

QUARTERLY FOCUS:

PLANNED PROJECTS WHICH MAY PROMOTE NATURAL GAS TRADE WITH MEXICO

INTRODUCTION

In the *Quarterly Report of Natural Gas Imports and Exports* (“*Report*”) issued for the second calendar quarter of 1995, our *Quarterly Focus* feature provided some historical statistics pertaining to natural gas trade between the United States and Mexico, information about recent trade trends and brief descriptions of six proposed pipeline projects which, if built, would facilitate natural gas trade between the two countries. The principal purpose of this *Focus* is to provide a follow-up to the report issued two years ago.

This *Focus* is comprised of **three sections**. The **first section** provides a broad overview of what has taken place over the past two years with regard to natural gas trade between the two countries. The overview includes a discussion of recent natural gas trade trends, changes brought about by the North American Free Trade Agreement (“NAFTA”), existing tariffs and fees imposed by Mexico and the United States on natural gas trade between the two countries, changes made in Mexico’s energy regulatory infrastructure and its efforts to privatize certain elements of its energy industry. The **second section** discusses the trends and infrastructure of the Mexican gas industry including trade developments since the 1980’s. This section also examines the demand for U.S. gas that may be generated within Mexico from projects sponsored, in part, by private investments. **Section three** looks at the potential for increased U.S. gas export deliveries to Mexico which may be associated with filings made with the Federal Energy Regulatory Commission (FERC) to construct new pipelines. This section also includes specific descriptions of six planned natural gas pipelines which would facilitate an increase in natural gas trade between the United States and Mexico.

I. OVERVIEW

Following the passage of NAFTA, which became effective in January 1994, and subsequent policy and regulatory changes in 1990’s, the Mexican Government has made steady progress in opening up its energy sector to competition and private sector involvement. NAFTA was relatively silent on energy issues; however, it acted as an impetus for the Mexican Government to take a number of measures in the early 1990’s which promoted greater domestic and foreign investment in independent power production, the petrochemical industry, and the electricity cogeneration sector. However, 1995 proved to be a turning point with respect to changes in Mexico’s energy industry sector, particularly the natural gas industry. In 1995, Mexico took a series of legislative, policy and regulatory actions pertaining to the energy sector which established the legal and regulatory framework necessary for domestic and foreign investors to become more active players in its natural gas industry. The reforms of the energy industry that were adopted in 1995 were seen by the Mexican Government as critical to its economic development and the improvement of Mexican standards of living. The principal features of Mexico’s new energy policy were outlined in the National Development Plan 1995-2000 (NDP), which was announced in May 1995. The specific energy goal of the NDP is to promote the rapid and efficient expansion of the energy sector in order to meet the country’s growing energy demand and infrastructure expansion needs.

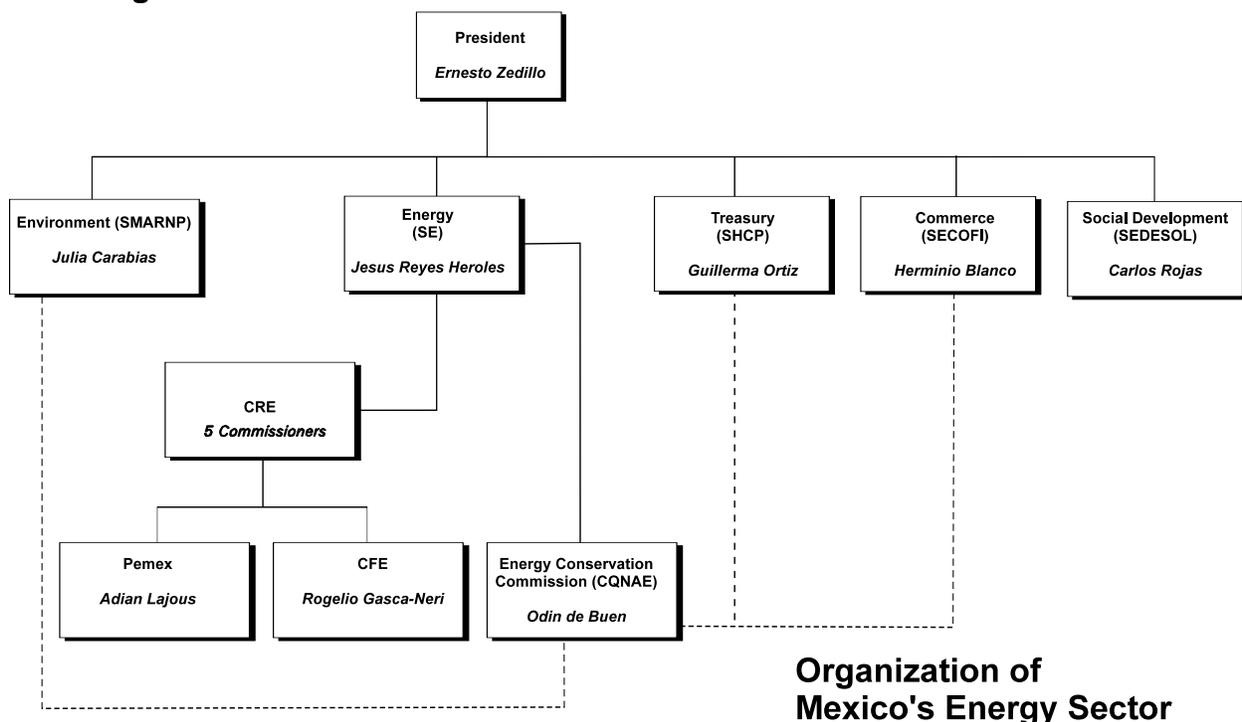
During 1995, the Mexican Government made a number of institutional and regulatory changes which were designed to carry out the energy sector policy guidelines and strategies outlined in the NDP. In May 1995, several articles of the Regulatory Law of Article 27 (petroleum by-laws) of the Constitution were modified. As a

result, private participation in natural gas storage, transportation and distribution activities is now allowed and Petroleos Mexicanos' (PEMEX) monopoly is confined to natural gas exploration and production, basic petrochemicals and "first-hand sales." In October 1995, the Mexican Congress passed the Energy Regulatory Commission (CRE) Law which redefined the CRE as an autonomous regulatory agency under the Agency of the Secretary of Energy (SE). Although the CRE had been in existence since January 1994, this law strengthened and extended its power by giving it regulatory oversight of both the natural gas and electricity industries. Prior to this law, the CRE's duties were rather limited in that it was employed by the SE as a consultative body which provided it with technical advice. After this law, the CRE was given the responsibility to regulate the construction, operation and ownership of power generation and natural gas transportation, storage and distribution systems. In utilizing its new authorities, the CRE adopted new rules in October 1995 designed to open certain oil and natural gas pipeline and distribution projects to a competitive bidding process.

Figure 1 depicts the current organization of Mexico's energy sector. As shown in **Figure 1**, Mexico's energy regulatory regime is directed through its state energy ministry, SE. The SE has responsibility over CRE, a regulatory agency similar to the FERC, Mexico's two state energy monopolies, PEMEX and the Comision Federal de Electricidad (CFE), the state federal electricity commission, and the Energy Conservation Commission (ECC). The ECC is an interdepartmental organization responsible for promoting energy conservation and renewable energy sources. The CFE, the national electric utility, has operational control over the generation, transmission, and distribution of electricity, including the import and export of electricity.

With the implementation of NAFTA, a majority of U.S. exports to Mexico have become exempt from Mexican tariffs. However, as an increasing number of non-energy commodities have become duty-free, Mexico's current 6 percent tariff on natural gas imports continues and has become a subject of controversy with U.S. natural gas producers and some Mexican consumers. Most

Figure 1



U.S. gas exported to Mexico is subject to this tariff; however, certain trade “zones” within 20 kilometers (12.5 miles) of the international border may apply for and receive exemptions from Mexico’s Finance Ministry. One such exemption recently granted was for gas exported to the new gas distribution system being developed in Mexicali, Baja California, Mexico. Although under provisions of NAFTA the gas import tariff is scheduled to be phased out one percent each year until it is eliminated by the end of 2002, a consortium of U.S. energy trade groups, led by the Natural Gas Supply Association (NGSA), petitioned the Office of the U.S. Trade Representative (USTR) on June 13, 1997, requesting that the USTR represent their grievance to the Mexican Government for early removal of this gas tariff. The group’s petition contends that the tariff discourages exports by U.S. producers and is unfair in that the U.S. does not impose a similar tariff on Mexican gas coming into the United States. PEMEX, who is not subject to this tariff, argues that the tariff should be phased out as currently scheduled because its immediate removal would jeopardize its competitiveness in supplying natural gas supplies to the Monterrey area. The 6 percent gas import tariff also is seen by U.S. producers and sponsors to pipeline projects as a major obstacle to building more pipeline to serve growing markets in Mexico. Although no similar tariff is imposed on Mexican gas, the U.S. Customs Service does levy a 0.19% merchandise processing fee on natural gas imports coming from Mexico. This fee, in accordance with NAFTA, is scheduled to be eliminated on June 30, 1999.

II. UNITED STATES/MEXICO NATURAL GAS TRADE OPPORTUNITIES

According to the Energy Information Administration (EIA), DOE, Mexico has sizeable proven natural gas reserves of nearly 68 trillion cubic feet (Tcf) [country analysis of Mexico (5/2/97) on EIA’s Web Site at <http://www.eia.doe.gov/emeu/cabs/mexico>]. Although Mexico has substantial gas reserves, Mexico traditionally has seen natural gas production as a mere by-product to the

development of its oil industry. It is estimated that 85 percent of Mexico’s current gas production is associated with the production of oil [*Opportunities and Obstacles: Natural Gas Regulations, Infrastructure, and Markets in Mexico*, Crossborder, Inc., November 1996, p.4] The Interstate Natural Gas Association of America (INGAA), in a recent study, stated that “higher rates of return on oil projects have meant that investment dollars have been channeled into oil projects rather than gas projects over the past decade, leading to lower levels of activity in gas exploration and development.” [INGAA, *The Outlook for Imported Gas*, prepared by the Brattle Group, February 1997, page 28]. Further, as shown in **Figure 2**, Mexico’s current gas producing areas are concentrated in the south-central and Gulf Coast region of the country. Therefore, the gas production areas of Mexico are not strategically located to meet the increasing demand for natural gas in the expanding “maquiladora” industrial and assembly plant areas of northern Mexico in the states of Baja California, Sonora, Chihuahua, Coahuila, Nuevo León, and Tamaulipas. Those industries designated “maquiladora” status are exempt from paying tariffs on imported raw materials and components (usually from the U.S.) provided the final product is exported back to the United States. For final products exported back to the United States, they “are subject to duty only on the value added by the manufacturing process.” [*Mexican Demand for U.S. Natural Gas*, Argonne National Lab, DOE, ANL/EAIS/TM-104, Sept. 1993] Given the fact that almost all of these maquiladora facilities are located in Mexico’s northern States, U.S. gas producers are concentrating on these border areas for potential customers. In addition, PEMEX has built few gas pipelines to serve this part of Mexico; therefore, U.S. companies also are seeking opportunities to build pipelines and distribution systems, as well as supplying them with gas.

Natural gas trade between the United States and Mexico was relatively dormant during much of the 1980’s. The Mexican Government actually suspended gas export sales to the United States from September 1984 until December 1993, representing over a nine year gap in sales. During this nine year period of suspended gas

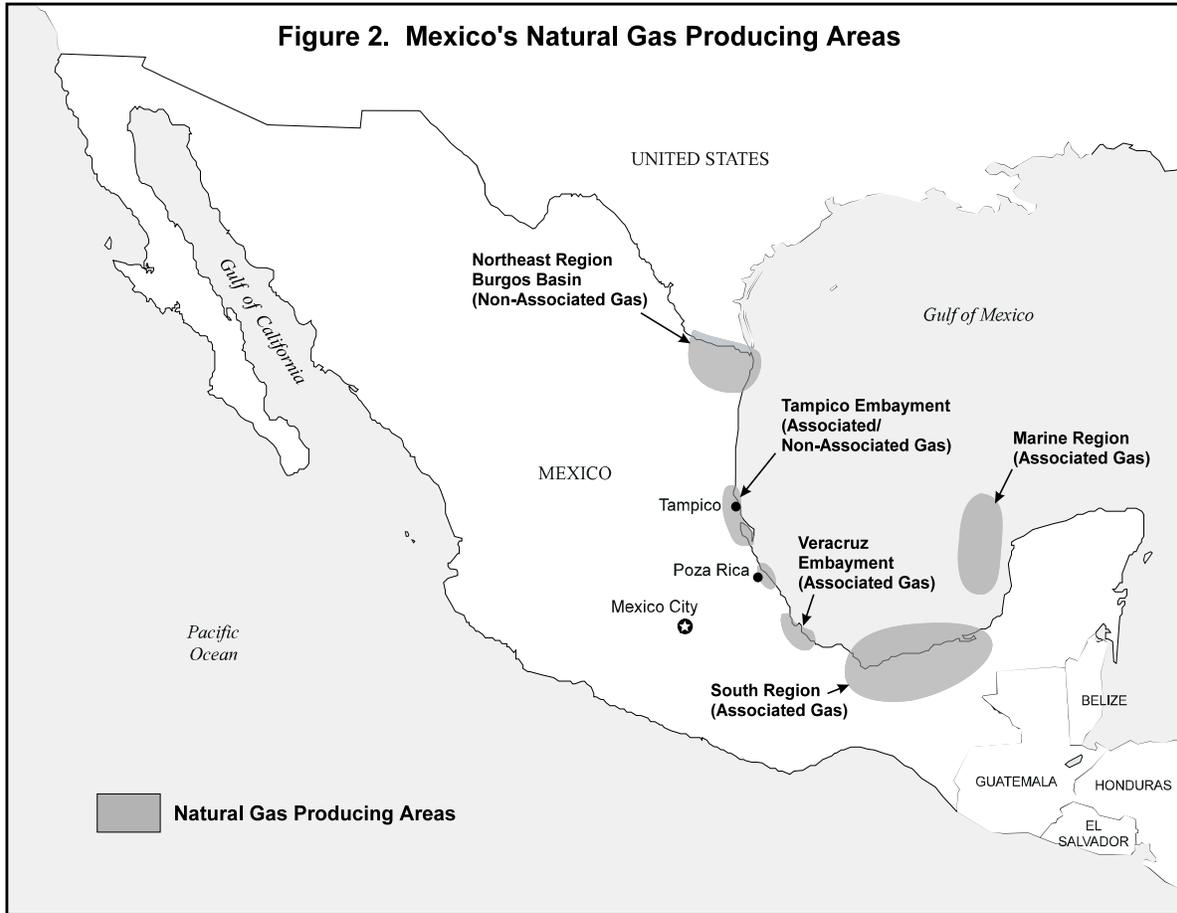
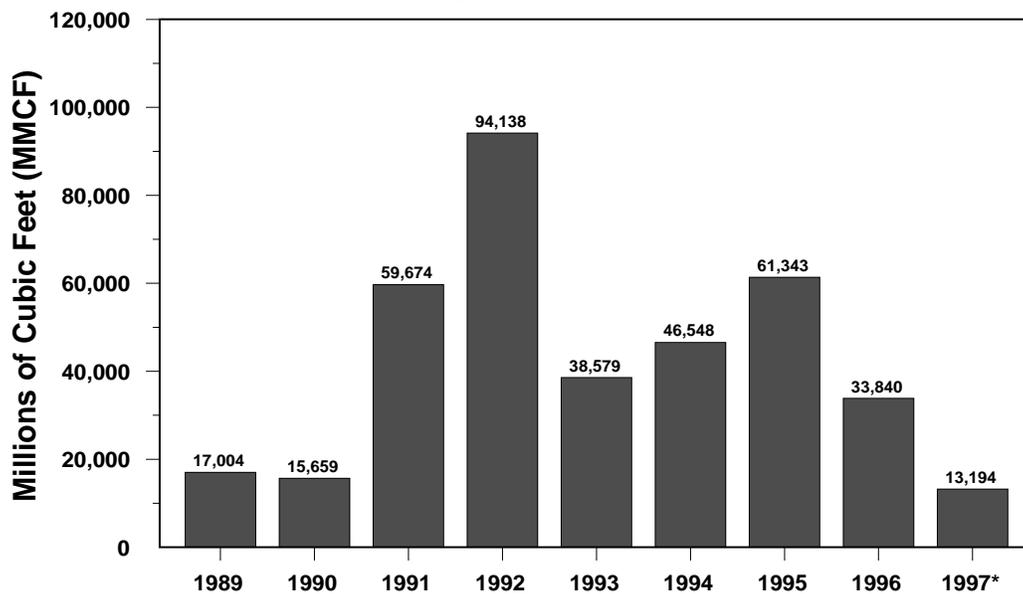


Figure 3 **NATURAL GAS EXPORTS TO MEXICO**
1989 - 1997



*1st 6 Months

export sales, the Mexican Government policy was to develop a domestic market for its gas and to concentrate on exporting oil or higher value products like petrochemicals. With regard to U.S. natural gas exports to Mexico, the 1980's sales remained at a very low level (around 2 billion cubic feet (Bcf) per year) until 1989. As shown in **Figure 3**, U.S. gas exports to Mexico started to climb in 1989, reaching 17 Bcf, and set a record of 94 Bcf in 1992. Export volumes have gradually eroded since then, falling to about 34 Bcf during 1996. Though relatively a small number, gas import volumes from Mexico rose sharply in 1996 to 13.9 Bcf, or an increase of 107% over the 1995 level of 6.7 Bcf. Based on data filed by importers with our office, gas imports are running twenty percent ahead of last year's level, as imports from Mexico reached 11.5 Bcf during the first six months of 1997. This compares with 9.6 Bcf imported during the first half of 1996. The same reports filed with our office also indicate that gas exports are running at nearly the same level this year as they experienced last year; for the first half of 1997 exports totaled 13.2 Bcf, compared with 13.8 Bcf during the first six months of 1996.

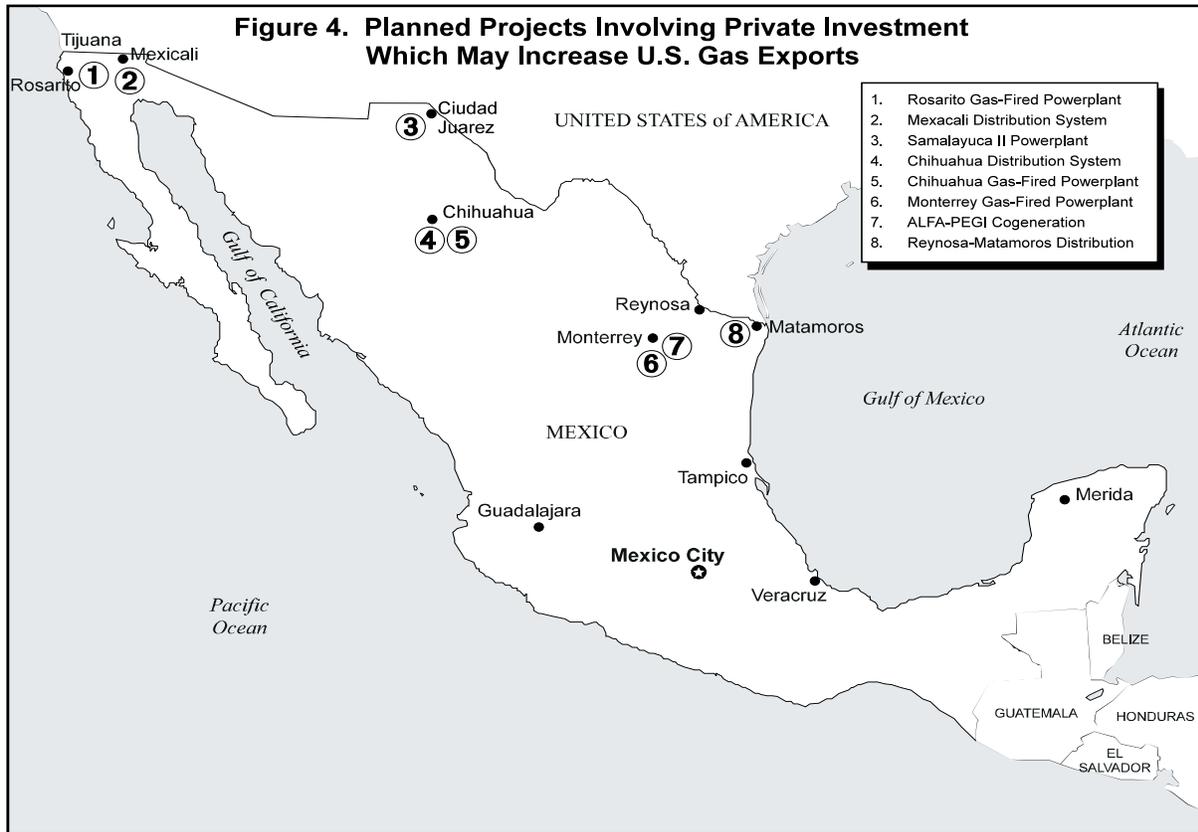
Mexico's commitment to better air quality is also expected to be a major impetus for increasing the country's demand for natural gas between now and 2005. Beginning in 1998, more stringent air quality regulations are scheduled to take effect in Mexico [INGAA, *The Outlook for Imported Natural Gas*, page 31]. In particular, the regulations will target cleanup of Mexico's major urban centers such as Mexico City, Chihuahua, Guadalajara and Tijuana. Included in the pollution abatement plans are both the construction of new gas-fired electric generating facilities and the conversion of older powerplants by CFE from using high sulfur oil to natural gas. Industry experts project that Mexico's natural gas use for fueling the generation of electricity could increase dramatically, increasing from 18 percent of the fuel mix experienced in 1995 to over 53 percent by 2005 [*Natural Gas Week* (4/14/97), p.9]. Mexico's Secretary of Energy, Jesus Heróles, recently estimated that CFE's conversion of nine existing oil-fired power plants to gas would increase demand for natural gas by another 700 MMcf/day. He further expects that

the overall Mexican demand for natural gas will increase from 2.4 Bcf/day in 1995 (not including gas used by PEMEX for its own consumption) to 4.2 Bcf/day in 2005, or a 75 percent increase [SE Press Release (July 1996) at Web Site <http://www.access.degex.net/~ermine/adv.>].

Figure 4 identifies eight proposed projects in northern Mexico which are planning to use natural gas and are expected to be potential candidates for purchasing natural gas supplies from the United States. Most of these projects were discussed in a September 1996 study commissioned by the U.S. Trade and Development Agency [*Infrastructure Opportunities in Mexico: Getting Good Projects on Track*]. A portion of this study concentrated on reviewing planned energy projects that were at least partially funded by the private sector. **Figure 4** identifies and shows the approximate location of the eight planned energy projects in northern Mexico scheduled to be operational within the next five years which may substantially increase the demand for natural gas supplies. The projects consist of four powerplants, three gas distribution systems and one cogeneration facility. If all of these projects became operational, our office estimates that natural gas demand would increase approximately 1,200 MMcf/day, or 438 Bcf/year.

III. POTENTIAL DEMAND FOR U.S. GAS FROM PLANNED U.S./MEXICAN PROJECTS

PEMEX over the past year has increased its natural gas production to about 4.3 Bcf/day and continues to advance toward its goal of producing about 5 Bcf/day by the year 2000. This increased production has resulted in some growth in gas exports to the United States as its supply during certain times of the year sometimes has outstripped domestic demand. Since Mexico does not have adequate gas storage facilities, the surplus supplies are sold into the U.S. export market. PEMEX has indicated that it intends to construct a 300 MMcf/day export "header" pipeline to allow it to sell gas into the Texas interstate markets, but the timing and details of that proposal remain unknown. In a



measure to further increase its natural gas production, particularly from its non-associated gas reserves, PEMEX in December 1996 called for bids to further develop its gas reserves located in the Burgos Basin in northeastern Mexico (see Fig. 2). Although PEMEX wants to produce 180 MMcf/day from this Basin, the project is seen in doubt due to the fact that PEMEX is only willing to pay foreign contractors a set fee for exploratory work and none of the production profits. Despite recent efforts by PEMEX to increase gas production and possibly increase export sales to the United States, most forecasters expect that the United States will continue to be a net exporter in the foreseeable future. However, there are considerable differences among the forecasters as to the extent the United States will remain a net exporter [INGAA, *The Outlook For Imported Natural Gas*, III-27].

Most of these forecasters base their forecasts on the assumption that northern Mexico will experience an enormous increase in demand for natural gas over the next 10-15 years. Some of

the drivers behind this expected growth in gas demand include a fast growing economy; more stringent environmental standards; Mexican Government's energy policy to promote the use of natural gas vis-a-vis oil; the expected growth in electricity demand and CFE's plans to convert many existing power plants to use natural gas rather than oil. Most forecasters, including the EIA [*Natural Gas 1996 Issues and Trends*, DOE/EIA-0560(96) p. 97], also note that PEMEX's current gas producing areas and pipeline system are concentrated in the central and coastal sections of the country and gas pipeline capacity serving northern Mexico is inadequate to supply near-term projects which plan to use natural gas. Further, U.S. natural gas suppliers seem to be better positioned to serve the northern Mexico region not only because of the area's proximity to U.S. production, but also because Mexico lacks sufficient gas storage facilities necessary to provide reliable service to these customers. PEMEX's current lack of adequate gas storage and reliability of service problems were demonstrated last year when PEMEX's Cactus gas processing plant blew-up,

which resulted in a reduction of its system-wide gas processing capability by a third.

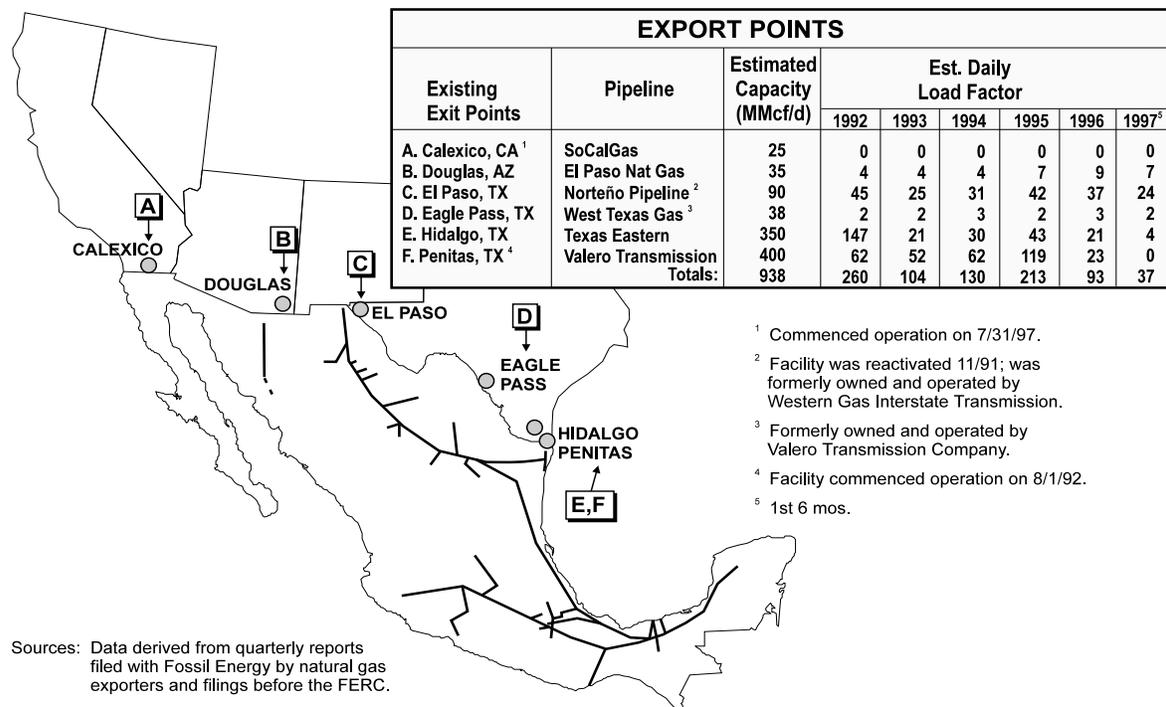
Figure 5 is a map showing the identity and location of the six existing natural gas pipelines facilitating cross-border gas trade between the United States and Mexico. The Table included with **Figure 5** estimates the daily capacities in MMcf for all six of the pipelines and provides their actual average daily throughputs from 1992 through the first six months of 1997. As shown, our office currently estimates that the average aggregate throughput capacity of these six pipelines totals 938 MMcf/day, or 342 Bcf per year. Southern California Gas Company's (SoCalGas) pipeline interconnect at Calexico, California is the newest pipeline. The pipeline, which became operational on July 31, 1997, has an initial capacity of 25 MMcf/day and was built to transport gas to the city of Mexicali.

Over the past five years, there have quite a few proposals filed with the FERC to build additional pipeline capacity to serve the anticipated growth in Mexican gas demand. However, a number of these proposed projects are no longer viable because of company mergers, competition, and changing markets, i.e., Pacific Interstate Offshore

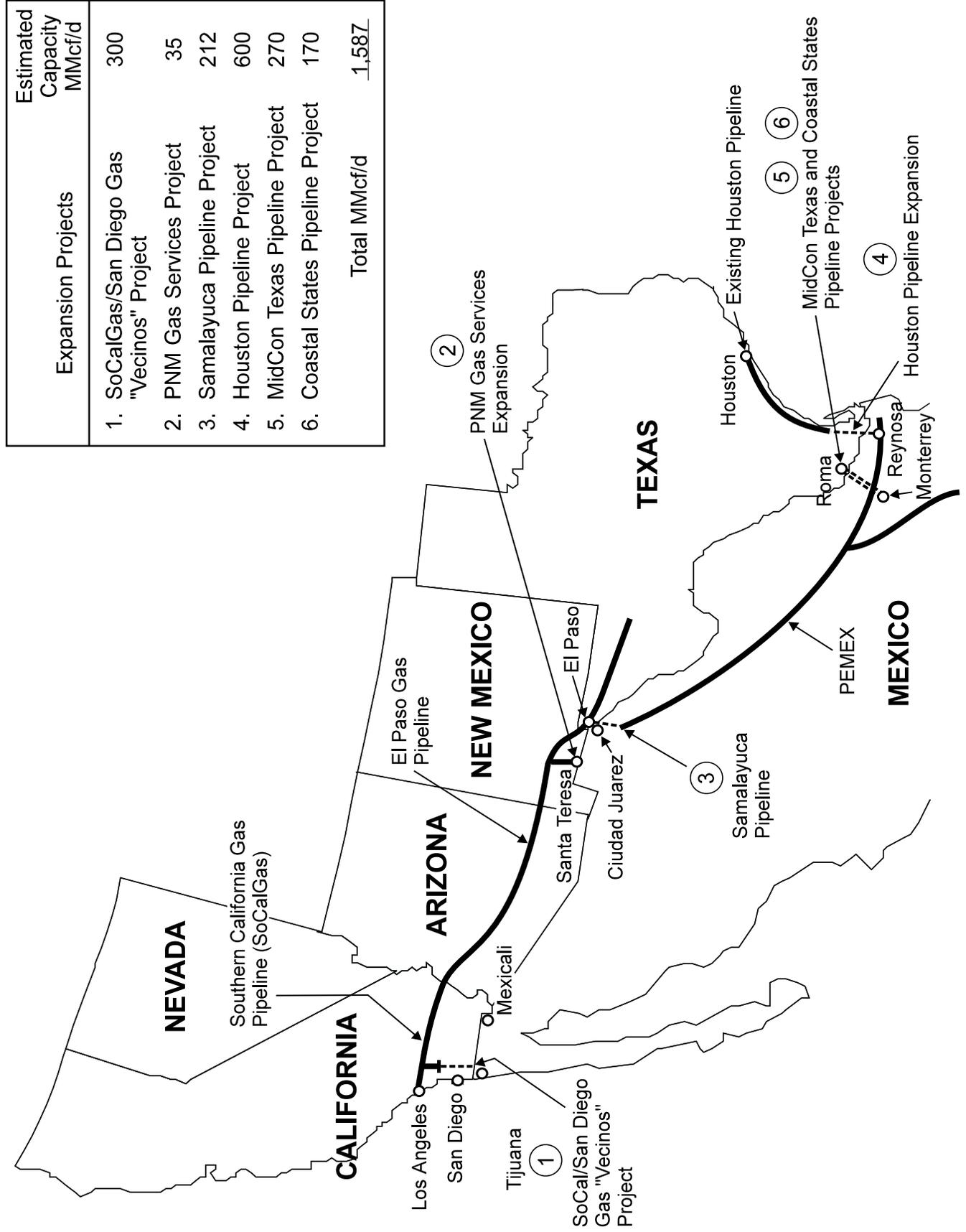
Pipeline, El Paso Yuma Lateral, Tenneco Mexicali Baja Project. **Figure 6** lists six proposed pipelines which are considered by their sponsors to be viable pipeline projects. If all of these pipelines were built, they would increase the average throughput capacity of the cross-border pipelines by 1,587 MMcf/day, or 579 Bcf per year. Inasmuch as several of these pipeline projects seem to have targeted the same markets, e.g., Monterrey metropolitan area, it seems highly unlikely that all of the projects will be built. However, it seems realistic that several of these proposed projects will be built within the next few years and raise the throughput capacity by about 400 Bcf per year; if this were to occur, it would more than double the existing capacity of 342 Bcf. El Paso's Samalayuca Pipeline is currently under construction and is expected to be completed by mid-December 1997.

The following pages provide brief descriptions of the six proposed pipeline projects, as well as SoCalGas' newly operational pipeline. The project descriptions contain information on ownership/sponsorship, location, pipeline size and capacity characteristics, date of projected commercial start-up, capital costs, markets to be served, and project/regulatory status.

Figure 5. Natural Gas Pipeline Interconnects on the United States and Mexican Border



**Figure 6. Planned Natural Gas Pipeline Projects
Designed to Facilitate Cross-Border Trade**



COASTAL STATES GAS TRANSMISSION PROJECT

Owner(s): Coastal States Gas Transmission Company (Coastal) is a Texas intrastate pipeline incorporated in the State of Delaware.

Location/Description: Coastal plans to build a new cross-border natural gas pipeline facility near Roma, Texas, and Ciudad Miguel Aleman, Tamaulipas. The facilities would consist of approximately 0.25 mile of 24-inch diameter pipe which would commence in Texas approximately 650 feet from the international boundary. This proposed facility would connect at its northern end with approximately 18 miles of new pipeline, which would be subject to the jurisdiction of the Texas Railroad Commission. At its southern end, the planned cross-border facility would interconnect with facilities to be constructed by its Mexican affiliate, Coastal Gas de Mexico S. De R.L. de C.V., (Coastal Mexico). The pipeline to be built by Coastal Mexico would interconnect with the existing natural gas pipeline system of PEMEX.

Summary: On September 5, 1996, Coastal filed an application (CP96-770) with the FERC seeking authority pursuant to section 3 of the Natural Gas Act, and a Presidential Permit (pursuant to Executive Order No. 10485, as amended) for the siting, construction, operation, and maintenance of the proposed border facilities. Coastal indicated in its application that the proposed facilities were intended to further facilitate the exportation of natural gas to Mexico.

Length/Diameter: 650 feet/24-inch

Projected In-Service Date: 1998

Daily Pipeline Capacity: 170,000 Mcf

Capital Costs: Not Available

Proposed Markets: Unidentified Mexican Markets

Status: On January 21, 1997, the FERC granted to Coastal a Presidential Permit and section 3 authorization to site, construct, operate and maintain the proposed new cross-border facilities. FERC stated that its approval was conditioned upon Coastal's compliance with the environmental conditions set forth in its Order. To date,

Coastal States Gas Transmission Company (cont'd)

Coastal Mexico has not yet filed with the Mexican Energy Regulatory Commission seeking permission to build the pipeline facilities in Mexico, nor has Coastal filed any application with the Texas Railroad Commission requesting permission to build the proposed upstream pipeline which would interconnect with the planned cross-border pipeline.

To date, DOE has not received any applications to export natural gas to Mexico which would be associated with this project.

HOUSTON PIPE LINE COMPANY PROJECT

Owner(s): Houston Pipe Line Company (Houston), a subsidiary of Enron Corp.

Location/Description: This project involves Houston constructing and operating a natural gas pipeline which would originate in Hidalgo County, Texas, and connect with a PEMEX pipeline on the Mexico/U.S. border near Reynosa, Tamaulipas, Mexico. The proposed pipeline would be considered a "header", or a pipeline which would connect directly with four or five other major pipelines, thereby offering trade opportunities with Mexico for a large number of parties.

Summary: The proposed project involves the construction of 1,373 feet of pipeline beneath the Rio Grande River. The Presidential Permit issued by the FERC requires Houston to provide the International Boundary and Water Commission (IBWC) with plans regarding the construction, connection, operation and maintenance of the border facility. The permit states that the review and approval by the IBWC will assure that any construction across the Rio Grande River will not cause a change in the flow of the river and a consequent change of the international boundary.

Length/Diameter: 22 miles/36-inch

Projected In-Service Date: 1999 (?)

Daily Pipeline Capacity: 600,000 Mcf

Capital Costs: Not Available

Proposed Market(s): Mexico (industrial markets in Reynosa and Monterrey)

Status: The application was approved by the FERC on September 21, 1992, in Docket No. CP92-417. Since the completion and operation of Valero Transmission, L.P.'s pipeline facility at Penitas, Texas, in August 1992, there is less reason to build this pipeline. Enron, the sponsor of this proposed pipeline, believes that it continues to be a viable future project if various planned natural gas-fired power plants are constructed over the next few years at Yucatan, Monterrey, and elsewhere. However, Enron has no current plans to begin construction.

MIDCON TEXAS PIPELINE CORPORATION

Owner(s): MidCon Texas Pipeline Corporation (MidCon Texas), a Texas intrastate pipeline.

Location/Description: MidCon Texas plans to build a new cross-border natural gas pipeline near Roma, Texas, and Ciudad Miguel Aleman, Tamaulipas. The facilities would consist of an 800 foot, 24-inch diameter pipeline and one meter. The proposed new cross-border facility would interconnect with 15-miles of new pipeline to be built upstream in Texas and new pipeline facilities to be built in Mexico by its Mexican affiliate, MidCon Gas Natural de Mexico, S.A. de C.V.(MidCon Mexico). MidCon Mexico would take delivery of the natural gas near Ciudad Miquel Aleman, and transport the gas 100 miles to Monterrey, Mexico.

Summary: On June 19, 1996, MidCon Texas filed an application (CP96-583) with the FERC seeking authority pursuant to section 3 of the Natural Gas Act, and a Presidential Permit (pursuant to Executive Order 10485, as amended), for the siting, operation, and maintenance of the proposed cross-border facilities. MidCon, in its application, indicated that the intended use of the proposed facilities would be to export natural gas to various customers in the Monterrey, Mexico area.

Length/Diameter: 800 feet/24-inch

Projected In-Service Date: 1998/1999

Daily Pipeline Capacity: 270,000 Mcf

Capital Costs: Not Available

Proposed Market(s): Monterrey, Mexico (electric generating facilities, LDCs, industrial users)

Status: On October 17, 1996, Mexico's Comision Reguladora de Energia (CRE) approved MidCon Mexico's application to construct, own, operate and maintain the 92-mile pipeline from near the U.S.-Mexico border to Monterrey, Nuevo Leon. However, MidCon Mexico discovered problems with the approved route and is presently seeking an alternate route to Monterrey which largely would follow an existing highway right-of-way. In order for MidCon Texas to construct its 92-mile pipeline in 1998, it will need to obtain the required permits from the federal, state and municipal governments in the near future.

MidCon Texas Pipeline Corporation (cont'd)

On November 26, 1996, the FERC granted to MidCon Texas a Presidential Permit and section 3 authorization to site, construct, operate and maintain the proposed cross-border facilities. FERC stated that its approval was conditioned upon MidCon Texas' compliance with environmental conditions set forth in its Order. On July 11, 1997, MidCon refiled with the FERC (CP96-583-001) to amend its planned pipeline border crossing by moving it about two miles from the original export point. To date, MidCon Texas has not yet filed an application with the Texas Railroad Commission requesting to build the proposed upstream pipeline which would interconnect with the planned cross-border pipeline.

To date, DOE has not received any applications to export natural gas to Mexico which would be associated with this project.

PNM GAS SERVICES PROJECT

Owner(s): Public Service Company of New Mexico

Location/Description: Public Service of New Mexico-Gas Services (PNM-GS), a Division of Public Service Company of New Mexico, plans to construct and operate a new pipeline facility at the United States/Mexico border near Santa Teresa, New Mexico. The pipeline would connect with a PEMEX pipeline and would supply an industrial park just across the border in Chihuahua, Mexico. In order to facilitate these exports, PNM-GS also proposes to build a 22-mile pipeline connecting its existing distribution system around Sunland Park, New Mexico, to a new tap on El Paso Natural Gas Company's system. This would allow PNM-GS to serve existing and potential customers in New Mexico, in addition to Mexico.

Summary: PNM-GS estimates that it would sell 4 Bcf of gas per year to customers of the industrial park in Mexico. However, PNM-GS does not have any contracts at this time.

Length/Diameter: 150 feet/8-inch

Projected In-Service Date: 1999

Daily Pipeline Capacity: 35,000 Mcf

Capital Costs: \$3 million

Proposed Market(s): Mexico (Santa Teresa Industrial Park), New Mexico

Status: The FERC approved the new border lateral on August 6, 1993 (Docket No. CP93-98). To date, no construction has started on this project.

In an Order issued September 16, 1997, DOE approved a request by the Public Service Company of New Mexico for a two-year blanket authorization to import up to 300 Bcf and export up to 300 Bcf of natural gas from and to Canada and Mexico (Order 1299, Docket 97-61-NG).

SAMALAYUCA PIPELINE PROJECT

- Owner(s):** 50/50 joint venture between business between units of El Paso Energy Corporation (El Paso Natural Gas Co. and El Paso Energy International Co.) and Pemex Gas Y Petroquimica Basica.
- Location/Description:** The 45-mile Samalayuca Pipeline Project consists of 22 miles of 24" diameter pipeline in the United States and 23-miles of 24" diameter pipeline in Mexico. On the U.S. side of the border, El Paso is building the new Samalayuca pipeline lateral which will connect with its existing natural gas system near the Hueco compressor station and will cross the international border near Clint, Texas. Once in Mexico, the jointly owned El Paso and Pemex pipeline will travel to the Samalayuca Power Plant located about 20 miles south of Ciudad Juarez, Mexico.
- Summary:** The project is designed principally to serve the Samalayuca II Power Plant, which is currently under construction. The new gas-fired 700 MW facility will consist of three 233 MW units. The first unit is scheduled to be operational in September 1998; the second unit will be operational by December 1998; and the third unit start-up should occur by May 1999. In addition, natural gas transported on this pipeline will also be used to deliver natural gas to Samalayuca I Power Plant which was converted from burning fuel oil to natural gas, and to Pemex for use in Ciudad Juarez and Chihuahua City. The natural gas fuel requirement for the proposed new plant and adjacent existing plant is estimated to be 172 MMcf/day, with another 40 MMcf/day going to Pemex. The Samalayuca II Power Plant is being built by a four-company consortium which includes El Paso Energy International, International Generating Company (a joint venture between Bechtel and PG&E Enterprises), GE Power Systems and GE Capital Services, and ICA S.A. de C.V. of Mexico.
- The Samalayuca II Power Plant is important because it represents the first large capital venture in Mexico not guaranteed by governmental loans. Furthermore, the facilities are being built under a build-lease-transfer arrangement whereby the Comision Federal de Electricidad (CFE), the federal electric public utility, will lease the plant for 20 years after it is constructed, and then it would be turned over to CFE.
- Est. In-Service Date:** December 1997
- Daily Pipeline Capacity:** 212,000 Mcf

Samalayuca Pipeline Project (Cont'd)

Capital Cost: \$35 million

Proposed Market(s): Samalayuca I and Samalayuca II Power Plants

Status: On March 16, 1993, El Paso filed an application with the Federal Energy Regulatory Commission (FERC) seeking authorization pursuant to sections 3 and 7 of the Natural Gas Act to construct and operate a new pipeline facility (CP93-252-000 and CP93-253-000). El Paso also sought a Presidential Permit to operate a new international border-crossing facility. El Paso's application, as amended, was approved by the FERC on June 11, 1997. The Comision Reguladora de Energia (CRE) granted the permit for the Mexican portion of the pipeline on July 4, 1997. The CRE is a new regulatory agency established in October 1995 to issue rate design tariffs, and make other regulatory decisions, such as certificates for the construction and operation of natural gas pipelines in Mexico. Construction on the Mexican portion of the pipeline began August 11 and construction on the U.S. portion of the pipeline will start in September.

SAN DIEGO GAS AND ELECTRIC/SOUTHERN CALIFORNIA GAS
"PROJECT VECINOS"

Owner(s): San Diego Gas and Electric Company (SDG&E)
Southern California Gas Company (SoCalGas)

Location/Description: SDG&E anticipates the construction of a new international border crossing facility at the United States/Mexico border near San Diego, California north of Tijuana, Mexico. The new facilities will consist of a new meter station and about 5 miles of pipeline.

Summary: The new pipeline is anticipated to interconnect with pipeline facilities in Mexico that are anticipated to be built on behalf of Mexico to serve existing, and new power plant facilities located at Rosarito, Mexico. The service to be provided is anticipated to be the transportation of natural gas from a delivery point into SoCalGas' transportation system, through SoCalGas' system, into and through SDG&E's system, to the new pipeline facilities to be built by SDG&E to the international border. Under the umbrella of Project Vecinos is all transportation service to Baja, California, including service already being provided by SoCalGas to Mexicali.

Length/Diameter: Approximately 5 miles/up to 36-inch

Projected In-Service Date: 1999

Daily Pipeline Capacity: Up to 300,000 Mcf

Capital Costs: Up to \$7 million

Proposed Market(s): Electric generation facilities and other end-users in northern Baja, California

Status: The FERC issued an order authorizing this project on August 6, 1993 (Docket No. CP93-117).

Mexico has not approved the project. To date, CFE has not finalized its proposal for the service of natural gas to its power plants at Rosarito.

To date, DOE has not received any applications to export natural gas to Mexico associated with this project.

SOUTHERN CALIFORNIA GAS COMPANY'S CALEXICO PROJECT

Owner(s): Southern California Gas Company (SoCalGas)

Location/Description: SoCalGas recently has constructed a new international border-crossing facility at the United States/Mexico border near Calexico, California. The new facilities consist of a new meter station and approximately 600 feet of 16" diameter pipeline.

Summary: The new pipeline interconnects with pipeline facilities in Mexicali that were built by Distribuidora de Gas Natural de Mexicali (DGN). DGN, the newly formed natural gas distribution system in Mexicali, Mexico, will provide sales and distribution services in and around the city, as well as transportation to marketers. DGN is owned by three partners: Proxima Gas, S.A. de D.V.; Enova de Mexico, S.A., a subsidiary of Enova International; and Pacific Enterprises International-Mexico, a subsidiary of Pacific Enterprises International. SoCalGas has indicated that this new pipeline is part of "Project Vecinos", a joint venture of SoCalGas and San Diego Gas and Electric Company to market gas to Mexico (see description of Project Vecinos on page xvii).

This pipeline project is making natural gas available to Mexicali for the first time. Mexicali, a city of about 750,000 residents, is expected to show considerable demand for natural gas as there is a heavy concentration of industrial complexes in and around the city. The new border facilities initially will ship about 5 to 7 MMcf/day to Mexicali, but this volume is expected to average 15 MMcf/day by the year 2000.

In-Service Date: July 31, 1997

Daily Pipeline Capacity: 25,000 Mcf

Capital Costs: \$320,000

Market Served: Mexicali, Mexico

Status: On February 1, 1994, SoCalGas filed an application with the FERC in Docket CP94-207, pursuant to section 3 of the Natural Gas Act, and Presidential Permit pursuant to Executive Order No. 10485, as amended, seeking authority to site, construct, and operate a new international border-crossing facility. On September 1, 1994, the FERC approved SoCalGas' application.

Southern California Gas Company's Calexico Project (Cont'd)

On December 21, 1994, SoCalGas filed an application to amend its authorization by relocating the pipeline and metering station 4.8 miles east of the previously authorized location. This amendment was approved by the FERC on May 22, 1995. On January 31, 1997, SoCalGas filed a request with the FERC to amend the authorizations it had received in 1994 and 1995 by moving the location of the pipeline 1.3 miles east of the approved site. On May 16, 1997, the FERC approved SoCalGas' request to move the site of the pipeline.

On June 27, 1997, the DOE issued a two-year blanket import/export authorization to DGN allowing it to import Canadian natural gas and to export natural gas to Mexico. DGN notified the DOE that transactions under this authorization commenced on July 31, 1997.