINE TRANSPORT SYSTEM

The Subdivision of Coordination of the Pipeline System (SCSTD) of Petróleos Mexicanos initiated the consolidation of its strategic role by means of a process of alignment and refinement of the specific strategies of each one of the subsidiary entities of Pemex.

In order to achieve this purpose, it established a path with identification of the main initiatives, establishing mechanisms and guidelines by means of:

- Agreement for the implementation of a single SCADA.
- Technical guide for implementing the management of pipelines.
- Cooperation agreement @ditpemex as a platform to integrate, save and manage Petróleos Mexicanos' data and technical information and support its operational activities, tactics and strategies.
- SAP standardized parameterization.
- Strategic Map formed with the participation of OAG and OIC of Pemex, which seeks the alignment of the Pemex Pipeline Transport System efforts with Director General's Office objectives.

The Inter-organism Consulting Commission of Hydrocarbon Transport has allowed this strategy to be diffused, accepted and implemented.

## ACTIONS TAKEN DURING 2007

Initiative/Project	Investment (MMS)	Results
Strategic alignment	2.6	Strategic alignment with the organizations / Definition of the SCSTD strategic map.
SCADA	2.5	An agreement to establish a single SCADA / Appointment of project leader / Strategic alignment with the organizations / Steps taken to obtain 120 software licenses to better use the existing infrastructure.
@ditpemex	44.4	Technical map (web – exclusively for pipelines) / Atlas of infrastructure (for internal use) / Atlas of infrastructure (for external use).
Risk management	16.4	The algorithm of the risk evaluation was revised and improved, as well as the database approximately 13,000 kilometers from PREF / Thirty-five systems pertaining to the GTDHD Norte were evaluated, incorporating the information on the design, inspections and renovations to the SCADA, SAP and @ditpemex systems.
PAID	18.6	The initial 20% of each subsidiary entity's pipelines was determined to carry out the NOM project / One hundred and thirty-seven technicians were trained from the four organizations / A version of PAID was established to be in alignment with the NOM, IMAC, ASP and SVA projects. / Follow-up was given to the inspection and renovation of the pipelines.
SAP	By administration	Unified count of pipelines, easements, components and their technical information (80% progress) / Standardized system, which contains maps and maintenance programs of the pipeline transportation systems. (50% progress) / Budgets and costs approved and applied to the maintenance of the pipeline transport systems for decision making (35% progress) / Follow-up on using the tool.
Legalization of DDVCs	By administration	Reliable counts of DDVCs / Organizations were coordinated to establish their legalization programs of 2008-2013.
Operative discipline/Mechanical Integrity and Quality assurance	24.3	Training of 223 workers / Audit of operational reliability and mechanical integrity of the beach pipeline systems / As part of a pilot plan at the Mendoza and Nuevo Teapa stations of PREF, a list of critical equipment and work cycles of their maintenance procedures were determined. DTIs and process diagrams were formed, establishing the IMAC groups of the Ciudad Mendoza and Minatitlan sectors. / Forty-one PREF engineers received training to improve the criteria to renovate pipelines and establish management of the MPOs. / A decision was made to train the operators of the stations and control centers in alignment with a single SCADA / Follow-up on how leaks, spillage and clandestine taps take place.
Physical and documental assurance of findings	15.9	Verification of 4,031 findings from 33 audits performed by the DCO (Head Office of Corporate Operations during 2005 and 2006 / 2,670 findings have been resolved; 1047 of which are in process and 314 are pending.
Corrosion control	60.6	Studies for corrosion control with ASP focus (Technology - personnel - facilities) in: Central area – The West of the country Bellota assets - Jujo, Macuspana, Muspac and Poza Rica-Altamira. Re-engineering of Loma Larga -Salina Cruz corridor
Operational integrity	4.9	Certification of 136 technicians / Follow-up on cathodic protection systems. Participation in creating and adapting the Petróleos Mexicanos vulnerability strategy / A strategy to create a Pemex safety stock was coordinated and there was 50% progress made in acquiring materials for \$78.7 million pesos through PREF and PGPB / Coordination of the creation of the Operational Integrity Group, which carried out two sessions in 2007 / A study was performed on the feasibility of establishing an integral system dedicated to hydrocarbons spills and leaks in Pemex.

### SEA ROUTE SUPPLY

To transport and distribute fuel, Pemex needs 20 oil tanker vessels: 19 with a 40,000 to 47,000 dead weight tonnage (DWT) and one with a 15,000 DWT. It currently operates seven of its own tankers, four of which are bare boat charters and nine of which are time charters. With this fleet on the Pacific coast and the Gulf of Mexico, Pemex moves daily 35% of the total fuel needed to supply the country.

Transporting oil by oil tanker vessels is approximately eight times more efficient than doing so by land in auto-tanks. The Pemex - Refining Board of Directors authorized the purchase of up to ten tankers under the financing leasing scheme with an option to buy. This acquisition will be 4.2 times more profitable than leasing.

### LAND SUPPLY

Pemex - Refining distribution strategy has the following objectives:

- Satisfy the fuel demand for service stations in a safe and prompt manner.
- Assure mechanical integrity of the local distribution fleet, resolve maintenance issues and reduce operation costs.

To satisfy part of the oil demand in Mexico, Pemex - Refining has a fleet of 1,347 auto-tanks that make 6,760 trips per day in order to distribute 1.3 MMBd of gasoline and diesel. Towards the end of 2007, Pemex began a program to renovate such fleet. This will allow 1,123 tankers to be replaced between 2007 and 2010 and includes an overall investment of \$1.524 billion pesos to renovate the distribution fleet for the first time since 2002. In 2007, \$344 million pesos of that amount were invested in 321 units.

## 4.3 Continuity and quality of the service

During 2007, Pemex faced various challenges in ensuring continuity, quality and service to its clients due to acts of sabotage which temporarily affected the company's capacity to maintain a constant flow of fuel to its consumers.

### CONTINUOUS IMPROVEMENT OF THE PRODUCTS

Pemex strives to be an efficient and competitive business that sets itself apart through its commitment and efforts regarding the processing, transportation, and marketing of hydrocarbons and their byproducts, both in the national and international markets, in a manner that is safe, efficient, and adheres to the applicable regulations, based on its philosophy of continuous process improvement, with the intention to get client satisfaction and increase the added value of the company.

For the improvement of its products, Pemex relies, among others, on the Mexican Oil Institute (Instituto Mexicano del Petróleo, IMP), for technology development and research, as well as specialized services that aim to provide for Pemex's strategic and operational needs. Go to <http://www.imp.mx/> for more information.

Pemex entered into an agreement with the Centro Mario Molina para Estudios Estratégicos sobre Medio Ambiente, A.C. (the Mario Molina Center for Strategic Studies Regarding the Environment) in 2006, to carry out studies related to the "Cost Benefit Analysis of the Improvement in the Quality of Automotive Fuels in Mexico". Thus, the Center started to work on research studies in 2007, which could lead to the implementation of projects with lower environmental impacts.

### CASE STUDY

#### EXPLOSIONS CAUSED BY THIRD PARTIES

On the mornings of July 5 and 10, 2007 there were four explosions due to acts of sabotage followed by fires in the valve houses in Celaya, Salamanca, Valle de Santiago and Coroneo. As a result, the operation of the Mexico-Guadalajara gas pipeline was affected, as well as the Cactus-Guadalajara LP Gas pipeline, the Poza Rica-Salamanca oil pipeline and the pipeline located in the Celaya house of valves. The interruption in transporting hydrocarbons affected the domestic and industrial consumption in the states of Jalisco, Michoacán, Guanajuato, Querétaro and Aguascalientes. Furthermore, production of gasoline, diesel and lubricants was halted in the Salamanca refinery.

The Company deployed 300 workers to repair the pipelines that were affected. Pemex adopted the following measures to reduce the impact of these types of incidents: a) Transfer sales programs to other supply terminals; b) Increase operation to three shifts in the supply terminals; c) Support to distributors through auto-tanks; d) Supply through alternate pipelines; e) Supply from the Tula and Cadereyta refineries; f) Replace natural gas consumption for LP Gas (wherever possible); g) Products transported by ships.

Normal operations of all pipelines were re-established on July 15, 2007.

On the morning of September 10, 2007 there were again six explosions due to acts of sabotage followed by fires in the house of valves of La Antigua, Actopan, Omealca, Balasterra, and Algodonera. The operation of the Cactus-San Fernando, the Cempoala-Santa Ana and the Minatitlán-México gas pipelines were affected as well as the Cactus-Guadalajara LP Gas pipeline, a 12 inch oil pipeline and 24 and 30 inch pipelines.

The interruption of the hydrocarbon transport affected domestic and industrial consumption in the high plains and west, due to interrupt the supply of LP gas to terminals in Puebla, San Martín Texmelucan, Tepeji del Río, Tula, Abasco and Guadalajara. There was also a suspension of the supply of crude oil to the refineries in Tula and Salamanca.

Pemex adopted the following measures in order to reduce the impact of these types of incidents: a) Chartering of a vessel with 10,000 metric tons of LP gas to supply the Madero marine terminal (TM) from the Pajaritos TM; b) Increase transportation of LP gas by auto-tanks; c) Increase LP gas imports at the northern border; d) Shipment of gasoline and diesel by auto-tanks to the Puebla TAR; e) Shipment of gasoline by auto-tanks to the Tula and Salamanca TARs; f) Gasoline imports through Rosarito TAR; g) Importing of turbosine and diesel through the Madero TM; h) Chartering ship with crude oil from the Pajaritos TM to the Madero TM; i) Assistance to distributors by means of auto-tanks.

All pipelines were operating at their maximum capacity on September 18, 2007.

There were no injuries or physical harm recorded outside of the Pemex facilities in any of the above-mentioned cases.

After these events, Petróleos Mexicanos has been working on a model to make the national pipeline system more flexible to re-establish operations as quickly as possible, should a similar situation be repeated.

## GAS PROCESSING CENTER Reynosa, Tamaulipas



### MAIN PEMEX PRODUCTS AND SERVICES

Line of Business	Products/Services and their Main Applications
Exploration and Production	Crude oil and natural gas
Refining	<p>Pemex Premium UBA: Low sulfur gasoline 92 octane</p> <p>Pemex Magna: Unleaded gas 87 octanes</p> <p>Pemex Diesel: Fuel used for internal combustion engine</p> <p>Special Marine Diesel: Fuel for marine vessels</p> <p>Low Sulfur Industrial Diesel: Industrial fuel with low sulfur emissions</p> <p>Fuel Oil: Fuel used in major vessels and industrial processes</p> <p>Aviation Fuel: Fuel that is used for aircraft that are equipped with traditional internal combustion engines</p> <p>Turbosine: Fuel used in aircraft with turbine or reaction engines</p> <p>Other: Naphtha Fuel, Gas Solvent, Oil Coke, Citrolina, Asphalts, Basic Lubricants and Paraffins</p>
Basic Petrochemicals and Gas	<p>Natural gas: Fuel that is both for domestic and industrial use, and as a raw material in petrochemicals processes</p> <p>LP Gas: Mixture that is mainly composed of propane and butane, for domestic use</p> <p>Basic petrochemicals: Ethane, propane, butane, pentane, hexane, heptane, raw material for lamp black, naphthas, methane. They are mainly used as fuel and industrial consumables.</p>
Petrochemicals	<p>Sulfur: Byproduct resulting from the sweetening of sour gas and oil refining</p> <p>Methane Derivatives: Ammonia and Methanol</p> <p>Ethane Derivatives: Raw materials for the plastics industry</p> <p>Aromatics: Petrochemical chain for the production of consumables for solvents, sealants, and paint industry; among others</p> <p>Propylene and derivatives</p> <p>Other: Glycols, reformed fuel, oxygen, hydrogen, nitrogen, hydrochloric acid, muriatic acid, hexane and heptane</p>



#### SUPERVISION OF PRODUCT QUALITY AND SAFETY

Pemex performs supervisory and safety inspections at its clients' facilities in order to evaluate the risk level at which the products are handled in regard to the following various aspects: processes, product handling, storage, facilities, emergency system and personnel protection.

All of the products that are commercialized by the Company require Quality Certificates on each shipment, with a description of the product's characteristics, according to their specifications and material safety data sheets (MSDS). All of units transported on roadways and railroads that contain hazardous products are required and subject to product identification processes and the mandatory availability of shipping documents that provide information on each product's origin and destination. Each shipment Pemex delivers to its clients includes quality certificates, information regarding the product risk in the case of an accident. In the same manner, clients are also trained on how to manage, store and ship the Pemex products.

It bears noting that Pemex produces raw materials for the petrochemical industry, in which case its clients are responsible for the use and disposal of the finished products. Moreover, the regulations that govern the management and use of hazardous products also apply to the processes, as well as the prevailing provisions on the disposal of hazardous waste.

## 4.4 Combat against illegal fuel trade

México faces hydrocarbon theft problem, which happens through clandestine taps, extraction from duct valves, contraband, "milking", and car tank thefts. Pemex implemented the "Complete Program to fight the Combat against Illegal fuel trade" in response to this problem. Said program allows for the arrest of the alleged criminals who perform these acts and their presentation before the authorities by Pemex Physical Security Management staff and the Mexican armed forces.

Pemex continues to apply the following actions to fight the aforesaid war:

- Physical Safety Programs.
- Terminal Control and Measurement System (SIMCOT).
- Computerized monitoring and remote control system on pipelines (SCADA).
- Satellite tracking equipment on Pemex car tanks.
- Closed circuit TV with 1,116 cameras installed at different terminals.
- Mobile labs.
- Online measurement of principle product transfer points. The Company currently has 58 transfer points.
- Electronic Control of Service Stations.
- Simulated User.
- Daily aerial surveillance.
- Control Center.
- Toll free telephone number 01800-228-96-60 to report anomalies in the Pemex distribution network.

Customer service and satisfaction is a priority for Pemex, which is the reason why it is fundamental to establish communication, deliver information and ensure high levels of quality service when providing services and delivering products. This is why Pemex has established direct communications channels with its clients. The Company's subsidiary entities websites provide product information, such as the technical data sheets and material safety data sheets. By the same mentioned, the websites also provide a section for users to register their complaints and suggestions, and request technical support to allow clients and the general public to express their concerns and request clarification, and also post their comments. Go to <http://www.Pemex.com> for more information.

All of these efforts are measured annually through the: "The Pemex Clients' Perception Survey".

#### CUALLI FRANCHISES

The Company has a Pemex Franchise Distinction Program for Service Stations that operate approved model gas tanks or prototypes and a certificate of compliance with regulation NOM-005-SCFI-2005.

Those franchises that comply with the Pemex Program requirements are authorized to use the Cualli logo on their corporate image. In the same manner, a system has been developed for tele-measurements and the automated control of shippers and service station tanks, provides clients with a more accurate reading of fuel volumes. This new technology and the credit card payment system has increased the supply efficiency for service stations and improved the speed of service, thus facilitating transactions and gaining trust for the Pemex brand.

Pemex publishes the magazine "Octanaje" to communicate with its service station franchisees.



# 5. Corporate governance and transparency

## 5.1 Corporate governance

### MANAGEMENT AND OWNERSHIP

Pemex is a government controlled body that is governed by its Board of Directors, which is responsible for directing and supervising the organization's correct operation. The Mexican President appoints six of the institution's 11 board members, including the Chairman of the Board. The five additional members belong to the Mexican Oil Workers Union, in conformity with the guidelines established in Pemex's Organic Law.

The Board of Directors was comprised as follows, in 2007:

State Representatives	
Chairwoman	Alternate Chairman
Georgina Kessel Martínez Secretary of Energy	Mario Gabriel Budebo Undersecretary of Hydrocarbons Secretary of Energy
Directors	Alternate Directors
Juan Rafael Elvira Quesada Secretary of the Environment and Natural Resources (SEMARNAT)	Mauricio Limón Aguirre Undersecretary of Management for the Environmental Protection (Semarnat)
Agustín Guillermo Crastens Carstens Secretary of the Treasury and Public Credit (SHCP)	Ernesto Javier Cordero Arroyo Undersecretary of Expenditures (SHCP)
Eduardo Sojo Garza Aldape Secretary of the Economy (SE)	Carlos Arce Macías Undersecretary of Regulations, Foreign Investment and International Trade Practices (SE)
Luis Téllez Kuender Secretary of Communications and Transportation (SCT)	Manuel Rodríguez Arregui Undersecretary of Transportation (SCT)
Gerardo Ruíz Mateos Presidency Headoffice	Antonio Vivanco Casamadrid Coordinator of the Presidency Consultant's Office
Representatives of the Mexican Oil Workers Union	
Luis Ricardo Aldana Prieto Fernando Pacheco Martínez Jorge Wade González Héctor Manuel Sosa Rodríguez Pedro García Barabata	Héctor Javier Saucedo Garza Jesús Gerardo González Salgado Donadano González Hidalgo Alejandro Mendoza Guadarrama Alfredo Yuen Jiménez
Public Commissioner	Alternate Public Commissioner
Manuel Onofre García de la Garza Public Commissioner and Delegate of the Energy Sector of the Office of the Comptroller General	Miguel Ángel Cedillo Hernández Alternate Public Commissioner of the Energy Sector of the Office of the Comptroller General
Secretary	Alternate Secretary
Alejandro Fleming Kaufman Head of the Legal Affairs Unit of the Secretary of Energy	Raoul Capdeville Orozco Technical Secretary for the Director General of Petróleos Mexicanos

Pemex encourages procedures regarding transparency and accountability that are in line with the Federal Government.

During 2007, Pemex adopted Corporate Governance best practices for the Administration of Pemex through the establishment of an Internal Audit Committee.

The transparency systems registered a 30% increase in requests for information in 2007.



Pemex has an Internal Control Body that supervises the Company's operations to guarantee its transparency.

Each Subsidiary Entity has a Board of Directors and a General Director who is appointed by the President of Mexico. By the same token, each Board of Directors is comprised of eight members with their respective deputies. Four of these represent the Federal Government and are appointed by the President of Mexico: the three director generals of the subsidiary entities, and the Director General of Pemex, who chairs said Boards of Directors.

Pemex's Organic Law establishes the faculties and obligations that bind the Director General, highlighting the following, among others:

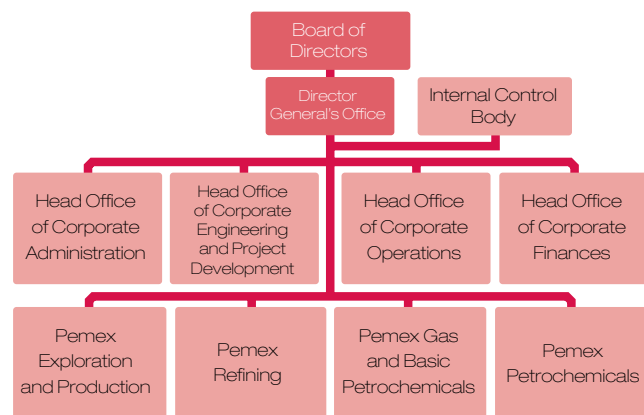
- Formulate institutional policies, programs, and procedures for the short, medium and long term, submitting them for approval by the Board of Directors.
- Remit, the budgetary and financial information that corresponds to the entity, to integrate said information in the Annual Account held by the Secretary of the Treasury and Public Credit.
- Establish control systems and evaluation mechanisms, supervise the implementation and compliance with corrective measures, and provide the Board of Directors with quarterly reports.
- Watch over compliance with the relative provisions concerning industrial standardization and safety.
- Propose measures to assure the quality of the products and the corresponding technological development.
- Watch over compliance with the provisions related to ecological balance and environmental conservation that guarantee the appropriate use of the oil resources.

#### MECHANISMS EMPLOYEES USE TO COMMUNICATE WITH COMPANY MANAGEMENT

Pemex employees have the option to express their concerns and provide recommendations for the Company's Board of Directors. Said expressions must be presented in writing and through the Technical Secretary of said Board to ensure their proper attention.

The Company's legal characteristics do not provide for cash compensations or in kind, for the Board members.

The Federal Law of Civil Servant Responsibilities establishes the guidelines the civil servants that sit on the Pemex Board of Directors must comply with to prevent conflicts of interest. Said law also establishes the applicable penalties for failure to comply with said provisions, when applicable.



## 5.2 Transparency and oversight

Pemex's Program for Transparency and the War Against Corruption includes mechanisms in order to ensure accountability, strengthening credibility and strengthening internal and external trust, where the population has free access to the information generated in the company.

One of the transparency commitments is linked to the constant information requests made to Pemex.

### REQUESTS FOR INFORMATION 2005 - 2007

Entitles	2005	2006	2007	Total
The Petróleos Mexicanos				
Head Office	738	1,059	1,437	4,269
Pemex-Exploration and Production	458	689	855	2,648
Pemex-Refining	364	613	785	2,326
Pemex-Gas and Basic Petrochemicals	171	179	215	793
Pemex-Petrochemicals	122	107	189	588
<b>Total</b>	<b>1,853</b>	<b>2,647</b>	<b>3,481</b>	<b>10,624</b>

Source: <http://www.pemex.com> Transparency section

### ¿DO YOU KNOW OF ANYONE WHO USES PEMEX'S RESOURCES FOR ELECTORAL PURPOSES?

One of the objectives of the Pemex transparency strategy consists of preventing the use of human, financial, material, and public resources for electoral purposes and to benefit political parties, for which it has established the following e-mail addresses to report this type of incidents:

- Petróleos Mexicanos: [satciucgc@cgc.pemex.com](mailto:satciucgc@cgc.pemex.com)
- Pemex - Exploration and Production: [quejasydenuncias@smx.pcp.pemex.com](mailto:quejasydenuncias@smx.pcp.pemex.com)
- Pemex - Refining: <http://oic.ref.pemex.com/>; [quejas@ref.pemex.com](mailto:quejas@ref.pemex.com)
- Pemex - Gas and Basic Petrochemicals: [oic@gas.pemex.com](mailto:oic@gas.pemex.com)
- Pemex - Petrochemicals: [lgpineda@ptq.pemex.com](mailto:lgpineda@ptq.pemex.com); [rlopezl@ptq.pemex.com](mailto:rlopezl@ptq.pemex.com); and [mrrodriguez@ptq.pemex.com](mailto:mrrodriguez@ptq.pemex.com)

Or you can deposit your report in the mailboxes found throughout the Pemex facilities

### GPC 22

#### POLICIES TO PREVENT AND FIGHT THE WAR AGAINST CORRUPTION

Actions focused on fighting the war against corruption must take the following two groups of actions into account: reactive actions that punish the responsible parties; and proactive actions that are directed to eliminating the spaces in which acts of corruption can develop, and permit the disclosure, transparency and accountability concerning the company's activities. The Internal Control Bodies at Pemex and its subsidiary entities are fundamentally responsible for the first of the aforesaid activities, supported by the Secretary of the Public Function with firm backing by Petróleos Mexicanos.

In regard to the second group of actions, Pemex has implemented several actions to increase and improve the information provided concerning its activities and ensure the transparency of actions related to the company's acquisitions and sales, as well as the construction of public works and infrastructure projects.

### GPC 23

#### TRANSPARENCY

The general population associates Pemex with corruption and obscure deals. Thus, one of the Company's core issues consists of improving the transparency and accountability of the activities it performs.

Pemex transparency policy is based on two major objectives: firstly, institutionalize transparency on a Company-wide basis; and secondly, provide the general public with more and better information. The Company has implemented diverse actions across its different business units to reach said objectives. However, there are still certain priority matters that are pending resolution.

Pemex publishes a monthly report on its operating results, which includes the production of hydrocarbons and its derived products, as well as the value and the volume of domestic sales and sales abroad, among others.

All of the Company's financial information is public. The "Financial Results Report" is published on a quarterly basis. The Company publishes its "Consolidated Financial Statements" every year, with information concerning its financial results, which are audited by independent auditors. In addition, Pemex publishes the following reports, on an annual basis:

- Annual Report
- Statistical Yearbook
- Sustainable Development Report
- Hydrocarbon Reserves
- Operations Report
- Statistical Operations Report
- Collective Bargaining Agreement (every two years)

Pemex has implemented different projects to ensure compliance with the Sarbanes-Oxley Act. The Company's documentation, the evaluation of the design and the tests on the operational effectiveness of its internal controls in the processes that generate financial information, will allow the Company to provide stronger levels of transparency and reliability in the financial information that is

published by Petróleos Mexicanos. Pemex has applied its institutional ICONO-F (Implementation of Financial-Operational Controls) project that is focused mainly on implementing the best practices in terms of automated internal controls. The "20-F" Form that is used to publish the Company's relevant financial information for international markets is now translated into the Spanish language.

During 2007, the Company modified and approved the "Guidelines in terms of Donations and Grants made by Petróleos Mexicanos and its Subsidiary Entities", which prevent discretionality in awarding the resources, thus allowing for their transparent designation. The grants and donations are submitted to rigorous auditing and accountability processes.

Pemex has listed the donations and grants it gave throughout 2007, under the Social Development section on its official website. Said donations correspond to states, municipalities and civil society organizations. As of 2008, the Company will incorporate the application of the 2007 donations and grants that are sent by the recipients of the funds. Pemex is also making efforts to publish all of its invitations to bid on the website, to guarantee improved conditions for the participants to access said bids and receive timely information concerning the successful bids. Moreover, social witnesses are becoming evermore involved in the bids, particularly those that involve higher amounts. As of 2007, the Company generalized the use of the electronic log for investments and the electronic witness concerning the bids.

In terms of accountability, the Board of Directors is putting together an Independent Audit Committee (CAI, acronym in Spanish), in line with the best practices of corporate governance. Said committee helps increase the accountability and transparency levels of the Company's decisions.

Pemex continues to face important challenges in terms of transparency and accountability. The Company is subject to multiple regulations that complicate its transactions (proceedings) and opens the door to corruption and obscure deals. This is the case, particularly in terms of public work contracts and acquisitions. Therefore, in addition to improving and providing greater access to its information, Petróleos Mexicanos needs to be allowed to introduce best practices in terms of corporate governance, which in turn requires changes to the entity's applicable legal and regulatory framework.

#### THE WAR AGAINST CORRUPTION

In addition to fulfilling the Transparency and Accountability Program of 2008, the company has implemented its own policies directed at fighting and eradicating corruption in the Company. Such actions seek to, on the one hand, add more frequent transparency processes against acts of corruption, and on the other hand, find, and punish those responsible for said acts.

Petróleos Mexicanos performs numerous infrastructure works, both for its own activities, as well as for the communities where it conducts business. In order to accurately track the various construction works for this infrastructure, Pemex devised an electronic log that allows Pemex and the outsourced companies that carry out the work, to have real time information regarding the construction. Because of its utility and design, Pemex donated the software to the Secretary of the Public Function for use in all Civil Services.

On another note, for the purpose of providing the population with more and improved information regarding its activities, Pemex must post its bids and purchases on its website, in accordance with the Law on Public Sector Services, Leases, and Acquisitions. This is how Pemex guarantees that all companies interested in providing its services for the company have equal opportunities and that the population has immediate information regarding the purchase and bidding results of various products and services Pemex acquires.

There are corruption practices in Petróleos Mexicanos. These occur within the Company and in conspiracy with people from other companies and contractors. Pemex requires support from the federal authorities, both from the executive and judicial powers to fight and eradicate corruption, and the direct participation of state and municipal authorities.



**CADEREYTA REFINERY**  
Nuevo León



## 5.3 Advertising and market competition

The company participates in international crude oil and natural gas markets, competing with other important suppliers in the industry. Pemex markets a large percentage of its production of crude oil to a small number of clients, which include the United States and Spain.

In accordance with Mexican laws, Pemex is the only authorized provider of basic petrochemicals, natural gas, and oil products for industrial, commercial, and domestic use in the country. Thus, Pemex does not strongly advertise its products.

The Company launched two media campaigns in 2007 to draw attention to specific corporate problems:

One of them named "Fighting the War Against the Illegal Fuel Market" deals with the problem of hydrocarbon theft. This problem not only damages company assets, but also represents a serious safety problem in the surrounding areas and in relation to the criminals who steal the fuel. The Company contracted a toll free number (01800-228-9660) for anonymous reporting purposes to reinforce the campaign.

The Company also launched a campaign titled, "We Have Our Sights Set on the Future".

### TRANSPARENCY OBLIGATIONS PORTAL, THE OPPORTUNITY TO KNOW

Pemex continued to apply the Petróleos Mexicanos Program for Transparency and the War Against Corruption during 2007, that is aimed at:

- Preventing irregular conduct and reinforcing ethical values among its workers.
- Reinstate credibility and internal and external confidence in the organization, by adding transparency and accountability to its operations.
- Developing, implementing, and disseminating continuous improvement and control mechanisms; and
- Increase the institution's efficiency, effectiveness, and profitability, innovation, and competitiveness levels.

Pemex has implemented the Petróleos Mexicanos Directive Commission on Transparency and Fight Against Corruption to plan and track the actions established in the Institutional Program, and the application of the agreements entered into by the Inter-secretarial Commission on Transparency and War Against Corruption.

## 5.4 Collaboration on public policies

The company maintains a close relationship with various entities of the Federal Government regarding different subjects: with the Secretary of Energy that coordinates the energy sector and chairs the Pemex Board of Directors; with the Secretary of the Treasury and Public Credit to manage its budget, and with the Secretary of the Public Function for oversight matters, among others.

Pemex also participates in the Transversality Agenda on Public Policy for Sustainable Development of the Federal Government that is headed by the Semarnat. The objective of this plan is to coordinate the actions of 32 public sector entities to achieve the government's goals regarding Sustainable Development<sup>6</sup>.

6. Source [http://www.semarnat.gob.mx/queesemarnat/politica\\_ambiental/transversalidad/Pages/Agendas-deTransversalidad.aspx](http://www.semarnat.gob.mx/queesemarnat/politica_ambiental/transversalidad/Pages/Agendas-deTransversalidad.aspx)

## 5.5 Fines and sanctions for non-compliance

Mexican legislation provides financial penalties for failure to comply with environmental regulations, quoted at a maximum amount of 50,000 times the prevailing minimum daily general salary for the Federal District, which is equal to \$2.5 million pesos.

Thus, in 2007, Pemex incurred fines in the amount of \$75.3 million pesos, that it will not have to pay until the corresponding courts determine their validity,

Entities	Amount in MXP
CORP	335,642
PEP	64,471,947
PGPB	1,012,411
PREF	9,528,321
Total	75,348,321

Two hundred and ten claims imposing corrective measures were filed in the case of non-monetary sanctions for non-compliance with environmental laws and regulations. These measures are still awaiting court decisions.

In 2007, there were no monetary or non-monetary penalties imposed due to discrimination, corruption, non-compliance with the laws or regulations regarding accounting fraud, violations of international agreements or treaties, market communications, product or labeling information regarding safety and health regulations, or in the confidential management of Pemex clients. In the same manner, no incidents of violations involving rights of indigenous people were presented.



**BELLOTA JUJO INTEGRAL COMPLEX**  
Nitrogen Recovery Plant  
Huimanguillo, Tabasco

# 6. Health and safety

## 6.1 Challenges and main events during 2007

Pemex undertakes actions to ensure the safety and health of its personnel and to ensure environmental balance, enshrined in its Policy on Safety, Health and Environmental Protection.

Throughout 2007, the safety process subsystem were implantated under the operational discipline criteria.

For the period reported, 18 deaths of company workers and 23 of outsourced workers were recorded. Of special gravity was the regrettable accident on the Usumacinta platform, in October of 2007, in which 22 people lost their lives. Simultaneous lines of investigation were opened regarding the causes of this accident; the investigations encompass facilities, workers, contractors, service companies, regulations, standards and safety practices.

The safety of its processes and the health of its workers are priorities for Pemex.

Pemex must strengthen the application of its safety administration and environmental protection system to abate the accident rate in its operations.



**MORELOS PETROCHEMICAL COMPLEX**  
Coatzacoalcos, Veracruz



**CAMPECHE SOUND**  
**VIEW FROM THE FPSO YUUM K'AK NAAB**  
(LORD OF THE SEA)

#### CASE STUDY

##### PEMEX EMERGENCY OPERATION CENTER (CCAIE)

The CCAIE (acronym in Spanish) comprises an interdisciplinary work team that operates at the corporate level; it is administered and operated by the Emergency Management office that is under the Assistant Office for Operational Discipline, Health and Environmental Protection of the Corporate Operations Department.

The CCAIE began operations in April of 2007, its objectives being:

1. To receive information from work centers and citizens regarding emergencies related to the oil industry.
2. To confirm and consolidate such information for its immediate transmission to General Management.
3. To support and optimize decision-making processes.
4. To facilitate actions that will reduce response time during an emergency at Pemex facilities.

In order to comply with its task, the CCAIE has:

1. Internal communication within Pemex through one single national number, 49166.
2. External communication with citizens, dialing 066 of the National Public Security System.
3. The use of information tools for administering the events and generating statistics.
4. Follow-up in real time of on-site events at facilities during an emergency through the systems available for this purpose.
5. Operations personnel specializing in handling emergencies, available 24 hours, during the 365 days of the year.

There is a protocol in place for reporting incidents, the "Protocol for Reporting Internal and External Information on Abnormal Situations, Incidents, Accidents and/or Emergencies at Petróleos Mexicanos Work Centers and Facilities and its Subsidiaries and Filial Companies."

The benefits of the CCAIE:

1. Direct, timely and reliable information to contribute to good crisis management.
2. Simplified communications for citizens and Pemex employees.
3. National coordination with the Secretary of Public Security for handling emergencies.
4. Institutional coordination during emergencies.
5. Improvement in the administration and follow-up of undesired events.
6. Contribution to improving the management of available resources in the states involved in an emergency.



## 6.2 Pemex – SSPA System

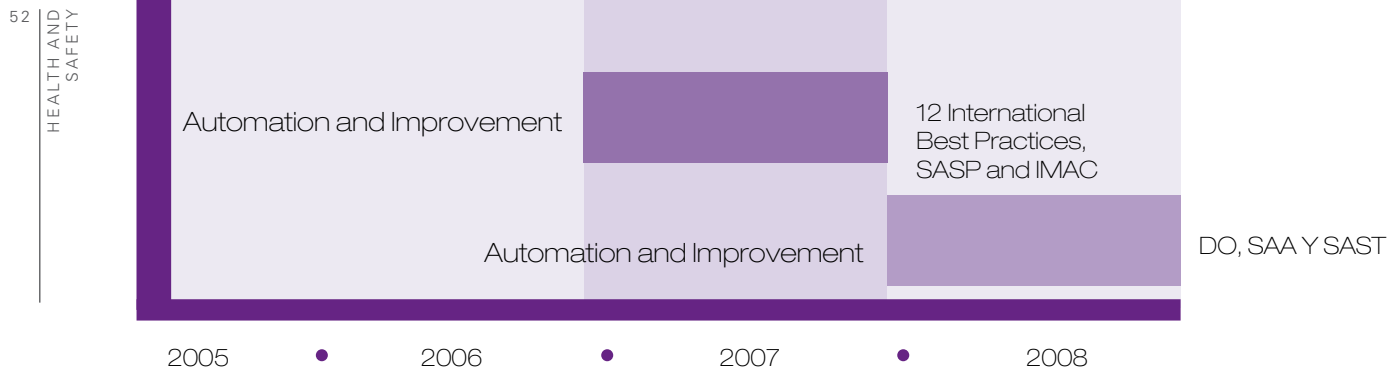
2005-2006: Pemex started to implement the Accident Containment phase in its facilities.

2007: The Pemex-SSPA system entered into the phase in which the practical security measures are incorporated into the Pemex Work Centers. Said measures include the 12 International Best Practices, such as the Administration of Security Processes (ASP) and the Mechanical Integrity and Quality Assurance (IMAC, acronym in Spanish).

2008: The Company will implement the sub-systems derived from the Environmental Administration (SAA, acronym in Spanish), and the Administration of Occupational Health, having as key axis the application of the Operational Discipline Process in all the Organization's levels.

2007: THE COMPANY STARTED TO IMPLEMENT THE EIGHT CRITICAL PROCEDURES ESTABLISHED IN THE EH&S

1. Safe entry to confined spaces (ESEC, acronym in Spanish)
2. Fire protection
3. Workers' personal protection equipment
4. Prevention of falls
5. Electrical security
6. Blocking of energy and hazardous materials
7. Delimitation of risk areas (barricades)
8. Opening of lines and processing equipment





## PEMEX-SSPA SYSTEM

Pemex began the Pemex-SSPA system automation and improvement phase in 2007, based on the 12 International Best Practices in EH&S and the following three Sub-systems:

- Security Process Management
- Occupational Health Management
- Environmental Management

## 12 INTERNATIONAL BEST PRACTICES



## OCCUPATIONAL HEALTH MANAGEMENT SUBSYSTEM



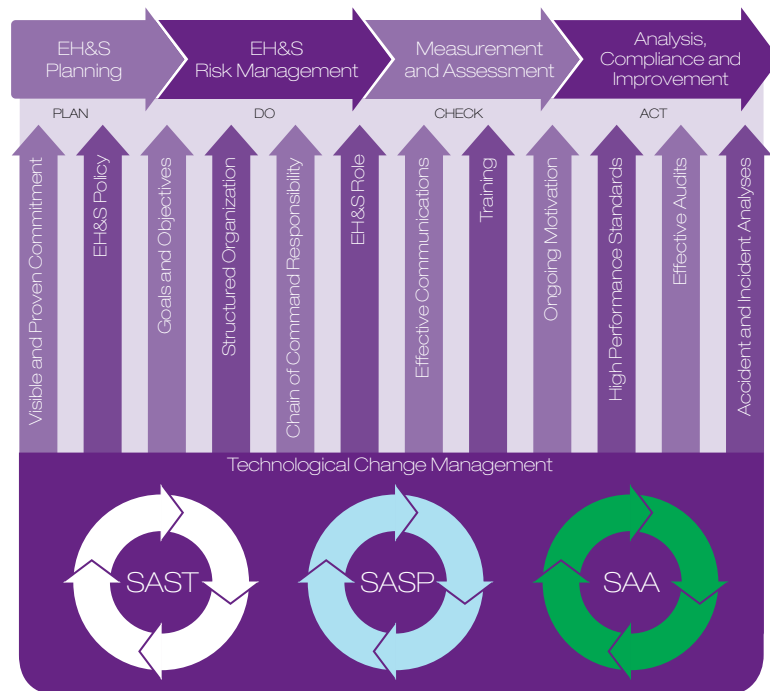
## SECURITY PROCESS MANAGEMENT SUBSYSTEM



## ENVIRONMENTAL MANAGEMENT SUBSYSTEM



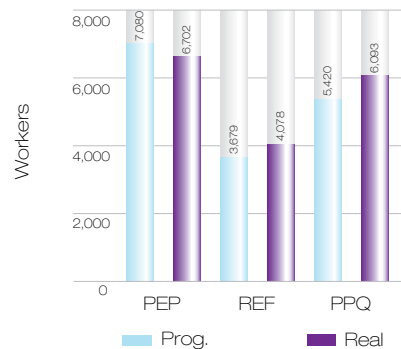
## PEMEX-SSPA MACROPROCESS



### MAIN RESULTS OBTAINED DURING 2007

- Over 16,500 workers were trained in the Pemex-SSPA Safety Management System; the Company also taught 724 courses that included SSPA1, SSPA2 and IMAC (Mechanical Integrity and Quality Ensurance, acronym in Spanish) training.
- Consistent Operation of the implemented Structured Organizations model in the Pemex SSPA System.
- Substantial improvement in the completion and quality of the audits performed by the chain of command, working towards a culture that promotes the prevention of incidents at the Pemex facilities.
- Training on the Operations Discipline (DO from the Spanish acronym) was carried out in its Availability, Quality, Communication and Compliance phases, starting the record of the activities registry, EH&S risk evaluation and the application of the 4 phases of the Operations Discipline in the existing procedures in all installations, including the eight critical procedures.
- Development, release and communication of the Pemex-SSPA System Manual, endorsed by the SSPA Inter-agency Advisory Commission.
- The Company completed the first self-evaluations of the 12 International Best Practices and the Sub-system for Security Process Administration by each Subsidiary Entity.
- A unique institutional SSPA audit process was designed, developed and implemented for Pemex, which is managed through the SAP Audit Management (AM) tool.

### EH&S Training



#### EH&S TRAINING:

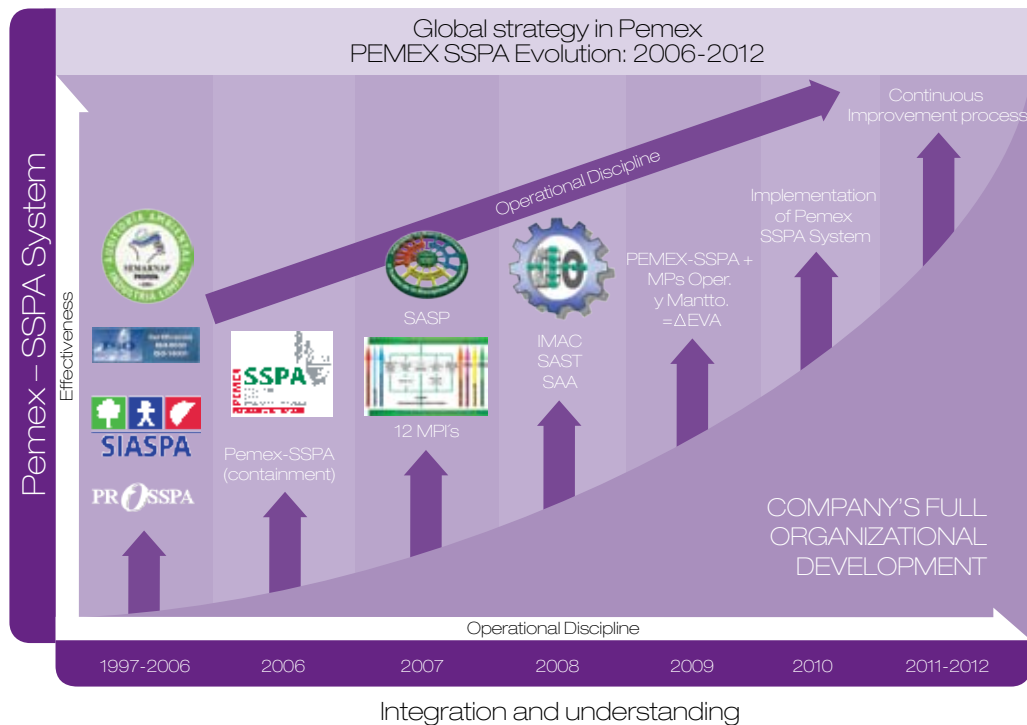
##### Program compliance:

PEP: 95%

REF: 100%

PPQ: 100 %

Trained workers: Courses taught: 724  
(SSPA1, SSPA2, IMAC)



## INSTITUTIONAL EH&S AUDIT PROCESS

Along 2007, EH&S specialists from the subsidiary entities and corporate areas, designed and developed the standardized EH&S audit process. Likewise, the EH&S Advisory Inter-entities Commission (CAISSPA from the Spanish acronym), approved the process to be deployed in PEMEX. Said initiative is associated the technological tool SAP Audit Management, which will be deployed during 2008, by the infrastructure technology and the business of process Assistant Director (SPNIT).

Scope: The process includes all EH&S types of audits:

The Pemex-SSPA System (12 Best Practices) and the following sub-systems:	Management of the Quality, Security, Health and Environmental Protection System
SASP	
SAST	
SAA	
Regulatory requirements	International reinsurance
Clean industry	Mixed Commission on Health and safety
EH&S task force	Integral environmental and security levels at the facilities
Mechanical integrity	NISAI

## TRAINING ON THE INSTITUTIONAL AUDIT PROCESS AND THE SAP AUDIT MANAGEMENT (AM) TECHNOLOGICAL TOOL

Ninety-four key users at the Corporate Office and Subsidiary Entities were trained as follows:

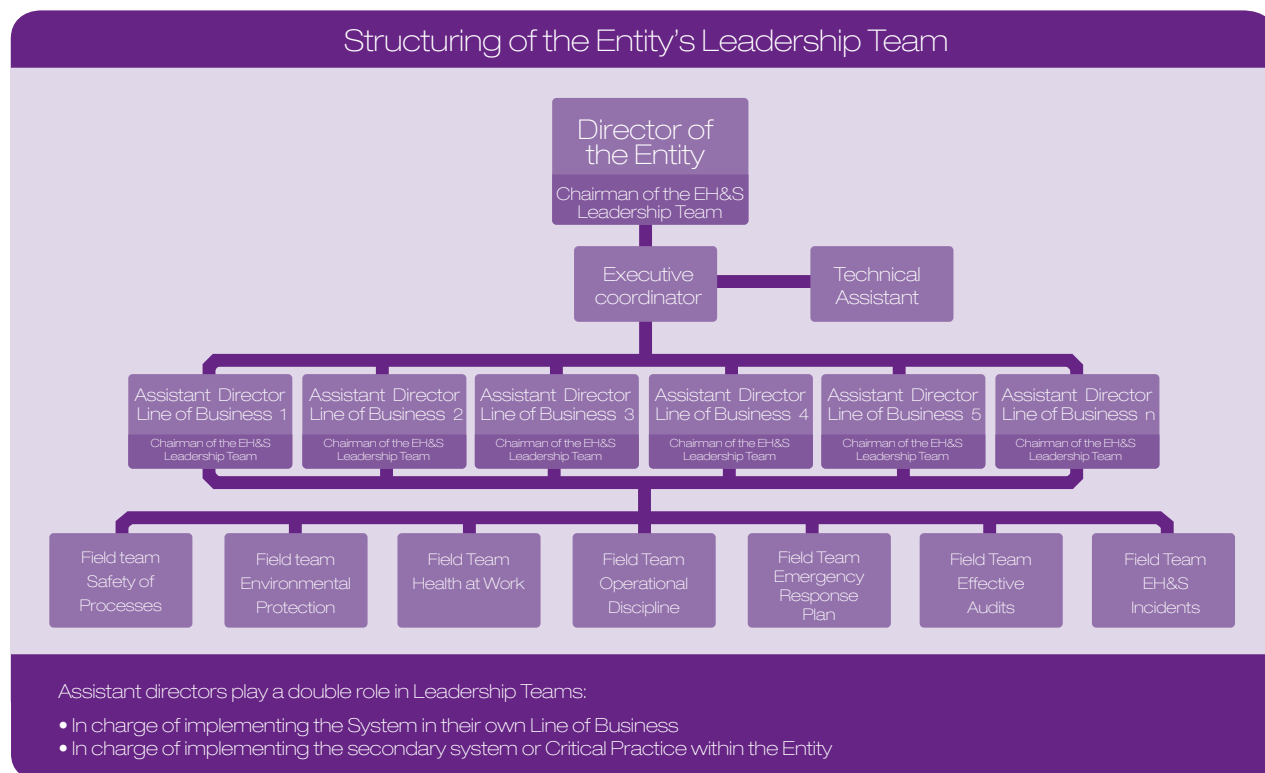
23	PEP
27	PGPB
24	REF
4	PPQ
7	DCIDP
9	Corporativo, incluyendo Subdirección de Servicios de Salud, Ductos y DCA
94	TOTAL

The solution is scheduled for implementation in all Pemex Work Centers in 2008, through the key users previously trained at each entity.

## THE EH&S STRUCTURED ORGANIZATION

Leadership teams at the subsidiary entities are formed by its General Manager, the under Directors in each line of business, and the EH&S's senior manager, in his advisory role. The leadership team acts as the governing body in terms of EH&S. Said premises are clearly established in the GT-022 Technical Guide (Structured Organization) under the 12 Best Practices section in the Pemex SSPA System Manual.

The EH&S has a sub-leadership team for each sub-system and Critical System Practice, which is presided by a leader who is responsible for the Lines of Business.



## INDEX OF PEMEX SAFE ACTS

These audits are consistently carried out by the workers, after the effort that was made during 2006 to adopt the Effective Audit practice as part of the Company's work culture, which has improved their quality.

### EFFECTIVE AUDITS 2007

Entity	Number of Effective Audits completed during 2007
Head Office	1,012
PEP	138,214
PREF	248,918
PGPB	59,481
PPQ	29,538

The level of the culture to perform the Effective Audits was mainly focused on observation of the Safety Equipment and increasingly on the workers' reactions and procedures.

The following subcategories were appointed to identify and stop insecure acts:

Element	Unsafe acts	Percentage
Personal protection equipment	136,783	57
Tools and equipment	13,381	6
People's individual positions	22,136	9
Procedures, order and cleanliness*	32,005	13
People's reactions	34,663	15
<b>Total</b>	<b>238,968</b>	<b>100</b>

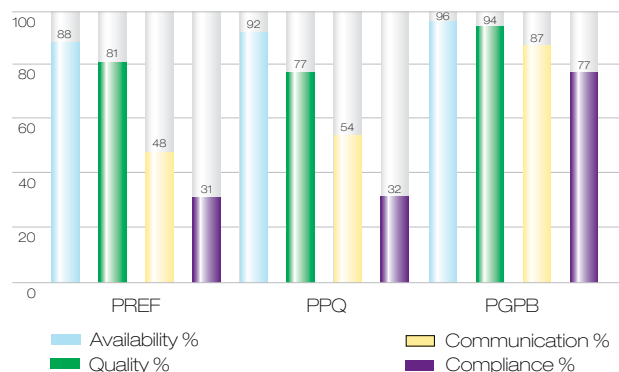
\*Including the eight Critical Procedures

### OPERATIONAL DISCIPLINE INDEX (DO)

The Operational Discipline training took place throughout the organization. The workers made a census of the activities and procedures in their Work Centers applying OD's four phases: Availability, Quality, communications and compliance.

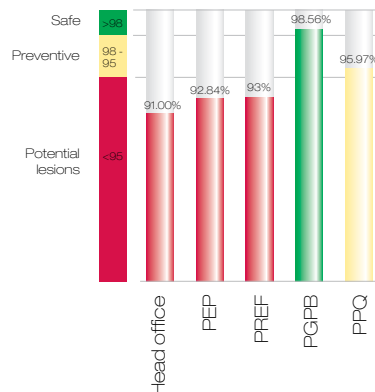
At the end of 2007, the OD Index are as follows:

### Operational Discipline



PEMEX-Exploration and Production is completing its OD training as well as its activities and procedures evaluation, while Pemex – Gas and Basic Petrochemicals is executing more than two cycles of Operational Discipline.

### Index of safe acts in Pemex





## SELF-EVALUATION LEVELS

### 5 Continuous Improvement

Corresponds to the implementation level in which all procedures and mechanisms required by each Element have not only been fully implemented, but also include the implementation and establishment of more than one improvement cycle, with the purpose of seeking for excellence, which translates into effectiveness and continuous improvement.

### 4 Established system

Corresponds to the level of implementation in which all of the procedures and mechanisms required by each Element, have been fully implemented. This level can only be met by fully implementing all level 2 procedures and mechanisms and systematically ensuring that they are free of any type of deviation. At this level, the staff members follow the procedures because they are convinced of the benefits they represent and at least one improvement cycle has been completed.

### 3 Establishing the System

Corresponds to the level of implementation of the procedures and mechanisms required by each Element. This level is satisfied once all of the procedures and mechanisms that were developed to satisfy level 2 have been disseminated, the staff members have been trained and the procedures and mechanisms are applied as a general rule, with implementation levels that only present certain random deviations.

### 2 Developing the System

Corresponds to the level of implementation achieved for the procedures and mechanisms required by each Element. This level is satisfied once all of the procedures and mechanisms that were developed to satisfy level 2 have been disseminated, the staff members have been trained and the procedures and mechanisms are applied as a general rule, with implementation levels that only present certain random deviations.

### 1 Evaluating the System and Raising Awareness

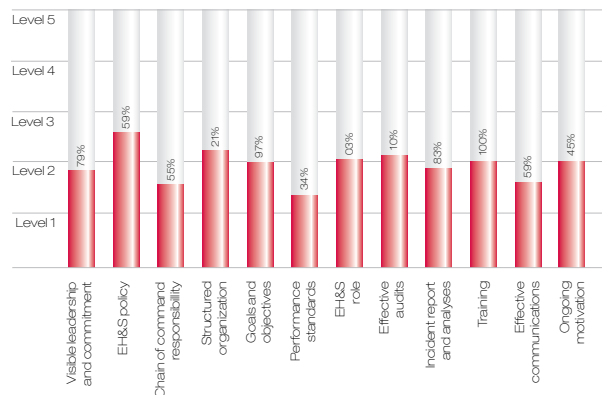
This is the foundation of the element, which determines the desired direction the Company wants to follow. It is believed that it is necessary to construct critical awareness levels among the staff members –through reflection– in regard to the importance of the impact the element creates as part of the system, and how fulfillment of its requirements contributes to improving the Organization's EH&S performance and yields personal benefits. This level is satisfied when the staff members objectively prove that they are aware of the importance of working on the element and how this can contribute to improve the EH&S' performance.

## SELF-EVALUATION BY ENTITY

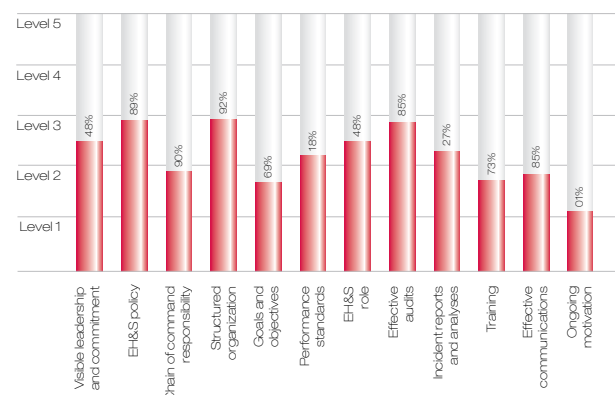
The charts illustrated at the end of 2007 indicate the implementation's progress made by every subsidiary entity, in this case in the 12 Best International Practices Subsystem:

### EH&S 12 BEST PRACTICES PROGRESS

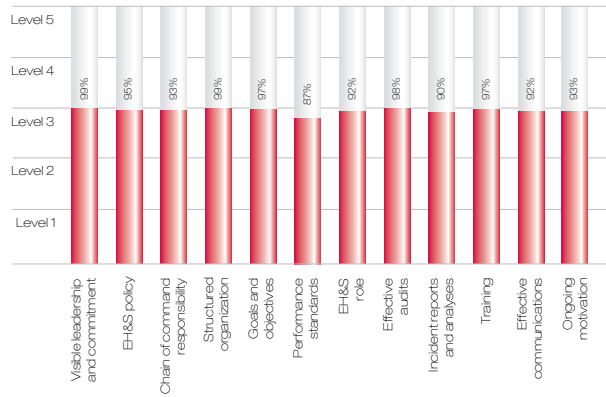
EH&S self-evaluation chart (PEP)



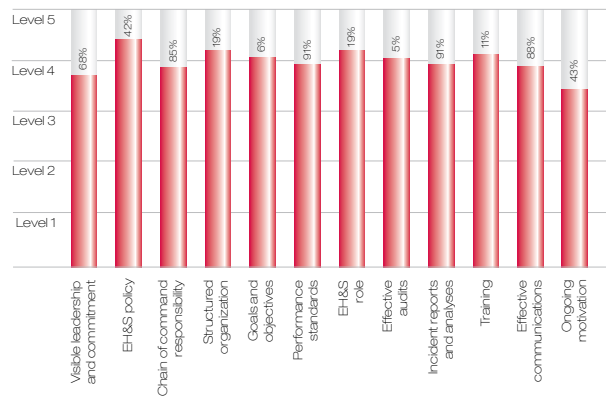
EH&S self-evaluation chart (PREF)



EH&S self-evaluation chart (PPQ)



EH&S self-evaluation chart (PGPB)



Self assessment reports for SASP, SAST and SAA Hill be reported starting in 2008.





**ROSARITO SECTOR DUCTS**  
Baja California

#### PEMEX-SSPA SYSTEM MANUAL

The CAISPPA approved the System Manual Developed by EH&S specialized personnel from the Process oriented management project from all the Subsidiary Entities and Corporate human resources areas, Health Services and DCIDP. This manual is integrated as follows:

Overview	Introduction
	Objective
	Scope of the System and Statement to Commitment
System structure	12 International Best Practices (12 IBPs)
	Secondary System for Management of the Security of the SASP Processes
	Secondary System for Management of SAST Occupational Health
	Secondary System of SSA Environmental Management
Operation	12 IBP's operation
	SASP operation
	SAST operation
	SAA operation
Implementation strategy	Planning
	Preparation
	Execution and Follow-up
	Audit
Secondary Systems' Documentary Structure	Secondary System Elements <ul style="list-style-type: none"> <li>• Description</li> <li>• Compliance requirements (the What's)</li> <li>• Element Guidelines (the How's)</li> </ul>
	Implementation <ul style="list-style-type: none"> <li>• Self-evaluation chart</li> <li>• Self-evaluation guidelines</li> </ul>
IBP's SASP SAST SAA	Audit Protocols
Glossary of Terms	Comprehensive

The Company created Mixed Health and safety Commissions integrated mainly by Company and Union representatives to comply with the requirements established by the Federal Labor Law (Federal Rules on Occupational Health and safety and NOM-019-STPS-2004) and the Petróleos Mexicanos Collective Bargaining Agreement (Annex 4). The collegiate mixed groups are organized as follows: The National Mixed Commission on Health and safety (CNMSH, acronym in Spanish) works at a central level, while the Local Mixed Commissions on Health and safety (CLMSH, acronym in Spanish) work at the Corporate level, and each Subsidiary Entity has five coordinators' groups of Local Mixed Commissions on Health and safety, along with 420 Local Mixed Commissions on Health and safety, one for each work center. The function of each these commission consists of basic accident prevention, occupational accidents and diseases and research on the causes of accident, to prevent their pervasiveness.

3,320 workers participate in the Mixed Commissions on Health and safety, approximately 2.1% of the total labor force.

## 6.3 Information, training and participation

The Company completed evaluations of the Pemex facilities during 2007, with a focus on prevention. The following main actions were completed in this action:

- 56 follow-up audits on EH&S, Reinsurance, Accident Containment, Administration Sub-system of Security Process Administration, Mechanical Integrity and Quality Assurance.
- Eight visits from Technical Support and advisory services concerning accident containment at the Operating Units in the PEP Southern and Northern regions.
- One audit of the Security Administration System on Processes in the Nuevo Pemex Gas Processing Complex.
- Two safety audits on outsourcing processes in the building facilities to expand the Minatitlán Refinery.
- 12 visits from Technical Support and advisory service for the emission, control and follow-up on the Mechanical Integrity and the Quality Assurance findings at the PEP, PGPB, PREF and PPQ work centers.
- Seven comprehensive audits of the EH&S systems at three PEP facilities, three PREF facilities and one PPQ facility.

Guidelines and technical guides were prepared to plan, program, and execute the audits with training for specialists at the subsidiary entities and approval of the EH&S 2008 homologated audit program; technical support and advisory services were provided to integrate the Change Management Network and the preparation of guidelines, Technical Guidelines and Audit Protocols.

### GPC 24

The Company provides induction courses and training on select topics in terms of Security, Health and Environmental Protection (EH&S), which form part of Pemex's Institutional Training Program and are put together by the subsidiary entity's work centers and lines of business.

A broad training program on specialized topics related to the Pemex-SSPA System was implemented in 2005. This same training program will be taught by skilled internal instructors at the work centers as of 2008.

The Corporate Operations Office is coordinating training on critical SSPA and Pemex Health and safety Regulations for all manual staff at the work centers for the 2007-2008 periods.

### PEP TRAINING COURSES Ciudad del Carmen, Campeche





#### FOLLOW-UP ON INTERNATIONAL REINSURANCE RECOMMENDATIONS

During 2007, Pemex received inspection visits from the reinsurance companies at facilities with completed projects and others that are under development, and the inspection of operating pipelines. 525 of the 1,077 recommendations in process were attended during 2007 (48% completion progress rates).

Prior to the 2008 visits by the reinsurance companies, the Operations Head Office established a prior visits program in November and December 2007 to provide technical support for each of the subsidiary entities.

#### ASSURANCE UNIT

Pemex has an internal verification unit to evaluate conformity with the Mexican Official Norms in matters related to Occupational Health and safety, Health and the Environment, in conformity with NOM-020-STPS-2002 (boilers and containers subject to pressure -operation- security conditions) and NOM-026-STPS-1998 (security and health signage and colors and risk identification based on fluids that are sent through the pipelines).

This Verification Unit certified 1,434 containers that are subject to pressure, in conformity with NOM-020; 637 of such inspections were performed by the Company's own staff and 797 inspections were outsourced (533 in Pemex – Refining, 227 in Pemex – Petrochemicals and 674 in Pemex – Exploration and Production); opinions were issued on a total of 3,025 containers from October 2003 through the close of December 2007.

As associated actions, the coordination of research institutions was carried out in the preparation of the “Survey of Containers of the National Refining System” which included more than 16,000 equipment units, 600,000 registers and 75,000 photographs. The work of the Verification Unit helps certify the operation in accordance with national and international regulatory standards applicable to equipment in operation and to those units that are part of new investment projects.



### FORMATION OF THE COLLEGIATE MIXED GROUPS OF HEALTH AND SAFETY

In 2007 the members of the EH&S system received training, reinforcing the application of their tools such as: effective audits, root cause analysis of accidents, safety analysis of risky work, preventive inspections of risk and critical safety procedures; aspects that provide certainty to the safe operation at the facilities.

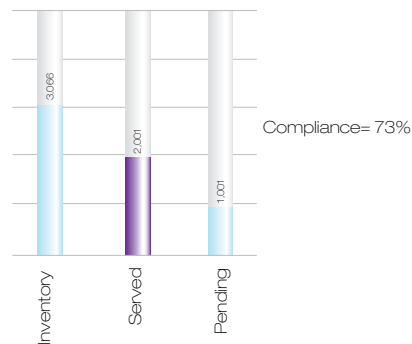
As a result of the above, the performance of those groups significantly improved over the previous years, as observed in the following statistic on compliance of the agreements inventory of 2006 and previous years and 2007. At the close of 2007, 5,973 of 9,276 agreements issued (2006 and 2007) were attended, which represents an overall performance of 62%.

Supporting the work of the Local Collegiate Mixed Groups of Health and Safety is the Pemex and Subsidiary Entities Regulation on Safety and Hygiene. This commission coordinated an intensive program of dissemination and training of this Regulation to 13,949 workers through 763 courses taught by the Mexican Oil Institute (IMP). Mainly middle management workers participated in these courses. Also, 65,000 personal copies of the document were distributed.

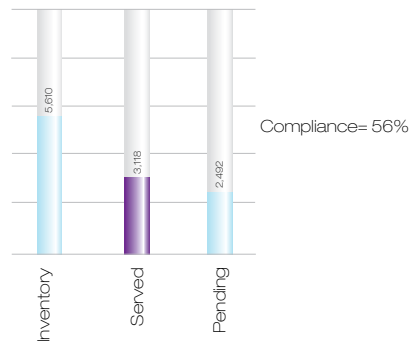
### INTENSIVE PROGRAM OF DISSEMINATION AND TRAINING OF THE PEMEX AND SUBSIDIARY ENTITIES SAFETY AND HEALTH REGULATION

- 65,000 copies distributed
- 13,949 workers trained personally
- 763 courses taught

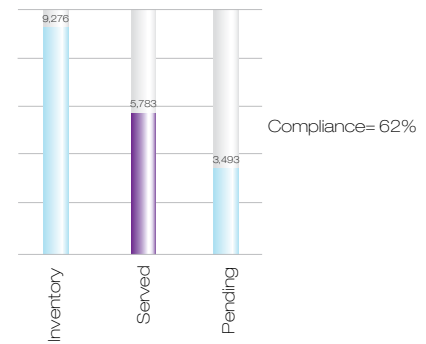
Agreements at  
December 31, 2006



Agreements generated  
during 2007



Balance of 2006 and  
2007 agreements



**BELLOTA JUJO INTEGRAL COMPLEX**  
Nitrogen Recovery Plant  
Huimanguillo, Tabasco





#### TESTIMONIAL: PARTICIPATION OF THE WORKERS' UNION

The Mexican Oil Workers Union, headed by Carlos A. Romero Deschamps as Secretary General, has maintained a climate of respect and harmony in labor relations under a union position of joint collaboration and effort, aware that safety, health and environmental protection is everyone's responsibility and contributes in a permanent manner to the consolidation of a culture on the issue in order to maintain the safety and integrity of the workers and the facilities.

In this sense, the workers join the efforts carried out by Pemex to implement the system of safety, health and environmental protection in all its work centers, in accordance with article 5 of Chapter I of Pemex and Subsidiary Entities Safety and Health Regulation. The effective audits that were carried out jointly with the management representation and the assurance visits made by the Mixed National Commission of Industrial Safety and Health in the work centers with some critical problem, as well as the follow-up on the recommendations issued by the CLMSH until concluding its compliance, certainly contributed toward its achievement.

We believe that the updating and training of the 3,212 members that make up the 420 Local Mixed Commissions on Safety and Health is an important support factor. For this reason, we participated in a joint effort in the diagnosis, planning and follow-up of the respective programs.

Aware that the dynamics of technological changes and the emergence of better practices in industrial performance demand the updating of internal regulations regarding safety and Health, in

line with the times we live in, in a joint effort with management, we took on the task of disseminating the Pemex and Subsidiary Entities Safety and Health Regulation, which we updated in 2007. To this effect, we participated in the training of 13,949 employees in middle management positions on the contents of the Regulation and in the personalized distribution of 65,000 copies of the Regulation, ensuring that the departments in the work centers received the document mentioned. In this context, we also participated in the updating of the "General Guidelines for the Establishment, Organization and Functioning of the Pemex and Subsidiary Entities Mixed Local Commissions of Safety and Health", based on the Collective Bargaining Agreement currently in force and Official Mexican Regulation NOM-019-STPS-2004.

Due to the above and maintaining the joint company/union effort with regard to safety, health and environmental protection issues, we will continue to guarantee the integrity of the workers and the facilities by working in a safe environment in the workplace.

**Diógenes Gómez López**

President of the Union Division, Pemex and its Subsidiary Entities  
Mixed National Commission of Industrial Safety and Health



## 6.4 Accident performance rate

As per industrial safety, 2007 was an unfavorable year for Petróleos Mexicanos and its Subsidiary Entities as related to the good performance that had shown in the last ten years

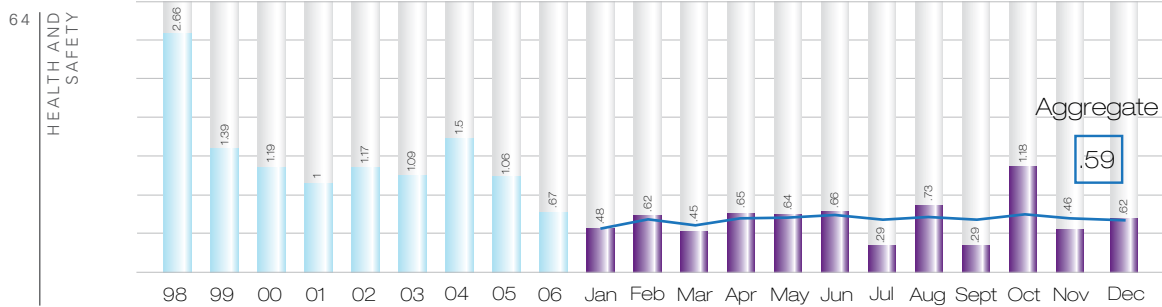
This situation was mainly due to the unfortunate accident that occurred in October 2007 at the Pemex Exploration and Production's Usumacinta Platform, where unfortunately, 22 casualties were registered; 6 from PEMEX and 16 from contractors.

It is important to appoint that Pemex Refining, Pemex Gas and Basic Petrochemicals and Pemex Corporate achieved the desired frequency index goal of 0.50.

### FREQUENCY INDEX

Pemex's accumulated accident Frequency Index at December 31, 2007 was 0.59, representing a 12% improvement over the 0.67 rate in 2006.

Pemex's frequency index  
1998-2007

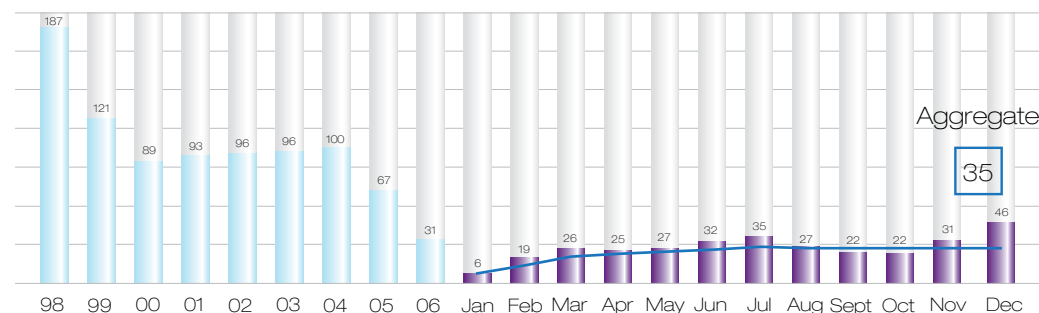


NOTE: Data of December 2007

### PEMEX GRAVITY INDEX

In regard to the Gravity Index, the results obtained in 2007 reflect an unfavorable trend compared to 2006, derived from an increase from 33 to 35 days lost per million man hours worked. This index increased by 6%.

Pemex's gravity index  
1998-2007

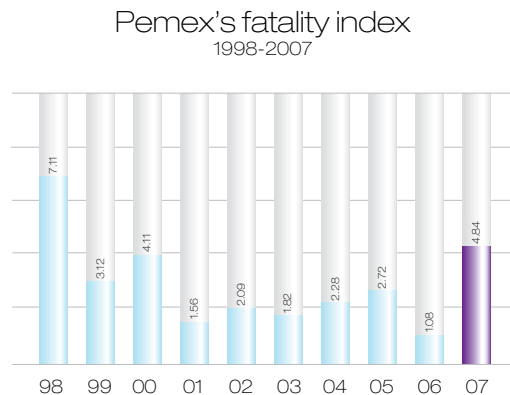


NOTE: Data estimated with the COMERI R221 4 version Guidelines



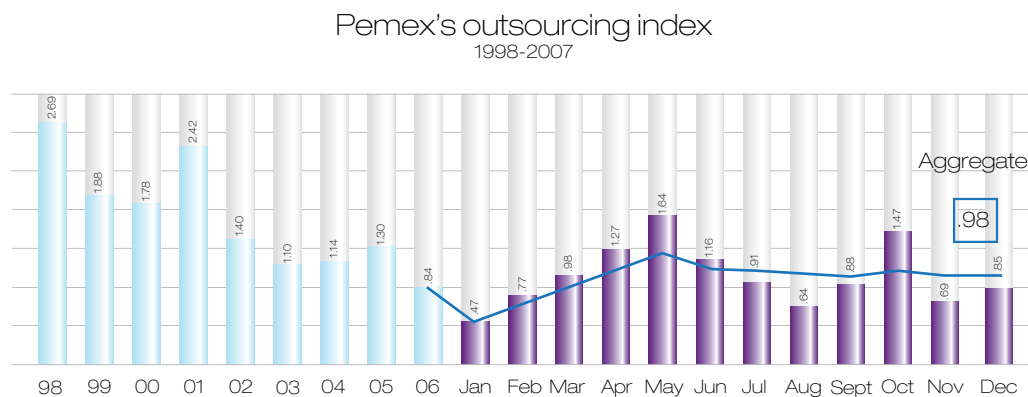
## PEMEX'S FATALITY INDEX

The Fatality index is significantly higher than 2006; this is due mainly to the accident that occurred on the Usumacinta Platform in October, which raised the rate from 1.08 to 4.84 this year.



## PEMEX OUTSOURCING INDEX

The accrued outsourcing frequency index rate at December 2007 was at 0.98, representing a 14% increase over last year.



NOTE: Data of December 2007

## CASE STUDY

### COLLISION BETWEEN THE USUMACINTA AND THE KAB-101 PLATFORMS

The Usumacinta self-adjusting drilling marine platform that belongs to Cia. Perforadora Central, S.A. de C.V., was positioned on the light Sea Pony KAB-101 type platform and performing interconnection activities between the equipments to subsequently start to drill the KAB-103 well. On the morning of October 23, 2007, the bad weather conditions resulting from cold front number 4 (with winds of 130 km/hr and six to eight meter high waves), produced oscillatory movements on the Usumacinta platform, that caused its cantilever (retractile structure that houses the drilling tower), hit the top part of the (valve shaft) of the well, that resulted in oil and gas leaks due to the fracture of the surface control connections of the well and a probable failure in the subsurface valve.

The emergency plan went into effect upon the occurrence of an uncontrolled gas leak, and two lifeboats were used to evacuate the platform. However, due to the weather conditions and problems during the rescue, the lifeboats were severely damaged, resulting in the death of six Pemex employees and 16 outsourced workers.

Pemex engaged the Battelle Memorial Institute to prepare a Root

Cause Analysis of the accident, and identify necessary corrective actions that were needed to prevent it from happening again. Said analysis is currently in process. The partial/preliminary report was delivered on February 15, 2008, and is scheduled to be completed on June 4, 2008. There are four lines of investigation to date: a) factors that contributed to moving the Usumacinta platform; b) Actions that were taken to protect the platform and the individuals at risk; c) The source of the leak and its implications and d) Performance of the personnel and team during the evacuation of the Usumacinta Platform and rescue labors.

As a result this accident, the volume of spilled and vented hydrocarbons measured before any fires, amounted 16.5 thousand barrels of light crude oil and 27 million cubic feet of gas. The environmental impact caused by the gas combustion while the well burned, was estimated at 76 tons of SO<sub>x</sub>, and 4,260 tons of CO<sub>2</sub>.

The population that resides close to the Tabasco and Campeche coast was not affected by the accident. Pemex paid approximately \$16 million pesos to the fishing sector.

## GPC 16

### REPORT SYSTEMS TO COMMUNICATE TO THE PUBLIC ABOUT CONTINGENCIES

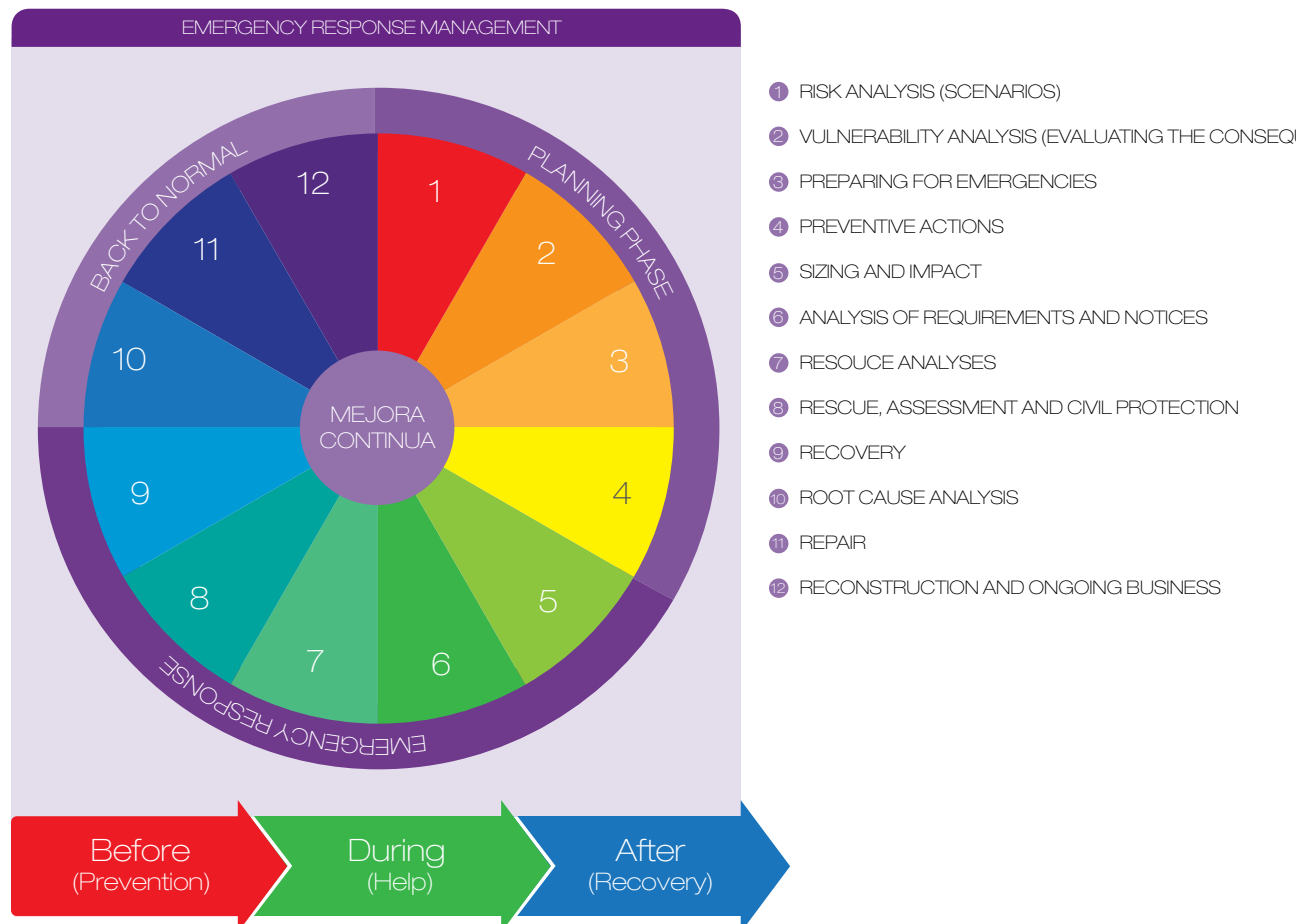
Pemex is systematically managing the following two types of reports as part of a management crisis system in the event of an accident: one is to inform the local media about the accidents caused by the Company's operations. The responsibility to release this information corresponds to the Corporate Department of Social Communication (GCCS, acronym in Spanish) of the region where the accident occurs and such information is prepared mainly by the work centers and the individuals responsible for Security and Environmental Protection at each Entity and Affiliate company, with additional information arranged and provided by the Pemex Emergency Operation Center (CCAE, acronym in Spanish) located in the Executive Tower at Pemex's Head Office in Mexico City.

The other report is provided at a federal level through press releases issued by the GCCS and/or by direct interviews with the Director General. Such press releases are prepared with the information provided by the Head Office, mainly by the PEMEX CCAE.

Petróleos Mexicanos has internal and external Emergency Response Programs in place for response to emergencies that establish communication through the individuals in charge of Civil Protection at a state and municipal level, who previously participated in the drills the Company organizes at its work centers. The sum of efforts is the result of the coordinated actions performed by the Civil Protection Councils from the three levels of government. It is important to note that certain communication decisions are taken during the meetings with the Regional Support and Emergency Management Groups (GRAM, acronym in Spanish), that are local Pemex organizations that involve the work centers in a certain region and that are prepared to face major emergencies that surpass the work center's own capacity for response.

### EMERGENCY RESPONSE AND CIVIL PROTECTION

The Inter-Agency Advisory Commission of Emergencies and Civil Protection (CAIEPC, acronym in Spanish) was created in 2007, with the participation of the Industrial Safety and Environmental areas from the four Subsidiary Entities and the Company's administrative, legal and support divisions.



Each risk scenario has a proceeding that defines the activities that must be carried before, during and after an event by the affected corresponding work center together with the Regional Support and Emergency Management (GRAMÉ, acronym in Spanish) responsible for its implementation.

#### REGIONAL EMERGENCY RESPONSE AND MANAGEMENT GROUPS

The CAIEPC agreed to promote the creation and operation of Regional Emergency Attention and Management Groups in reach oil region. In this regard, the "GRAMÉ Veracruz Sur" was installed in December 2007, to coordinate major emergency services that transcend the emergency response capacities in the affected work center and promote Pemex's participation in Municipal and State Civil Protection Councils, based on the Emergency Response Plan in each work center. The GRAMÉ's officially established at date include the South GRAMÉ that coordinates the PGPB, and the South Veracruz GRAMÉ that coordinates the PPQ.

The Company carried out Regional Civil Protection exercises throughout the course of the year, that were attended by close to 14,000 people, and in which Pemex informed the Regional Emergency Response and Management Groups (GRAMÉ), and the Emergency Response Plans (PRE).

#### HEALTH IN THE WORKPLACE

Pemex has established that one of its Occupational Health objectives consists of promoting, maintaining and supervising a safe and healthy work environment, as well as the Company's workers' health and ability to perform well at work, by managing health and occupational risks and developing a regulatory Framework at all levels within the organization to ensure the operation of Multidisciplinary Health Services and contribute to the Company's productive and competitive levels.

It completed four general lines of action during 2007, within the EH&S Occupational Health Sub-system (SAST):

1. The Company taught induction courses on the Occupational Health Sub-system (SAST) for the members of the four Subsidiaries' self-evaluation teams, in conformity with the strategic actions the Company established to implement the Pemex-SSPA system. Said team members will start to

reproduce the information and implement the SAST sub-system in their own units during 2008.

This basic activity will also be conducted out at managerial levels, both within the Company and the Mexican Oil Workers Union to confirm the understanding and support that are essential to advance safe occupational functions in compliance with the Pemex-SSPA administration system implementation.

2. The COMERI approved the Guidelines the Company prepared in regard to the Organization and Operation of Multidisciplinary Occupational Services, to appropriately structure the entities that are dedicated to occupational health at a strategic, tactical and operational level.
3. Design a Strategic Human Occupational and Health Training Plan for the Company's human resources, which includes the description of the profiles desired for each one of its primary occupational health specialties, based on their levels of performance in strategic, operational and tactical environments, along with their primary technical and decision-making abilities, the products and services they provide and each candidate's professional profile.
4. The Company developed a methodology to evaluate each employee's position and characteristic requirements, in terms of their physical and mental abilities.

#### LEGAL PROVISIONS TO ADDRESS CONTINGENCIES

Guidelines to analyze and evaluate risks in Petróleos Mexicanos and its Subsidiary Entities (COMERI-144).

Guidelines to formulate the Emergency Response Plans (COMERI-145).

Guidelines to schedule, perform, plan, execute and control Emergency Response Plan drills (COMERI-146).



**MORELOS PETROCHEMICAL COMPLEX**  
Coatzacoalcos, Veracruz

## 6.5 Health services

Pemex has a strong tradition in Medical Services that spans 70 years of occupational healthcare for its employees and family members. The Company provides healthcare services for its employee's family nucleus and serves the population in light of specific occupational risks and deteriorating health conditions.

Pemex's Assistant Director's Office of Health Services monitors its workers' health through its Assistant Occupational Health Office and in compliance with the corresponding legal provisions and applicable norms, under which it performed 49,462 periodic medical exams in 2007, including health rates, supervision and control of workers who are exposed to occupational hazards to detect lifestyle risk factors, psychological and nutritional evaluations and 57,591 exams for rehiring purposes and the selection of new hires at December 31, 2007.

These occupational preventive medical services monitor workers' health through compliance with Occupational Hazard operational instructions that include: health diagnosis, health education, the Annual Operational Occupational Hazard Program, medical analysis on the employee job positions, immunizations, confirmation of hygiene conditions in industrial dining rooms, analysis of work processes, sensorial recognition of work-related risk factors and agents, risk maps, evaluation of the worker's exposure to physical and Chemicals agents, biological supervision of occupational exposure to benzene, toluen and xylene; as well as medical participation in Multidisciplinary Groups at the Work Centers.

The Company also has a work-related disease qualification procedure that includes specific activities in the Human Resources, Health and Safety, Work Related-Medicine and Expert Medicine Divisions. Pemex concentrates its efforts on picking up on these cases through medical exams focused on workers who are exposed to physical, chemical, biological, psycho-social and ergonomic agents, in addition to the current SAST program. The Company started a Toxicological Emergency Containment Program in 2006, and prepared a Toxicological Emergency Medical Handbook and an Industrial Toxicological Manual to train all of its doctors in the work centers and Medical Emergency Units. The Industrial Toxicological Lab continued to monitor workers at the Petrochemicals Complexes during 2007 and has studied 452 workers at the Petrochemicals Complexes at La Cangrejera, Pajaritos, Morelos, Escolin and Independencia to date, and 24 workers in its head offices, with phenol, hypuric acid and methylhypuric acid tests.

**VACCINATION PROGRAM**  
Villahermosa, Tabasco





Preventive and Aid Services		
	2006	2007
Doctors appointments	5,125,937	5,070,831
Hospital discharges	70,739	71,918
Surgeries	33,796	35,322
Births	4,573	4,519
Lab work	4,309,232	4,258,208
Imaging studies	632,459	554,857
Pathological Anatomy	90,701	95,810
Timely detection examinations contagious and chronically degenerative diseases	850,807	836,393

Note: Quantified assistance and preventive services provided for workers and their closest blood relatives

The Company prepared 19 Specific Sanitary Surveillance protocols for personnel exposed to physical, chemical, biological and ergonomic agents, and plans to train the Medical staff in charge of Preventive Occupational Medical Service in the eight regions in which the Company plans to apply such protocols, during 2008. Pemex participates in social welfare activities during National Health Weeks, in addition to distributing Oral Life Saline Solution packets and training people on how to use said packets in addition to the administration of vitamins, antiparasitics, iron and folic acid.

On the other hand, it decreased its absentee rates by 8.27% compared with 2006.

Pemex developed diverse health programs in 2007, which include: Personnel from the Head Office and its Subsidiary Entities participated in the Occupational and Employee Health Workshops, from which the Company developed the procedure to obtain Health Profiles for positions. It also implemented stages one through three of the EH&S in Medical Units, while maintaining its permanent health monitoring activities among its employees.

The Company's Preventive Medicine Division has kept cases of avoidable diseases at a "zero" rate among employees and the general population, through universal vaccine programs for children under five, while reporting "Zero Maternal Deaths" over the last five years, with the "Equal Start-up Opportunity" (Arranque Parejo en la Vida) Federal Program.

The Company currently operates 14 Health Labs in Medical Hospital Units where it has detected 43,772 inappropriate lifestyle risk factors among its population entitled to social welfare benefits, beginning its control program with training, education and the promotion of healthy foods, physical activities and reductions in the consumption of alcohol y tobacco. In an effort to reduce alcohol and tobacco consumption, the Company informed 104,489 workers about the damages these substances cause and provided a comprehensive model treatment for 694 smokers. Pemex also issued five electronic bulletins titled "Your Health", which were distributed to 40,000 different email addresses. This effort was coordinated with the Social Communication Corporate Office.

All medical attention activities for the workers and their family members who are entitled to healthcare comply with the provisions established in the Federal Labor Law, the Federal Safety Rules, Occupational Health and Environment, the prevailing Collective Pemex-STPRM Agreement, Employee Rules for Non-Union employees at Petróleos Mexicanos and its Subsidiary Entities, and the Petróleos Mexicanos and its Subsidiary Entities' Occupational Health and Safety Rules.

## 6.6 Supplier and contractors' responsibility concerning environmental protection and safety

Pemex contractors are duty-bound to submit to the rules and codes established by the competent authorities in terms of the prevailing safety, occupational health, and environmental protection provisions at Federal, state and municipal levels, and Pemex's provisions on the subject, among others that correspond to the Company's code of conduct.

### GPC 25

All contractors are also contractually duty-bound to comply with the security measures by providing the minimum training Pemex requires in terms of EH&S for activities performed at the Company's facilities.

# 7. Pemex employees

## 7.1 Human resources in Pemex

Employees are a key asset for Pemex. The incorporation of knowledge and development of skills are essential to the management of human resources and thus, a priority for Petróleos Mexicanos. The Pemex workforce totaled 154,802 employees across the nation during 2007.

- The number of discrimination reports during 2007 was reduced by 78%.
- La gestión de los recursos humanos en Pemex se ha diseñado en torno a dos enfoques de clientes: la organización y los trabajadores.

Pemex has designed the management of its human resources around two types of clients: the organization and the Company's workers.

The first focuses on the application of organizational structures and fortifying the Company's organizational culture geared towards complying with its objectives.

In regard to its workers, the Human Resources Division is permanently dedicated to creating timely development programs for the staff to ensure their improved performance as Pemex employees.

### CASE STUDY

#### SAFE ATTENTION TO EMPLOYEE INFORMATION, SERVICES AND PROCEEDINGS (ASISTE, ACRONYM IN SPANISH)

Pemex implemented the ASISTE model and started to operate self-service kiosks and a WEB portal during 2003 to maximize response times for its active and retired workers' administrative proceedings and eliminate discretionality. Such modules provide the following staff services:

1. General information.
2. Financial information
3. Proceedings
4. Guidelines
5. Medical appointment and disabilities queries

Thirty-nine new modules were put into operation in 2007, for a total of 125 units installed on a national level. The Module was queried 7,519,430 during the 2003 to 2007 periods, 3,939,526 of which correspond to 2007, with a total of 24,597 proceedings completed in the last year. The ASISTE Module operation has helped the Company save a little over \$386 million pesos. The ASISTE module was again awarded C&D 2007 award to innovation in Human Resources in October 2007.

### ASPIRATIONS, CHALLENGES AND OBJECTIVES FOR 2008

- Increase coverage of the ASISTE and the MIS-RH modules.
- Kick off the Talent Development Program for people with High Potential
- Strengthen the scholarship Program
- Reinforce the "Staff Development Administration Program".
- Maintain the variable performance compensation Program.

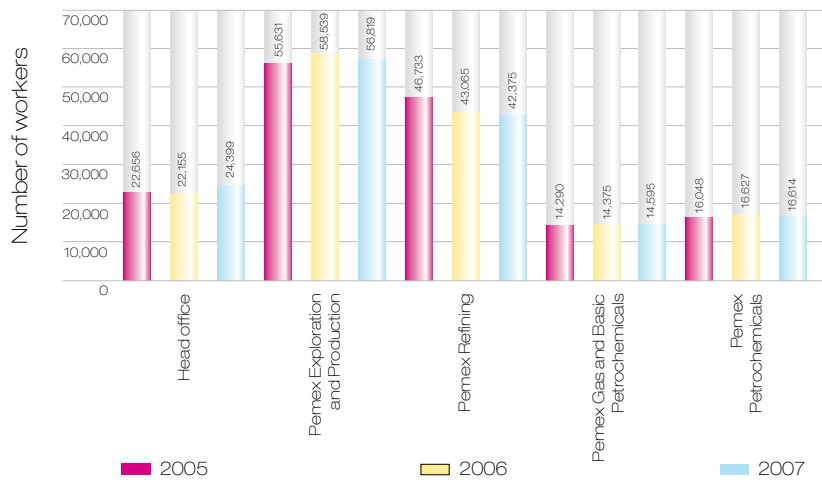


**PROCESSING CENTER-KU-SIERRA**  
Campeche Sound

## 7.2 Job creation

Pemex is concerned about providing its workers with an appropriate working environment to encourage their professional development and thus strengthen the Company.

Pemex employees  
2005 - 2007



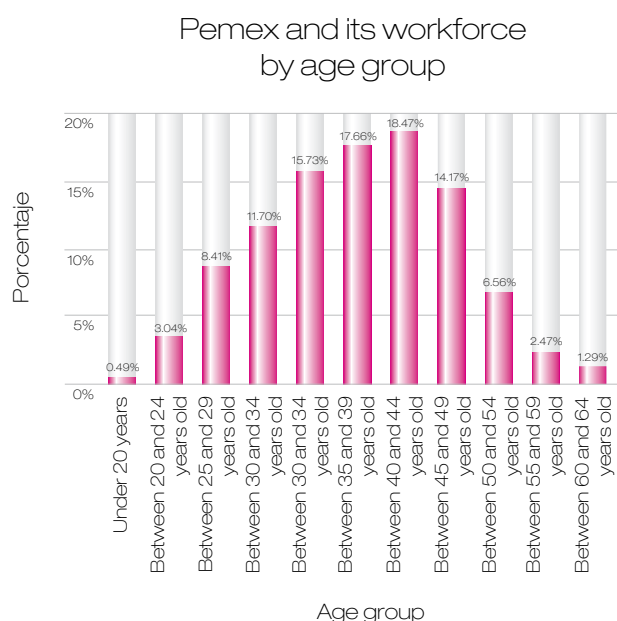
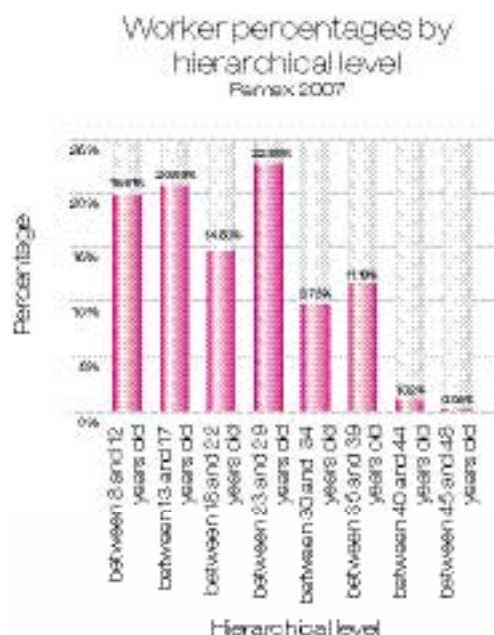
## PEMEX WORKFORCE 2005-2007

Entity	2005		2006		2007	
	Planta	Transitorios	Planta	Transitorios	Planta	Transitorios
Head Office	16,574	6,082	17,235	4,920	18,714	5,685
Pemex-Exploration and Production	34,975	20,656	35,497	23,042	35,619	21,200
Pemex-Refining	39,736	6,997	37,532	5,533	37,529	4,846
Pemex-Gas and Basic Petrochemicals	10,418	3,872	10,475	3,900	10,699	3,896
Pemex-Petrochemicals	12,759	3,289	12,688	3,939	12,613	4,001
<b>Total PEMEX</b>	<b>114,462</b>	<b>40,896</b>	<b>113,427</b>	<b>41,334</b>	<b>115,174</b>	<b>39,628</b>

Note: (Includes non-union and unionized employees)

Total wages, salaries and normal and extraordinary benefits paid during 2007 amounted to \$31.8 billion pesos, which represents a 6% increase over the amount paid in 2006<sup>7</sup>.

Pemex does not differentiate salary rates based on gender. Compensation for specific positions is based on the responsibility and the position in the hierarchical corporate position; thus, it bears noting that the relationship that exists between the initial salary the Company pays and local minimum wages vary depending on the regions established by the National Minimum Wage Commission and published in the Federal Official Gazette.



Pemex is committed to respecting human rights, principles and human dignity, the war against child exploitation and forced labor, non-discrimination and respect for race, gender, origin and religious differences. Services provided by Pemex personnel are governed by the Federal Labor Law, the Collective Bargaining Agreement, and the Work Rules for non-union Petróleos Mexicanos and Subsidiary Entity employees. Said documents establish policies and respect concerning child and forced labor and human rights.

7.Source. Petróleos Mexicanos: Exercise of Public Account 2007, 2006 in cash flow in January-December.



## 7.3 Talent attraction and retention

Pemex hires workers from the local communities in which it performs its operations, thus constituting an important source of jobs. The number of employees hired by community of origin will be quantified during 2008. The Company prepared guidelines in 2005 as the basis to Process the Incorporation of Non-Union Workers, by implementing a process to incorporate and fill vacant positions that helps the Company fulfill its strategic objectives by improving training, selection and induction processes, which Pemex continues to apply.

Pemex management is comprised of a General Director, four corporate directors, and four directors at its subsidiary entities, with an average age of 50 years old, and a 20-year seniority average in the Company. It bears noting that the Pemex Board of Directors is chaired by Georgina Kessel Martínez, Secretary of Energy.

It bears noting that the non-union worker seniority average in the Company is 16.5 years, while the seniority average for unionized workers is 17.5 years, with an average of 42 years of age, considering unionized and non-union workers, who are base and transitory employees both at the Company's headquarters and in the Company's different subsidiaries. The employee turnover rate during 2007 was 4.2%<sup>8</sup>.

### SOCIAL WELFARE BENEFITS

Pemex employees have access to social benefits that improve their families' conditions, including the following:

- Children's Development Centers (CENDI): An average of 3,413 minors was registered during 2007.
- Artículo 123 Elementary Schools: During 2007, 9,099 oil workers' children and 20,989 children in the different communities received educational services, which represent a total of 30,088 students, taught by 1,409 teachers.
- Libraries: The Company has libraries in 22 cities across the nation.
- "Ingeniero Salvador Benavides Acuña" sports facilities. During 2007, an average of 16,121 users played a sport and participated in different scheduled events.
- Family Integration Centers (CIFA): Pemex has 15 CIFA's in operation across the nation.
- Social and Full Service Centers for Senior Citizens (CESIPAM).
- Morelos Social Center: To start and/or finish elementary studies.
- Protec - Salary: Protection program for workers' salaries based on agreements with suppliers that offer discounts.
- Comprehensive Housing Financial System (SIFIVI).
- Medical Services.



PEP OFFICES  
Villahermosa, Tabasco

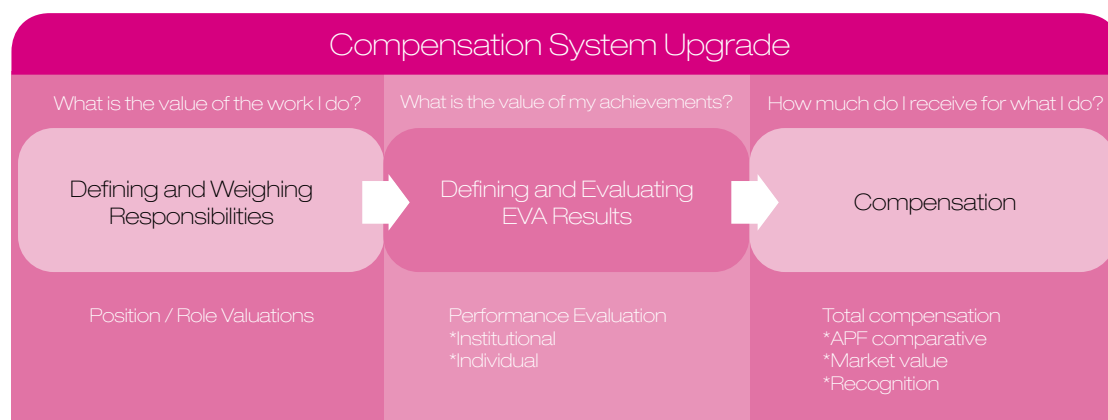
### CASE STUDY

#### VARIABLE COMPENSATION SYSTEM

The purpose of this system consists of ensuring that Pemex pays its workers a fair, equal and competitive compensation, aligned with results, to help attract and retain qualified personnel and help strengthen the State Oil Industry.

The Company updated its Management Compensation System during 2007. The system was reoriented to a compensation plan based on responsibilities, and the Company still faces the challenge of evolving towards a variable compensation system. The basis for this new plan consists of assessing the positions in a process to determine the value related to said positions, which allows for fixed compensation based on the level of responsibility and the position's contribution to the Company's business results.

The next step consists of including a variable component in the Company's compensation plan, tied to its performance and individual employee contributions to generating value. Thus, the Company plans to link variable compensations to engineering value for Pemex, as a result of each employee's individual performance. The propounded matrix will be linked to the EVA4. methodology, which must also consider group indicators, such as performance agreements, and the Balanced Scorecard, among others, along with each employee's individual contribution to the Company's results through the Performance Administration System (SIADI).

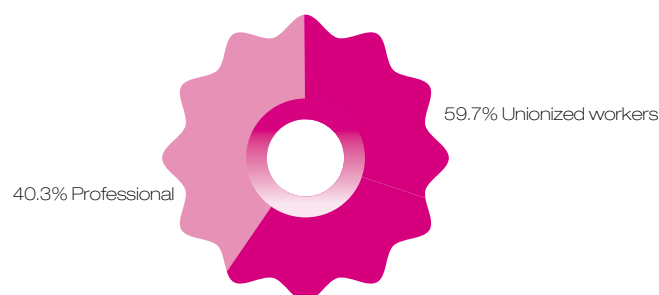


8. Turnover Index: Number of employees that leave the organization / total number of employees X 100).

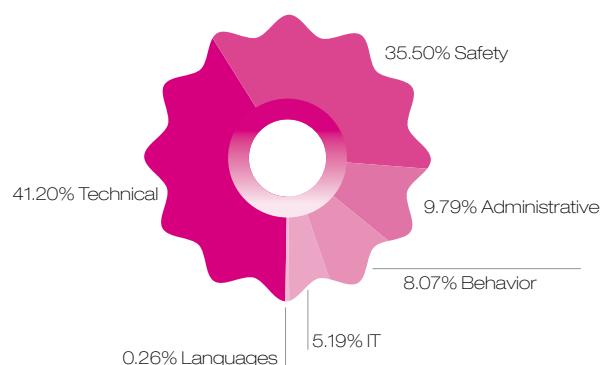
## 7.4 Professional development

Pemex implements its annual training plan on the results obtained from the Detection of Development Needs. The Company applied the following personnel training processes and methodologies during 2007:

Breakdown of Training  
by Population Sector  
2007



Training by Subject Matter



### TRAINING

Pemex implemented a program to homologate its evaluation of knowledge and training for unionized workers. Eight different specialties were developed throughout the course of 2007, to establish individual training needs for approximately 40,000 workers. The Company also worked on improving the quality of its contractual training programs by certifying 259 internal instructors on an Institutional level.

Career and Executive Development Plans were created for Company's non-union workers. This Plan responds to future needs in terms of creating the Company's replacement work forces. Pemex has evaluated 1,418 officers under this program.

On the other hand, the "Specialists Development Program" is focused on training staff members on key processes to guarantee the Company's sustainability.

### TRAINING 2005 - 2007

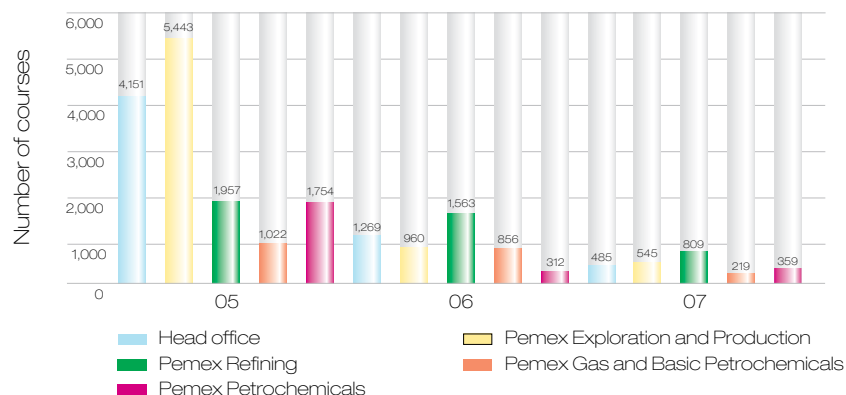
Category	2005	2006	2007
Number of Employees	182,313	145,996	176,101
Number of Hours	848,059	624,179	777,925
Courses taught	13,282	13,192	14,040

Pemex invested \$458.5 million pesos in personnel training programs during 2007. The Company is also concerned about offering other comprehensive training and development programs in addition to technical career development programs, such as: human relations, oral and written communication, languages, and ethics and values, among others.

Category	2007
Safety Training (hours)	140,293
Attendees (individuals)	76,866
Fire-fighting training (hours)	6,545
Attendees (individuals)	2,254

Pemex believes that training in occupational hazard and security is one of the most important actions in terms of improvement of the performance and management of these topics.

Online code of conduct courses



The Company has established annual goals to spread the Oil Industry's Code of Conduct since 2005. Over 21,704 workers have been trained through the Company's e-learning at date, and 2,417 workers took the Code of Conduct course during 2007, which represented a total of 7,251 hours (three hours per person).

It bears noting that workers involved in physical safety operations are also included in the training programs, based on their high levels of responsibility. The company created a Recognition Program for outstanding behavior and/or projects related to integrity and transparency in Petróleos Mexicanos to honor workers for their behavior or innovative proposals on the subject. Awards have been given to 242 workers in the Company's work centers nationwide.

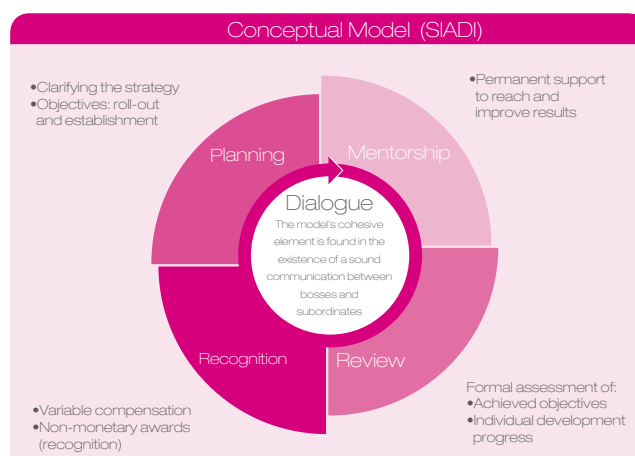
The aforesaid actions seek to promote respect for human in Pemex activities and business, to maintain its good reputation and protect the stability of its investments. Pemex will continue to work on strengthening its agreements on this topic.

The Company has also designed a program called New Phase of Life to support its workers who will soon retire.

#### INSTITUTIONAL INDIVIDUAL PERFORMANCE MANAGEMENT SYSTEM (SIADI)

SIADI is a comprehensive Performance Administration processed comprised of four elements: Planning, Tutorship, Review and Recognition, that share DIALOGUE as their common bond.

This Model is applied to non-union workers in general and is founded on the following two major items: the development of Leadership Skills (command of the 14 Behavioral Factors defined for the Pemex culture) and the Performance Management Model. It bears noting that during 2007, the individual evaluation performance process was completed in conformity with the methodology established in the SIADI Model, covering 91% of Pemex's non-union staff members.



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CABEZAL  
DE DESCARGA

## 7.5 Merit and equal opportunities

The Company respects human rights, equal opportunities and non-discrimination policies based on gender, race, age, language, socioeconomic level, abilities, religion, disability or other characteristics, that prevent full exercise and respect for human rights. Pemex taught 1,417 hours of employee training during 2007, for Corporate and PPQ employees in human rights.

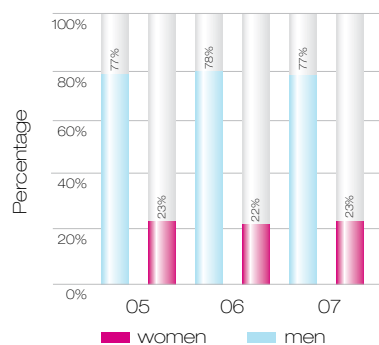
Pemex carried our sensitization and information activities, reaching a total of 9,052 workers, by organizing campaigns and events that promote cultural change, and addressing topics such as the importance of gender equity, and the elimination of established stereotypes based on gender and discrimination.

It bears noting that the number of discrimination reports was reduced by 77.78% during 2007, with respect to 2006.

The Intra-Agency Office of Gender and non-Discrimination has institutional representation before the National Women's Institute (INMUJERES), the National Council to Prevent Discrimination (CONAPRED), the National Commission of Human Rights (CNDH), and the United Nations Development Fund for Women (UNIFEM), the Federal Government and other kindred agencies.

The Company implemented the Institutionalization Program on Gender Equality and non-Discrimination Perspectives 2007-2012, to consolidate its institutional culture based on a social policy of gender equality rights and non-discrimination, derived from the results obtained from its Survey on Gender Equality and self-diagnosis. The Company is also a member of the National System that promotes Gender Equality among men and women.

Distribution of Pemex's global workforce by gender





## 7.6 Dialogue with the workers' representatives

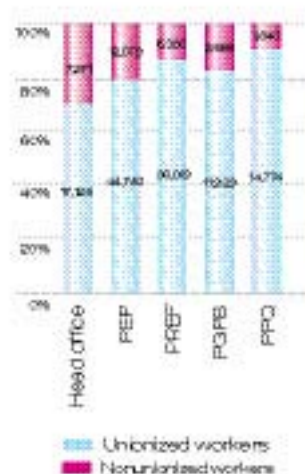
Pemex maintains a respectful relationship with the Mexican Oil Workers Union (STPRM, acronym in Spanish) in an alliance that promotes its corporate development and workers, with full respect for freedom of association.

The health and security matters the Company agrees to with the Union are governed by Clause 65: Occupational and Health Measures; Clause 95: Medical Services, and Clause 124: Occupational Diseases, of the Collective Bargaining Agreement.

The Company has ten national Mixed Commissions to guarantee permanent communication with its workers; said Commissions are integrated by an equal number of union and corporate representatives: the Commission of Levels and Promotions, the Tabulator's Commission, the Re-location Commission, the Training Commission, the Industrial Occupational and Safety Commission, the Central Commission for Medical Services, the Quality-Productivity Commission, the Cultural and Athletic Commission, the Clause 3 Commission, and the Clause 34 Commission. In addition, the Salary Review Commission and the Hiring Commission, both participate in each salary and contractual review.

At December 31, 2007, 80.5% of Pemex employees were unionized (including permanent and temporary personnel).

Pemex unionized and nonunionized workers 2007



Each employee's immediate supervisor informs him/her of organizational changes that might affect him/her, in conformity with the provisions established in the Federal Labor Law and in Clauses 85, 86 and 87 of the Collective Bargaining Agreement, Articles 56 and 57 of the Petróleos Mexicanos and Subsidiary Agencies' Labor Rules for Non-Union Workers.

Pemex and the Mexican Oil Workers Union representatives reviewed the 2007-2009 collective bargaining agreement in 2007. The Company also posted the terms of the 2007-2009 Collective Bargaining Agreement on the Company's Intranet in 2007, to ensure the expeditious and sure communication of its content.

### CASE STUDY

#### FULL SERVICE HUMAN RESOURCES MODULE (MIS-RH)

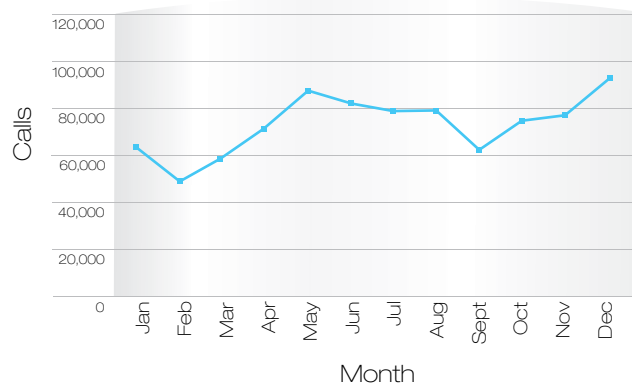
This module consists of a Customer Service Center that takes telephone calls concerning queries, complaints, suggestions, claims and Pemex employees' and retiree processes and proceedings.

The MIS-RH system is available to the Company's 154,802 workers at the 555 work centers and the 68,000 Pemex retirees. Employees and retirees can access the Customer Service Center by calling the Pemex switchboard and dialing extension number 49123.

The Customer Service Center achieved the following objectives during 2007:

- It responded to a total of 886,669 queries through the MIS-RH system.
- The IVR telephone menu services were increased and several new processes released through its service agents.
- The MIS-RH system was awarded with the Gold Medal in the category of the Best Contribution in Human Resources, in the second edition of the National Award to Excellency at the Contact Centers implemented by the Mexican Institute of Teleservices.
- Use of the MIS-RH module during 2007 generated approximately \$44.2 million pesos in savings.

Full service human resources module (MIS-RH)



# 8. Climate change

## 8.1. Commitment to a global problem

Forecasts made by the United Nations Intergovernmental Panel on Climate Change (IPCC) indicate that the earth's average global temperature could rise three degrees Celsius during this Century, provoking significant changes on the planet's marine and terrestrial ecosystems.

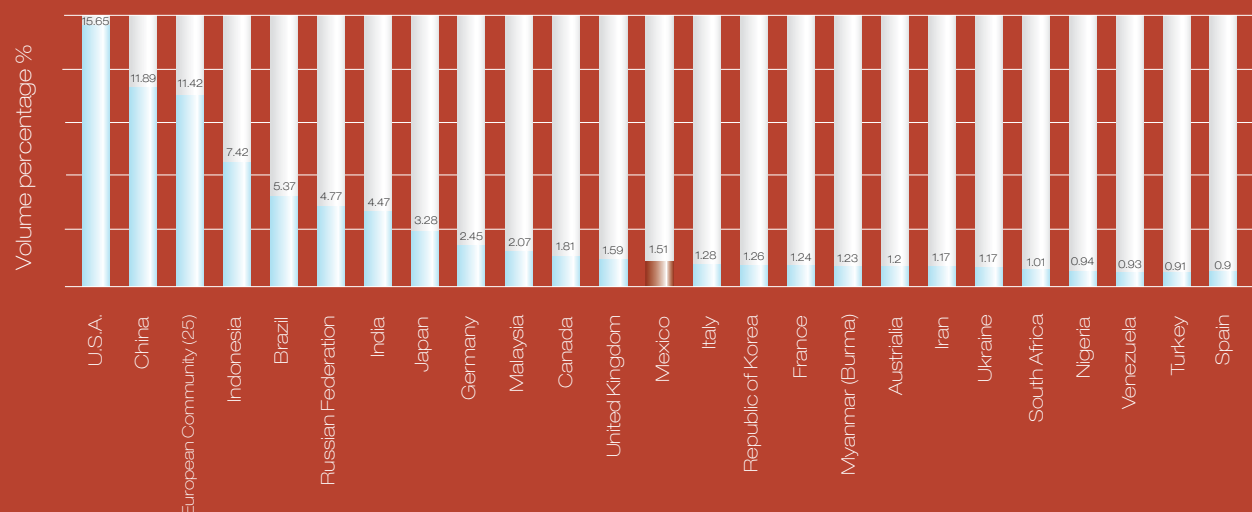
The Kyoto Protocol in the United Nations Framework Convention on Climate Change officially entered into force in February 2005 to face this challenge. This Agreement establishes average production goals of 5.2% of its GHG gas emissions for 38 developed countries (Annex I in this Protocol), with respect to the emissions registered in 1990. Mexico ratified the Kyoto Protocol and is part of the No-Annex I nations, and thus does not have reduction goals. It participates in this Protocol's Clean Development Mechanism and works together with the Federal Government in the combat against global climate change.

Mexico generates close to 1.5% of the world's GHG gas emissions, and holds 13th place among the 25 major countries that generate GHG<sup>9</sup> gas emissions that contribute 80% of the total<sup>10</sup>.

Pemex generates close to 6% of the nation's greenhouse gas emission (GHG) effect.

The strategy to reduce GHG gas emissions is focused on improving energy efficiency, co-generation and use of methane, to register Clean Development Mechanism (CDM) projects. CO<sub>2</sub> emissions increased by 9% in 2007 compared with last year, due to the release of sour gas with high nitrogen content

Percentage of the total Volume by the top 25 countries worldwide GHG emitters



9. Major GHG emitters through 2000 in MtCO<sub>2</sub>e

[http://www.semarnat.gob.mx/queessemarnat/politica\\_ambiental/cambioclimatico/Documents/queesemarnat/cambioclimatico/tabla2.pdf](http://www.semarnat.gob.mx/queessemarnat/politica_ambiental/cambioclimatico/Documents/queesemarnat/cambioclimatico/tabla2.pdf)

10. [http://www.semarnat.gob.mx/queessemarnat/politica\\_ambiental/cambioclimatico/Pages/Presentaciones.aspx](http://www.semarnat.gob.mx/queessemarnat/politica_ambiental/cambioclimatico/Pages/Presentaciones.aspx)



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Campeche Sound

#### INVENTORY OF CO<sub>2</sub> EMISSIONS<sup>11</sup>

During the 2001-2007 periods, Pemex passed from 40.1 to 43.8 million tons of CO<sub>2</sub> per year, with an increase of 9% in this period

Growth registered in 2007, was due mainly to the release of sour gas with high nitrogen contents through compression maintenance equipment and operational failures on offshore facilities in the Northeast Marine Region. In the same manner, such increase was based on the consumption of fuels due to higher levels of oil well production and maintenance on Exploration and Production land, the burning of sour gas by the Ciudad Pemex CPG maintenance processes and a non-scheduled stoppage at the Gas and Basic Petrochemicals New Pemex CPG and the production of the ammonia plants at the Cosoleacaque CPQ. Refining, on the other hand, maintained its level of emissions in 2007.

In according with his operations, Pemex does not have other GHG emission registries other than CO<sub>2</sub> and methane, or records on substances that cause ozone damage, because they are little significant.

#### CASE STUDY

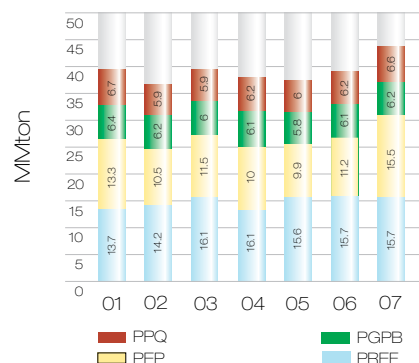
##### MEXICO'S GHG PROGRAM

Pemex forms part of a group of 35 countries that voluntary participates in the GHG Mexico Program (Programa GEI-México). Participating companies report their corporate GHG gas emission inventories to Semarnat, in conformity with the standards established by The GHG Protocol: A Corporate Accounting and Reporting Standard developed by the WRI/WBCSD.

This program was implemented in 2004 and has the support of the Commission of Studies in Private Enterprise Sector for Sustainable Development (CESPEDES), the World Resource Institute (WRI), and the World Business Council for Sustainable Development (WBCSD).

The report issued at July 2006 states that said companies registered close to 102 million tons of equivalent carbon dioxide (CO<sub>2</sub>e), that is to say, 35% of the total of the emissions of fixed sources of the National Inventory of total Greenhouse Gas Emissions in Mexico<sup>12</sup>.

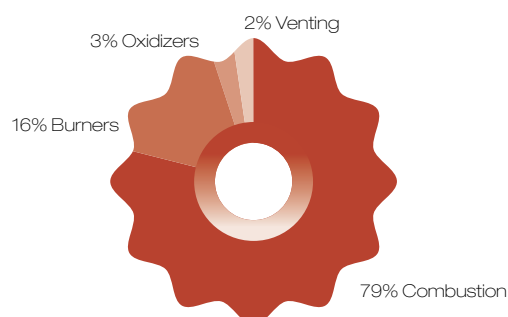
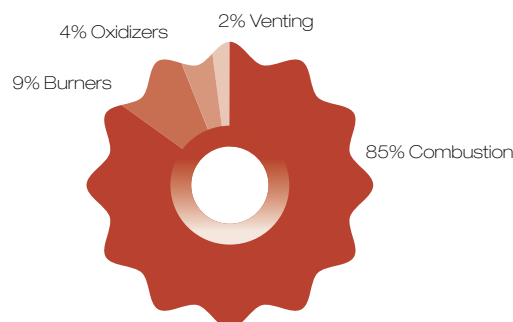
Evolution of the greenhouse gas emissions impact by business unit



Note: Pemex reported 43.8 tons of CO<sub>2</sub> emissions in 2007. The figures in the graphs may not coincide due to number rounding.

11. <http://www.geimexico.org/inventario.html>

12. AP-42 emission factors from the United States Environmental Protection Pact (US EPA) are used to estimate CO<sub>2</sub> emissions that are applied to the consumption of fuel in equipment and on the factors and material balance for venting, oxidizers and burners.



## 8.2. Gas emission mitigation strategy

The greenhouse gas emission mitigation actions from Pemex are in line with strategy 10.2 of the National Development Plan, NDP (PND, acronym in Spanish) concerning efficient energy use.

### FUTURE CO<sub>2</sub> FORECASTS DUE TO INCREASED DEMAND OF FOSSIL HYDROCARBONS IN TRANSPORTATION AND POWER GENERATION

The Secretary of Energy (SENER, acronym in Spanish) forecasts a 3.8% annual increase in the demand of automotive fuels over the next ten years. This will imply a significant growth of greenhouse gas emissions in Mexico.

Pemex must provide the following daily supplies in 2012 to satisfy Mexico's transportation needs: 144 million liters of gasoline, 57 million liters of diesel, and 4.9 million liters of LP gas. Consumption of these fuel volumes will generate 200 million tons of carbon dioxide per year. These emissions equal almost five times the emissions Pemex currently generates in all of its operations.

### NATIONAL CLIMATE CHANGE STRATEGY

In 2007, the Mexican President informed the public about the National Climate Change Strategy (ENACC, acronym in Spanish) that propounds action lines to mitigate the phenomenon and how Mexico must adapt to their adverse effects, while recognizing that this problem is one of the greatest challenges the human race faces. The ENACC helps to:

- Identify opportunities to reduce gas emissions and develop mitigation projects
- Acknowledge the vulnerability of the respective sectors and areas of competence, and undertake projects to develop national and local response and adaptation capacities
- Propound lines of action, policies and strategies that serve as a base to prepare a Special Climate Change Program to be registered in the 2007-2012 National Development Plan

### GPC 7

#### PEMEX'S GENERAL STRATEGY TO REDUCE GHG AND PARTICIPATE WITH CMD ON CARBON MARKETS

Pemex commenced its climate change efforts in 1999, and became one of the first oil companies that acknowledged the role fossil fuels would play in the climate change. This position was accompanied by the design of an internal virtual carbon market, which closed its operation in 2004, the year in which it reached a level of 3.6 million tons of carbon dioxide emissions, which were commercialized through 224 market transactions valued at \$20 million USD.

Pemex began the transition from an internal virtual market strategy in 2005, which served as a sensitization process, to other of incentives effective seizing through the Clean Mechanism Development (CMD). This task required the design of a business model whose central axis was the proposal of a price formula with an objective that consist of ensuring the best conditions for the State and guaranteeing equity and transparency for all interested parties.

This led the Secretary of the Treasury and Public Credit (SHCP, acronym in Spanish), to favorably sanction Pemex's proposal for a price on carbon in December 2007, which became the first official economic carbon instrument in Mexico.

The next steps will include the systematic review of the investment planning processes to internalize carbon costs in business decisions (a possible incentive in this day and under the CMD framework, albeit an low eventual cost in a scenario

in which Mexico becomes part of the Kyoto Protocol Annex 1 countries), and design the legal and budgetary framework that will permit Pemex to pay for environmental services related to climate change, as well as the evaluation of the possible participation in voluntary carbon markets.

Pemex has subscribed letters of intent with several oil companies, financial institutions and related companies, to expedite the identification, documentation and CMD project registration process. Letters of intent were subscribed in 2007, to register the 19 projects the Semarnat initially certified in 2006, with the Executive Board of the Clean Mechanism Development. The Company has materialized four of these projects' purchase and sale agreements (Emission Reduction Purchase Agreement, ERPA) to date.

Pemex subscribed seven agreements of intent with Credit Suisse, Ecosecurities, USA LLC and Mitsui to register 18 projects to reduce 1.8 MMt of CO<sub>2</sub> per year with the Executive Board of the CMD. With this, Pemex is gestioned 19 projects to reduce 2.7 MMt of CO<sub>2</sub> per year.

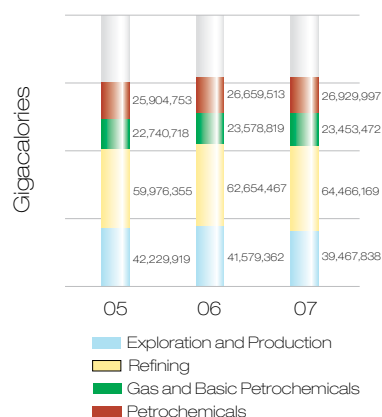


## 8.3 Energy efficiency

Pemex maintained energy consumption levels without significant changes during 2007, as compared to 2006.

	Energy consumption by business area, Annual Gcal.			Variation	
	2005	2006	2007	2005 / 2007	2006 / 2007
Pemex-Exploration and Production	42,229,919	41,579,362	39,467,838	-7%	-5%
Pemex-Refining	59,976,355	62,654,467	64,466,169	7%	3%
Pemex-Gas and Basic Petrochemicals	22,740,718	23,578,819	23,453,472	3%	-1%
Pemex-Petrochemicals	25,904,753	26,659,513	26,929,997	4%	1%
<b>Total</b>	<b>150,851,745</b>	<b>154,472,161</b>	<b>154,317,476</b>	<b>2%</b>	<b>-0.1%</b>

Energy consumption by business area, Annual Gcal

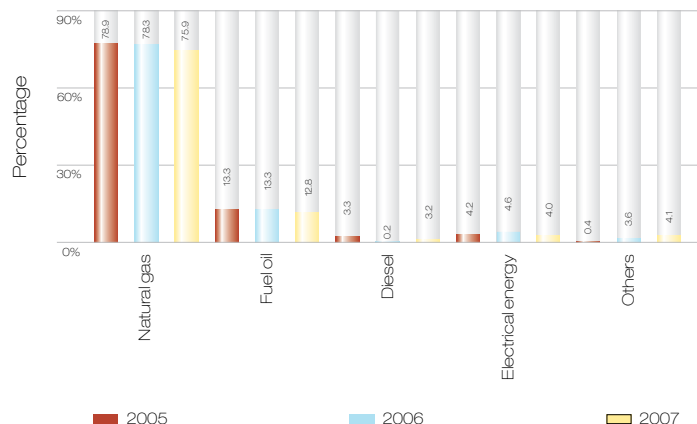


Participation in energy consumption, 2007



Pemex's energy consumption during 2007 came from the following sources: 75.9% from natural gas, 12.8% from fuel oil, 3.2% from diesel, 4.1% from other fuels, such as gasoline and LP gas, while 4.0% corresponded to electrical power.

Energy consumption by source



Apparent consumption of electrical energy (Gcal)

	2006	2007
Generation (+)	6,552,639	6,005,702
Imports (+)	1,354,734	1,218,280
Exports (-)	720,208	764,310
<b>Total</b>	<b>7,187,165</b>	<b>6,459,672</b>



## EMISSIONS DERIVED FROM THE CONSUMPTION OF IMPORTED ELECTRICAL POWER

Pemex currently does not quantify indirect GHG produced by the generation of imported electrical energy; nor does it identify indirect emissions derived from other sources (transportation, corporate travel, and packages, among others).

### CASE STUDY

#### PORTAGE OF ELECTRICAL ENERGY

This project consists of using the Federal Electricity Commission (CFE, acronym in Spanish) or the Central Light and Power Company (LyFC, acronym in Spanish) transmission network for electrical energy supply from a Pemex generation center to several of the Company's own consumer centers.

Portage of electrical energy in 2007 amounted to 79.4 MW on average, 13.7% above the level reported in 2006, which generated savings of approximately \$4.9 million USD per month, in the Company's operating expenses, 1.6% increase above 2006.

Energy consumption indicators by crude oil and/or production processing unit (Gcal/Mton)	Variation				
	2005	2006	2007	2005 / 2007	2006 / 2007
Pemex-Exploration and Production	145	187	169	16.7%	-9.5%
Pemex-Refining	892	944	971	8.9%	2.8%
Pemex-Gas and Basic Petrochemicals	460	466	475	3.3%	1.9%
Pemex-Petrochemicals	4,266	4,153	4,280	0.3%	3.0%
Pemex	364	447	434	19.2%	-2.8%

### GPC 5

#### INTERNAL ENERGY SAVINGS

Pemex reduced its electrical consumption by production unit by 2.8% over the last two years, moving from 447 to 434 gigacalories for each one thousand tons of produced, processed and prepared petrochemicals hydrocarbons.

Pemex's different lines of business have basically maintained their same levels of energy consumption in gas processing and petrochemical preparation, despite the 2% decrease in PPQ and PGPB production.

The 9.5% decrease in production and exploration is derived mainly from the increased production of dry gas, especially in the north zone of the country.

On the other hand, the use of energy to process and refine crude oil grew 2.8% as consequence of unscheduled plant shut down and start ups events.

### GPC 4

#### SCOPE OF ALTERNATE ENERGY SOURCES IN SCHEMES OF SELF-SUFFICIENCY

The commercial availability of alternate energy technologies that is able to guarantee the constant and reliable supply to the scale of the oil industry's processes, have not yet permitted their overall implementation in this sector on a worldwide level.

It is estimated that failures in energy supplies could shut down the plant's operations sending the gases to the burning or venting/relief processes that could derive in the possible release of large amounts of greenhouse gas emissions.



**IN-LAND PERFORATION WELL  
BURGOS INTEGRAL ACTIVE**  
Reynosa, Tamaulipas

## 8.4 Clean Mechanism Development (CMD) of the Kyoto Protocol

### THE CMD BUSINESS MODEL IN PEMEX: MARKETING PROCESS FOR CERTIFICATES OF EMISSION REDUCTION (CER)

Pemex developed a business model comprised of three legal instruments, along with the price formula authorized by the Secretary of the Treasury and Public Credit, to guarantee the best conditions for Mexico and ensure transparency in the marketing of the CERs generated by its CMD projects: Said aforementioned instruments are listed as follows:

- General collaboration agreement that regulates identification activities for potential projects supported by third parties;
- Letter of intent to process documentation and registering projects with the CMD Executive Board;
- Emission Reduction Purchase Agreement (ERPA).

Pemex intends to prepare a legal administrative plan that will allow the Company to allocate resources for projects related to climate change adjustments.

## 8.5 Joint action programs: Methane to Markets

### MEASUREMENT OF METHANE (CH<sub>4</sub>) EMISSIONS

The Company intensified its measurement of methane emissions and diagnosis at the Ciudad Pemex, the Nuevo Pemex, and the Cactus CPGs and in 14 gas pipeline sectors during 2007, as part of the actions Pemex has undertaken as a result of co-chairing the Gas and Oil Subcommittee with representatives from Russia and Canada for the international Methane to Market (M2M) initiative.

The results of these measurements are used to establish efficient cost reduction actions for CH<sub>4</sub> gas emissions and trim down industrial risks. Furthermore, the information obtained from these efforts is used to support Pemex's Clean Mechanism Development projects.

### CASE STUDY

#### PEMEX IN THE 2007 METHANE TO MARKETS (M2M) EXPO PROJECT

Pemex participated in the 2007 Methane to Markets (M2M) Expo Project in Beijing, China. During the Expo Project's plenary session, which was attended by close to 700 specialists and journalists from 34 countries, the President of the M2M Steering Committee spoke of the progress made in the four areas that comprise the Program. He also highlighted Pemex's leadership position, based on its actions to recover fugitive gas emissions at processing centers and gas transportation pipelines.

### GPC 8

#### FLOW OF PEMEX RESOURCES FOR MITIGATION AND ADAPTATION TO CLIMATE CHANGE

Pemex has subscribed collaboration agreements with diverse oil companies, financial institutions and related companies, to streamline the identification, documentation and CMD project registration process.

The Company held conversations with the Secretary of the Treasury and Public Credit (SHCP) during 2007 to discuss the importance of allocating the revenues derived from marketing Certificates of Reduction of Emissions (CERs) for the projects that originate said revenues.

Thus, Article 12 of the Federal Law of Revenue for 2008 establishes that revenues derived from marketing certificates of reduction of greenhouse gas emissions, such as carbon dioxide and methane, will be used to complete the said project achievement. This Law applies for adherence by all Federal Government programs and is not limited specifically to Pemex.

Basing on the article 12 of the Law of Income of the Federation for 2008 application, Pemex hopes to get the first income for CERs during the initial months of 2009. The reception of said incomes will depend on the cross-check / supervision realized by the technical reviewer of the project that at present PEMEX has current.

### GPC 9

#### PEMEX INCENTIVES FINAL USERS TO DO MORE EFFICIENT THE PROCESSES THAT USE ENERGY

Pemex is not authorized to provide its clients and users with economic incentives for streamlining their consumption of the fuels the Company produces.

The Secretary of the Treasury and Public Credits sets the prices for the products Pemex markets with criteria that seek to reflect fuel costs of opportunity and their competitive conditions on relevant international markets.

The prices thus established apply to all clients and users within a context of equality and transparency that do not consider the possibility of offering preferential terms to any given parties.

It also bears noting that the majority of the industrial clients and final users that use the fuels Pemex produces find that the primary incentive for consumption efficiencies is based on the reduction of the cost of fuel.

Notwithstanding the above, Petróleos Mexicanos sits on the jury that awards annual prizes for national energy efficiency measures, as a member of the Governing Board of the National Commission for Energy Savings (Conae, acronym in Spanish). Thus, Pemex participates in this project by recognizing efficiency measures that are taken by the different sectors that use large amounts of energy.

In this same manner, Conae is the agency that provides services both for final consumers and large corporations, the transportation sector and small and medium-sized companies, to help them adopt the best practices on the topic of energy consumption.

# 9. Biodiversity conservation and ecological regulation

## 9.1 Strategy for 2007-2012

Pemex's 2007-2012 Environmental Protection Strategy considers ecological land use planning code and biodiversity conservation regulations, as part of its community environmental responsibility action plan.

Pemex's Environmental Protection Strategy includes the conservation and compensation of biodiversity in oil basins.

Pemex channeled \$22.1 million pesos to support for conservation projects in natural protected and sensitive areas during 2007.

### MAIN ACTIVITIES OF THE BIODIVERSITY CONSERVATION AND COMPENSATION OF OIL BASINS

	Ecological land use planning code	Biodiversity conservation and compensation of oil basins		
		Support for protected natural areas	Reforestation	Restoration of hydrological basins
Objetivo	Provide greater assurance on investments by integrating them in advance in the territorial planning, while preventing conflicts with the communities	Prevent and repair the environmental impact caused by the oil activities in protected natural areas	Contribute to mitigating negative effects of climate change	Prevent and repair the environmental impact caused by the oil activities in water resources
Ongoing actions	Gulf of Mexico Tuxpan Burgos Basin Northern Chiapas Coatzacoalcas	Natural resources in the Oil Zones (PEP) Construction of the Jaguarundi Park Environment Monitoring (PEP) Support Reactivation for protected natural areas in oil basins (Pantanos de Centla, Laguna de Términos, Sierra de Otontepec, Tuxpan, Alvarado)	Identification of areas that require reforestation (PEP and CONANP) Location and follow-up on areas through SIG Projects Identification with state governments Support projects for fire-fighting and prevention	Characterization study to restore the Lower Basin of the Coatzacoalcas River Support for conservation of the high basin on the Tabasco plains (Montes Azules)
Actions under analysis	Support to carry out land use planning studies in municipalities that represent a priority for the company (with a possible incorporation into state agreements)	Environmental studies Laguna de Términos and the Pantanos de Centla	Reforestation project for forests, jungles and mangrove swamps in areas of oil influence	Identification of strategic municipalities for waste water use purposes

The conservation and compensation activities are in line with strategies 2.3, 3.1, 3.4, 3.5 and 4.2 of the NDP related to comprehensive and sustainable water management, restoration of forests, fire controls, containment of agricultural boundaries, and the increase of surfaces subject to conservation plans.

The ecological land use planning code actions are in line with strategies 9.1 and 9.2 of the 2007-2012 National Development Plan (NDP), that are geared to execute ecological land use planning code programs in Mexican territory, and design policies for the sustainable and integral handling of the oceans and seashores.





PETROCHEMICAL COMPLEX CANGREJERA  
Veracruz

## 9.2 Biodiversity conservation

### GPC 10

#### PROMOTION ACTIVITIES OF GOODS AND ENVIRONMENTAL SERVICES FOR THE CONSERVATION IN OIL ZONES

Part of the actions Pemex carries out in the promotion of goods and services in the oil zones consist of providing donations to support activities that tend to conserve the ecosystems in natural protected zones in the states of Veracruz, Campeche, Tabasco, and Puebla. Some of the areas include: The Términos Lagoon, Centla Marshes, the Reef System in the State of Veracruz, the Tuxpan Reef System, the Raudal, Lechuguillas, Tecolutla and Vega de Alatorre turtle camps, and the Patla Glen. Donations to support these activities have been channeled to environmental education projects, reforestation, and community development projects, among others, that promote the importance of the ecosystems and their conservation.

The National Commission for Knowledge and Use of Biodiversity (CONABIO, acronym in Spanish) received \$81 million pesos from Petróleos Mexicanos in 2003, as part of a commutation plan for fines imposed by the Profepa (Federal Environmental Attorneys Office). These resources were earmarked to carry out diverse restoration, conservation and research projects that include: protection and conservation of the marine turtle, establishment of Conservation Management Units, sustainable farming projects to promote biodiversity and cattle production, comprehensive ecological restoration of the Burgos Basin, restoration of the Hydrographic Basin of the Madre Lagoon, and the conservation of farmlands, woodlands, sheepherding, soil and water.

In 2007, the Board of Directors of Petróleos Mexicanos authorized resources to support the following sustainable development programs: Action plan for environmental education and the operation of the Casa del Agua, and the Centla Marshes in the state of Tabasco; Program for environmental education and the recovery of wetlands in the state of Veracruz; and a technological, research and educational program for the conservation of the

Lacandona Jungle in the middle basin of the hydrological system on the plains of the State of Tabasco.

### GPC 12

Pemex does not yet have health indicators on ecosystems in the environmental areas that are related to the Company's industrial activities.

## PROTECTED AREAS AND ENVIRONMENTALLY SENSITIVE AREAS

Area Name	Location	Surface (hectares)	Category of the protected area*	Description of the area	Protected species in the Area
Sierra de Otontepec	Veracruz	6870	Natural protected area since 2004	It has five important ecosystems based on its altitude grade (evergreen forest, evergreen sunflower, medium sub-perennifolia jungle and medium jungle)	Road eagle, gray small eagle, canoe-bill toucan, eleutherodactylus sp. and laemactus serratus, kinkajou badger, old man's head, and anteaters.
Pantanos de Centla	Tabasco	331200	Biosphere reserve since 1992	It has glen and marsh ecosystems, medium jungles and low sub-perennifolia and mangrove swamps	13 flora species, 56 bird species, 46 mammal species, 36 reptile and amphibian species and six fish species
Montes Azules (in the Lacandona Jungle)	Chiapas	152000	Biosphere reserve since 1978	It represents 0.9% of the Mexican territory and one fifth of Mexico's biological diversity (30% of the country's mammals, 50% of its birds and 50% of its daytime butterflies)	Red macaw, harpia harpyja eagles, jaguars, tapirs, spider monkey, Mexican black howler monkey, and glen crocodiles
Tuxpan mangrove swamps and wetlands	Veracruz	267010	Ramsar site since 2006	This is the largest mangrove swamp that still remains north of the Papaloapan. It has four species of Mexican mangrove swamps (rhizophora mangle, Avicennia germinans, laguncularia racemosa and conocarpus eructus)	Zolcate or cantil moccasin snakes, dark herons, minor small black eagle, silver-beak woodpeckers, crocodiles, prickly Gulf iguanas, Monarch butterflies, red egrets, turtles, American storks, and the Moctezuma oropendola
Alvarado wetlands	Veracruz	302707	Ramsar site since 2004	It belongs to the estuaries-lagoon system comprised of costal salty water lagoons and several rivers, such as the Papaloapan; 81 of its registered species are migratory and 120 are resident	Rhizophora mangle, laguncularia racemosa and avicennia germinans, royal duck, manatee, aratinga holochlora, amazona oratrix and doricha eliza, geranospiza caerulescens, falco femoralis, botaurs lentiginosus, campylorhynchus rufinucha, opornis tolmei, nomo

\* In conformity with the National Commission of Protected natural areas

## MAIN CONSERVATION ACTIONS

Area Name	Pemex operations start date	Biological impact during the operations and current condition (not necessarily in 2007)	Other activities that affected the protected areas in 2007 (not due to Pemex)	Activities focused on biodiversity care in 2007 (by Pemex)	Pemex's investment in 2007 (million pesos)
Sierra de Otontepec	1952	NA	Ecosystems fragmentation, advancing farming and cattle raising boundaries and change in land use code	Program on environmental education and recovery of the wetlands and jungles in the state of Veracruz	1.20
Centla Glens	1952	Hydrologic modification due to channels; ecosystem fragmentation	Expansion of the farming boundaries, burning of the wetland, illegal hunting and trafficking or wild fauna, untreated wastewater	Educational activities concerning the environment, fire control, operation, maintenance and financial support to build the "Casa del Agua Interpretation Center"	7.80
Montes Azules (in the Lacandona Jungle)	1976	Clearing of approximately 188 hectares with the subsequent loss of fauna and vegetation to build roadways and exploratory oil wells	Jungle fragmentation due to sub-division of farming parcels upon opening roadways that allowed the people to access the area	Research, education and technological application program for the conservation of the Lacandona Jungle	6.80
Tuxpan mangrove swamps and wetlands	1963	Dredging activities that provoked sediments accumulation at the river mouths of Barra Galindo and Corazones in the Tampamachoco Lagoon, impact on the oyster bed and changes to its hydrodynamic structure	Change of land use code to farming and industrial land, discharge of untreated municipal wastewater and land clearing	Environmental educational activities to contribute to conserving the mangrove swamps and wetlands	1.21
Alvarado wetlands	1970	Construction activities that led to sedimentation at the mouths of the De la Mancha Lagoon in the Alvarado zone and significant impact on the swampy mangroves and wetlands	Expansion of farming boundaries, unsustainable use of the swamp mangrove and contribution of untreated municipal wastewaters	Environmental education activities and restoration of the wetlands	5.06

## RESTORATION OF THE LOWER BASIN OF THE COATZACOALCOS RIVER

Pemex participates in the Restoration Program for the Lower Basin of the Coatzacoalcos River that is coordinated by the Semarnat. The project encompasses seven townships in the southern part of the State of Veracruz that measures 2,786.759 square meters..The Company prepared the terms of reference for the Strategic Plan at the end of 2007 that will serve as the foundation for the works that will be commenced in 2008.



The Program for the conservation of the Lacandona Jungle is performed by NATURA MEXICANA and supported by PEMEX. Chiapas



LACANTUN RIVER  
Lacandona Jungle, Chiapas

#### TESTIMONIAL: SUPPORT FOR CONSERVATION PROJECTS

The waters that flooded the city of Villahermosa in November 2007, and the falling apart of the San Juan Grijalva Peak, clearly manifested the huge risks that are created when the vegetation covering is deforested, as it occurred on the length of the Grijalva River basin. Fortunately, this is not the case of the Usumacinta River basin, which has a much larger vegetal coverage, although it is not exempt from threats.

Within this context it is very fortunate and relevant to find that Petróleos Mexicanos decided to support the actions propounded by the technological research, education and application program for the conservation of the Lacandona Jungle in the middle basin of the hydrological system of the plains of the State of Tabasco that is performed by Natura y Ecosistemas Mexicanos A.C.

The Lacandona Jungle is one of the most important regions in Mexico, based on its vast biodiversity wealth and because it is the primary zone that replenishes the Usumacinta and the Grijalva Rivers. Over half of the Usumacinta River flows come from the Lacandona Jungle. Furthermore, it generates other environmental services, such as the trapping of carbon dioxide that helps mitigate global climate change, the stability of regional climate, soil conservation and the transportation of nutrients, among others. These are the reasons why its conservation is a matter of national security and this Program will provide greater elements to achieve these objectives

JULIA CARABIAS

#### GPC 11

##### JAGUAROUNDI ECOLOGICAL PARK

The Jaguaroundi Ecological Park is located on 960 hectares and includes relict medium jungle areas and bodies of water located within the Coatzacoalcos industrial zone. This park belongs to Pemex Petrochemicals (PPQ), and Semarnat (the Secretary of Environment and Natural Resources) delivered, through the National Commission of Protected Natural Areas (CONANP, acronym in Spanish), a document that certified the park as the first private zone dedicated to conservation in Mexico, thus acknowledging the efforts made to preserve the park's biodiversity and ecosystems. Said certificate was issued on the World Environment Day celebrated in 2002.

Jaguaroundi represents a protected zone for the Cangrejera petrochemicals facilities. The park provides actual and comprehensive information, supported by the National Autonomous University of Mexico (UNAM, acronym in Spanish), on the collection of forest carbon and the Company has prepared a project to conserve and develop a relict of a medium perennifolia jungle. The park helps develop and raise awareness on the subject of sustainability of the communities that are located around the Cangrejera, Pajaritos and Morelos petrochemicals complexes, and the population that resides in the cities of Coatzacoalcos and Minatitlán. The Jaguaroundi Park also has a conservation management plan and is providing training on productive projects for the residents in the neighboring communities, thus contributing to community development.

The Mexican Senate recently named the Jaguaroundi Park as part of a conservation paradigm in Mexico, in light of the fact that it agglutinates a large and integral project that is very important in terms of biodiversity, voluntary certification, and because it is a property that belongs to the largest company in Mexico.

Based on the above, the Senate has praised Petróleos Mexicanos' efforts for creating and managing the Jaguaroundi Ecological Park and awarded it for its express sense of environmental and social responsibility, and because it is an example to be followed by the Federal Government's decentralized agencies.



### 9.3 Environmental impacts from leaks and spills

One of Pemex's top priorities consists of maintaining and operating its infrastructure; thus, it adopted a process that is based on managing the integrity of its pipelines, and the operational reliability of its facilities. The coordinated implementation of this process with the Company's Subsidiary Entities, has allowed Pemex to jump-start the requirements established by the Official Mexican Norm for the "Administration of the Integrity of the Hydrocarbon Collection and Transportation Pipelines," that is expected to go into force in 2008.

Pemex has also implemented operational safety processes and procedures, in an effort to safeguard the security and environmental protection of its operations. However, acts of vandalism, meteorological phenomenon and corrosion provoke incidental leaks and spills that have an impact on biodiversity, the soil or bodies of water. Pemex immediately undertakes actions to mitigate the impact provoked by these cases.

#### MOST RELEVANT ACCIDENTAL SPILLS DURING 2007

Pipeline leaks and spills represented 79% of the total events that occurred in 2007, followed by events that occurred within the Company's facilities (17%), and ocean spills that represented 4% of said events.

The volume spilled in 2007 (48,200 barrels) was significantly higher (87%) than the volume spilled during 2006 (25,707 barrels).

It is important to note that only 2% (six events) of the 392 actual events that occurred represented the 86% of the total oil spilled. The most outstanding of these events occurred on the Usumacinta Platform on October 23, 2007, which represented 34% of the total volume spilled; and in the Nuevo Teapa-Salina Cruz 30-inch wide pipeline on October 24, 2007, which represented 25% of the total volume spilled in 2007.

In regard to pipeline leaks, 8,448 tons of hydrocarbons were released through gas emissions, 7,299 of which corresponded to the leaks caused by the July 5 and 10, and the September 10, 2007 explosions derived from acts of sabotage, which corresponded to 86% of the total leak emissions.

#### CASE STUDY FUEL OIL SPILL IN THE NUEVO TEAPA-SALINA CRUZ RIVER OIL PIPELINE

In October 2007, Pemex responded to the emergency caused by the spill of 11,808 barrels of fuel oil from the Salina Cruz-Nuevo Teapa River 30-inch oil pipeline (at Km 122+950), in Suchilapan, in the township of Jesús Carranza in the State of Veracruz, where it took the following emergency actions:

- Installation of hydrocarbon containment barriers
- Installation of oleophilic belts
- Recovery of the loose product
- Recovery of water lilies and undergrowth that was impregnated with the hydrocarbons
- Packaging of the contaminated material.
- Construction of temporary confinement cells.

Pemex hired 1,595 local residents in the affected zones, to attend to this emergency, and used 396 boats and 79 canoes. The Company also received support from Environmental and Civil Protection Authorities, the Water Commission of the State of Veracruz and the affected townships, the Secretary of Health, and the Mexican Navy.

Subsidiary Entity	Spills (liquid)			Leaks (gases)		Total (spills + leaks)		
	Number	Spilled volume* (barrels)	Spilled amount* (tons)	Number	Leaked amount* (tons)	Number	Released amount (tons)	Recovered amount (tons)
Pemex Exploration and Production	199	20,920	2,933	71	1,078	270	4,011	1,394
Pemex Refining	71	27,280	3,611	15	29	86	3,640	26
Pemex Gas and Basic Petrochemicals	0	0	0	32	7,334	32	7,334	ND
Pemex Petrochemicals	0	0	0	4	8	4	8	ND
Totals	270	48,200	6,544	122	8,449	392	14,993	1,420

ND: Not available  
\* Estimated

#### MORELOS PETROCHEMICAL COMPLEX Coatzacoalcos, Veracruz





## 9.4 Remediation of environmental liabilities

### RELEVANT REMEDIATION CASES

#### The Pajaritos CPQ, Veracruz

Environmental liabilities at the Pajaritos Petrochemical Complex consisted of 10.53 hectares of land that were affected mainly in terms of its subsoil and groundwater mantle. Pemex Petrochemicals has been involved in repair technologies for organochlorated compounds, such as demineralized water injections and the extraction of polluted water and the innovation of two repair methods: 1) Chemical oxidation by injecting oxygen into the saline soil; and 2) the stimulation of the native bacteria of the natural biodegradation process of chlorate components; the outcome was the restoration of 8.5 hectares of land at December 2007.

#### Dos Bocas Well , Veracruz

Pemex Exploration and Production is restoring this environmental liability in the township of Mamey, in the State of Veracruz. Said liability reported the accumulation of 17.5 million cubic meters of a mix of water and weathered hydrocarbons on approximately 97 hectares.

The Company completed the risk analysis in 2007, and built a containment border out of the weathered hydrocarbon processing plant, with venting equipment and a collection hood.

The Final Risk study reported that the analyzed scenarios are risk-free; therefore, the Profepa determined to conclude the Specific Remediation Action Program at this site.

The next steps consist of incorporating the crude oil that is stored in the area in the productive currents by starting to operate a hydrocarbon fluidization plant.

#### March 18 Refinery, Mexico City

Pemex closed the Mexico City 18 de Marzo Refinery on March 18, 1991, and identified areas affected by hydrocarbons found in the soil, the subsoil, and the shallow water. Pemex Refinery has carried out the following actions after closing the plant:

- Relocation of the processing plants
- Dismantling facilities
- Recovered hydrocarbons in the loose phase
- Recovered water-oil emulsions
- Removed the underground hydrocarbon storage tanks
- Removed and disposed of the superficial residuals
- Contained the pollution by building a physical barrier and a filtering gallery
- Completed characterization studies through research institutions and domestic and international firms

Pemex repaired 7,951 square meters and 15,902 cubic meters in 2007 by applying bio-repair techniques, thus reporting a 98% progress rate.

The inventory of affected areas at the close of 2007 amounted to the 525 hectares the Company reported to the Securities and Exchange Commission (SEC).

54% of the liabilities are associated with refinery activities, particularly the Minatitlán refinery, the Santa Alejandrina marsh, and the former 18 de Marzo refinery.

Pemex Exploration and Production concentrates its environmental liabilities in the Northern Region with 40% of the total liability.

The restoration actions are in line with the 12.4 strategy of the NDP regarding the repair of polluted soil.

### ONSITE RESTORATION OF THE TEXISTEPEC, VERACRUZ ENVIRONMENTAL LIABILITY

The sulfur exploitation practices that were performed by a company other than Pemex in the township of Texistepec, in the State of Veracruz, provoked the contamination that led to the Texistepec environmental liability. The Federal Government instructed Pemex to assume the task of repairing and restoring the site to eliminate the environmental risks and restore the national habitat's conditions.

The environmental problem consisted of the existence of:

- Deteriorated industrial facilities
- 550,000 tons of hazardous waste
- Three dams with 11 million cubic meters of acid water.
- 2,800 sulfur exploitation wells

Between 2000 and 2006, Pemex developed the first phase of the project that consisted of confining 550,000 tons of hazardous waste (a mix of hydrocarbons, sulfur and sulfuric acid) in a "Waste Stabilization Cell", and neutralized the three dams that contained 11 million cubic meters of liquid waste that resulted from extracting, filtering and cleansing sulfur with a 0.5 to 2.0 pH level of acidity, and 240,000 cubic meters of weathered hydrocarbons on the bottom of said dams.

The Company will close 2,800 sulfur wells that are located on 1,700 hectares during Phase Two (2007-2011) and restore 43 natural depressions with 30,000 cubic meters of weathered hydrocarbons and 30 kilometers of internal roadways and access routes with solid and hazardous waste.





**CAYO ARCAS DISTRIBUTION TERMINAL**  
Campeche Sound

## 10.2 Atmospheric emissions

Atmospheric emissions are estimated according to the AP-42 factors of the United States Environmental Protection Agency (EPA). These emissions are controlled and monitored according to the scope and frequency established in the regulations. Between 2006 and 2007 there was an increase of 9.3% in the emission of atmospheric pollutants.

Annual emissions, tons			
Emissions	2005	2006	2007
SO <sub>x</sub>	516,976	512,145	566,115
NO <sub>x</sub>	91,292	94,023	105,044
COV's	55,109	49,180	46,961
PST	19,346	19,827	19,917
Total	682,723	675,175	738,037

Note: The VOC and COT data emissions are outside of the scope of the assurance process

### SOURCE OF SO<sub>x</sub> AND NO<sub>x</sub> EMISSIONS BY LINE OF BUSINESS

During 2007, SO<sub>x</sub> emissions accounted for 76.7% of total atmospheric emissions, while the NO<sub>x</sub> accounted for 14.2%. Both pollutants are produced by the following:

- **Pemex-Exploration and Production:** SO<sub>x</sub> emissions increased due to releases of sour gas with high nitrogen content, maintenance of compression equipment, and unscheduled shut downs. The larger volume of NO<sub>x</sub> emissions was due to production and maintenance operations on wells and increased offshore releases.
- **Pemex-Refining:** The decrease of SO<sub>x</sub> and NO<sub>x</sub> was caused mainly by the operation of the sulfur recovery plants in the Tula refinery.
- **Pemex-Gas and Petrochemicals:** The increase of SO<sub>x</sub> and NO<sub>x</sub> was caused by increased burning of sour gas by maintenance operations at Sulfur Plant II of the Ciudad Pemex CPG and increased releases due to unscheduled shut downs at Nuevo Pemex CPG.
- **Pemex-Petrochemicals:** The drop in SO<sub>x</sub> emissions is due to the decrease in fires in the petrochemical complex. In the same manner, the increased NO<sub>x</sub> was mainly due to increased fuel consumptions by the ammonia plants in the Cosoleacaque CPQ.

### GPC 15

#### ENVIRONMENTAL MONITORING MEASUREMENTS CONCERNING LIQUID, SOLID AND GAS DISCHARGES

Environmental monitoring measurements of discharges produced by Pemex operations and support services must conform to the following prevailing environmental standards:

**Air:** NOM-085-SEMARNAT-1994, which applies to emissions from fuel combustion in heating equipment that uses direct heat (boilers, heaters and etcetera); it is performed four times a year in critical areas and twice a year in the rest of the country.

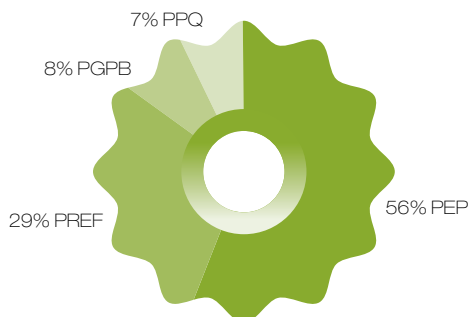
**Annual measurement of air pollutants at the perimeter of industrial sites:** NOM-137-SEMARNAT-2002, relates to the measurement of emissions from Claus processes (sulfur plants) in PGPB. In this case, the Company has implemented continuous direct monitoring of sulfur dioxide emissions in the thermal oxidation chimneys at the sulfur plants. The PGPB suggested Semarnat to adopt NOM-137 to reduce the level of SO<sub>2</sub> emissions in the gas-processing centers, through significant investments.

**NOM-148-SEMARNAT-2006,** concerning the efficiency of sulfur recovery at Pemex-Refining (PR) (includes all refinery processing plants, with a special focus on Claus processes). Compliance with the regulations is verified every quarter through the delivery of the sulfur balance of each refinery where the sulfur recovery efficiency is found to be equal to or higher than 90%.

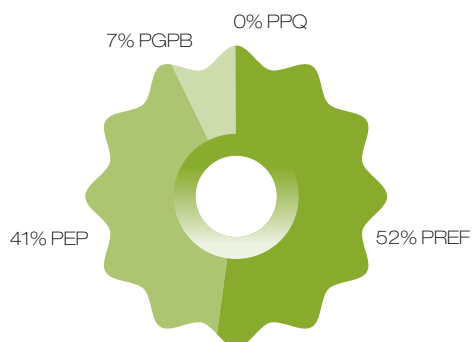
**Water:** NOM-001-SEMARNAT-1996, which governs 16 pollutant parameters in wastewater discharges that drain into bodies of water under federal jurisdiction. Reports of the polluting load in each of the wastewater discharges are made mainly on a quarterly basis, with information obtained from the results derived from laboratory tests that identify each polluting parameter.

**Specific Discharge Conditions:** This regulates parameters on specific pollutants in wastewater discharges that drain into bodies of water under federal jurisdiction.

Origin of NO<sub>x</sub> emission by business area



Origin of SO<sub>x</sub> emission by business area



#### ACTIONS TO REDUCE SO<sub>x</sub> AND NO<sub>x</sub> EMISSIONS

NOM-148-SEMARNAT-2006 (Recovery of Sulfur from Oil Refining Processes) was published during 2007, which sets the minimum limit of 90% for the recovery of sulfur in the Cadereyta, Cd. Madero, Tula, and Salamanca refineries for 2008, and at the Minatitlan and Salina Cruz refineries in 2010. Compliance with this regulation will reduce SO<sub>x</sub> emissions in the refining processes by 30%, which represents a breakthrough in the discharge of this pollutant, considering the fact that Pemex refineries generate 51.6% of SO<sub>x</sub> emissions.

Pemex is considering the rehabilitation and modernization of sulfur recovery plants in the six refineries and the acquisition of two new sulfur recovery plants at the Minatitlan and Salamanca refineries, to comply with the regulation.

In addition, in 2008 the Nitrogen Rejection Unit (NRU) will begin operating in the Ciudad Pemex CPG, which will reduce the nitrogen content in the sour gas that is used in the process, thus reducing the amount of burned nitrogen.

In addition to monitoring compliance with the regulations, the main work centers carry out air quality studies at the intake area and are involved in initiatives propounded by the environmental agency at the regional level, such as in the case of air quality in Salamanca, Guanajuato, as well as global initiatives, such as the Miracle Project, which studied emissions in Mexico City and the influence of the energy sector located in Tula, Hidalgo.

#### CASE STUDY

##### INTRODUCTION OF PEMEX DIESEL UBA IN THE NORTHERN MEXICO BORDER AREA

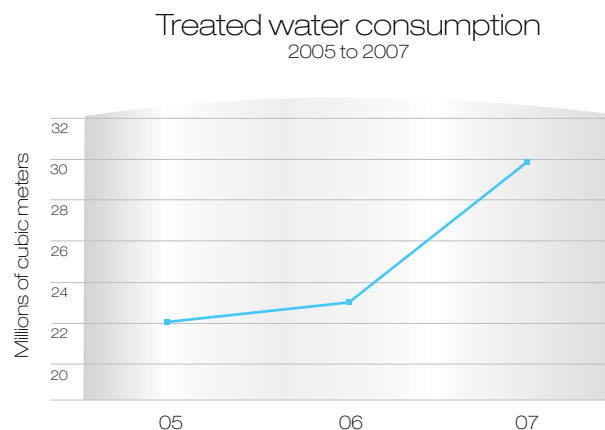
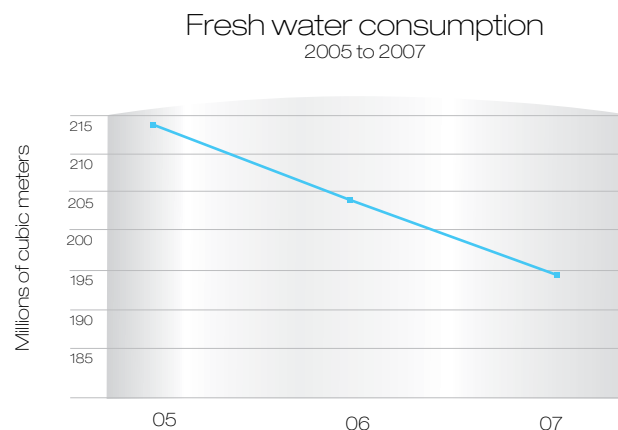
To comply with the NOM-086-SEMARNAT-SENER-SCFI-2005, regulation, Pemex-Refining began to supply Pemex Diesel UBA, with a 15 ppm sulfur content during 2007 through the Storage and Distribution Terminals in the cities of Rosarito, Ensenada, Mexicali, the state of Baja California; Nogales and Magdalena de Kino in the State of Sonora; Sabinas, Coahuila; Ciudad. Juárez, Chihuahua and Nuevo Laredo and Reynosa in the state of Tamaulipas, as well as the Service Stations in the areas that are influenced by the aforementioned. The introduction of this new fuel has produced a 97% reduction in sulfur content.



## 10.3 Water use and discharges

### TOTAL WATER RECEPTION BY SOURCE

Fresh water use was reduced by 4.7% during 2007 compared with the prior year, by dropping to 194.7 million cubic meters from 204.4 cubic meters. This is due mainly to the increase of 6.4 million cubic meters of water treated for reuse, mainly in Pemex Refining, and the consequent decrease in the use of fresh water from natural sources (surface, groundwater, seawater, potable water network and others).



Thus, the use of treated water was increased for the third year in a row, reaching a volume equal to 13.4% of its total consumption.

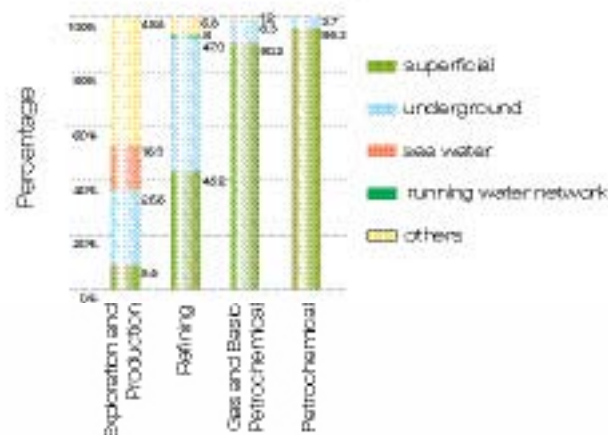
A wastewater treatment plant is constructed at the Francisco I. Madero refinery in Cd. Madero, Tamaulipas to reduce the use of fresh water in the operations. Said plant has a capacity for 900 liters per second, 600 of which will be used for the refinery's own industrial use, reducing fresh water consumption, while the rest will be used by the Madero and Tampico municipalities. Pemex expects to complete this project in 2008.

### WATER SOURCES AFFECTED BY THE RECEPTION

Close to 80% of the fresh water used comes from surface and underground sources. Consumption is concentrated on the Company's industrial activities.

During 2007, Pemex completed an analysis on water development sources for operations and services at all of its facilities, by taking some of the following factors into account: population and growth expectations, future facilities and expansions, national regulations, access sources, and the use of water in metropolitan areas. This analysis will allow the Company to identify the work centers that could use municipal wastewater that has been treated.

### Distribution of fresh water by source and business area during 2007



## RECYCLED WATER AND WATER USAGE

Pemex recycled 11.36 million cubic meters of water it used in its operations during 2007.

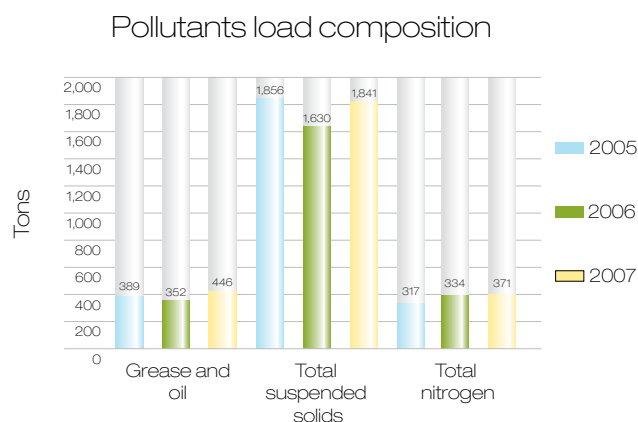
Over the last eight years, Pemex has invested in projects to improve the quality of its treated water and increase the use of recycled water. Particularly, the Salamanca Refinery has completed the following specific actions:

- Installation of floating lids on two urban water sump pump collectors.
- Rehabilitation and upgrade of the primary urban water filtering system to reduce solids by up to 100 microns for activated mud treatment process, and ten microns in the treated water the Refinery uses in its cooling towers and fire-fighting systems.
- Acquisition of a waste mud filtering system that uses polymers to minimize the generation of said mud and recover the water to move it into the process.
- Rehabilitation and start up of new air flotation equipment between the primary and the secondary effluent treatments.

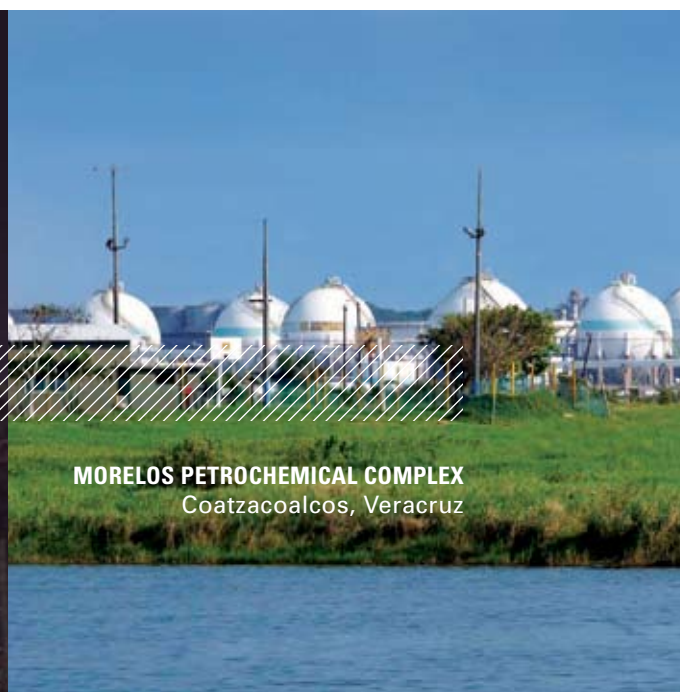
## TOTAL DUMPING OF WASTEWATERS

About the discharge of pollutants between 2001 and 2007 Pemex reported 57.4% reduction in mass pollutants dumped into receiving bodies.

	Recycled water (Millones de m³)
Pemex-Exploration and Production	0.02
Pemex-Refining	10.98
Pemex-Gas and Basic Petrochemicals	0.02
Pemex-Petrochemicals	0.34
<b>Total</b>	<b>11.36</b>



ING. ANTONIO M. AMOR REFINERY  
Salamanca, Guanajuato



MORELOS PETROCHEMICAL COMPLEX  
Coatzacoalcos, Veracruz

## BURGOS-MONTERREY DISTRIBUTION TERMINAL

Reynosa, Tamaulipas



The Company reported an increase in pollutants over 2006, which was due mainly to silting of the effluent Systems at the New Pemex CPG and problems related to handling the water born at the Dos Bocas marine terminal in the state of Tabasco.

	Total volume spilt (millions of cubic meters)	Total load of pollutants (Mton)
Pemex-Exploration and Production	4,910	0.39
Pemex-Refining	38,604	1.40
Pemex-Gas and Basic Petrochemicals	12,429	0.37
Petrochemicals	23,517	0.53

With respect to water treatments, the Company issued an invitation to bid for the 2008-2009 period, during 2007. The purpose of the bid is to co-process the wasted sodium derived from the hydrocarbon sweetening process to reduce the contribution of phenols in the refinery's effluent and wastewater treatments. The Company has also taken actions that will eliminate sulfurs and ammoniac nitrogen from the water treatment processes, thus reducing the total load of pollutants at each refinery and allowing for stronger treated water recycling volumes.

Actions to use and improve the quality of the water are in line with strategies 1.1 and 2.2 of the National Development Plan (PND, acronym in Spanish) with regard to development and expansion of the capacity for treatment and the use of wastewaters.

## 10.4 Waste

The operation of Pemex's activities produces hazardous waste, non-hazardous waste, and special handling waste. Hazardous waste refers mainly to oils mud, organochlorated waste, and used catalyzers. The most relevant special handling waste refers to drilling cuts and used oils.

Generated waste (%)		
	Hazardous	Non-hazardous
Pemex-Exploration and Production	20.04%	96.28%
Pemex-Petrochemicals	28.29%	3.69%
Pemex-Gas and Basic Petrochemicals	4.65%	0.01%
Pemex-Refining	47.02%	0.03%

Non-hazardous waste includes drilling cuts

The total amount of hazardous waste and 74% of non-hazardous waste were sent to a specialized treatment provided by companies authorized by Semarnat for this purpose, thus complying with the specifications established by Mexican regulations. 5.6% of the hazardous waste (organochlorated) was incinerated.

### TREATMENT METHODS

The energetic valuation of hazardous waste was privileged during 2007, a year in which the company was able to treat close to 80% of the total volume with this method.

Hazardous Waste Treatment (%)			
	2005	2006	2007
Disposal	58.1%	41.7%	10.4%
Incinerated	31.4%	40.2%	5.3%
Recycled	0.1%	5.9%	5.0%
Energetic valorization	10.5%	12.2%	79.3%

Non-Hazardous Waste Treatment (%)			
	2005	2006	2007
Disposal	77.3%	63.2%	76.4%
Reused	0.2%	4.0%	4.4%
Energetic valorization	22.5%	32.9%	19.2%

Hazardous waste valorization actions are in line with strategy 12.1 of the National Development Plan in regard to handling and use of waste.

### WASTE TRANSPORTATION

Pemex has a systematic control over the waste that is transported inside and outside of its facilities, to ensure compliance with the applicable norms and as part of its responsibility for generating the waste.

Transported waste (Ton)					
	Imports	Exports	Internal transportation	Total	Principal means of transportation
2005	0.00	230	59,017	59,247	Transportation by sea and land
2006	0.00	3,209	92,119	95,328	
2007	0.00	5,520	62,824	68,344	





**CANGREJERA PETROCHEMICAL COMPLEX**  
Veracruz

## 10.5 Environmental improvement of products

After Premium Ultra Low Sulfur gasoline was introduced during 2006; the company began distributing ULS (Ultra Low Sulfur) Diesel during 2007, reducing the sulfur content from 500 to 15 parts per million. This process was launched in the northern border of the country, and it is expected that the rest of the country will be fully covered in by January 2009.

The Clean Fuel program was launched during 2006, and entails the production of fuels with 88% less sulfur compared to the figure just three years ago, and a 94% decrease compared to the sulfur level in 2000.

This program envisions the construction of 22 plants, of which 11 of the post-treatment units are for gasoline, four are hydrodesulphurization plants, four for hydrogen and three for sulfur recovery. In addition to this, 18 other intermediate distillery plants will be modernized, which will also help bring down levels of the aforementioned pollutant.

Specifications for gasoline, diesel, heavy fuel oil, domestic gasoil, marine diesel, industrial diesel and agricultural diesel have been described in the Official Mexican Norm NOM-086-SEMARNAT-SENER-SCFI-2005 (fossil fuel specifications for environmental protection purposes).

### MOBILE LABORATORIES TO VERIFY ENVIRONMENTAL SPECIFICATIONS

A "Commercial visits" program will be carried out via 24 mobile laboratories with the purpose of verifying the quality of the fuels that Pemex manufactures, and ensure consumers are receiving a product that is suitable for the proper operation of their vehicles or industrial equipment, fulfilling the environmental Norms of emissions caused by vehicles and industry.

### PRODUCT RECOVERY OBJECTIVES FOR 2008

Pemex does not have enough information available at this time, concerning the recycling of its products and byproducts at the end of their life cycle. Regarding this area of opportunity, it would be an opportunity to implement cleaner production and life cycle methodologies for the products of its main processes.

### GPC 6

#### USE OF BIOFUELS

The convenience of mixing ethanol with gasoline is currently under analysis. Diverse proposals have arisen for consumer programs in this regard. Infrastructure and necessary financial resources are verified for implementation purposes, and the top price that Pemex could pay for this product is being analyzed. In due time, product suppliers will be evaluated to verify the supply guarantee, as will the quality, net reduction of greenhouse gases and net consumption of water, and other possible changes in land use or zoning restrictions.

Furthermore, there is a research project underway for the future development of second generation ethanol.

Possible implementation programs in the short and mid term are listed as follows:

- The use of biodiesel as a lubricant additive in the production of Ultra Low Sulfur (ULS) Diesel.
- The use of ethanol as an oxygenation agent in the metropolitan areas of Guadalajara, Monterrey and Mexico City Valley.

# Statistical Appendix

AIR EMISSIONS WITHOUT METANO (TON)						
SUBDIRECTION	SO <sub>x</sub>	NO <sub>x</sub>	Particles	TOC's*	VOC's*	Total Emissions
Management Center						
PEP	230,119	53,512	1,152	14,832	11,145	295,929
MARINE SERVICES COORDINATION OFFICE	0.05	0.68	0.05	0.05	0.00	0.78
Logistics Manager's Office	-	-	-	-	-	-
Integral Maintenance Manager's Office	0.05	0.68	0.05	0.05	0.00	0.78
Unit for Industrial Safety, Environmental Protection & Quality	-	-	-	-	-	-
NORTHEASTERN MARINE REGION	191,107	15,349	249	943	66	206,770
Transportation and distribution of Hydrocarbons						
Cantarell exploitation assets	148,192	10,397	145	485	38	158,773
Ku-Maloob-Zaap exploitation assets	39,890	2,198	25	284	6	42,119
Transportation and distribution of Hydrocarbons Manager's Office	3,025	2,754	79	175	22	5,879
SOUTHEASTERN MARINE REGION	18,513	5,347	91	804	872	24,822
Transportation and distribution of Hydrocarbons	50	1,878	12	446	851	2,791
Integral Abkatun Pol-chuc assets	18,462	3,467	79	358	21	22,029
Assets on the Tabasco Littoral zone	0.30	1.36	0.05	0.06	-	1.72
NORTHERN REGION	10,927	6,973	185	9,133	5,542	23,627
Altamira Production	641	916	3	606	28	1,589
Cerro Azul – Naranjos Production	8,018	267	1.23	114	853	9,139
Poza Rica Production	1,009	2,458	135	2,678	4,239	7,840
Reynosa - Burgos Production	1,257	2,617	33	5,341	312	4,218
Veracruz Production	2.32	715	13	393	111	841
SOUTHERN REGION	5,008	8,879	156	3,310	4,666	18,710
Five Presidents Integral Assets in the SR	158	3,061	48	1,648	916	4,183
Jujo-Bellota Integral Assets in the SR	2,603	1,770	28	327	522	4,924
Macuspana Integral Assets in the SR	0.65	694	8.2	419	157	859
Muspac Integral Assets in the SR	1,252	1,610	33	301	977	3,871
Samaria-Luna Integral Assets in the SR	995	1,497	33	466	2,092	4,618
Construction & Maintenance Manager's Office in the SR	-	247	5.1	8.5	1.6	253
Transportation and Distribution of Hydrocarbon's Manager's Office in the SR	0	0	0	141	-	0
WELL DRILLING AND MAINTENANCE UNIT	4,564	16,965	470	642	0	21,999
Marine Division	2,103	8,044	236	317	0	10,383
Northern Division	1,756	6,337	165	228	-	8,257
Southern Division	705	2,584	70	96	-	3,359
PPQ	191	7,653	594	1,727	2,083	10,521
CAMARGO	-	-	-	-	-	-
CANGREJERA	25	3,212	235	1,074	907	4,379
COSOLEACAQUE	3.2	1,157	43	76.2	30	1,233
ESCOLIN	0	306	17	175	10	333
INDEPENDENCIA	5	353	29	142	49	436
MORELOS	141	1,635	186	162	976	2,939
PAJARITOS	17	972	73	76	98	1,161
REYNOSA	-	-	-	-	-	-
TULA	0	16.9	9.9	22.1	13.3	40.2
PGPB	42,385	9,492	688	13,718	2,287	54,852
PIPELINES ASSISTANT DIRECTOR'S OFFICE	478	578	14.1	367	3.7	1,074
LIQUEFIED GAS AND BASIC PETROCHEMICAL'S ASSISTANT DIRECTOR'S OFFICE	0	2	0	36	0	3
PRODUCTION ASSISTANT DIRECTOR'S OFFICE	41,907	8,912	674	13,315	2,283	53,775
CPG AREA COATZACOALCOS	96	547	36	113	555	1,235
CPG ARENQUE	246	1.7	0.5	1.7	0.2	248
CPG BURGOS	0	350	8	118	135	493
CPG CACTUS	7,298	2,187	216	11,190	331	10,033
CPG CD. PEMEX	22,166	1,484	107	314	159	23,915
CPG LA VENTA	0	579	14	75	175	768
CPG MATAPIONCHE	3,765	44	7	106	10	3,826
CPG NVO. PEMEX	6,418	2,681	226	834	561	9,886
CPG POZA RICA	1,917	570	33	300	79	2,598
CPG REYNOSA	1	468	27	264	278	773
PREF	293,417	34,382	17,482	4,321	31,446	376,728
WAREHOUSE AND DISTRIBUTION ASSISTANT DIRECTOR'S OFFICE	4.7	12.3	0.9	19.9	1,026	1,043
DISTRIBUTION ASSISTANT DIRECTOR'S OFFICE	6,137	7,676	193	479	10,118	24,124
PRODUCTION ASSISTANT DIRECTOR'S OFFICE	287,275	26,694	17,289	3,822	20,302	351,560
"FRANCISCO I. MADERO" REFINERY	30,825	3,486	2,714	2,021	7,741	44,767
"GRAL.LAZARO CARDENAS" REFINERY	30,699	3,323	2,175	1,086	1,848	38,045
"ING. ANTONIO DOVALI JAIME" REFINERY	86,769	6,105	4,859	175	1,014	98,747
"ING. ANTONIO M. AMOR" REFINERY	37,946	4,423	1,815	178	4,662	48,847
"ING. HECTOR R. LARA SOSA" REFINERY	25,978	3,430	1,578	172	1,053	32,040
"MIGUEL HIDALGO" REFINERY	75,057	5,928	4,148	189	3,983	89,116
TOTAL PEMEX	566,112	105,039	19,916	34,598	46,961	738,029

\* The VOC and COT data emissions are outside of the scope of the assurance process

DISCHARGE OF POLLUTANTS INTO THE WATER (TON)							
SUBDIRECTION	O&G	TSS	totN	Other Org	Total discharges	DBO	Heavy Materials
Management Center							
PEP	60	329	0.14	0.24	390	543	0.82
MARINE SERVICES COORDINATION OFFICE	-	-	-	-	-	-	-
Logistics Manager's Office	-	-	-	-	-	-	-
Integral Maintenance Manager's Office	-	-	-	-	-	-	-
Unit for Industrial Safety, Environmental Protection & Quality	-	-	-	-	-	-	-
NORTHEASTERN MARINE REGION	4.03	36.18	-	-	40.21	29.38	0.08
Transportation and distribution of Hydrocarbons	-	-	-	-	-	-	-
Cantarell exploitation assets	3.91	33.40	-	-	37.31	28.36	0.06
Ku-Maloob-Zaap exploitation assets	-	-	-	-	-	-	-
Transportation and distribution of Hydrocarbons Manager's Office	0.12	2.78	-	-	2.90	1.02	0.02
SOUTHEASTERN MARINE REGION	50.21	267.14	-	-	317.35	490.39	0.69
Transportation and distribution of Hydrocarbons	47.38	252.10	-	-	299.48	486.16	0.69
Integral Abkatun Pol-chuc assets	2.83	15.04	-	-	17.87	4.22	0.00
Assets on the Tabasco Littoral zone	-	-	-	-	-	-	-
NORTHERN REGION	0.27	9.34	0.14	0.23	9.98	4.39	0.01
Altamira Production	-	-	-	-	-	-	-
Cerro Azul – Naranjos Production	0.00	0.01	0.00	0.00	0.02	0.01	-
Poza Rica Production	0.00	0.01	0.00	0.00	0.01	0.01	-
Reynosa - Burgos Production	-	-	-	-	-	-	-
Veracruz Production	0.26	9.32	0.14	0.23	9.95	4.38	0.01
SOUTHERN REGION	0.55	1.00	0.00	0.01	1.56	0.66	0.00
Five Presidents Integral Assets in the SR	0.05	0.05	0.00	0.00	0.09	0.05	0.00
Jujo-Bellota Integral Assets in the SR	0.50	0.95	0.00	0.01	1.47	0.61	0.00
Macuspana Integral Assets in the SR	-	-	-	-	-	-	-
Muspac Integral Assets in the SR	-	-	-	-	-	-	-
Samaria-Luna Integral Assets in the SR	-	-	-	-	-	-	-
Construction & Maintenance Manager's Office in the SR	-	-	-	-	-	-	-
Transportation and Distribution of Hydrocarbon's Manager's Office in the SR	0.00	0.00	-	-	0.00	0.00	0.00
WELL DRILLING AND MAINTENANCE UNIT	5.29	15.38	-	-	20.67	18.61	0.03
Marine Division	5.29	15.38	-	-	20.67	18.61	0.03
Northern Division	-	-	-	-	-	-	-
Southern Division	-	-	-	-	-	-	-
PPQ	75.9	414	27.5	14.7	532	209	12.0
CAMARGO	-	-	-	-	-	-	-
CANGREJERA	55	161	13.0	8.7	238	64.1	4.5
COSOLEACAQUE	8.6	11.9	-	-	20.5	16.4	0.2
ESCOLIN	-	0.02	-	0.00	0.02	0.08	-
INDEPENDENCIA	7.28	13.81	6.76	2.73	30.59	20.31	0.82
MORELOS	-	184.43	6.25	3.10	193.77	30.81	5.33
PAJARITOS	5.17	39.91	-	-	45.08	75.54	1.16
REYNOSA	-	-	-	-	-	-	-
TULA	0.04	2.20	1.48	0.20	3.92	1.88	0.00
PGPB	96.4	214.1	57.6	8.3	376.4	261.2	3.6
PIPELINES ASSISTANT DIRECTOR'S OFFICE	0.08	-	-	-	0.08	-	0.00
LIQUEFIED GAS AND BASIC PETROCHEMICAL'S ASSISTANT DIRECTOR'S OFFICE	0.02	0.12	0.03	0.00	0.17	0.12	0.00
PRODUCTION ASSISTANT DIRECTOR'S OFFICE	96	214	57.6	8.3	376	261	3.6
CPG AREA COATZACOALCOS	0.19	0.36	0.19	0.03	0.77	0.33	0.01
CPG ARENQUE	0.01	-	-	-	0.01	-	0.00
CPG BURGOS	-	-	-	-	-	-	-
CPG CACTUS	8.58	37.40	14.70	0.10	60.79	96.23	-
CPG CD. PEMEX	0.53	1.43	0.04	0.06	2.06	0.71	-
CPG LA VENTA	0.94	7.90	0.77	0.17	9.77	6.20	-
CPG MATAPIONCHE	0.02	0.01	0.03	-	0.05	0.04	-
CPG NVO. PEMEX	73.9	140	36.9	5.2	256	117	3.4
CPG POZA RICA	9.5	19.4	3.3	2.6	34.7	37.1	0.2
CPG REYNOSA	2.6	7.5	1.7	0.2	12.0	3.8	0.0
PREF	213.5	884.5	285.5	30.8	1,414.2	749.0	13.8
WAREHOUSE AND DISTRIBUTION ASSISTANT DIRECTOR'S OFFICE	0.5	1.7	0.8	0.1	3.1	3.1	0.0
DISTRIBUTION ASSISTANT DIRECTOR'S OFFICE	7.7	34.8	3.8	0.6	46.9	25.1	0.3
PRODUCTION ASSISTANT DIRECTOR'S OFFICE	205.3	848.0	280.9	30.1	1,364.3	720.8	13.5
"FRANCISCO I. MADERO" REFINERY	32.2	125.5	11.5	-	169.1	43.4	1.5
"GRAL.LAZARO CARDENAS" REFINERY	18.5	32.9	8.7	-	60.0	130.4	0.2
"ING. ANTONIO DOVALI JAIME" REFINERY	6.9	18.9	-	-	25.8	17.3	0.5
"ING. ANTONIO M. AMOR" REFINERY	65.9	287.2	128.3	19.3	500.8	163.3	7.9
"ING. HECTOR R. LARA SOSA" REFINERY	51.6	224.4	96.5	8.8	381.3	129.9	1.5
"MIGUEL HIDALGO" REFINERY	30.2	159.1	35.9	2.0	227.2	236.5	2.0
TOTAL PEMEX	446	1,841	371	54	2,712	1,763	30

\* The generation of hazardous waste excludes spent oils and drilling cuts, since these are considered Special Handling Waste.

\*\* Estimated

\*\* \*Leaks that belong to Petrochemicals pipelines that were currently passed to PGPB.

SUBDIRECTION Management <i>Center</i>	WASTE	HYDROCARBON LEAKS AND SPILLS			PRODUCTION	
	Hazardous waste generation* (tons)	Number of spills	Amount spilled** (tons)	Number of Leaks	Amount leaked** (tons)	Prod. Proc Crude Oil (Mton)
PEP	5,170	199	2,933	71	1,078	233,273
MARINE SERVICES COORDINATION OFFICE	3,909.2					-
Logistics Manager's Office	-					-
Integral Maintenance Manager's Office	3,909.2					-
Unit for Industrial Safety, Environmental Protection & Quality	-					-
NORTHEASTERN MARINE REGION	363.6					111,540
Transportation and distribution of Hydrocarbons	-			3	-	-
Cantarell exploitation assets	208.6	3	0.48	2	-	88,793
Ku-Maloob-Zaap exploitation assets	95.8			1	-	22,659
Transportation and distribution of Hydrocarbons Manager's Office	59.1	1	-	1	949	88
SOUTHEASTERN MARINE REGION	509.0					23,977
Transportation and distribution of Hydrocarbons	238.3	3	0.1			-
Integral Abkatun Pol-chuc assets	260.4			1	-	23,977
Assets on the Tabasco Littoral zone	10.2	1	0.85	2	-	-
NORTHERN REGION	1,177.3					21,591
Altamira Production	-	77	253	7	6	-
Cerro Azul – Naranjos Production	-					931
Poza Rica Production	-					2,988
Reynosa - Burgos Production	54.7	4	20	31	88	10,397
Veracruz Production	1,122.6	3	0.07	5	6	7,276
SOUTHERN REGION	94.7					76,164
Five Presidents Integral Assets in the SR	-	55	23	8	12	2,853
Jujo-Bellota Integral Assets in the SR	88.1	12	6	2	2	11,217
Macuspana Integral Assets in the SR	0.2	4	0.37	2	4	39,305
Muspac Integral Assets in the SR	4.4	17	267	3	6	9,423
Samaria-Luna Integral Assets in the SR	2.0	5	27.18	3	4	13,367
Construction & Maintenance Manager's Office in the SR	-					-
Transportation and Distribution of Hydrocarbon's Manager's Office in the SR	-					-
WELL DRILLING AND MAINTENANCE UNIT	9,116.2					-
Marine Division	1,862.2	14	2,335			-
Northern Division	7,195.4					-
Southern Division	58.6					-
PPQ***	21,411	-	-	4	8	6,292
CAMARGO	-					-
CANGREJERA	84.3					2,722
COSOLEACAQUE	142.0					947
ESCOLIN	39.5					10
INDEPENDENCIA	211.2					22
MORELOS	244.9					1,624
PAJARITOS	20,600.6					944
REYNOSA	74.2					-
TULA	14.2					24
PGPB	3,516	-	-	32	7,334	49,348
PIPELINES ASSISTANT DIRECTOR'S OFFICE	1,063.6			32	7,334	-
LIQUEFIED GAS AND BASIC PETROCHEMICAL'S ASSISTANT DIRECTOR'S OFFICE	24.1					-
PRODUCTION ASSISTANT DIRECTOR'S OFFICE	2,428.7					49,348
CPG AREA COATZACOALCOS	41.5					5,760
CPG ARENQUE	7.2					199
CPG BURGOS	-					5,577
CPG CACTUS	183.9					12,914
CPG CD. PEMEX	1,081.4					8,416
CPG LA VENTA	12.8					1,175
CPG MATAPIONCHE	89.6					539
CPG NVO. PEMEX	61.3					12,607
CPG POZA RICA	89.0					891
CPG REYNOSA	862.0					1,271
PREF	35,585	71	3,611	15	29	66,387
WAREHOUSE AND DISTRIBUTION ASSISTANT DIRECTOR'S OFFICE	681.3	4	29	-	-	-
DISTRIBUTION ASSISTANT DIRECTOR'S OFFICE	4,893.5	67	3,582	15	29	-
PRODUCTION ASSISTANT DIRECTOR'S OFFICE	30,010.6					66,387
"FRANCISCO I. MADERO" REFINERY	1,702.9				7,420	
"GRAL.LAZARO CARDENAS" REFINERY	4,614.8					9,097
"ING. ANTONIO DOVALI JAIME" REFINERY	4,310.7					14,396
"ING. ANTONIO M. AMOR" REFINERY	10,599.6					10,038
"ING. HECTOR R. LARA SOSA" REFINERY	4,325.2					10,597
"MIGUEL HIDALGO" REFINERY	4,457					14,840
TOTAL PEMEX	75,683	270	6,544	122	8,448	355,300



SUBDIRECTION Management Center	GEI	CONSUMPTION OF ENERGY AND PRODUCTION			
	CO <sub>2</sub>	Tot. Cons. of Energy	Tot. Cons. of Energy and burned gas	Tot. cons. of Energy x Prod. Proc. Crude Oil	Tot. Cons. of Energy Burned Gas x Prod. Proc. Crude Oil
	(tons)	(Gcal)	(Gcal)	(Gcal/Mton)	(Gcal/Mton)
	15,499,458	39,467,838	77,772,958	169	333
MARINE SERVICES COORDINATION OFFICE	25	964,774	964,774	-	-
Logistics Manager's Office	-	964,688	964,688	-	-
Integral Maintenance Manager's Office	25	86	86	-	-
Unit for Industrial Safety, Environmental Protection & Quality	-	-	-	-	-
NORTHEASTERN MARINE REGION	9,462,576	16,209,319	43,969,309	145	394
Transportation and distribution of Hydrocarbons					
Cantarell exploitation assets	7,210,640	10,349,375	33,506,612	117	377
Ku-Maloob-Zaap exploitation assets	992,637	1,831,750	6,006,018	81	265
Transportation and distribution of Hydrocarbons Manager's Office	1,259,298	4,028,194	4,456,679	45,807	50,680
SOUTHEASTERN MARINE REGION	1,715,044	7,089,311	8,749,247	296	365
Transportation and distribution of Hydrocarbons	188,779	929,061	929,061	-	-
Integral Abkatun Pol-chuc assets	1,526,202	6,156,342	7,816,277	257	326
Assets on the Tabasco Littoral zone	63	3,908	3,908	-	-
NORTHERN REGION	1,330,783	4,040,504	9,938,258	187	460
Altamira Production	52,861	149,022	149,022	-	-
Cerro Azul – Naranjos Production	259,148	22,528	1,170,417	24	1,257
Poza Rica Production	462,229	801,075	5,452,500	268	1,825
Reynosa - Burgos Production	448,181	2,404,707	2,404,707	231	231
Veracruz Production	108,364	663,171	761,612	91	105
SOUTHERN REGION	2,156,174	9,207,880	12,195,320	121	160
Five Presidents Integral Assets in the SR	268,556	1,375,519	2,295,632	482	805
Jujo-Bellota Integral Assets in the SR	607,640	2,469,466	3,802,763	220	339
Macuspana Integral Assets in the SR	142,079	284,900	284,900	7	7
Muspac Integral Assets in the SR	497,239	1,892,524	2,051,375	201	218
Samaria-Luna Integral Assets in the SR	555,826	2,674,660	3,249,839	200	243
Construction & Maintenance Manager's Office in the SR	84,831	449,736	449,736	-	-
Transportation and Distribution of Hydrocarbon's Manager's Office in the SR	3	61,075	61,075	-	-
WELL DRILLING AND MAINTENANCE UNIT	834,856	1,956,051	1,956,051	-	-
Marine Division	394,488	1,217,802	1,217,802	-	-
Northern Division	312,680	325,408	325,408	-	-
Southern Division	127,688	412,841	412,841	-	-
PPQ	6,596,911	26,929,997	27,226,453	4,280	4,327
CAMARGO	-	-	-	-	-
CANGREJERA	2,842,260	14,174,054	14,229,141	5,207	5,227
COSOLEACAQUE	1,458,303	2,632,363	2,632,363	2,780	2,780
ESCOLIN	134,982	322,642	322,642	32,250	32,250
INDEPENDENCIA	224,999	973,042	1,192,594	44,829	54,944
MORELOS	1,463,527	6,509,792	6,520,295	4,009	4,015
PAJARITOS	447,240	2,190,359	2,201,671	2,321	2,333
REYNOSA	-	-	-	-	-
TULA	25,599	127,747	127,747	5,310	5,310
PGPB	6,197,243	23,453,472	143,496,700	475	2,908
PIPELINES ASSISTANT DIRECTOR'S OFFICE	220,422	855,414	120,644,633	-	-
LIQUEFIED GAS AND BASIC PETROCHEMICAL'S ASSISTANT DIRECTOR'S OFFICE	1,772	94,139	116,412	-	-
PRODUCTION ASSISTANT DIRECTOR'S OFFICE	5,975,049	22,503,919	22,735,656	456	461
CPG AREA COATZACOALCOS	276,322	1,357,685	1,357,685	236	236
CPG ARENQUE	9,786	46,135	46,135	232	232
CPG BURGOS	142,717	1,322,774	1,389,920	237	249
CPG CACTUS	1,908,794	6,299,457	6,299,457	488	488
CPG CD. PEMEX	932,708	2,680,202	2,715,705	318	323
CPG LA VENTA	167,057	831,910	838,956	708	714
CPG MATAPIONCHE	71,356	269,568	269,568	500	500
CPG NVO. PEMEX	2,023,392	7,805,890	7,895,610	619	626
CPG POZA RICA	292,038	1,183,109	1,203,332	1,327	1,350
CPG REYNOSA	150,878	707,187	719,287	557	566
PREF	15,685,824	64,466,169	67,822,723	971	1,022
WAREHOUSE AND DISTRIBUTION ASSISTANT DIRECTOR'S OFFICE	1,659	300,362	300,362	-	-
DISTRIBUTION ASSISTANT DIRECTOR'S OFFICE	1,034,648	4,874,598	4,874,598	-	-
PRODUCTION ASSISTANT DIRECTOR'S OFFICE	14,649,517	59,291,209	62,647,763	893	944
"FRANCISCO I. MADERO" REFINERY	2,313,348	9,985,902	10,482,542	1,346	1,413
"GRAL.LAZARO CARDENAS" REFINERY	1,743,154	7,343,311	7,343,311	807	807
"ING. ANTONIO DOVALI JAIME" REFINERY	3,008,149	11,094,318	12,463,379	771	866
"ING. ANTONIO M. AMOR" REFINERY	2,372,410	9,969,975	10,391,439	993	1,035
"ING. HECTOR R. LARA SOSA" REFINERY	2,105,848	9,604,966	10,210,448	906	964
"MIGUEL HIDALGO" REFINERY	3,106,607	11,292,737	11,756,643	761	792
TOTAL PEMEX	43,979,435	154,317,477	316,318,834	434	890

SUBDIRECTION Management <i>Center</i>	WATER MANGEMENT				CONGENITAL WATER	
	Supply	Discharges	Consumption	Supply x Prod Proc Crude Oil	Sep Cong	Inject Cong
	(m³)	(m³)	(m³)	(m³/ton)	(m³)	(m³)
<b>PEP</b>	9,769,122	4,910,112	7,144,170	41.9	13,441,990	1,961,715
<b>MARINE SERVICES COORDINATION OFFICE</b>	-	-	-	-	-	-
Logistics Manager's Office	-	-	-	-	-	-
Integral Maintenance Manager's Office	-	-	-	-	-	-
Unit for Industrial Safety, Environmental Protection & Quality	-	-	-	-	-	-
<b>NORTHEASTERN MARINE REGION</b>	631,483	490,962	481,927	5.7	752,088	22,999
Transportation and distribution of Hydrocarbons	-	-	-	-	-	-
Cantarell exploitation assets	253,712	213,645	381,474	2.9	752,088	22,999
Ku-Maloob-Zaap exploitation assets	143,748	131,453	12,295	6.3	-	-
Transportation and distribution of Hydrocarbons Manager's Office	234,023	145,864	88,159	2,661	-	-
<b>SOUTHEASTERN MARINE REGION</b>	1,156,457	3,870,551	1,959,657	48.2	2,212,391	-
Transportation and distribution of Hydrocarbons	781,143	3,752,685	1,702,209	-	2,212,391	-
Integral Abkatun Pol-chuc assets	372,425	114,929	257,496	15.5	-	-
Assets on the Tabasco Littoral zone	2,889	2,937	-48	-	-	-
<b>NORTHERN REGION</b>	5,075,556	42,690	1,416,976	235	4,012,514	-
Altamira Production	-	-	-	-	-	-
Cerro Azul – Naranjos Production	765,671	262	522,610	823	346,418	-
Poza Rica Production	4,194,736	5,359	816,286	1,404	2,255,407	-
Reynosa - Burgos Production	17,363	14,710	2,653	1.7	1,248,413	-
Veracruz Production	97,787	22,359	75,428	13.4	162,275	-
<b>SOUTHERN REGION</b>	1,888,556	48,581	2,708,625	24.8	6,451,056	1,796,370
Five Presidents Integral Assets in the SR	304,792	8,856	324,218	107	1,001,299	207,541
Jujo-Bellota Integral Assets in the SR	227,717	31,784	195,757	20	802,223	13,411
Macuspana Integral Assets in the SR	-	-	38,688	-	91,267	38,688
Muspac Integral Assets in the SR	347,472	-	1,145,421	37	2,770,449	1,125,978
Samaria-Luna Integral Assets in the SR	998,312	-	998,312	74.7	1,785,819	410,752
Construction & Maintenance Manager's Office in the SR	-	-	-	-	-	-
Transportation and Distribution of Hydrocarbon's Manager's Office in the SR	10,264	7,941	6,230	-	-	-
<b>WELL DRILLING AND MAINTENANCE UNIT</b>	1,017,070	457,329	576,985	-	13,942	142,346
Marine Division	786,515	432,215	354,300	-	-	-
Northern Division	200,910	13,907	200,945	-	13,942	142,346
Southern Division	29,645	11,207	21,740	-	-	-
<b>PPQ</b>	54,020,943	23,516,683	32,187,009	8,586	-	-
<b>CAMARGO</b>	-	-	-	-	-	-
<b>CANGREJERA</b>	22,100,789	8,404,614	13,679,833	8,119	-	-
<b>COSOLEACAQUE</b>	8,582,400	1,129,178	7,453,222	9,065	-	-
<b>ESCOLIN</b>	37,195	27,177	10,018	3,718	-	-
<b>INDEPENDENCIA</b>	1,550,491	864,336	739,454	71,433	-	-
<b>MORELOS</b>	17,240,260	10,374,690	8,544,055	10,617	-	-
<b>PAJARITOS</b>	4,074,341	2,552,760	1,487,264	4,318	-	-
<b>REYNOSA</b>	-	-	-	-	-	-
<b>TULA</b>	435,467	163,928	273,163	18,101	-	-
<b>PGPB</b>	41,489,541	12,428,889	20,733,424	841	-	-
<b>PIPELINES ASSISTANT DIRECTOR'S OFFICE</b>	101,112	64,199	36,913	-	-	-
<b>LIQUEFIED GAS AND BASIC PETROCHEMICAL'S ASSISTANT DIRECTOR'S OFFICE</b>	119,239	8,468	93,970	-	-	-
<b>PRODUCTION ASSISTANT DIRECTOR'S OFFICE</b>	41,269,189	12,356,221	20,602,541	836	-	-
<b>CPG AREA COATZACOALCOS</b>	999,568	44,257	515,027	174	-	-
<b>CPG ARENQUE</b>	5,156	3,731	1,425	26	-	-
<b>CPG BURGOS</b>	26,256	-	26,256	4.7	-	-
<b>CPG CACTUS</b>	11,730,696	3,668,354	5,826,388	908	-	-
<b>CPG CD. PEMEX</b>	6,392,685	44,980	4,901,901	760	-	-
<b>CPG LA VENTA</b>	502,528	228,472	271,700	428	-	-
<b>CPG MATAPIONCHE</b>	356,963	99,078	257,885	663	-	-
<b>CPG NVO. PEMEX</b>	13,397,881	6,766,369	6,593,913	1,063	-	-
<b>CPG POZA RICA</b>	6,878,107	1,274,279	572,093	7,716	-	-
<b>CPG REYNOSA</b>	979,349	226,701	1,635,952	771	-	-
<b>PREF</b>	119,869,265	38,603,885	79,832,745	1,806	-	-
<b>WAREHOUSE AND DISTRIBUTION ASSISTANT DIRECTOR'S OFFICE</b>	808,510	175,189	545,183	-	-	-
<b>DISTRIBUTION ASSISTANT DIRECTOR'S OFFICE</b>	2,000,767	1,087,700	1,236,702	-	-	-
<b>PRODUCTION ASSISTANT DIRECTOR'S OFFICE</b>	117,059,988	37,340,995	78,050,861	1,763	-	-
"FRANCISCO I. MADERO" REFINERY	19,655,010	5,623,120	13,662,328	2,649	-	-
"GRAL.LAZARO CARDENAS" REFINERY	12,665,541	4,111,729	8,370,502	1,392	-	-
"ING. ANTONIO DOVALI JAIME" REFINERY	21,598,270	3,990,343	16,881,120	1,500	-	-
"ING. ANTONIO M. AMOR" REFINERY	17,397,179	5,220,401	14,510,163	1,733	-	-
"ING. HECTOR R. LARA SOSA" REFINERY	19,412,989	5,308,914	14,424,785	1,832	-	-
"MIGUEL HIDALGO" REFINERY	26,330,999	13,086,489	10,201,962	1,774	-	-
<b>TOTAL PEMEX</b>	225,148,870	79,459,568	139,897,348	633.7	13,441,990	1,961,715

This appendix only considers emissions by Pemex's productive activities; thus, it excludes emissions by the Corporate Office (Hospitals and Telecommunications)



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## Assurance Letter

(Free translation from the original in Spanish. In case of Discrepancy, the Spanish language version prevails)

To the readers of this Report

### Introduction

We were retained by Petróleos Mexicanos (Pemex) to examine the non-financial information for fiscal year 2007, contained in its Sustainable Development Report 2007 (hereinafter, the Report), whose preparation, including the decision to include the related topics, is the responsibility of Pemex's Head Office of Corporate Operations.

### Scope

The Report describes the efforts and progress Pemex has made as it strives for a more sustainable development. Our responsibility consists of examining the aforementioned Report, confirming the application of the AA1000 Assurance Standard (AA1000 AS) and Version 3 (GRI G3) of the Global Reporting Initiative Guide, in conformity with the Company's level of self-declaration, while offering the readers of the Report, a limited level of assurance in conformity with the ISAE 3000 standard as related to:

- Assurance of the reliability of the manner in which the quantitative data was collected.
- The qualitative information that appears in the report is adequately supported by internal or third party documentation.
- Pemex's self-statement of the application of the AA1000 AS standard and the GRI G3 Guide for the A+ application level has been confirmed by the Global Reporting Initiative.

### Review Criteria

Our work has been carried out in accordance with the International Standard for Assurance Engagements (ISAE 3000): *Assurance Engagements other than Audits or Reviews of Historical Financial Information* developed by the International Auditing and Assurance Standards Board (IAASB). This standard establishes the following requirements, among others:

- The team that works on the project must have the specific knowledge, and the professional skills and abilities that are needed to understand and examine the information contained in this Report, while its members must comply with the requirements established in the Professional Ethics Code of the International Federation of Accountants (IFAC) to ensure their independence.
- When providing limited assurance on the information, which is a lower level than reasonable assurance, a conclusion limited to the work undertaken is used.

We followed the assurance principles and criteria included in the AA1000 AS norm and in the GRI G3 Guide, as these were the same criteria Pemex applied in preparing the Report, the understanding and application of which are described in the section titled, "Principles that govern this Report".

### Work Performed

#### a) Assurance of the quantitative data and other qualitative data contained in the Report

We have examined both the quantitative and the qualitative information contained in the answers Pemex prepared as a response to the questions made by the Citizen Participation Group (GPC), as indicated in the Annex on the Citizen Participation Group, in accordance with the scope described in said section, and based on our completion of the following activities:

- Interviews with the responsible parties that provide the information contained in this Report.
- Examination of the systems that were used to generate, add and make the data available.
- Analysis of the scope and presentation of the information provided.
- Examination of the new data added at a corporate level, through sampling and recalculation processes.
- Examination that the qualitative information is duly supported by internal or third party documents.
- Random sample reviews of the information generated at the following ten Work Centers, selected by Pemex to be visited:

PEP	PGPB	PREF	PPQ
Activo Integral Samaria, in Tabasco	Nuevo Pemex CPG in Tabasco	Francisco I. Madero Refinery in Tamaulipas	The Morelos CPQ, in Veracruz
The UPMP South Division in Reforma, Tabasco	The Arenque CPG, in Tamaulipas	The Rosarito Storage and Retirement Terminal, in Baja California	The Pajaritos CPQ, in Veracruz
GTDH Operative Re-pumping Complex in Campeche			
The Kumazaa Platform in Campeche			

#### b) Examination of alignment with the criteria and principles that must be used to define the content of the Report and its scope, according to the AA1000 AS and the GRI G3 Guide.

We have examined the documents related to the criteria and the procedures that were used to define the contents of the Report, in conformity with the scope described for this purpose.

An overall description of these presentation criteria on the aforementioned information concerning the scope of the Report, including the eventual limitations to the same, as well as the importance, and the integration and aggregation methods of the data provided by Pemex and its Subsidiary Entities, is provided in the section titled, "Principles that Govern this Report", with specific descriptions provided in the different chapters that address the presentation of the non-financial information.

### Conclusions

Throughout the course of our review, described above, we did not find any circumstances that would indicate that the data collected in the Report was not obtained in a reliable manner, and that the information is not properly presented, nor did we find material deviations or omissions.

KPMG Cardenas Dosal S.C.

C.P. Roberto Cabrera Siles  
Partner

Mexico, DF on April 25, 2008

Aguascalientes, Ags.  
Ciudad Juárez, Chih.  
Culiacán, Sin.  
Chihuahua, Chih.  
Guadalajara, Jal.  
Hermosillo, Son.  
Mérida, Yuc.  
Mexicali, B.C.

México, D.F.  
Monterrey, N.L.  
Puebla, Pue.  
Querétaro, Qro.  
Reynosa, Tamps.  
San Luis Potosí, S.L.P.  
Tijuana, B.C.  
Toluca, Edo. de Mex.

KPMG Cárdenas Dosal, S.C. is a firm Mexican member of KPMG International, una cooperativa Suiza.



# Citizen Participation Group (GPC acronym in spanish)

Petróleos Mexicanos is making an effort in this report aimed at improving the quality and depth of the topics included, by taking up again the transparency exercise of the 2005 report. To this purpose, distinguished specialists on sustainable development coming from the civil society were summoned to integrate the Citizen Participation Group (GPC), whose members had the following responsibilities:

- Propose the themes, according to the GRI-G3 criteria, to be the most important in their judgment, to the areas and sectors in which their members participate, and for that reason should be treated in greater detail in the 2007 Sustainable Development Report.
- Evaluate the compliance degree of the proposed themes.
- Elaborate a report on the main findings and recommendations, which is presented in this section.

The GPC elaborated 25 questions related to the themes contained in the report. The questionnaire was sent to Petróleos Mexicanos, which responded to each of the questions, identifying the chapters and sections of the report containing the supporting data.

The answers to the questions were audited by KPMG and later examined by the GPC and in a specific session, the answers were evaluated according to their importance and to the public information presented for this purpose, assigning a qualification to each one, which is presented later in this document.





# Findings and recommendations of the Citizen Participation Group (GPC) in the Petróleos Mexicanos 2007 Sustainable Development Report

## MAIN FINDINGS OF THE GPC IN THE 2007 SUSTAINABLE DEVELOPMENT REPORT

The Citizen Participation Group found documented answers to the formulated questions, in general, but also inconsistencies as in question No. 5, in which it indicates that the world trend is on reducing the energy intensity of the processes, while in Pemex some recent increases have been detected.

In some of Petróleos Mexicanos answers, as in the one related to the reduction of greenhouse effect gases (GHG) and specifically in the participation of carbon markets (questions 7 and 8), the GPC finds also the possibility to integrate schemes that allow the financing of reduction projects while maximizing their benefits.

Derived from the GPC's reflection exercise, some additional questions arise which were not subject to an answer, among which the following were found: In answer No. 1: Is the strategy for the territory ecological code and the initiatives to compensate the landowners generalized and with what resources ? ; in answer No. 15, Are current environmental laws always observed ? and: Is it possible to go beyond this compliance ? ; in answer No. 17 : What aspects are integrated in the Clean Development Mechanism (CDM) projects consultations ?

## MAIN GPC RECOMMENDATIONS

Among the most relevant recommendations submitted by the GPC are the following:

- Evaluate if the strategies used by Pemex to socialize the sustainability criteria inside the organization, are successful among the employees.
- Promote the incorporation of alternate energies in self-sufficiency energy schemes as, even though they could be more expensive and in some cases intermittent, they reduce the GHG emissions and contribute to enhance the institution image
- Promote a program to obtain net internal energy savings. Perform a third party study to analyze the technical and economical advantages and disadvantages of adding bio fuels to conventional fuels.
- Establish communication programs to promote oil fuels and natural gas savings as the following: adequate maintenance to industrial boilers to avoid fuel waste, discourage the use of cars, use of public transportation, use of bicycles, and maintaining household stoves in good conditions to save on liquefied gas.
- Define, with the automotive industry, the application of better gas mileage figures.
- Implement in each of the significant operations regions, successful programs to protect or enhance the environment, and community development programs, as a routine procedure.
- Monitoring of environment health variables in impact and direct influence areas as part of the Environmental Management Plans.
- Optimize the response time to communicate the people about contingencies, in the spirit of a modern and transparent management framework.
- Develop a carbon financing strategy more integrating to the inside of the organization while more articulated towards the CDM and coordinated with SEMARNAT.

- Establish an action plan that allows the channeling of revenues coming from the sale of reduced emissions certificates (REC's), to beneficiaries in the oil regions, as part of an environmental goods and services program in the benefit of communities and the environment.
- Ensure that the consultation processes of the Clean Development Process (CDM) projects are sufficient and that this mechanisms guarantee that impacts are reduced or that the interests of affected parties are considered.
- Disclose and add transparency to the intra government agreements signed among the state and municipal governments related to sustainable development, to the civil society
- Promote the use of commercial fuels to generate productive activities that can generate local wealth in rural communities, and hence avoid the use of firewood.
- Ensure that the corruption elimination or reduction objective is accomplished inside Pemex as fast as possible aiming at the effectiveness of the implemented measures and as a consequence obtain a reputation as a world class socially responsible enterprise.
- Consolidate training programs of international quality in safety and environmental protection matters for the employees
- Guarantee that contractors keep a high level technical and administrative skill and professional quality, regardless of potential signs of existing corruption.

## CONCLUSIONS

The GPC expressed as one of their main concerns the need to disseminate the sustainable development topics to the inside as well as to the outside of the company, and was particularly interested in the social aspects of sustainability, consultation processes with communities, the war against corruption, as well as energy topics, climate change, use of renewable energy sources, use of bio fuels and safety among others.

For Petróleos Mexicanos, the exercise of transparency and dialogue with representatives from these sectors of society represents a fundamental space in its commitment to communicate with all audiences and stakeholders the Sustainable Development report, as well as a priceless opportunity to know the vision that diverse country sectors have of a public industry considered as a pillar of national development.

## PEMEX'S RESPONSE TO QUESTIONS ABOUT THE PETRÓLEOS MEXICANOS SUSTAINABLE DEVELOPMENT REPORT 2007

	Very Bad 0-20%	Bad 20-40%	Medium 40-60%	Good 60-80%	Very Good 80-100%
<b>GENERAL</b>					
1. What policies and action lines does Petróleos Mexicanos use to include aspects on sustainable development (in environmental, social and economic terms) in its activities? <i>Answer included in the Chapter on Pemex's Role in Society</i>					
2. How is this reflected in the different chapters that comprise the Sustainable Development Report? <i>Answer included in the Chapter titled, Principles that govern this report</i>					
3. What strategies does Pemex follow to internalize or socialize the sustainability criteria within the Company? <i>Answer included in the Chapter on Pemex's Role in Society</i>					
<b>ENERGY AND CLIMATE CHANGE</b>					
4. In regard to the physical aspects of sustainable development, what activities has Pemex developed related to the incorporation of alternate sources of energy in its self supply energy plans, in light of the fact that this might be the Mexican company that consumes the largest amount of energy for its internal use? <i>Answer included in the Chapter on Climate Change</i>					
5. What results has the Company obtained in terms of the internal energy savings that refer to the level of this activity? <i>Answer included in the Chapter on Climate Change</i>					
6. What actions has Pemex taken with regard to the use of bio-fuels, within the context of the Sectorial Energy Program 2007-2012 and in conformity with the Law for the Promotion and Development of Bioenergetics that was approved by Congress and published in the Official Federal Gazette on February 1, 2008? <i>Answer included in the Chapter on Environmental Performance</i>					
7. What overall strategy has Pemex adopted with respect to the reduction of greenhouse gas emissions (GHG) effects and specifically as related to its share in carbon markets, through the Clean Development Mechanism (CDM) or voluntary markets? <i>Answer included in the Chapter on Climate Change</i>					
8. Based on the Company's potential to reduce emissions and the sale of Reduced or Verified Emission Certificates, has Petróleos Mexicanos implemented a program to generate a flow of resources for mitigation activities and those related to climate change adjustments within and without Pemex? <i>Answer included in the Chapter on Climate Change</i>					
9. How does Pemex incentivize the final users of secondary energy products that produce and distribute energy, to improve the efficiency of the processes in which these energy products are used? <i>Answer included in the Chapter on Climate Change</i>					
<b>ENVIRONMENTAL MANAGEMENT</b>					
10. Has Pemex applied resources to promote environmental goods and services in basins that have been affected by its activities that benefit the local producers and contribute to the conservation of the natural environment, or to the mitigation of impacts and environmental repairs, or implemented community development programs? <i>Answer included in the Chapter on Biodiversity Conservation</i>					

	Very Bad 0-20%	Bad 20-40%	Medium 40-60%	Good 60-80%	Very Good 80-100%
11. Can you state a specific case or location where Pemex has successfully completed an environmental protection or improvement program and community development? <i>Answer included in the Chapter on Biodiversity Conservation</i>					
12. What indicators on impact on environmental health does Pemex have? <i>Answer included in the Chapter on Biodiversity Conservation</i>					
13. What actions have derived from monitoring and following up on environmental health impact indicators? <i>Answer included in the Chapter on Environmental Performance</i>					
14. What reporting systems does Pemex use to communicate the environmental impact of its activities to the general public, and the route it follows to offset said impacts? <i>Answer contained in the Chapter on Pemex's Role in Society</i>					
15. What environmental monitoring measurements has Pemex adopted in terms of liquid, solid and gas discharges? <i>Answer included in the Chapter on Environmental Performance</i>					
16. What reporting systems does Pemex use to communicate contingencies to the general public? <i>Answer included in the Chapter on Health and Safety</i>					
<b>SOCIAL MANGEMENT</b>					
17. What consultation processes does Pemex use with specific actors and communities to carry out its activities? <i>Answer contained in the Chapter on Pemex's Role in Society</i>					
18. How does Pemex evaluate the efficiency of the reached agreements? <i>Answer contained in the Chapter on Pemex's Role in Society</i>					
19. How does Pemex implement state and municipal government participation in the joint work it performs with the community in the design and implementation of its sustainable development programs? <i>Answer included in the Chapter, Pemex, development promoter in Mexico</i>					
20. How does Pemex evaluate the efficiency of the reached agreements? <i>Answer included in the Chapter, Pemex promotes development in Mexico</i>					
21. What activities does Pemex perform to increase access to its products by the nation's vulnerable rural zones, in order to reduce the consumption of non-commercial biomass, i.e. wood, in regard to its social aspects concerning sustainability and in light of the fact that Pemex is the only company that distributes petroleum products? <i>Answer included in the Chapter, Pemex, development promoter in Mexico</i>					
22. What policies does Pemex follow to prevent and fight the war against corruption? <i>Answer included in the Chapter Transparency and Corporate Governance</i>					
23. What safety measures does Pemex have to guarantee the effectiveness of its preventive and corrective actions? <i>Answer included in the Chapter Transparency and Corporate Governance</i>					
<b>OCCUPATIONAL AND SAFETY MANAGEMENT</b>					
24. What training programs does Pemex have in place in terms of the safety of its workers? <i>Answer included in the Chapter on Health and Safety</i>					
25. How does Pemex guarantee that its contractors actually carry out these programs? <i>Answer included in the Chapter on Health and Safety</i>					

# GRI Index

GRI INDICATOR, VERSION G3		CHAPTER	TOPIC	PAGE
FOCUS ON ORGANIZATIONAL MANAGEMENT		Pemex's role in society	Mission statement Pledged policies and commitments	20/27
Strategy and analysis				
1.1	Statement from the President	Message from the Director General		4
1.2	Description of key impacts, risks and opportunities	Pemex's role in society Pemex, development promoter in Mexico	Mission statement Pemex's commitment to sustainable development, Technological innovation	20/21/31
Organizational profile				
2.1	Name of the organization	Pemex in Summary	Context	10
2.2	Primary brands, products and/or services	Pemex in Summary, Operational reliability and security of the hydrocarbon supply	Context Operations Continuity and quality of the service	10/11/17 42
2.3	Operational structure of the organization, including main divisions, operating companies, subsidiaries and joint ventures	Pemex in Summary	Context, Operations	10/11/17
2.4	Location of organization's headquarters	Pemex in Summary	Context	10
2.5	Number of countries where the organization operates	Pemex in Summary	Operations	18
2.6	Nature of Ownership / Legal Form	Pemex in Summary	Context	10
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HR8	Percentage of the security personnel trained in the organization's policies or procedures concerning aspects of human rights that are relevant to operations	Pemex employees	Professional development	75

HR9	Total number of incidents of violations involving rights of indigenous people and actions taken	Corporate governance and transparency	Fines and sanctions for non-compliance	47
MANAGEMENT APPROACH TO SOCIAL INDICATORS		Pemex's role in Society, Pemex, development promoter in Mexico, Corporate governance and transparency	Pemex's commitment to sustainable development, Communication channels and dialogue, Pledged policies and commitments. Social Development Actions, Collaboration on public policies, Fines and sanctions for non-compliance	20/24/27 32/48/49
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S02	Percentage and total number of business units analyzed for risks related to corruption	Corporate governance and transparency	Transparency and oversight	47
S03	Percentage of employees trained in organization's anti-corruption policies and procedures	Pemex's role in society Pemex employees	Professional development, Pledged policies and Commitments	27/75
S04	Actions taken in response to incidents of corruption	Corporate governance and transparency	Transparency and oversight	47/48
S05	Public policy positions and participation in public policy development and lobbying	Corporate governance and transparency	Collaboration on public policies	48
S06	Total value of financial and in-kind contributions to political parties, politicians and related institutions by country	Corporate governance and transparency	Transparency and oversight	46
S07	Total number of legal actions for anticompetitive behavior, anti-trust, and monopoly practices and their outcomes	Pemex in Summary	Context	10
S08	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	Corporate governance and transparency	Fines and sanctions for non-compliance	49
MANAGEMENT APPROACH TO PRODUCT RESPONSIBILITY		Operational reliability and security of the hydrocarbon supply, Environmental liabilities	Continuity and quality of the services, Environmental improvement of products	44/97
Product Responsibility				
PR1	Life cycle stages in which health and safety impacts of products and services are assessed for improvement	Operational reliability and security of the hydrocarbon supply	Continuity and quality of the services	41/43
PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes	Corporate governance and transparency	Fines and sanctions for non-compliance	49
PR3	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements	Operational reliability and security of the hydrocarbon supply	Continuity and quality of the services	43
PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcome	Corporate governance and transparency	Fines and sanctions for non-compliance	49
PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction	Operational reliability and security of the hydrocarbon supply	Operational reliability of the supply, Continuity and quality of the services	38 a 41/43
PR6	Programs for adherence to laws, standards, and voluntary related to marketing communications, including advertising, promotion, and sponsorship	Operational reliability and security of the hydrocarbon supply	Advertising and market competition	48
PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion and sponsorship, by type of outcomes	Corporate governance and transparency	Advertising and market competition, Fines and sanctions for non-compliance	48/49
PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	Corporate governance and transparency	Fines and sanctions for non-compliance	49
PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	Corporate governance and transparency	Fines and sanctions for non-compliance	49



# United Nations Global Compact Indicators: “Communication on Progress”

The following index reflects the relation between the GRI indicators and the United Nations Global Compact principles. This relation was made following the guidance “Making the Connection”<sup>14</sup>, document that introduces and explores ways to address GRI and Global Compact requirements simultaneously.

PRINCIPLES OF THE UNITED NATIONS GLOBAL COMPACT	GRI INDICATOR	CHAPTER
<b>Human Rights</b>		
GC1 Businesses should support and respect the protection of internationally proclaimed human rights.	EC5, LA4, LA6-9, LA13, LA14, HR1-9, S05, PR1, PR2, PR8	Pemex employees, Health and safety, Corporate governance and transparency, Operational reliability and security of the hydrocarbon supply
GC2 Businesses should make sure that they are not complicit in human rights abuses.	HR1-9, S05	Pemex employees, Health and safety, Corporate governance and transparency,
<b>Employees</b>		
GC3 Businesses should respect the freedom of association and the effective recognition of the right to collective bargaining.	LA4-LA5, HR1-3, HR5, S05	Pemex employees, Health and safety, Corporate governance and transparency,
GC4 Businesses should respect the elimination of all forms of forced and compulsory labor.	HR1-3, HR7, S05	Pemex employees, Health and safety, Corporate governance and transparency,
GC5 Businesses should respect the effective abolition of child labor.	HR1-3, HR6, S05	Pemex employees, Health and safety, Corporate governance and transparency,
GC6 Businesses should respect the elimination of discrimination in respect of employment and occupation.	EC7, LA2, LA13, LA14, HR1-4, S05	Pemex, development promoter in Mexico, Pemex employees, Health and safety, Corporate governance and transparency
<b>Environment</b>		
GC7 Businesses should support a precautionary approach to environmental challenges.	EC2, EN18, EN26, EN30, S05	Climate change, Biodiversity conservation, Pemex, development promoter in Mexico, Corporate governance and transparency
GC8 Businesses should support undertake initiatives to promote greater environmental responsibility.	EN1-30, S05, PR3, PR4	Environmental Performance Climate change, Biodiversity conservation, Health and safety, Corporate governance and transparency, Pemex, development promoter in Mexico, Operational reliability and security of the hydrocarbon supply.
GC9 Businesses should support and encourage the development and diffusion of environmentally innocuous technologies.	EN2, EN5-7, EN10, EN18, EN26, EN27, EN30, S05	Environmental Performance Climate change, Pemex, development promoter in Mexico, Corporate governance and transparency.
<b>Anti-corruption</b>		
GC10 Businesses should work against corruption in all its forms, including extortion and bribery.	S02-6	Corporate governance and transparency, Pemex employees, Pemex’s role in society

14. <http://www.unglobalcompact.org/COP/>

# Glossary

**AA1000:** Procedural norm that guarantees the transparent quality of accountability, evaluation and disclosures concerning the social and ethical aspects of corporate management.

**Biofuel:** Any fuel that is derived from organic material or metabolic waste.

**Carbon dioxide (CO<sub>2</sub>):** Greenhouse gas produced by the oxidation of carbon compounds.

**Catalyzers:** Substances that accelerate a chemical reaction but remain unchanged by it. It increases the rate of the reaction at lower temperatures, and remains static through the end of the reaction. However, spent catalysts must be periodically replaced in industrial processes to ensure efficient production levels.

**Clean Mechanism Development (CMD):** Is an arrangement under the Kyoto Protocol allowing industrialised countries with agreenhouse gas reduction commitment (Annex 1) to invest in projects that reduce emissions in developing countries as an alternative to more expensive emission reductions in their own countries.

**Cogeneration:** Generation of electric power and heat using a combined system.

**Drilling cuts:** Dirt and rocks removed during exploration and production well drilling operations. The cuts are impregnated with oil as the come in contact with drilling mud.

**Drilling spud:** A mixture of clays and chemicals and water; pumped down the drill pipe to lubricate and cool the drilling bit and to flush out the cuttings and to strengthen the sides of the hole and control the ascending flow of crude oil to gas.

**Ecological equilibrium:** State of dynamic equilibrium within a community of organisms in which genetic, species and ecosystem diversity remain relatively stable, subject to gradual changes through natural succession.

**Effluent:** The wastewater discharge from industrial facilities.

**Environmental impact:** Any environmental change, positive or negative, partially or fully derives from activity, products or services.

**Environmental Impact Studies:** document prepared to provide a brief summary of environmental coordination, impacts and benefits and is published for comment and review. An EIA must comply with the National Environmental Policy Act (NEPA) requirements.

**Excise tax on production and service (IEPS):** The IEPS applies to automotive gasoline and diesel as established by the Law of Federal Income under the prevailing tax regime. Final consumers who purchase automotive gasoline or diesel pay this IEPS tax. Pemex serves as an intermediary between the Secretary of the Treasury and Public Credit (SHCP) and the final consumer, as Pemex withholds the IEPS and pays it to the Federal Government. The difference between the retail price or the final price and the gasoline and diesel producer's price is based mainly on the IEPS. The SHCP establishes the retail price or the price for the final user who purchases gasoline and diesel. Pemex gasoline and diesel producer prices are referenced to an efficient refinery in the Gulf of Mexico.

**Frequency Index (FI):** Reference to the number of accidents that lead to disability and demise in a period that includes one million man hours of exposure to the risks, worked in a certain period, that do not include accidents to and from work and those work accidents caused by third parties and/or unsafe conditions that are out of Pemex's control.

**Fugitive emissions:** Emissions that escape an allegedly closed system. Fugitive emissions generally include volatile organic compounds.

**Gigajoule (GJ):** Energy unit equal to 1,000,000,000 joules (1 Calorie= 4,184 joules).

**Global Reporting Initiative (GRI):** Sustainability reporting guidelines.



**CANGREJERA ECOLOGICAL RESERVE**  
Birth of two white tail deers (12/02/2007)  
Veracruz

**Greenhouse gases (GHG):** Gases, whose presence in the atmosphere contributes to potential climate change. The greenhouse gases group includes the following:

- Water vapor ( $H_2O$ ).
- Carbon dioxide ( $CO_2$ ).
- Methane ( $CH_4$ ).
- Nitrous oxide ( $N_2O$ ).
- Ozone ( $O_3$ ) and
- Chlorofluorocarbons (CFC).

**ISO 14001:** International standard that establishes a process to control and improve environmental management. ISO 14001 is the international standard that is recognized by the Environmental Management System (EMS).

**ISO 9001:** Certifiable Quality Management Standard.

**Kyoto Protocol:** International agreement that went into force in 1997 through which developed countries commit to reduce their greenhouse gas emissions to stabilize the concentration of these atmospheric gases at a level prevents dangerous interferences with climate changes.

**Materiality principle:** Applied to matters of sustainability or corporate responsibility. Reference is made to the significance or relevance the different aspects related to corporate responsibility have for the business.

**Methane ( $CH_4$ ):** Is considered a greenhouse gas. It is not included in the category of so-called volatile organic compounds, due to convection.

**Mitigation:** Series of actions that minimize the atmospheric emissions and discharges

**NGO:** Non-governmental organization.

**Nitrogen oxides ( $NO_x$ ):** Generic term for nitrous oxides. Gas compounds generated during the combustion process, due to the oxidation of the nitrogen that is found in the air. They contribute to the formation of troposphere ozone and the acid rain phenomenon.

**NOM-001-SECRE-2003:** Official Mexican Standard on natural gas characteristics and specifications.

**NOM-005-SCFI-2005:** Official Mexican Standard related to measurement instruments – system to measure and dispatch gasoline and other liquid fuels. Testing and assurance specifications and methods.

**NOM-001-SEMARNAT-1996:** Official Mexican Standard that establishes the maximum limits of pollutants allowed in wastewater effluents into national waters or assets.

**NOM-019-STPS-2004:** Official Mexican Standard on constitution, organization and operation of the safety and health commissions at the work centers.

**NOM-020-STPS-2002:** Official Mexican Standard on “Boilers and containers that are subject to pressure. Safety operations and conditions”.

**NOM-026-STPS-1998:** Official Mexican Standard on “health and safety colors and signage, and the identification of the risk represented by the fluids that flow through pipelines.”

**NOM-085-SEMARNAT-1994:** Official Mexican Standard on environmental pollution. Fixed sources: for fixed sources that use solid, liquid or gas fossil fuels or any of their combinations, which establish the maximum level of smoke and particle emissions that are allowed to enter the atmosphere.

**NOM-137-SEMARNAT-2002:** Official Mexican Standard related to atmospheric contamination. Desulphurization plants for gas and condensed sour compounds. Emission control of sulfur compounds.

**NOM-148-SEMARNAT-2006:** Official Mexican Standard related to atmospheric contamination. Recovery of sulfur derived from oil refining processes.

**OHSAS:** Evaluation specifications for Occupational Health and Safety Management Systems. It was developed in response to the need for companies to efficiently comply with health and safety obligations.

**Oils and greases (O & G):** Any material that can be recovered as a soluble substance in the following solvents: n-hexane, trichlorotrifluoroethane or a mixture of 80% n-hexane and 20% methyl tertiary butyl ether.

**Oily mud:** Solid waste with hydrocarbon content, such as crude oil's congenital solids, hydrocarbons that impregnate the ground, sediments of hydrocarbon containment systems (tanks, septic tanks, dams, et cetera).

**Phenols:** Class of chemical compounds consisting of a hydroxyl group attached to an aromatic hydrocarbon group.

**PIDIREGAS:** These are long-term productive infrastructure projects. The difference between PIDIREGAS and Non-PIDIREGAS expenses is significant in terms of budgetary matters, as the PIDIREGAS designation guarantees that financing for a project is immune to budgetary cutbacks. Pemex finances its annual budget (without including PIDIREGAS) through revenues generated by its financial operations and activities. Capital expenses are assumed by Pemex and its Subsidiary Entities. Capital investments and operating expenses must be authorized in Pemex's annual budget, which is in turn, approved by Congress.

**PST:** Finely divided solid material produced by the combustion of gasoline or other fuels, or derived from mineral and metal powder, paint pigmentations, pesticides, soot and smoke from burnt oils.

**Restoration:** Environmental restoration aims to eliminate, reduce or control risks to human health and the environment at sites that are environmentally affected.

**Severity Index (SI):** Reference to the number of work days lost due to accidents that lead to disability and demise in a period that includes one million man hours of exposure to the risks, worked in a certain period, that do not include accidents to and from work and those work accidents caused by third parties and/or unsafe conditions that are out of Pemex's control.

**Sour gas:** Natural gas containing significant amounts of hydrogen sulfide that requires treatment to be used as a fuel.

**Sulfur oxides (SO<sub>x</sub>):** Generic term for sulfur oxides. Compounds generated by energetic combustion processes that contain sulfur compounds. They contribute to the acid rain phenomenon. The Council on Environmental Quality (CEQ) and the agencies are responsible for the proposed actions or projects.

**Total Suspended Particles (TSP):** Term that is used to designate the total number of particles and particle material in the air.

**Turnover Index:** Number of employees that leave the organization / total number of employees X 100).

**United Nations Global Compact:** Initiative that aims to spread among organizations, the commitment to environmental and labor commitments, the protection of human and the war against corruption

**Volatile organic compounds (VOC):** Organic compounds that evaporate a room temperature, including several hydrocarbons, oxygenated compounds and

compounds with sulfur content. Methane is considered separately, due to convection. VOC contribute to the formation of troposphere ozone through a photochemical reaction with nitrogen oxides.

**Workers:** The organization's unionized, non-union workers and staff members.



# Acronyms and abbreviations

**AM:** Audit Management.

**ARPEL:** Association of Gas and Oil companies of Latin America and Caribbean.

**ASP:** Administration of Security Processes.

**Bancomext:** National Bank of Foreign Trade.

**bco:** Barrel of crude oil.

**BPC:** Polychlorinated biphenyl.

**CAIEPC:** Inter-Agency advisory emergency and civil protection commission.

**CAIMA:** Inter-Agency Advisory Commission of Environmental Management.

**CAISSPA:** Inter-Agency SSPA Advisory Commission.

**CCAE:** Pemex's Coordination and Emergency Support Center.

**CCT:** Collective Bargaining Agreement.

**CDI:** Chemical Distribution Institute.

**CENDI:** Children's Development Centers.

**CER:** Emission reduction certificate.

**CESIPAM:** Social and Comprehensive Service Center for Senior Citizens.

**CESPEDES:** Commission on Sustainable Development Studies for the Private Sector.

**CFE:** Federal Electricity Commission.

**CIFA:** Family Integration Centers.

**CLMSH:** Local Mixed Health and Safety Commissions.

**CMD:** Clean Mechanism Development.

**CNDH:** National Commission of Human Rights.

**CNMSH:** National Mixed Health and Security Commission.

**Conabio:** National commission for the knowledge and use of biodiversity.

**Conae:** National Commission for Energy Savings.

**Conanp:** National Commission of Protected natural areas.

**Conapred:** National Council to prevent discrimination.

**COT:** Accumulation of evaporation gas emissions from tanks, cooling towers.

**API:** separators, valves, trusses, connectors, and seals.

**CPG:** Gas Processing Complex.

**CPQ:** Petrochemical complex.

**CSO:** Civil Society Organizations.

**EA:** Effective Audits.

**EBIS:** European Barge Inspection Scheme.

**ECLAC:** Economic Commission for Latin America and the Caribbean.

**EITI:** Extractive Industries Transparency Initiative.



**CANGREJERA ECOLOGICAL RESERVE**  
Birth of two white tail deers (12/02/2007)  
Veracruz



**EMA:** Mexican Accreditation Entity.  
**ENACC:** National Climate Change Strategy.  
**EP:** Environmental Protection.  
**EPA:** Environmental Protection Agency.  
**ERPA:** Emission Reduction Purchase Agreement.  
**ESEC:** Safe entry into confined spaces.  
**Gcal:** Gigacalories.  
**GH:** Greenhouse gas emissions.  
**GPC:** Citizen Participation Groups.  
**GRAME:** Regional Group for Emergency Response and Handling.  
**IAC:** Independent audit committee.  
**ICON-F:** Implementation of operational financial controls.  
**IDB:** Inter-American Development Bank.  
**IFQC:** International Fuel Quality Center.  
**ILO:** International Labor Organization.  
**IMAC:** Mechanical Integrity and Quality Assurance.  
**IMO:** International Maritime Organization.  
**IMP:** Mexican Oil Institute.  
**Inmujeres:** National Institute for Women.  
**INTERTANKO:** International Association of Independent Tanker Owners.  
**IPCC:** Inter-governmental panel on climate change.  
**ITOPF:** International Tanker Owners Pollution Federation  
**LyFC:** Central Light and Power Company.  
**M2M:** Methane to Markets.  
**Mbd:** Thousands of barrels per day.  
**MDG:** Millennium development goals.  
**MIS-RH:** Full service Human Resources Module.  
**MMbd:** Millions of barrels per day.  
**MMMb:** Billions of barrels.  
**MMMbcoe:** Billions of barrels of crude oil equivalent.  
**MMbco:** Millions of barrels crude oil.  
**MMcfd:** Millions of cubic feet per day.  
**MMt:** Millions of tons.  
**MM\$:** Million pesos.

**MT:** Maritime terminal.  
**Mton:** Thousands of tons (Mt).  
**MW:** Mega Watts.  
**NRU:** Nitrogen Reduction Unit.  
**OCIMF:** Oil Companies' International Marine Forum.  
**OET:** Ecological land use planning code.  
**NDP:** National Development Plan.  
**NIP:** National Infrastructure Program.  
**OD:** Operating discipline.  
**OSH:** Occupational safety and health.  
**PATG:** Tertiary Gulf Oil Project.  
**PEMEX:** The Mexican Oil Company.  
**PEP:** Pemex Exploration and Production.  
**PGPB:** Pemex Gas and Basic Petrochemicals.  
**PPQ:** Pemex Petrochemicals.  
**PREF:** Pemex Refining.  
**Profepa:** Environmental General Attorney's Office.  
**RBPC:** The "Pantanos de Centla" biosphere Reserve.  
**RSS:** Really Simple Syndication.  
**SAST:** Sub-system for safety at work.  
**SCADA:** Automated pipeline monitor and control system.  
**SEC:** Securities and Exchange Commission.  
**Semarnat:** Secretary of the Environment and Natural Resources.  
**Sener:** Secretary of Energy.  
**Seproci:** Sub-Commission for Emergency Response and Civil Protection.  
**SHCP:** Secretary of the Treasury and Public Credit.  
**SIADI:** Institutional system for individual performance management.  
**Sifivi:** Comprehensive housing financing system.  
**Simcot:** Terminal measurement and control system.  
**SIPA:** Sub-system on information for Industrial Safety and Environmental Protection.  
**SISPA:** Information System on Environmental, Safety and Protection.  
**STPRM:** Mexican Oil Workers Union.  
**STPS:** Secretary of Labor and Social welfare  
**TPM:** Tons of dead weight.  
**ULS:** Ultra low sulfur.  
**UNDP:** United Nations Development Program.  
**UNEP:** United Nations Environment Program.  
**UNIDO:** The United Nations Industrial Development  
**UNIFEM:** United Nations Development Fund for Women.  
**UNHCR:** The Office of the UN High Commissioner for Refugees.  
**WBCSD:** World Business Council for Sustainable Development.  
**WEF:** Energy Industry Partnership (EIP) of the World Economic Forum.  
**WRI:** World Resource Institute.  
**3P reserves:** most probable and likely proven reserves.

# Your opinion matters

Comments from the readers are important, any suggestion, clarification or comment with respect to this Report may be addressed through the following:

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You will also find additional information concerning this Report at the Pemex website ([www.pemex.com](http://www.pemex.com)), section "Sustainable Development". Earlier reports are available at: <http://desarrollosustentable.pemex.com>

Your comments are appreciated; they will be helpful during the preparation of the next Report.







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