

Case Study:

CHILE

PROJECT:

Regulatory Frameworks and The Role Of State-Owned
Oil & Gas Companies

REGULATORY FRAMEWORKS AND THE ROLE OF STATE-OWNED OIL & GAS COMPANIES IN CHILE

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1 DESCRIPTION OF THE REGULATORY FRAMEWORK

The State has the sole ownership of all deposits of oil, gas and other fossil fuels, as guaranteed by the Political Constitution of Chile.¹ The Constitution also establishes that only the State may explore and develop reservoirs, whether directly, through public companies, or in partnership with private enterprises.

In Chile there is freedom to invest, import and export liquid, gaseous and solid hydrocarbons. Given the scarcity of reservoirs in the country, Chile is presently a net importer of hydrocarbons.

Under this constitutional framework, the Chilean State delegates oil & gas reservoir exploration and exploitation to the State-owned company ENAP,² through operational contracts that can be entered into either individually or as partnerships.

In the liquid hydrocarbons sector, ENAP and its affiliates participate in petroleum exploration and development, refining, storage services, and transportation of refined products. Fuel is distributed to the public by 8 companies for liquid products and 10 for liquefied gas (classified in 4 groups). Similarly, oil pipeline transportation within the country is performed by a liquid fuel transportation company and a liquefied gas marketing company.

Natural gas transportation is through a utility concession contract that makes it mandatory to provide open access to transportation pipelines. Gas distribution also requires a concession and obliges companies to provide the service within their respective concession areas. There are presently 6 companies that distribute gas through the grid, 3 marketing companies, and 8 transportation companies.

The laws governing institutional arrangements for the Chilean hydrocarbons sector are Decree Law 2,224 of 1978, created by the *Comisión Nacional de Energía* (CNE), and Decree Law 18,410 of 1985 (as amended by law 19,613 of 1999), created by the *Superintendencia de Electricidad y Combustibles* (SEC).

This chapter describes the legal regime for hydrocarbons in Chile, starting with a description of its historical evolution, the rulings that are currently in effect for

¹ Article 19°, paragraph 24.

² *Empresa Nacional del Petróleo* (national petroleum company)

exploration and development; transportation, distribution and commercialization; price and energy policies; and a summary of the primary applicable bodies of law.

1.1 *Historic Evolution of the Chilean Hydrocarbons Laws and Policies*³

1.1.1 Evolution of legal frameworks

Since the late 19th and early 20th centuries, petroleum exploration and development, as set forth in the Mining Code,⁴ was under the responsibility of private companies that unsuccessfully carried out various exploration works, primarily in the Magallanes area.

The process of nationalizing hydrocarbons began in 1917, and by 1928 a series of laws had been passed reserving for the State all hydrocarbon deposits that were not in private hands.⁵

From that year forward, both the ownership of all hydrocarbons deposits and the power to explore and develop them were passed to the State. This power was created by the Mining Code of 1932 and Law N° 9,618 of 1950, which established that “The State has absolute, inalienable, imprescribable ownership of all petroleum reservoirs, regardless of what lands they are found on.”

The State function of exploration and development was executed by traditional governmental agencies until 1943, when responsibility for developing the Magallanes area was passed to the *Corporación de Fomento de la Producción* (CORFO). Later in 1946, as a consequence of the first commercial discovery of petroleum, this entity was given the power to develop deposits of hydrocarbons.

In 1950, Law N° 9,618 created the *Empresa Nacional del Petróleo* (ENAP) under CORFO, as the entity that is responsible to execute the State functions and rights regarding the exploration and development of petroleum reservoirs and the refining and sale of all petroleum and derivatives obtained therefrom.⁶ From that time until 1970, ENAP was the only company authorized by Law to carry out those activities in Chile.

³ Summary extracted from the 1989 text “*El Sector de Energía en Chile*” by the *Comisión Nacional de Energía*. Chapter 3, page 62.

⁴ From the year 1888

⁵ Law N° 3,242 of 1917, Law N° 4,109 of 1926, and Law N° 4,281 of 1928.

⁶ Law N° 4,927 of 1931.

Despite ENAP's exclusivity in exploration, exploitation, refining, and sale of the hydrocarbons that were produced, liquid fuels imports enjoyed a degree of freedom due to the shortage of domestic deposits to supply the country's internal demand.

Although historically performed by private companies, wholesale and retail distribution of petroleum derivatives was strictly controlled and regulated by the State.⁷ This control was maintained from 1964 to 1978, during which period only companies that were authorized by the Chilean President could carry out this activity and price caps were fixed by the Ministry of Mining.

The evolution of the laws on natural gas exploration and development in Chile⁸ is the same as for petroleum, and from 1950 to mid 1970, the State enjoyed exclusivity in domestic activities through its company ENAP.

On the other hand, manufactured gas has always been under the legal regime of government concessions granted by the President of Chile. Since 1931, production and distribution of manufactured gas was governed by the Gas Utilities Law, which also applied to liquefied gas until 1978. This law normalized, harmonized and regulated the concession system that companies operated under in 1931, and established the fees, requirements and conditions for granting concessions. The law also regulated all things relating to gas supply, that is: The exploration and development regime, concession expiration, price system, State oversight, and other matters relating to gas distribution.

Gas prices were historically regulated by the State through the system established in the General Gas Law, based on the company's investment capital. Specifically, the law established that companies receiving a net profit of less than 10 % per year over their investment capital were entitled to raise their tariffs. Then again, if net profits over three consecutive years exceeded 15 % of investment capital, the tariff was to be lowered in such wise that, when applied to the last one of those three years, it would have lowered net profits to one half of the surplus over that 15 %. From 182 to this date, the manufactured gas price regime was liberalized.

1.1.2 Review of the Experience gained from the Change

Finally, prior to the present legal framework for liquid hydrocarbons and gas, it is important to summarize the primary experiences gained from the evolution of the policies and laws, whose primary problems or difficulties are summarized below:

⁷ Decree Law N° 519 of 1932.

⁸ Chapter 6, page 180 of "*El Sector Energía en Chile*" by CNE, 1989.

- At the beginning of the 20th Century, when oil and gas exploration and exploitation was done solely by private companies, their efforts were not successful and the State was obliged to intervene and reserve these activities for itself.
- From then on, by law only the State could explore, produce and refine hydrocarbons through ENAP, and no private participation in these activities was possible.
- Likewise, by law only the State could explore and develop natural gas through ENAP, and no private participation in these activities was possible.
- Sectoral development was increasingly monopolized by one state-owned company, which also worked without game rules that would bring sufficient transparency and clarity to the different activities.
- The only state-owned company in the sector, in addition to its business activities, was in charge of playing the regulatory role of a central government agency.
- All importing and marketing of oil products was subject to strict State control, which inhibited all possibilities of competition.
- There was a high degree of discretion and lack of technical and economic criteria in setting fuel taxes and customs duties.
- This, together with the enforcement of multiple exchange rates in the economy and price freezing in an environment of heavy inflation, generated major fuel price distortions. In addition, most of the subsidies used were regressive and inefficient.
- Manufactured gas production and distribution companies were either owned or intervened and managed by the State, and were submerged in a chaotic operational and financial situation.
- Gas prices were totally distorted, which caused enormous operational deficits for the companies and regressive, inefficient subsidies for the public.

1.2 *Legal Regime for Hydrocarbons in Chile*

The policy applied during the 70's to the Chilean energy sector, particularly the oil & gas sector, sought efficient management of State resources among public institutions and private companies.

One of the fundamental tools for implementing this policy was to provide the energy sector with a clear, hierarchical organization that separated regulatory roles from commercial ones. All this was sought through a process of regulatory transformation, as described in the next chapter.

1.2.1 Exploration and Development

Oil & natural gas reservoir exploration and development are delegated by the State to the *Empresa Nacional del Petróleo* (ENAP), or else to private or mixed entities through concessions or delegated operation contracts. ENAP is a State-owned company that can operate individually or in partnership with private enterprises.

According to current legislation, reservoirs are owned by the State, which can exercise the authority to exploit them through ENAP, through government concessions, or through special oil operations contracts (CEOP from the Spanish – *Contratos Especiales de Operación Petrolera*), which are the most used lately.

Oil and natural gas production in Chile covers about 10 % of the country's total demand, and the other 90 % is supplied through imports, primarily from Argentina (77 %) and other countries such as Brazil, Peru and Nigeria.

In the case of gas, the use of natural gas in Chile has arisen from oil exploration and development. This is why most of the discovered reservoirs are in the Magallanes region, and until the end of the 20th Century Punta Arenas was the only city in Chile with a natural gas distribution system.

With regard to manufactured gas, it was initially obtained almost exclusively as a coal derivative, and later came from the naphtha cracking plant in Santiago, from liquefied gas imports, and finally as biogas.

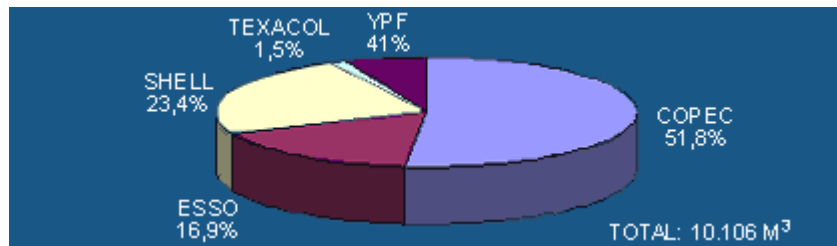
1.2.2 Transportation

Gas transportation and distribution operate under a regime of State-regulated concessions, which are non-exclusive. In Northern Chile there are two inter-connections with the Argentine province of Salta: the *Norandino* gas pipeline and the *Atacama* gas pipeline, which are designated to supply the three power companies of the *Sistema Interconectado del Norte Grande* (SING) and a few mining consumers. In the central zone of the country are the *Gasandes* gas pipelines, which primarily supply power generation plants and industrial / residential consumption in the metropolitan area (Santiago), and the *Pacífico* gas pipeline located in Region VIII, which interconnects the city of Concepción to the Neuquén valley in Argentina. In the Southern zone, in the province of Magallanes, although ENAP has its own wells there are three inter-connections with Argentina that are primarily allocated to natural gas imports for methanol production.

1.2.3 Distribution and Marketing

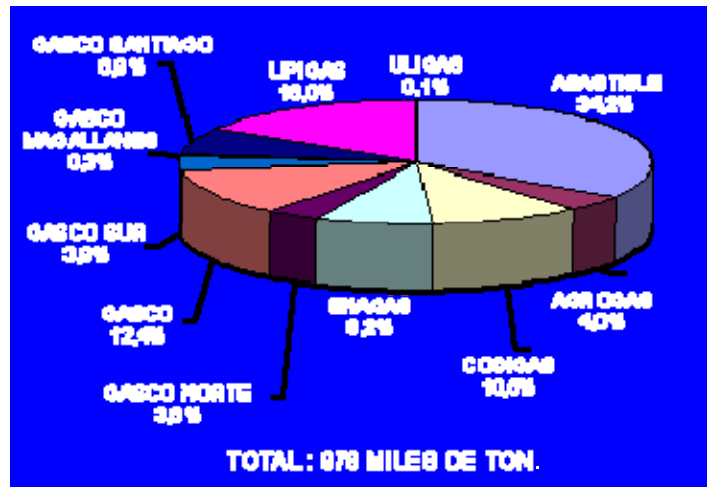
Natural gas distribution usually requires a gas distribution concession for construction and operation, with an undefined duration. There are presently natural gas distribution networks in Region V, the Metropolitan Region, Region VIII, and Region XII.

The fuel distribution liberalization began in 1978 and was completed in 1982 when prices were freed. In 1979, after Decree N° 20 of 1964 was derogated, the liquid fuel market began to open with the entry of new companies. The current market shares are as follow:



Source: CNE

As for liquefied gas sales, whether in bottles or in bulk, gas marketing was only authorized as of 1956. The companies involved in selling this fuel and their share of the domestic market are indicated in the following figure:



Source: CNE, "Participación de Empresas en Distribución de Gas"

TOTAL: 978 THOUSAND TONS

Moreover, with the arrival of Argentinean natural gas to the central area, urban gas companies were transformed, having changed from gasoline to natural gas as a raw

material for gas manufacture, while expanding the networks dedicated to natural gas distribution. Presently, owing to supply insecurity from Argentina, propane plants are being installed as a backup.

1.3 Price Policy

Oil & gas prices are governed by international markets through import parity, except for natural gas. In this case, the price is given by the prices of the production basins in Argentina and Chile, and is reflected in long-term contracts freely entered into. It is important to highlight the fact that the companies involved must comply with quality standards for their products or services, in accordance with the current regulatory framework.

The *Comisión Nacional de Energía* determines the weekly parity prices for fuels contemplated in Law N° 19,030, and periodically determines referential prices for those same fuels for the purposes of its *Fondo de Estabilización de Precios del Petróleo*. With regard to the state-owned companies for the sector, it reviews and recommends making the investments required to expand them.

As for natural gas, prices were freed as of 1978, with the exception of Region XII, where there is only one producer and distributor (ENAP) and costs are significantly lower than other substitutes. In all cases the prices applied by distributors should be transparent and non-discriminatory.

Despite the above, the law⁹ contemplates provisions that enable price regulation for low-consumption users should potential monopoly profits be detected, when qualified as such by the *Comisión Resolutiva Antimonopolios*, and companies can appeal all cases to the Supreme Court of Justice.

For the gas inter-connection with Argentina, additional protocols to the economic complementation agreement were established through Decree N° 1187 of 1995, which sets standards for gas inter-connection and natural gas supply, and regulates the marketing, exploitation and transportation of liquid hydrocarbons, crude oil, liquefied gas, and liquid derivatives of oil and natural gas.

The gas transportation concession grants license holders the right to impose rights-of-way and the obligation to transport the gas of other users provided their facilities have available capacity. These prices and those for supply are agreed to by negotiation among the parties, respecting for the principle of non-discrimination of affected

⁹ Law N° 18,856 of 1989, which reforms Law N° 323 of 1931 (Gas Utilities Law).

consumers. Prices or tariffs and other charges that are applied within the territory of one of the parties to the transportation services included in the Interconnection Protocol do not include cost recovery and/or economic / financial expenses and/or benefits of any kind that are attributable to a transportation system installed in the territory of the other party.

1.4 *Energy Policy*

The energy situation in Chile paints a critical picture for various reasons: first, the increasingly serious supply problems in Argentina, then Bolivia's refusal to sell gas to Chile owing to a merely political decision, and finally the high international prices for commodities such as gas and oil.

In view of this situation, the CNE has developed a proposal to diversify the energy matrix so as not to depend entirely on supply from inter-connections with neighboring countries.

The government's proposal consists of building a re-gassing plant for liquefied gas under ENAP's leadership, invest in renewable energy – primarily geothermal – projects, develop a power generation plan to ensure greater security, guarantee regulatory transparency, and encourage competition on the free market.

In February 2006, the *Empresa Nacional del Petróleo* (ENAP), the gas transport company METROGAS and the electric company ENDESA awarded the company British Gas with the construction, operation and supply of LNG, although two other important generating companies of the interconnected system have not joined this development, namely *AES Gener* and *COLBUN*. The project contemplates installing the regassing facility at the Quinteros site, located in the country's central costal plains, and startup is estimated for the second semester of 2009.

Moreover, there is a critical view by political sectors that are not in power regarding the need to liberalize entry of significant capitals and cutting-edge technologies into this sector. They believe that the *Contratos Especiales de Operación* (CEOP) lack sufficient incentives for private parties to enter, as they include aspects that make them discretionary and their procedures add uncertainty and delays, and in practice may take up to 14 months.¹⁰

A group of lawmakers has submitted a bill to the National Congress that is presently being processed, which proposes suppressing State reserve of liquid and gaseous

¹⁰ "Opinión Política N° 479", *Instituto Libertad y Desarrollo* (ILD), January 25, 2007.

hydrocarbons and subjecting the latter to a concession regime, without thereby losing State ownership.

This motion does not seek to alter the present status of the State-owned oil company (ENAP), or to deprive the State of its ownership of the hydrocarbons prior to their development. Furthermore, this bill broadens the possibility of licensing out surface and subsurface areas of the ocean floor that fall under national jurisdiction as determined by a constitutional organic law.

1.5 *Legal Framework*

Chile became one of the first Latin American countries to initiate legislative reforms aimed to deregulate the hydrocarbons sector when it passed Law N° 1089 of 1975, as updated through DFL N° 2 of 1986 by the Ministry of Mining, making it possible for any enterprise to participate in oil & gas exploration and production through special operation contracts.

Deregulation also reached the transportation / distribution sectors, consumer prices, and liberalized crude oil imports and refining. With regard to prices, regulations were limited to setting prices for derivatives based on the import parity for each fuel type.

As for the distribution of oil and its derivatives, as well as natural and liquefied gas, a large number of private companies are currently operating.

Listed below are the laws, regulations and rulings that make up the legal framework for hydrocarbons in Chile.

1.5.1 *Laws*

Decree N° 323

"*Ley de Servicios de Gas y sus Modificaciones*" of the Ministry of Mining, published in the official gazette on May 30, 1931.

DFL N° 1 of 1978

"Derogates Decree N° 20 and replaces it by the provisions below," of the Ministry of Mining, published in the official gazette on February 14, 1979.

Law N° 18,179

"Substitutes Article N° 7 of the decree with the force of Law N° 1 of 1978, of the Ministry of Mining, and the Ministry of Economy, Development and Reconstruction, published in the official gazette on November 11, 1982.

Law N° 18,502

Establishes the fuel taxes as indicated, by the Treasury Department, published in the official gazette on April 3, 1986.

Law N° 20,052

Amends Law N° 18,502 regarding the gas tax and establishes complementary regulations for gas use as a fuel in vehicles, by the Treasury Department, published in the official gazette on September 27, 2005.

1.5.2 **Protocols**

Decree N° 1187

- Protocol to substitute Protocol N° 2 of *Acuerdo de Complementación Económica N° 16* between Chile and Argentina. Rules regulating the Gas Interconnection and Natural Gas Supply between Chile and Argentina, by the Ministry of Foreign Relations, published in the official gazette on November 27, 1995.

- Protocol to substitute the Eighth Additional Protocol of the *Acuerdo de Complementación Económica N° 16* between Chile and Argentina. Rules for marketing, development and transportation of liquid hydrocarbons. Crude oil, liquefied gas, and liquid products derived from oil and natural gas.

1.5.3 **Regulations**

Decree N° 379

Regulations regarding minimal safety requirements for the storing and handling of liquid fuels derived from oil for self-consumption, by the Ministry of Economy, Development and Reconstruction, published in the official gazette on March 1, 1986.

Decree N° 739

Safety regulations for the distribution and sale of urban gas, by the Ministry of Economy, Development and Reconstruction, published in the official gazette on December 9, 1994.

Decree N° 263

Regulations for provisional and permanent concessions for gas distribution and transportation, by the Ministry of Economy, Development and Reconstruction, published in the official gazette on July 8, 1995.

Decree N° 254

Safety regulations for natural gas transportation and distribution, by the Ministry of Economy, Development and Reconstruction, published in the official gazette on October 30, 1995.

Decree N° 90

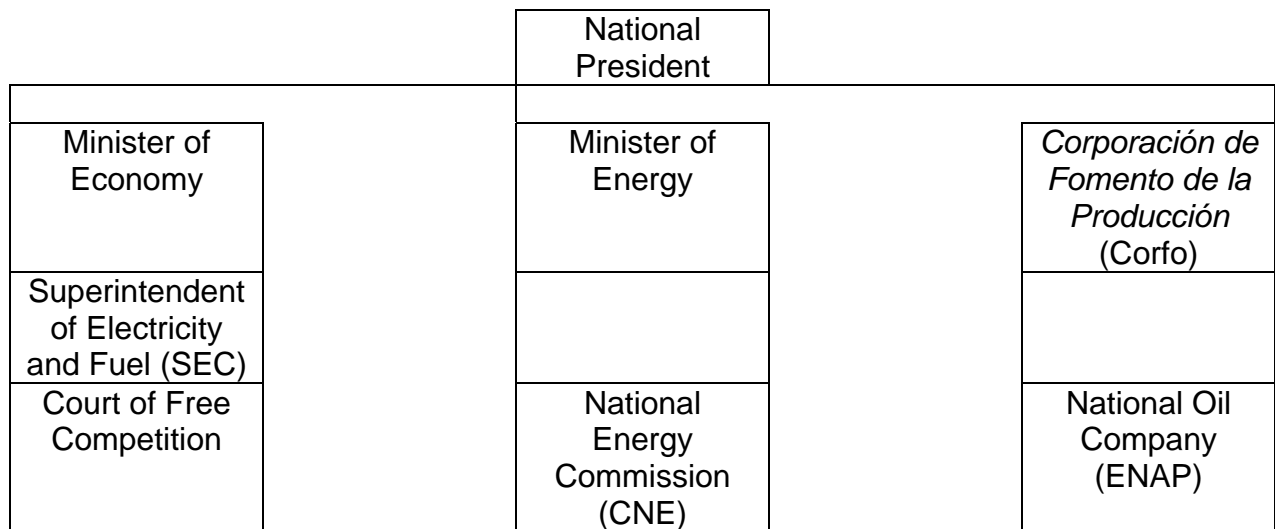
Safety regulations for storage, refining, transportation, and public sale of liquid fuels derived from petroleum, by the Ministry of Economy, Development and Reconstruction, published in the official gazette on August 5, 1996.

Decree N° 67

Approves the gas network utilities regulations, by the Ministry of Economy, Development and Reconstruction, published on February 25, 2004.

2 ROLE OF THE INSTITUTIONS

The institutional makeup of the hydrocarbons sector includes State agencies whose duties are policy making, regulation and inspection, plus production companies, transportation companies, distribution companies, and consumers. The major State agencies that participate in regulating the sector are the Ministry of Economy, the Comisión Nacional de Energía (CNE), and the *Superintendencia de Electricidad y Combustibles* (SEC).



2.1 *Ministry of Energy*

The most recent administration removed energy matters from under the Ministry of Mining, formerly in the Ministry of Economy, Development and Reconstruction. The Minister of Energy chairs the Committee of Ministers making up the Board of the *Comisión Nacional de Energía*, whose duty it is to approve energy policies, all legal reform proposals to be submitted by the executive branch for discussion and approval by the legislative branch, and in general any other tasks entrusted to it by the President of Chile.

2.2 *Comisión Nacional de Energía (CNE)*

This is a public agency that is functionally decentralized and autonomous, with its own legal status, governed by Decree Law N° 2,224 of May 25, 1978.

The CNE is directly linked to the Chilean President and is headed by a Board of Directors made of the ministers of Mining, Economy, the Treasury, National Defense, the Secretary General of the President's Office, and Planning & Cooperation, and chaired by the Minister / Chair of the *Comisión Nacional de Energía*. The Executive Secretary is in charge of Commission administration, being the chief manager of the service and its legal, judicial and extra-judicial representative.

Its primary duty, in conformity with Article 2 of the Decree Law that created it, is to develop and coordinate the plans, policies and regulations required for correct operation and development of the country's energy sector, in addition to overseeing its compliance with all energy-related matters.

According to current legislation, the CNE has the following roles:

- a) *Planning and policy making*: Prepares plans and policies for the energy sector. Develops national energy supply and demand projections.
- b) *Regulation*: Has the authority to develop sectoral regulations. Coordinates and proposes technical standards. Sectoral regulations should be enacted through the Ministry of Mining or, in the case of prices and tariffs, the Ministry of Economy, Development and Reconstruction.
- c) *Supervision*: Oversees compliance with the sector's technical standards. Likewise, performs technical reviews of price and tariff levels for energy goods and services and notifies the Ministry of Economy, Development and Reconstruction, which is authorized to set prices and tariffs, to the extent that is legally possible.

Particularly in the hydrocarbons sector, it designs the standards and ensures enforcement of transparent, non-discriminatory prices and detecting potential monopolistic profits by companies.

2.3 *Ministry of Economy, Development and Reconstruction*

This ministry develops the decrees, rules and regulations drafted by the *Superintendencia de Electricidad y Combustibles*, and grants concessions for gas transportation and distribution.

2.4 *Superintendencia de Electricidad y Combustibles (SEC)*

The SEC is a decentralized public entity that is governed by Law N° 18,410 of 1985 and is related to the Government through the Ministry of Economy, Development and Reconstruction.

Its duties are to supervise and oversee compliance with the legal and regulatory provisions and technical standards for electricity, liquid fuels and gas facilities.

Specifically, the SEC is technically responsible for granting provisional concessions and informing the Ministry of Economy of permanent concession applications for gas transportation and distribution, in addition to confirming the quality of services provided.

With regard to gas, the primary duties of the SEC are:

- a) *Concessions*: Grants provisional concessions for gas production plants, gas transportation and distribution lines, and reports on permanent concession applications (which are granted by the Ministry of Economy, Development and Reconstruction), processes the expiration of permanent concessions, takes over transitory administration of a concession in the case of expiry.
- b) *Control and supervision of quality standards*: Requires that concession holders comply with applicable quality standards, sets maximum terms for service extension in concession areas; admonishes, fines and provisionally administers the service at the expense of concessions holders if quality is not adequate, and supervises facilities and installations.
- c) *Authorization and licensing*: Grants licenses to gas installers, authorizes laboratories, etc., and temporarily suspends such authorizations or licenses should irregularities be detected.
- d) *Arbitration*: Resolves claims arising from standards it should enforce between or against parties, consumers and owners of facilities.
- e) *Penalties*: Penalizes non-compliance with technical standards and applicable regulations, demands –under threat of fines– reinstatement of a service that has been interrupted due to events that are attributable to the company.
- f) *Information and statistics*: Puts together technical statistics on gas company exploitation, as specified by the CNE. Companies must deliver information, under pain of fines. It sets regulations concerning the ways and means for submitting information.
- g) *Regulation*: Makes proposals to the Ministry of Economy, Development and Reconstruction regarding regulations for LPG and natural gas storage, transportation, distribution, and commercialization. Makes pronouncements on special service regulations that public utility concession companies submit for its approval.

2.5 *Anti-monopoly agencies*

As with all other economic activities, gas distribution services are subject to scrutiny by anti-monopoly agencies in charge of preventing, investigating and correcting any affronts to free competition and abuses incurred by those holding monopoly positions. Should a monopoly situation be detected, this agency may notify the CNE so that it might regulate prices. This measure may be appealed to the Supreme Court of Justice by the affected companies.

2.6 *Empresa Nacional del Petróleo (national petroleum company)*

It is a State-owned company under the *Corporación de Fomento de la Producción* (CORFO), created by Law N° 9,618 of June 19, 1950, hereinafter the “Organic Law of ENAP”, in charge of exploring and operating oil and natural gas reservoirs in Chile.

As established in article 3 of its Organic Law, the company is administered by a Board of Directors made up of the following persons:

- The Ministry of Mining, presiding by its own right;
- The Executive Vice-president of the *Corporación de Fomento de la Producción*, to hold the position of Vice-president and wield the powers granted to the President in article 19, letters e) and g), and article 23, letters e) y g) of the Company Bylaws; and
- Six Directors, three named by the *Corporación de Fomento de la Producción*, one by the *Instituto de Ingenieros de Minas*, one by the *Sociedad Nacional de Minería*, and one by the *Sociedad de Fomento Fabril*.¹¹

The Directors have a three-year term in their duties and may be reelected and removed by their respective constituents. Their sole retribution for attending the Board meetings or commissions or committees is the equivalent of 6 “monthly tax units” (UTM from the Spanish),¹² with a monthly maximum of 12 UTMs, regardless of the number of meetings attended in a given month. This retribution is honorary in nature for all legal purposes. They will also receive the equivalent of 7 UTMs under the heading of special assignments.

¹¹ A professional association of private companies

¹² At December 31, 2006, 1 UTM = \$ 32,206 (1 US\$ = 534.43).

Article 2 of the Organic Law of ENAP defines the company's scope of action. In effect, that article textually establishes the following:

"...The Empresa Nacional del Petróleo may conduct the activities of exploration, development or extraction in reservoirs containing hydrocarbons both inside and outside the national boundaries, whether directly or through companies in which it has shares, or in partnership with third parties. Should such activities be conducted within the national boundaries via companies to which they are parties or in partnership with third parties, it shall do so through government concessions or special operation contracts, with the requirements and under the conditions set by the President of Chile in the appropriate supreme decree.

Whether directly or through companies in which it has shares, the Empresa Nacional del Petróleo may also store, transport, transform, treat, process, refine, sell, and in general commercialize oil or gas, as well as performing any other industrial activity relating to hydrocarbons, their products or derivatives, but these activities will not be reserved for it exclusively. Likewise, the Company may, on behalf of the State, receive, repurchase, sell, and commercialize hydrocarbons from special operation contracts in any form, and perform all other duties and rights entrusted to it by supreme decree and the respective contract, regardless of whether or not the Company has a share in such contracts..."

Chapter 3, below, describes the company in greater detail.

3 EVOLUTION OF STATE-OWNED COMPANY PERFORMANCE

The *Empresa Nacional del Petróleo* (ENAP S.A.) was created on June 19, 1950, by the Chilean State. Its business activity is exploration, production and commercialization of hydrocarbons and its derivatives, which it does both in Chile and abroad.

ENAP constitutes a network of businesses in the fields of petroleum, natural gas and other energy products such as liquefied natural gas and geothermal energy. In Chile, ENAP and its affiliates carry out their activities in an open economic environment, where any investor may explore, develop, refine, import, and distribute hydrocarbons products and sub-products.¹³

3.1 Business Description

ENAP conducts crude oil and natural gas exploration and production activities (upstream), and refining and logistics of fuels and other oil products (downstream). Using its extensive, rich experience in this business, it also performs services relating to the petroleum industry, such as oil infrastructure construction and maintenance, both on land and at sea, and logistics for liquid and gaseous fuel transportation and storage.

It therefore forms of a network of businesses with a presence on domestic and foreign markets, with technological backing, modern infrastructure, competitive products, and customer services in all stages of the business.

In Chile, ENAP and its affiliates carry out their activities in an open economic environment, where any investor may explore, develop, refine, import, and distribute hydrocarbons products and sub-products. Its high-level administration consists of a Board of Directors made up of eight members, chaired by the Minister of Mining. Its Vice-president is the Executive Vice-president of CORFO, an entity that also names three other directors. The other three directors represent the Chile's *Instituto de Ingenieros de Minas*, the *Sociedad Nacional de Minería*, and the *Sociedad de Fomento Fabril*.

¹³ Through special operation contracts (CEOPs from the Spanish *Contratos Especiales de Operación*) granted by the State.

Production

The ENAP refineries –Aconcagua, Biobío and Gregorio– process 230,000 barrels per day of oil and produce 13 million cubic meters of fuel per year. These refineries supply approximately 85 % of all fuels consumed by Chile and exports refined products to countries of Central and South America. In Chile, ENAP exploits oil and natural gas reservoirs in the Magallanes region and supplies natural gas to the company Methanex, located 23 kilometers north of Punta Arenas, where the largest methanol production plant in the world operates.

Shares in other companies

ENAP owns shares in the following companies:

- *Sociedad Nacional de Oleoductos (Sonacol S.A.)*
- *Petropower Energía Ltda.*
- *Productora de Diesel S.A.*
- *Terminales Marítimas Patagónicas S.A. (Argentina)*
- *Oleoducto Trasandino Chile*
- *Oleoducto Trasandino Argentina*
- *Inversiones Electrogas S.A.*
- *Gasoducto del Pacífico Chile S.A.*
- *Gasoducto del Pacífico Argentina S.A.*
- *Geotérmica del Norte S.A.*
- *Empresa Nacional de Geotermia*
- *Compañía Latinoamericana Petrolera S.A.*
- *Innergy Holdings S.A.*
- *Éteres y Alcoholes S.A.*
- *Petrosul S.A.*
- *Distribuidora Petrox S.A. (Peru)*
- *Norgas S.A.*
- *A&C Pipeline Holding*

3.2 Organizational Structure

ENAP is operationally organized in two lines of business:

- *Exploration and production*, on which the respective area in Magallanes depends; and *ENAP Sipetrol S.A.*;

- *Refining and Logistics*, to which the affiliate company *ENAP Refinerías S.A.* belongs, in addition to the Gregorio refinery located in Magallanes.

3.2.1 Exploration and Production

As its name indicates ENAP's exploration and production line of business specializes in exploring for hydrocarbons (oil and natural gas) and in geothermics. These activities are conducted in Chile and abroad. In the latter case, through the international affiliate *ENAP Sipetrol S.A.*



Source: ENAP

Ecuador, Peru, Argentina	Iran, Egypt
--------------------------	-------------

ENAP's exploration and production activities in Chile are centered in the Magallanes region, the only one in Chile where oil & gas reserves have been discovered, despite the fact that ENAP and other companies have explored in other zones of the country.

Through the international affiliate *ENAP Sipetrol S.A.*, ENAP performs crude oil exploration and production activities in Argentina, Ecuador, Egypt, and Iran.

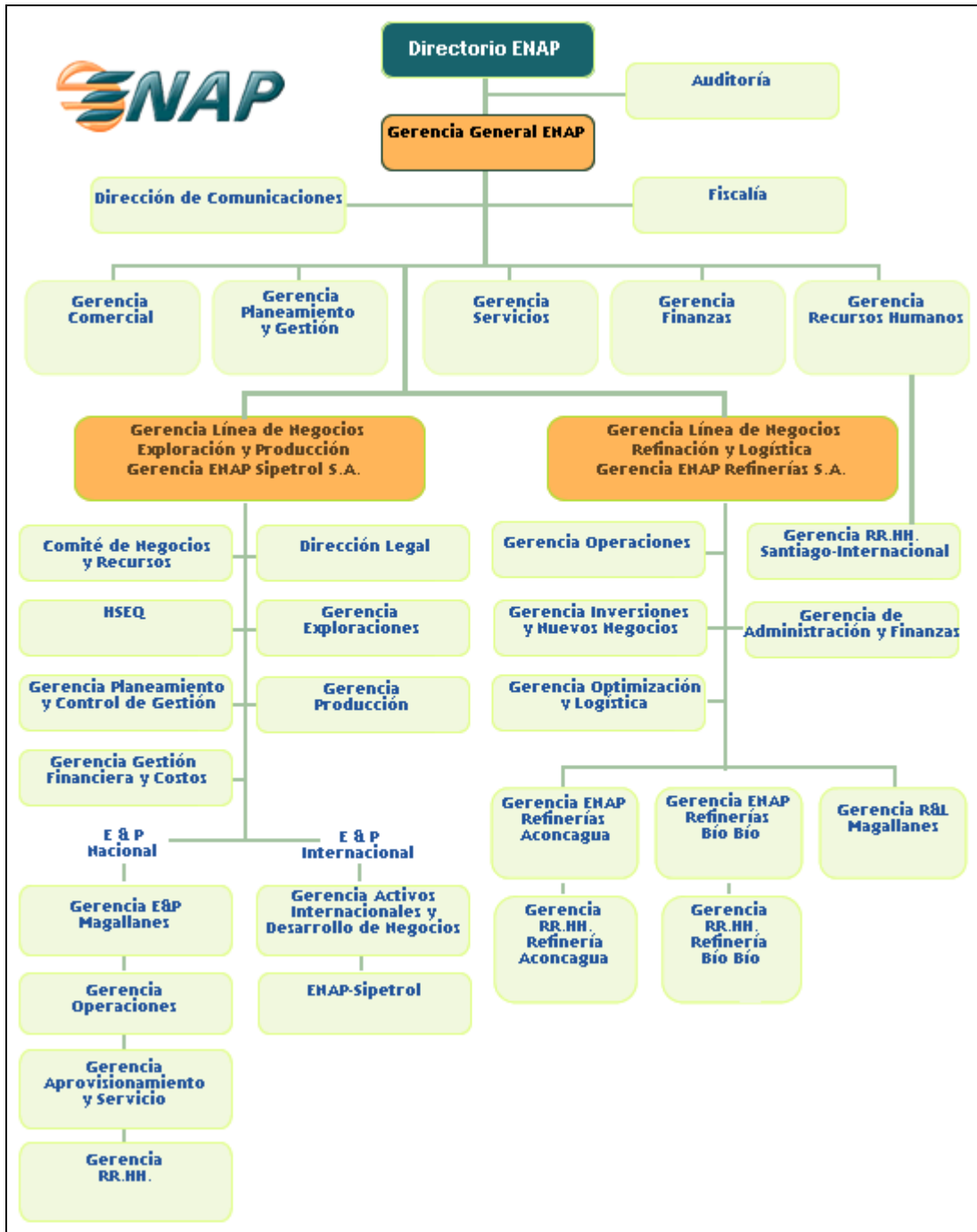
3.2.2 Refining and Logistics

ENAP's Refining and Logistics (R&L) line of business is area in charge of developing activities relating to fuel production (mostly gasoline, diesel oil, fuel oil, kerosene, liquefied gas) and other oil products (solvents, raw materials for asphalt, ethylene, and other petrochemicals), in addition to managing logistics infrastructure for their transportation and storage.

The ENAP's R&L line of business includes the affiliate *ENAP Refinerías S.A.*, with its Aconcagua and Biobío refineries, and the Gregorio refinery, the southernmost in the world, located at the eastern mouth of the Magellan Strait.

3.2.3 Organizational Chart

At December 31, 2006, the company's organizational chart was as follows:



Source: ENAP

		ENAP Board of Directors			
				Auditor	
		ENAP General Manager			
Communications Director				Attorney General	
Commercial Manager	Planning and Operations Manager	Services Manager	Finance Manager	Human Resources Manager	
Business Line Manager: Exploration and Production Manager ENAP <i>Sipetrol S.A.</i>			Business Line Manager: Refining and Logistics Manager ENAP <i>Refinerías S.A.</i>		
Business and Resource Committee	Legal Director			Operations Manager	HR Manager Santiago–International
HSEQ	Explorations Manager			Investments and New Business Manager	Administration and Finance Manager
Operations Planning and Control Manager	Production Manager			Optimization and Logistics Manager	
Finance and Cost Manager					
National E & P	International E & P	ENAP Aconcagua Refinery Manager	ENAP Biobío Refinery Manager	Magallanes R & L Manager	
Magallanes E & P Manager	International Assets and Business	Acongagua Refinery Human	Biobío Refinery Human Resources		

	Development Manager	Resources Manager	Manager
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Operations Manager	ENAP Sipetrol
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Provisions and Service Manager

Human Resources Manager

3.3 *Infrastructure*

As part of its productive refining and logistics activities, ENAP has deployed a vast network of oil and products pipelines, for transporting crude oil and fuels, in the central, central–southern and southern zones of Chile.

3.3.1 **Central Zone**

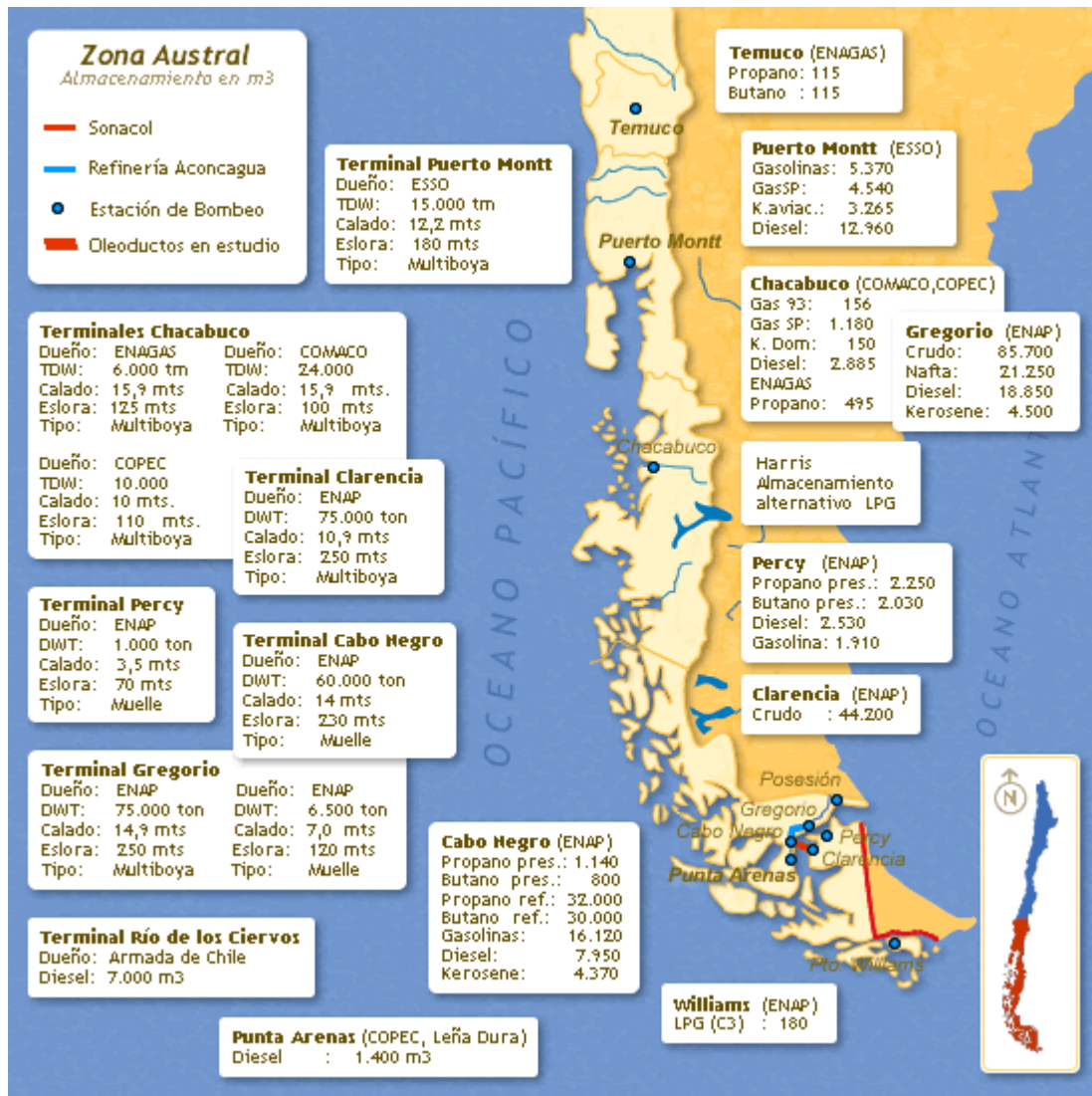
The following figure illustrates the placement of ENAP’s oil pipelines, refineries and pumping stations in the central zone of the country.



Source: ENAP

3.3.2 Southern Zone

The following figure illustrates the placement of ENAP’s oil pipelines, refineries and pumping stations in the southern zone of the country.



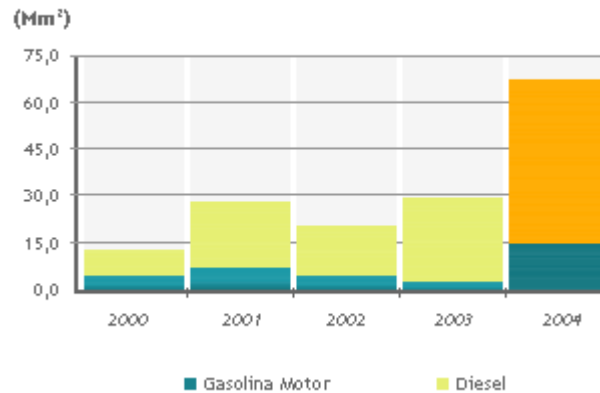
Source: ENAP

3.3.3 Refineries

ENAP has three refineries, two of which operate through its affiliate *ENAP Refinerías S.A.* They are: The Aconcagua refinery located in the Concón community of the Fifth Region, and the Biobío refinery, which is in the Hualpén community of the Eighth Region. The third is the Gregorio refinery, established in the San Gregorio community of the Magallanes Region, in the far south of Chile.

The refining capacity of ENAP's three refineries is a total of 230,000 barrels per day.

The primary market for the Gregorio refinery is the extreme southern part of the South American continent and supplies customers from both Chile and Argentina, as well as ships that navigate the Magellan Strait. The following graph shows the evolution of exports from that ENAP refinery to Argentina:



Source: ENAP

3.3.4 Oil and Gas Pipelines

ENAP has a network of oil and gas pipelines installed in the Magellan Region, including a bi-national gas pipeline that transports natural gas from reservoirs located in the southern Patagonia of Argentina to *Cabo Negro*, to supply the methanol plant operated by the company Methanex.



Source: ENAP

Through its affiliate *ENAP Refinerías*, it owns the oil pipeline that runs from the Biobío refinery in Hualpén to the town of San Fernando. From this point, ENAP's oil pipeline connects to another one belonging to the company Sonacol, which extends to Maipú in the Metropolitan Region.

ENAP is a stockholder of the *Sociedad Nacional de Oleoductos S.A. (Sonacol)*, which also owns the products pipeline (so called because it can transport various oil-derived fuels) which goes from the Aconcagua refinery to the Maipú storage plant. It also has shares in *Electrogas S.A.*, the company that owns the gas pipeline that connects the Metropolitan Region with the Valparaíso Region.

In addition, ENAP is a stockholder in the company *Oleoducto Trasandino Estenssoro-Pedrales*, which connects the Argentine oil reservoirs located in the Neuquén province with the Biobío refinery.

Finally, ENAP owns shares in the *Gasoducto del Pacífico* that feeds Chile’s central–southern region with natural gas from the “*Loma La Lata*” reservoirs in the Argentine province of Neuquén. This gas pipeline reaches Talcahuano through a 530–kilometer duct and from there fans out into 106 kilometers of branches that supply the different localities of the zone.

3.3.5 Storage Plants

Through its affiliate *ENAP Refinerías S.A.*, ENAP owns three fuel storage plants located in Maipú, *San Fernando* and Linares.

ENAP Storage Capacity (in cubic meters)		
Liquid fuels	Liquefied gas	Total
256,000	60,000	316,000

Source: ENAP

3.3.6 Sea Terminals

ENAP operates five sea terminals, through which it imports and exports crude oil and oil products. Three of these are in Chile and one in Argentina. Those located on Chilean territory are Quintero (Fifth Region), San Vicente (Eighth Region) and Gregorio (Twelfth Region).

In Argentina, it shares ownership of *Terminales Marítimas Patagónicas* (*San Jorge* gulf), through which it exports oil produced by reservoirs operated by its affiliate *ENAP Sipetrol S.A.* in Neuquén.

3.3.7 Platforms

ENAP carries out a large part of its oil exploitation in the southern seas of the South American continent, specifically in the Magellan Strait.

For this purpose, some 40 production platforms have been installed and supplied with high–tech operating systems tailored to the complex weather conditions in the zone such as low temperatures, strong winds and heavy seas.

3.4 Financial Gains

The consolidated gains of the *Empresa Nacional del Petróleo* (ENAP) during 2006 totaled US\$ 104 million after calculating the 17 % income tax and other taxes from abroad. In 2005, earnings reached US\$ 299 million and were heavily influenced by the international market situation during the second semester of that year, caused by hurricanes Katrina and Rita, which implied an uncommon hike in oil prices and refining margins.

The following summarizes the main financial indicators for the ENAP business group for the 2004, 2005 and 2006 periods:

<u>INDICADORES FINANCIEROS</u>		<u>DICIEMBRE</u>		
		<u>2006</u>	<u>2005</u>	<u>2004</u>
VENTAS	mill. US\$	7.824	6.674	4.725
RESULTADO OPERACIONAL	mill. US\$	243	448	250
EBITDA	mill. US\$	482	650	518
RESULTADO DESPUES IMPPTO. 17% E IMP. AL EXT.	mill. US\$	104	299	222
DEUDA FINANCIERA	mill. US\$	976	879	966
DEUDA FINANCIERA + PROVEEDORES	mill. US\$	1.031	1.194	1.128
DEUDA FINANCIERA L.P. / DEUDA FINANCIERA TOTAL	%	97%	93%	88,8%
DEUDA FINANCIERA / PATRIMONIO	veces	1,04	0,96	1,27
DEUDA FINANCIERA + PROVEEDORES / EBITDA	veces	2,1	1,8	2,2
LIQUIDEZ	veces	1,43	1,38	1,38

Source: ENAP

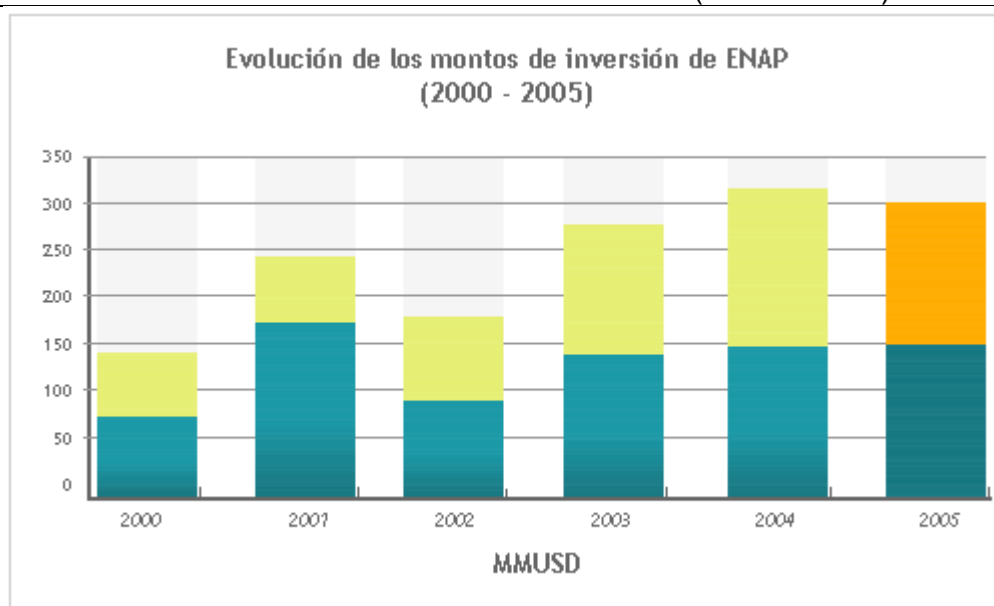
FINANCIAL INDICATORS	DECEMBER
SALES	Thousand
TRADING PROFIT OR LOSS	Thousand
EBITDA	Thousand
PROFIT/LOSS AFTER 17% TAX AND TAXES ABROAD	Thousand
FINANCIAL INDEBTEDNESS	Thousand
FINANCIAL INDEBTEDNESS + SUPPLIERS	Thousand
FINANCIAL INDEBTEDNESS L.P. / TOTAL FINANCIAL DEBT	%

FINANCIAL INDEBTEDNESS / EQUITY	Periods
FINANCIAL INDEBTEDNESS + SUPPLIERS / EBITDA	Periods
LIQUIDITY	Periods

ENAP's total assets at ENAP 31, 2006, reached US\$ 3,805 million, up 3,6 % (US\$ 134 million) from the end of 2005. During this year, ENAP allocated US\$ 274 million to investments. Of that amount, 45 % was allocated to the refining and logistics business line, and 55 % to the exploration and production line of business, for investments both in ENAP and abroad.

ENAP recorded an EBITDA of US\$ 482 million in 2006, which was 25.8 % less than that of 2005. This drop is due basically to the lower operational earnings.

Evolution of ENAP Investment Amounts (2000 – 2005)

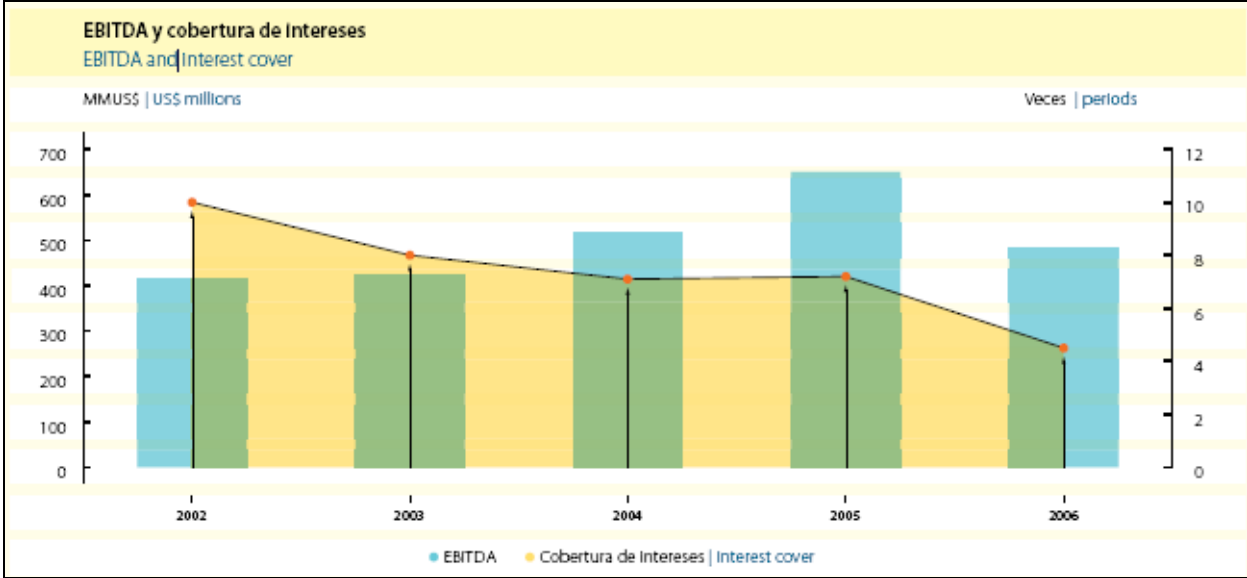


	2000	2001	2002	2003	2004	2005
E&P	63,4	167,8	81,7	130,7	149,5	151,8
RL&C	63,6	64,3	87,4	133,4	154,8	149,2
TOTAL	127	232,2	169,1	264,1	304,3	301,0

Source: ENAP

ENAP's financial debt (including instruments payable to suppliers) reached US\$ 1,031 million at ENAP 2006, which is 13.7 % lower than the indebtedness registered at year-end 2005, at US\$ 1,194 million. The debt/EBITDA ratio saw an increase, going from 1.8x in 2005 to 2.1x in 2006, which is similar to the level recorded at the close of 2004.

The company's EBITDA evolution is illustrated in the following figure:



Source: ENAP

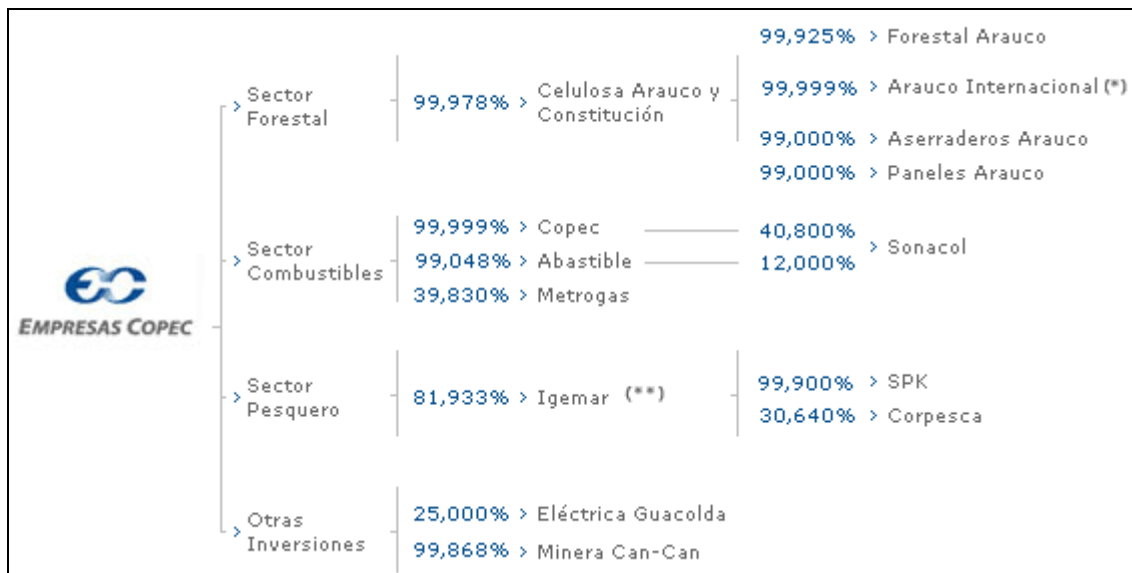
4 REVIEW OF PRIVATE COMPANY PERFORMANCE

As mentioned in Chapter 2, the hydrocarbons sector began its deregulation in 1975, which made it possible for private enterprises to participate, especially in the transportation and distribution segments.

As an example, and to perform a comparative review of public vs. private enterprise performance in the sector, three of the major private companies now operating in the country were selected: *COPEC S.A.*, *SONACOL S.A.* and *GASCO S.A.*

4.1 *Empresas COPEC S.A.*

COPEC S.A. is a diversified financial holding that participates, through its affiliates and partners, in different sectors of Chile's economic activities. Since its creation in 1934, the parent company was devoted to liquid fuel distribution, a business that was transferred to a new affiliate in October 2003. Today, the activities of *Empresas COPEC* are grouped in two major specialty areas: energy and natural resources. In terms of energy, it is involved in distributing liquid fuels, liquefied gas, and natural gas. In terms of natural resources, it participates in the forestry, fishing and mining industries.



	Forestry Sector	
COPEC COMPANIES	Fuel Sector	El resto son los nombres propios de las empresas, que no se traducen.
	Fishing Sector	
	Other Investments	

The company has the following affiliates in the hydrocarbons sector:

- *Compañía de Petróleos de Chile (COPEC S.A.)*
- *Abastecedora de Combustibles S.A.*
- *Metrogas S.A.*

The participation of *Empresas COPEC* in fuel distribution began with its birth over 70 years ago. Since then, it has become one of the major players in the liquid fuel, lubricant, liquefied gas, and natural gas markets.

COPEC attends to some four thousand industrial customers, which include companies in forestry, mining, fishing, aeronautics, shipping, construction, and transportation, among others. The products marketed in this way are gasoline, diesel oil, fuel oils, turbo fuel, jet fuel, and kerosene, aside from lubricants. During 2006, COPEC consolidated its presence in the mining sector, primarily with the Spence project and the greater volume of *Minera El Tesoro* with regard to 2005.

The *Empresa Nacional del Petróleo (ENAP)*, supplied 88 % of all fuels required by COPEC during 2006, while the other 12 % was purchased from different foreign suppliers, primarily from the United States and South Korea.

Fuel transportation was done through the Sonacol oil pipelines, the Sonamar tanker ships and the Transcom tanker trucks. The latter affiliate's fleet is made up of 101 trucks that transported 1.6 million cubic meters in 2006, 95 of which serve the different COPEC plants and six of which serve Abastible to transport bulk liquefied gas. COPEC is also involved in the business of exploring new oil wells through its affiliate Clapsa, which during the 2006 period formally cut its ties with the Colombian oil contracts and turned to studying new reserve development projects.

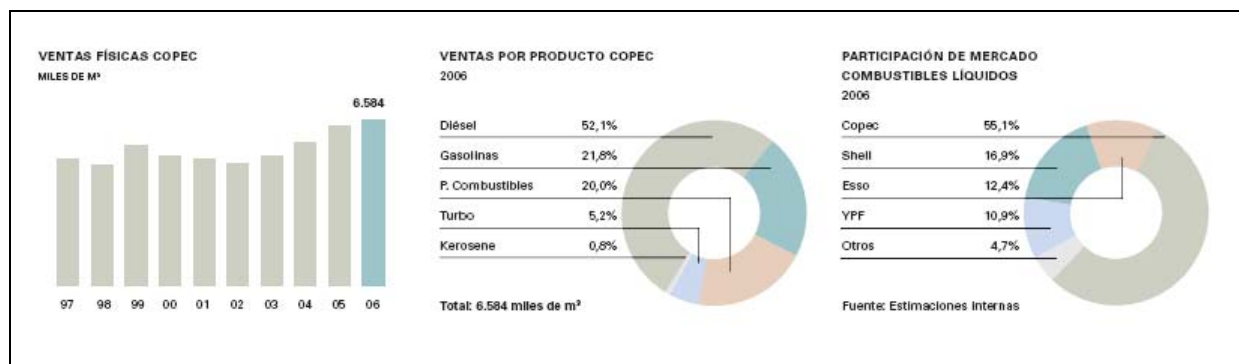
The COPEC network of service stations is the largest in Chile, with 621 points of sale from Arica to *Puerto Williams*, and 61 Pronto establishments located between Iquique and *Puerto Montt*.

During 2006 COPEC's network of service stations served nearly 200 thousand customers per day and sold 2.7 million m3 of fuel.

An important supply sector is that of the electric companies, which in 2005 and 2006 significantly increased their fuel purchases as a consequence of natural gas supply shortages from Argentina.

The affiliate Air BP, in charge of marketing aviation fuel, supplied 43 % of the market during 2006, dispatching 331 thousand m3 and serving various airlines in nine of Chile's airports.

All in all, total sales for the industrial channel in 2006 saw a slight rise of 1.9 % over 2005, totaling volumes of nearly 3.9 million m3, which is 58.9 % of COPEC's total dispatches, without counting the companies' consumption rates.

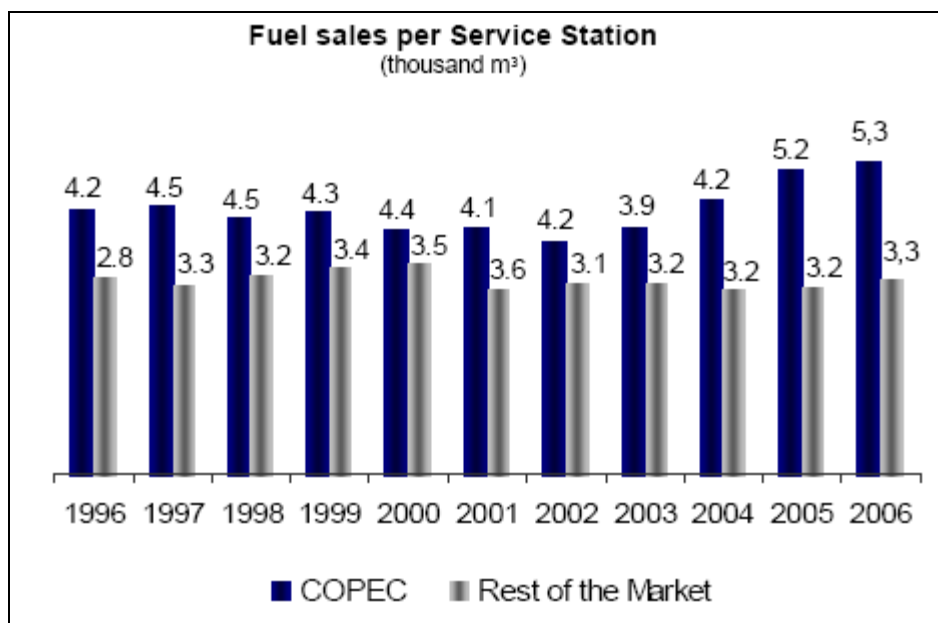


Source: COPEC

COPEC Physical Sales Thousands of m3	SALES PER COPEC PRODUCT	MARKET SHARE LIQUID FUELS
	Diesel	
	Gasoline	
	Fuel oils	
	Turbo	
	Kerosene	
	Total: nnn thousands of m3	Source: Internal estimates

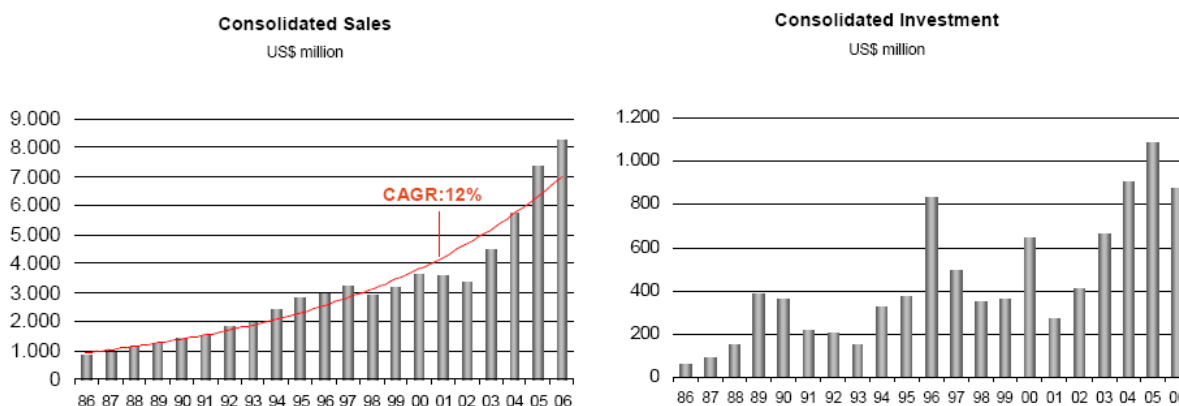
COPEC's market share reached 55.1 % in 2006. Physical sales of liquid fuels reached 6.6 million m3, in a market that saw a total growth of 3.0 %. By product, gasoline sales were up 1.5 %, diesel oil sales 3.5 %, turbo 0.1 %, and fuel oils 8.1 %, while kerosene

sales dropped 16.4 %. Service station sales experienced a 5.9 % increase and those for the industrial channel grew 1.9 % during 2006, the latter representing 58.9 % of COPEC's total sales.



Source: COPEC

The following graphs show the evolution of monetary sales and levels for the COPEC companies.



Source: COPEC

During the 2006 period, COPEC finished building the imported products terminal located at Quintero bay. These facilities make it possible to store 75 thousand m³, thus increasing COPEC's liquid fuels import and storage capacity and ensuring supply for its customers.

Of note among the projects it is developing are the diesel terminal of Mejillones, destined to replace the Antofagasta plant in the future, and a new terminal in Calbuco that will substitute for the *Puerto Montt* facilities, which stopped operating in 2006.

4.2 SONACOL S.A.

SONACOL is the *Sociedad Nacional de Oleoductos*, founded in 1957 by the companies COPEC, ENAP and ESSO Chile,¹⁴ for the purpose of developing and operating land and sea transportation networks for fuel and derivatives in Chile.

SONACOL is one of the main fuel transportation companies in the country. For instance, it transports 98 % of all fuels consumed in the Metropolitan Region. This company is the best example of public-private partnerships in the hydrocarbons sector, with efficient operations that have even enabled it to develop and expand its services.

At 2006 the oil pipeline network had a total length of 465 kilometers, distributed as follows:

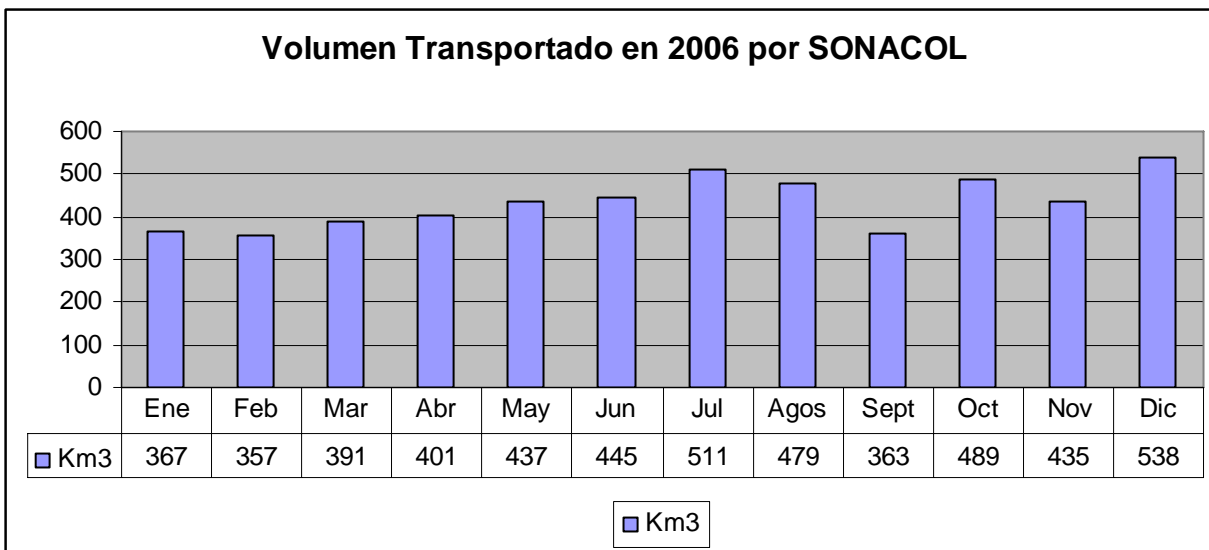
- Quintero – Concón Line 1 : 21.5 km
- Quintero – Concón Line 2 : 23 km
- Concón – Maipú Line 1 : 134 km
- Concón – Maipú Line 2 : 134 km
- San Fernando – Maipú : 135 km
- Maipú – Airport : 17.5 km

The company's major customers are:

- *ENAP – Petrox – RPC Gasmar*
- *COPEC Gasco*
- *Esso Abastible*
- *Shell Codigás*
- YPF

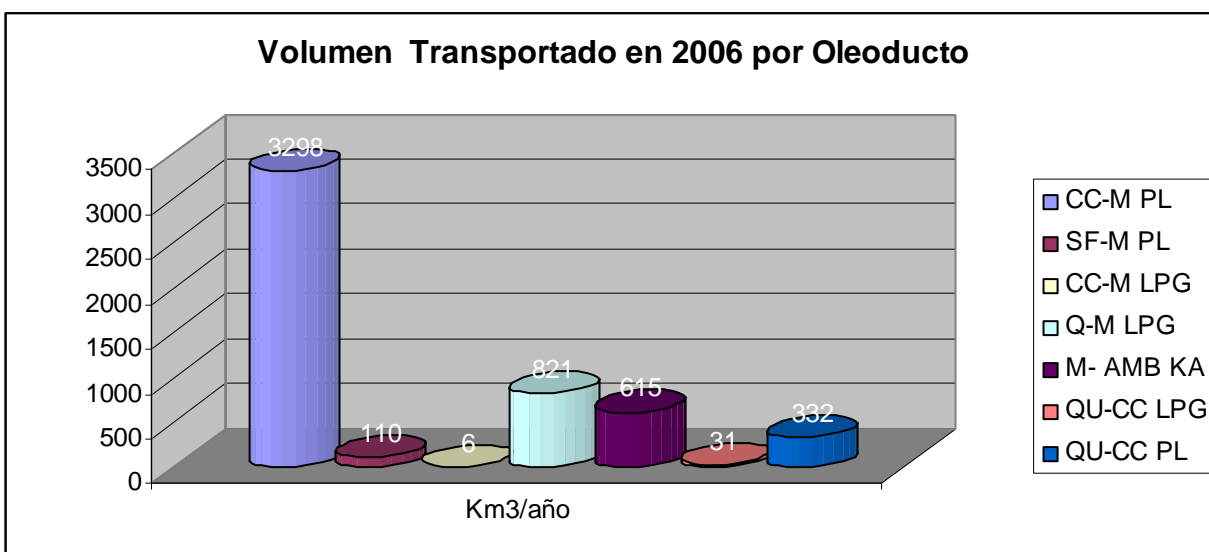
¹⁴ In 2004 it joined the company *Abastible S.A.* as a stockholder.

The monthly volumes transported by SONACOL in 2006 are illustrated on the following graph:



Source: SONACOL

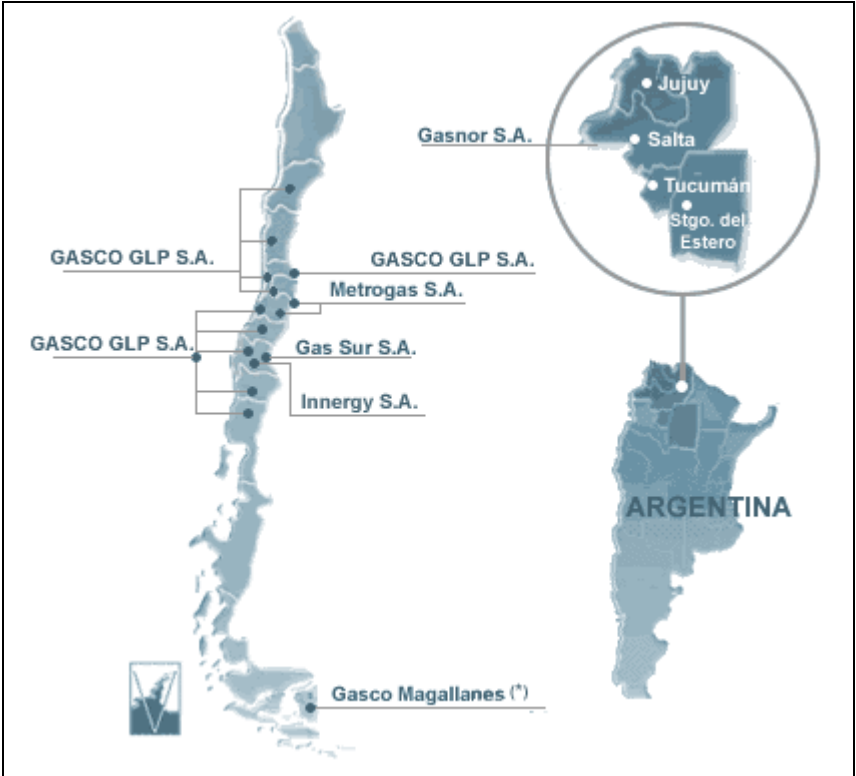
Likewise, the following graph illustrates the yearly volumes of fuel transported through each of SONACOL's oil pipelines:



Source: SONACOL

4.3 GASCO S.A.

Since 1856, the private company Gasco S.A. has been Chile's main liquefied gas distributor. Service coverage includes the main cities of the country's central, southern and central-southern zones, as well as the towns of Jujuy, Salta, Tucumán, and *Santiago del Estero*.

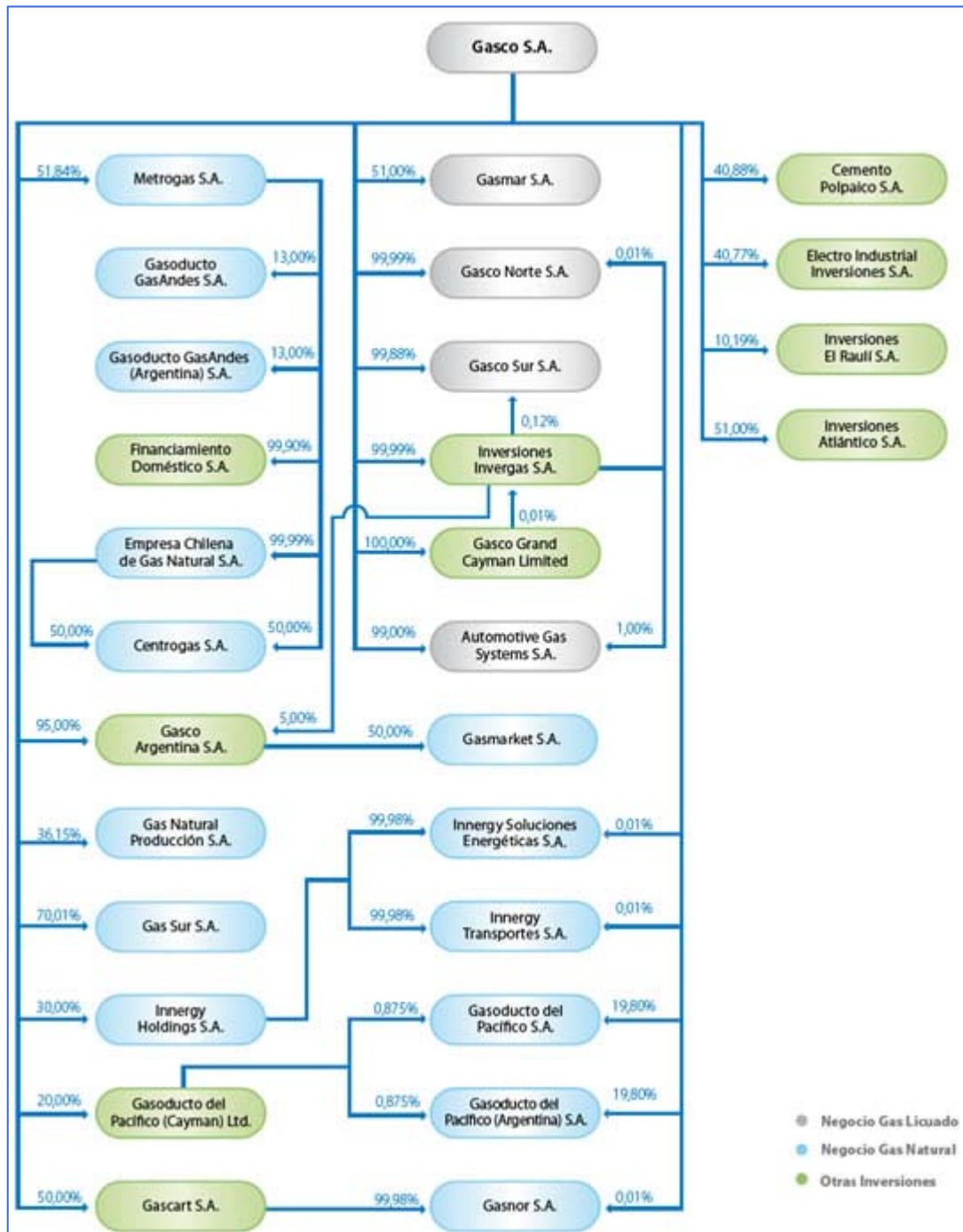


Source: Gasco S.A.

Service provision is through its affiliate companies:

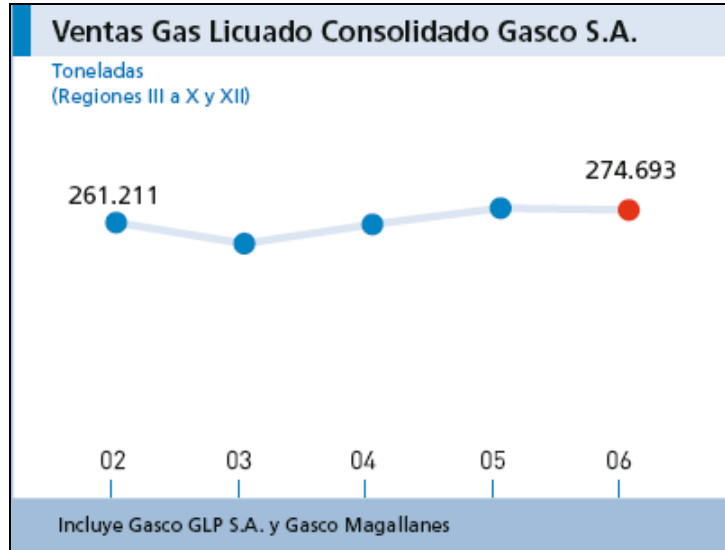
- Liquefied gas:
 - Gasco GLP S.A, Metropolitan Region Division
 - Gasco GLP S.A, Northern Division
 - Gasco GLP S.A, Southern Division
 - *Gasmar S.A.*
- Natural gas
 - *Metrogas S.A.*
 - *Gas Sur S.A.*
 - *Gasco Magallanes*
 - *Gasmar S.A.*
 - *Gasoducto del Pacífico S.A.*
 - Innergy Holdings S.A.

The ownership status of each of these affiliates is indicated on the following chart:



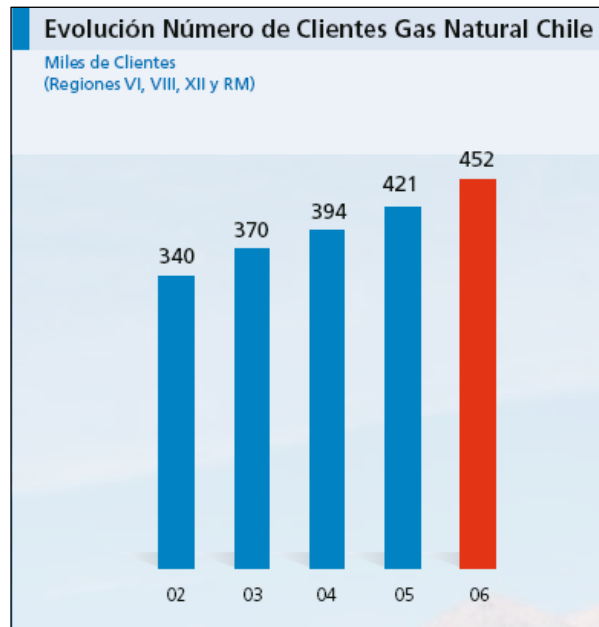
Source: Gasco S.A.

Liquefied gas sales have increased by about 5.2 % in four years.



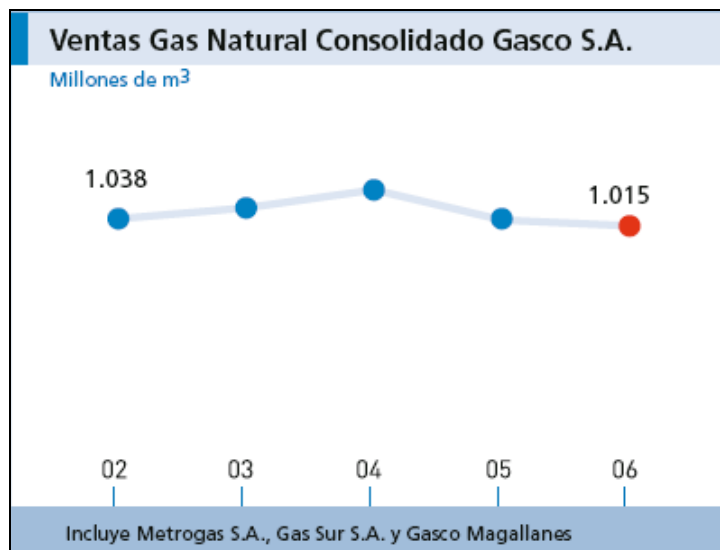
Source: Gasco S.A.

Between 2002 and 2006, the number of natural gas customers grew by about 33 %.



Source: Gasco S.A.

Despite the above, natural gas sales dropped by around 2.2 % in four years due to import restrictions on gas from Argentina.



Source: Gasco S.A.

At December 31, 2006, the individual Gasco staff was 122 workers, and the consolidated Gasco staff was 1593.

Staff supplied Gasco S.A.	Individual	Consolidated
Executives	16	74
Professionals and Technicians	22	533
Specialized workers	84	986
Total workers	122	1,593

Financial Background

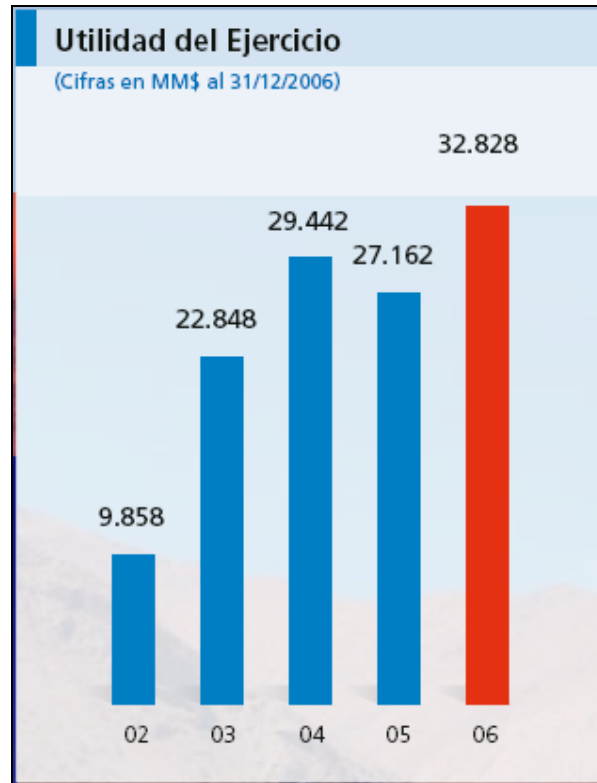
The following graph shows the company's main financial indicators for 2006.

Financieras Consolidadas	2006	2005
(Cifras en MM\$ al 31/12/2006)		
Ventas	376.984	367.830
Resultado de explotación	71.269	78.548
Utilidad	32.828	27.162
Activos	844.133	831.628
Pasivo exigible	459.999	464.920
Patrimonio	243.560	226.153
Endeudamiento (veces)	1,20	1,27

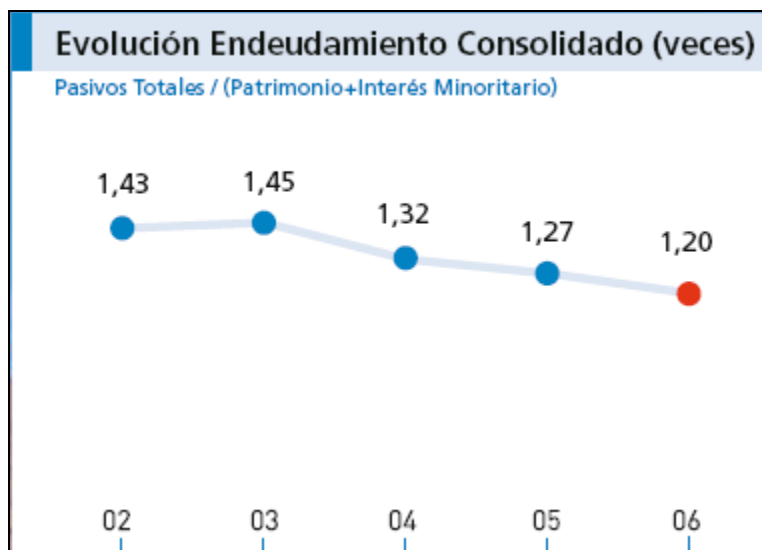
Source: Gasco S.A.

Consolidated Financials		
(figures in millions of \$ at 12/31/2006)		
Sales		
Profit and loss from development		
Earnings		
Assets		
Creditor liabilities		
Equity		
Indebtedness (period)		

The following figures illustrate the profit and debt evolution over the past four years.



Source: Gasco S.A.



Source: Gasco S.A.

In 2006, *Gasco S.A.* invested 60 million dollars, with no restrictions on its investment and finance policies.

5 COMPARATIVE REVIEW OF PRIVATE VS. PUBLIC COMPANY PERFORMANCE

This chapter contains a critical analysis of the performance of companies providing liquid fuels and gas exploitation, production, transportation and distribution services in Chile, with special emphasis on comparing between the performance of the public company ENAP and that of the privately-owned companies such as GASCO, or mixed ownership companies such as SONACOL.

The review is done from the viewpoints of the characteristics of service provision and the market, of corporate organization and management, of service growth and expansion, of service quality and supply security, and of financial yield.

5.1 *Nature of the Service, Coverage and Market*

Although the law initially granted the public company ENAP a monopoly over reservoir exploration and development, the 1980 Constitution allowed the State to delegate to third parties via government concessions or special operation contracts.

To date, the State as formalized 15 special operation contracts with 13 private companies, some in partnership with ENAP, as indicated in Annex XXX.

Despite the existence of regulatory and administrative mechanisms that encourage oil & gas development and operation, Chile still does not have sufficient supply to fully cover its domestic market. For example, in 2001 domestic crude oil production was only 7 % of the total fuel demand.

ENAP –through its affiliate *ENAP Refinerías*– and its business division *ENAP Magallanes* are the only refiners. In 2003 their joint production was 83 % of all domestic oil-based fuel supply (85 % of all diesel oil, 82 % of all gasoline, and 100 % of all kerosene). Furthermore, ENAP imported nearly 37 % of all refined products that entered the country, having a share of almost 67 % of all diesel demand. Likewise, in 2001 ENAP controlled 53 % of the industry's storage, owned a significant part of the oil

pipeline system in the central zone of the country and, jointly with three wholesale distributors, owned shares in the rest of oil pipeline systems through SONACOL S.A.¹⁵

From 1950 to date, ENAP has discovered and operated 23 reservoirs in Chile, participated in 17 companies through which it has developed the refineries and transportation networks that the country requires, and performed exploration in other countries of the Americas, Africa and Asia. However, the criticisms of the past few years have not been against its business performance but against the possibility of privatizing it.

On the one hand, privatizing ENAP would enable the State to recover and redirect investments to other areas of the economy with greater social benefits, where private companies are not willing to intervene. On the other hand, however, there room for doubt regarding the harmful effects of transferring to the private sector a monopoly that is able to exert market power, over which the government would have little control.

5.2 Business Organization and Management

As seen in the description of public and private companies in Chapters 3 and 4 above, both the public company ENAP and the private companies, which in the example are COPEC S.A. and GASCO S.A., were structured through affiliates to deal with the vertical and horizontal expansion of their services (ENAP with 17 companies, COPEC with 15 companies in Chile, 4 of which are in the hydrocarbons sector, and GASCO with 28 companies, 24 of which are in the hydrocarbons sector).

Both ENAP and GASCO have focused on the hydrocarbons sector and expanded their operations internationally, while COPEC has diversified into other sectors of the economy.

From an organizational point of view, COPEC and GASCO are stock companies and as such are governed by the *Ley de Sociedades Anónimas* and regulated by the *Superintendencia de Valores y Seguros* (SVS), while ENAP is covered by a special law and controlled by the Comptroller General of Chile. However, as in the case of private companies, ENAP prepares and publishes audited financial statements, and is headed by a Board of Directors that includes independent members, and has executive, professional and technical staff that runs the company efficiently.

¹⁵ Taken from the publication "*Privatización de ENAP y competencia en el mercado de los combustibles*" by professors Ricardo Paredes of the Industrial Engineering Department, *Universidad Católica de Chile*, and Ricardo Sanhueza of the Faculty of Economic and Business Sciences, *Universidad de los Andes*.

5.3 Service Growth and Expansion

Over the years, all these companies have maintained an upward trend in sales, with no significant changes in each one's market shares. Only the natural gas sales segment lost competitiveness vis-à-vis liquefied gas and other energy products, due rather to the restriction on importing gas from Argentina than for competition reasons. However, given the diversification of these companies (COPEC owns Abastible and shares the ownership of Metrogas with GASCO), on a consolidated level they were not heavily affected.

All these companies have made significant investments each year. For example, in the past four years, ENAP has doubled its levels of investment and COPEC has tripled them.

5.4 Service Quality

Regardless of the owner, the *Superintendencia de Electricidad y Combustibles* supervises liquid fuel and gas service quality and security. This it can do on its own initiative or in response to customer complaints, so the obligations and responsibilities are the same for the state-owned company ENAP and the private enterprises COPEC and GASCO, for example.

To illustrate State non-discrimination in matters of quality and environment, it is important to mention that during 2006 the Environmental Audit applied several hundreds of thousands of Pesos in fines, both to ENAP for its oil spill in the *San Vicente* bay, and to Arauco (a forestry affiliate of the COPEC group) for its industrial waste spill on the Mataquito river.

5.5 Financial Indicators

The above chapters presented financial figures and indicators for the public company ENAP and the private enterprises COPEC and GASCO, which show that there are no marked financial performance differences between the companies beyond those due to their size and scope of service.

Regardless of their owners, all companies have made a profit¹⁶ throughout their years in operation, decreased their levels of indebtedness,¹⁷ and in general systematically increased their economic value (with a tendency to grow their EBITDA).

¹⁶ ENAP earned 2.7 % and GASCO gained 3.9 % over their assets.

¹⁷ 1.04 times equity in the case of ENAP and 1.2 times in the case of Gasco.

5.6 *Comments*

As can be seen from the review in this chapter, there is no business management grounding that justifies attributing a greater or lesser efficiency rating to publicly or privately owned companies in the oil and gas sector, despite the fact that the companies under review participate in different segments of the production chain and do not compete with each other.

Although ENAP has a privileged market position as a result of the reservoir development and operation exclusivity granted it by law for many years, with free imports with ease of access for distributors and large customers, ENAP is quoting at the import parity price.

On the other hand, from a viewpoint of enforcing the energy policy, the government has found in ENAP a strategic ally that has enabled it to lead exploration or refinement projects that are not attractive to private enterprises. One could mention for example the project to install a liquefied natural gas regasifying plant in Con Con, planned for mid-2009, which is strategic for the country given the limits on gas imports from Argentina, in which ENAP is the group leader and is partnered with the private companies of Gasco and Endesa.

The issue as to whether or not the State needs to have state-owned companies to provide services on the energy markets is met with different economic, political and ideological positions. However, in contrast to what occurs in the oil and gas sector, there is the case of the Chilean electric sector, in which company ownership is 100 % private, there is a latent supply risk, and electricity prices are at a historical high. Although this has been magnified by the lack of Argentine gas, it shows that the State has not had a strategic partner that would enable it to develop a centralized development policy and diversify the energy matrix.

6 LESSONS LEARNT, COMMENTS AND SUGGESTIONS

6.1 *Lessons Learnt*

6.1.1 **Lesson N° 1: Importance of an Energy Policy**

It is necessary to have a stable, long-term energy policy with a broad consensus that can survive changes in political authorities and tend towards energy independence, add inter-connections to optimize resource use, and promote renewable energy and efficient energy use.

Although each administration in Chile has had an energy policy, it has been designed within the programmatic environment of political candidatures without citizen participation and consensus.

The current legal framework does not give the energy policy a role in sectoral planning or regulation, as is the case in other countries of the region where energy policies are a basic input for centralized planning.

6.1.2 **Lesson N° 2: Need for Centralized Planning**

To implement the energy policy, the country needs centralized planning of energy sector development, which may be indicative or binding.

Within the political context of Chile's broadly consensual social market economy, the State has been exempted from playing a business role in sectors where private enterprises are interested in participating, and has limited itself to an active oversight role in terms of regulation and supervision.

Within this context, except for the oil and gas sector (through ENAP), the State has left investment in the hands of private enterprise, with the understanding that its responsibility is to provide signals and incentives for the efficient development of investments.

As this policy evolved over the past two decades, the State gradually discarded the task of centralized planning, limiting it to only those State-owned companies that remained under its power.

As a result of this policy, every time the country is in risk of energy rationing, it needs to legislate specifically to add greater obligations and incentives, which due to the inflexibility of construction projects do not suffice to lower supply risks on the short term, and this subjects consumers to high supply costs. One example of this is the natural gas restriction that Chile has experienced since 2003 and reached a peak in 2007. The solution promoted by the State made use of a whole battery of regulatory changes in addition to intervention of the state-owned company ENAP, which in partnership with private enterprises is building a LNG regassing plant that in any case will not begin operations before the second semester of 2009.

6.1.3 Lesson N° 3: Stability in the Game Rules

Stability of the energy sector legal framework has promoted investment development, enhanced service quality and increased consumption levels.

The Chilean legal framework has remained stable in its substantive aspects for over 25 years, which has favored investments and enhanced service quality.

Despite the above, while the present legal framework has been in effect, legal reforms have been introduced whose purpose was to complement or correct aspects that the market did not solve, such as more and better facility safety standards, gas interconnection protocols with Argentina, regulations for concessions, and special operation contracts.

One matter that needs to be improved is that the process of discussing legal framework reforms should include businesses and specialists of the sector. To this end, formal mechanisms are required to prevent reforms from depending entirely on the will of transitory authorities.

6.1.4 Lesson N° 4: Diversifying the Energy Matrix

It is necessary to formalize a high-level energy policy that will send long-term signals regarding the energy matrix makeup, after which regulation would be the instrument for its materialization.

Chile has dealt with its hydro variability issues by adding natural gas from Argentina to the energy matrix as of 1999, thus reducing its hydro dependency from 80 % to approximately 55 %.

Restrictions on natural gas imports and supplies over the past years has demonstrated Chile's ongoing energy vulnerability, making it necessary to embark once again on actions to further diversify the energy matrix, through new interconnections with countries like Peru and Bolivia (the "energy ring"), by developing LNG regassing plants, and by reviving thermoelectric generation projects with coal plants.

As governments, interconnection protocols can be established between the countries of the region. However, these agreements are slow and do not ensure supply stability in the face of political and economic contingencies in one or more countries of the region. Therefore, development should aim towards energy independence.

In a country such as Chile, in which energy investment decisions are made by private interests, the State has mobilized the market with ENAP's leadership in the hydrocarbons sector and with new regulatory changes in the electric sector. These changes provide incentives to investment, especially in renewable and non-conventional energy sources, through instruments that seek to stabilize returns on investments vis-à-vis any changes that the country's energy matrix may undergo with time.

6.1.5 Lesson N° 5: Importance of Mixed Arrangements: Public and Private

The Chilean experience has shown that efficiency in business management is not limited only to private enterprise, and that the existence of public companies may be a good tool for the State to enforce its energy policy.

Legislation to regulate reservoir exploration / operation and liquid hydrocarbons and gas transportation / distribution should not discriminate based on operating company ownership in each segment and sector, but rather on the competitiveness, transparency

and efficiency of their operations. This will benefit consumers through better prices, levels of quality and supply security.

Questions regarding ENAP's State ownership in Chile are not leveled against the company's efficiency, but against the State policy and role. Since the company is not integrated vertically and there is a parity price for oil, privatizing the company would not impose monopoly risks on the hydrocarbons supply.

Quite the contrary. The existence of a state-owned company such as ENAP has helped the State develop continual explorations, build refineries and oil pipelines, and now the LNG regassing plant.

6.1.6 Lesson N° 7: Oversight of Competition

The existence of a body to detect the formation of monopoly actions complements the regulatory function and gives the regulating agency the power to instruct any needed corrections.

Although exploration and development of liquid and gaseous hydrocarbons is concentrated in a single company, given that it is State-owned and the gradual inclusion of private companies is minimal, there have been no disagreements or complains regarding competition as there are in the case of the electric sector, which is 100 % private.

The Chilean legal framework considers the verdict of the *Tribunal de Defensa de la Libre Competencia* (anti-monopoly commission) to qualify goods or services that need to be subjected to price regulation.

For example, in the electric sector this body has reviewed or issued an opinion on:

- Economic concentration in the electric sector,
- Vertical integration in the generation and transmission segments,
- Services associated with power supply by distribution companies,
- And others.

In the hydrocarbons sector, this agency could decide tomorrow to submit the household natural gas distribution service to price regulation. In effect, Article 31 of the *Ley de Servicios de Gas* (Decree N° 323 of 1931), establishes that despite price liberalization for gas supply, the Ministry of Economy, Development and Reconstruction may set prices if the *Tribunal de Defensa de la Libre Competencia* decides that the prices

applied by distribution companies to residential consumption do not reflect market conditions of free competition.

As seen in the above chapter, there are ownership relations between the natural gas transportation and distribution companies, and between them and their primary substitute which is liquefied gas. This creates a market situation in which as concentration increases greater regulation is needed.

6.1.7 Lesson N° 8: Self-regulation and transparency

Should the market fail to respond, the regulatory authority should intervene and add further regulations.

The need to prevent market concentration, in order to avoid abusive prices and deficient service quality for consumers, has led the authority to develop new regulatory tools, which would not be necessary if the companies tended towards self-regulation and greater transparency.

The experience of the past years has brought the various actors to greater cooperation and the will to solve the problems of the energy sector.

6.2 Comments and Suggestions

Unfortunately, the importance of the energy matter in the country's social and political opinion is made known when the undesirable situation of rationing occurs, and measures to solve it generally take many years during which economic effects are significant and even decisive.

Energy autonomy is not always possible, and Chile is one of these cases, lacking the primary energy resources to achieve it, which makes it dependent on inter-connections with other countries and their political ups and downs.

In this context, it is vital to develop and maintain a long-term energy policy and a more active government role in energy sector planning, in order to avoid or get a jump on energy scarcity problems.

The participation of private enterprises in the energy sector has given the country good results, as investments have been developed and service quality and security have improved.

The existence of a state-owned company such as ENAP in the sector has enabled the State to face the challenges of developing the oil & gas sector and taking a leading role in the important energy matrix changes that the country needs.

The next challenges are to improve the regulatory instruments in such wise that the country can continue developing with a more efficient, renewable, autonomous energy matrix, encouraging the participation of private capitals, so as to free up resources needed to meet the most urgent social needs.

ANNEXES

This annex contains a summary of the principal statistics and infrastructure of the hydrocarbons sector at December 2006, which is taken from the public background provided by the *Comisión Nacional de Energía*, Chile's regulating entity for energy matters.

I. Exploration and Development

The oil reservoirs are concentrated in the Magellan basin, in three zones called "Districts": *Continente* (Continent), *Isla Tierra del Fuego* (Tierra del Fuego Island), and *Costa Afuera* (Off-Shore). Most crude oil and natural gas production comes from the Off-Shore reservoirs developed starting in the eighties. Since 1950, 23 reservoirs have been found in Chile's Magellan basin, 12 of which have proven reserves of at least 1,600 million m³ of gas each.

At December 2001, the accrued oil production record reached 69,295 thousand m³, while in the case of natural gas, this figure was 91,256 million m³.

a. Supply System

During 2001, 11.8 million m³ of crude oil were imported, primarily from Argentina (77 %), Brazil (6 %), Nigeria (5 %), and Peru (5 %). Likewise, fuel sales from the refineries served to supply 85.4 % of the national market. The 3 main imported fuels were liquefied gas, diesel oil, and gasoline for automobiles. The total fuel volume that was marketed in 2001 reached as high as 13 million m³.

Hydrocarbon reservoirs are concentrated in the Magellan basin, in the districts known as *Continente*, *Tierra del Fuego* and *Costa Afuera*, the latter district being the one with most crude oil and natural gas production at present.

During 2001, the country's main area for consumption of natural gas was Region XII (4,116 million m³), while the Central-Northern region of the country consumed 3,693 million m³. Of the total domestic consumption, 71.4 % was imported from Argentina and the rest was obtained from the reservoirs of Chile's Magellan basin.

According to current legislation, reservoirs are owned by the State, which has the authority to exploit them through the state-owned company ENAP, administrative concessions, or special oil operations contracts, which are the most used presently.

From 1988 to date, 15 special operation contracts have been formalized, as detailed on the following table:

Nº	BLOCK	MAIN EFFORTS MADE	CONTRACT DURATION	PARTICIPANTS	INVESTMENTS MADE	RESULTS
1	<i>Chiloé – Golfo</i>	2,097 km seismic	From 12/7/77 to	<i>Arco Petróleos Chile S.A.,</i>	39,123	Lacuy 1–B: Dry
	<i>de Penas:</i>	Exploratory wells: Lacuy I,		<i>Amerada Hess, Petróleos Chile S.A.,</i>		Chepu 1: Dry
	Continental Shelf	Lacuy 1–A, and Lacuy 1–B,	07/09/1982	ENAP		Darwin1: Dry
		2044 m abandoned;				No commercial discovery
		Chepu 1, 3,054 m, and Darwin 1, 2,293 m.				
2	Continental shelf	4,814 km seismic	From 12/21/78 to	<i>Phillips Petróleos Chile S.A.,</i>	27,743	A–IX: Dry
	<i>Isla Diego de Almagro / Isla Diego Ramírez</i>	Exploratory well: A–1X, 2,541 m, dry.		<i>Arco Petróleos Chile S.A.,</i>		No commercial discovery
			11/18/1982	<i>Amerada Hess, Petróleos Chile S.A.,</i>		
3	Salar de Atacama	Geology	From 8/30/88 to	<i>Chile Hunt Company,</i>	29,108	Toconao 1: dry
		1,000 km seismic		ENAP		
		Exploratory well: Toconao 1, 5,340 m, Toconao 1A, directional	08/29/1991			
4	Altiplano de Arica	Geology	From 03/13/89 to	<i>Chile Hunt Company,</i>	659	No data
		Gravimetry		ENAP		
5		750 km seismic	09/06/1998			
	San Pedro de Atacama	Geology	From 03/14/89 to	<i>Pecten Chile Company,</i>	1.99	No second stage will follow.
		277 km seismic		ENAP		
Imilac		03/13/1990				
6	Pampa de Chiu–Chiu	Geology	From 5/9/89 to	<i>Eurocan (Bermuda) Limitada de Chile,</i>	1,228	No information
		200 km seismic		ENAP		
			12/01/1991			
7	Salar de Pedernales–	Geology	From 5/9/89 to	<i>Eurocan (Bermuda) Limitada de Chile,</i>	5,934	Fortuna 1X: "anticipated objective was not found"
		200 km seismic		<i>Hamilton Oil (Chile) Co.</i>		
	Maricunga	Exploratory well: Fortuna 1X, 2,684 m	01/31/1998	<i>Norcen International Ltd. (Chile).</i>		
				ENAP		
8	Salar	Geology	From 08/9/89 to	<i>Maxus Energy</i>	2,003	Consortium abandoned area.

Nº	BLOCK	MAIN EFFORTS MADE	CONTRACT DURATION	PARTICIPANTS	INVESTMENTS MADE	RESULTS
	Punta Negra	250 km seismic		Corporation, Inc.,		Contract Terminated
			08/08/1991	ENAP		
9	Lago Mercedes Tierra del Fuego	Geology	From 01/15/90 to	Texaco Exploration Lago Mercedes Chile Inc.,	7.79	Lago Mercedes 1: Discovered gas and condensate,
		Seismic		Anderman/Smith Chile Inc., and Argerado (Chile) Inc.,		Laguna Ema 1: Dry
		Exploratory wells: Lago Mercedes 1, 4,204 m Laguna Ema 1, 3,448 m.	Current	ENAP		
10	Arica area	No data	From 05/23/91 to	Petresearch International (Chile) Inc.,	No data	No data
				ENAP		
			08/18/1991			
11	Altiplano Iquique	Geology	From 25/10/91 to	Chile Hunt Company,	411	The contractor terminated the contract.
		Geochemistry		ENAP		Considers potentially of secondary order.
		Remote sensors	10/25/1992			
12	Lago Blanco, Tierra del Fuego	Geology	From 14/2/92 to	Anderman/Smith (Chile) Inc.,	411	Renounced contract
		Gravimetry		ENAP		
			06/08/1993			
13	Tamarugal Norte	Exploration activities planned for 2 nd exploration period were completed in both blocks	From 6/6/97 (effective date) to 6/6/2007	Evergreen Resources, Inc.	153	In the first phase, data was gathered on sediment basin areas.
		Magnetotelluric profiles were taken		ENAP		
14	Tamarugal Sur	Evergreen Resources, Inc. ENAP		152		
15	Fell Block (Magellan)	3D survey done.	Phase 1: 3 1/2 years. Phase 2: 6 1/2 years	Cordex Petroleums, Inc.	No data:	Natural gas accumulations were observed in the Molino 5 and Santiago Norte 1 wells.
		2D and 3D seismics are being interpreted.		ENAP		

b. Refining

Chile has the following refining plants:

- Oil Refinery of *Concón S.A.*, (RPC from the Spanish) (Region V)
- Oil refinery of Talcahuano, *Petrox S.A.*, (Region VIII)
- Gregorio topping plant (Region XII)

At 2001, RPC's production capacity (given by topping production) was 16,300 m³ / day, Petrox had a production capacity of 16,000 m³ / day, and the Gregorio topping plant had a capacity of 1,800 m³ / day.

c. Infrastructure in the Sector

Both oil exploitation and refining require a number of complementary works that make it possible for the product to arrive at its destination. This infrastructure consists of storage plants, sea terminals, and connection oil pipelines.

Chile presently has a storage capacity of approximately 3.3 million m³ in terminals for crude oil, liquid fuels and liquefied gas. Thirty-five % of this total pertains to crude oil, about 7 % to liquefied gas, and some 58 % to clean and 'dirty' products.

The sea terminals are used to receive and dispatch crude oil and fuels between ships and storage plants. These are located primarily in Regions II, V, VIII, and XII.

The current oil pipeline network in our country connects the RPC and PETROX refineries to the major consumption centers in the country and to the storage terminals belonging to the distribution companies and ENAP. There is also a stand-alone system in Magallanes that is associated with crude oil development, clean products, and gas processing.

In the case of natural gas, the basic infrastructure is made up of gas pipelines and distribution networks.

Since 1961, ENAP has built over 1,400 km of gas pipelines in the Magellan Region, most associated to exploiting natural gas at the reservoirs in the area and processing it in the Cullen and Posesión plants.

In 1971, the Posesión – Cabo Negro gas pipeline commenced operations as the first commercial one in the country. It was built by ENAP to fill de residential gas and thermoelectric power demand in *Punta Arenas* and a few intermediate facilities.

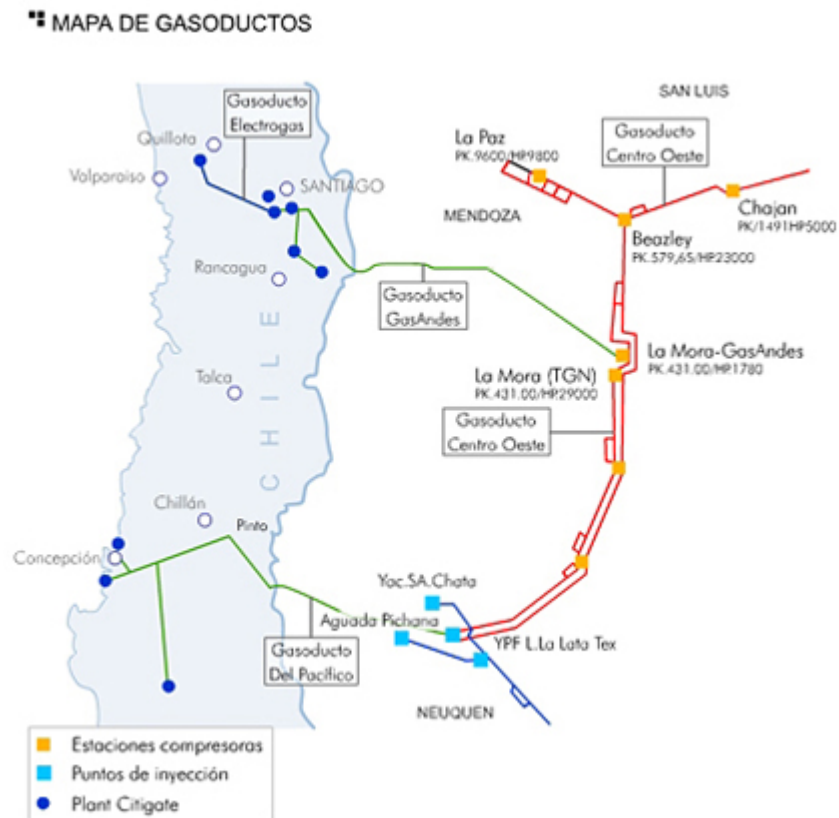
In 1996, the Bandurria gas pipeline was inaugurated in *Tierra del Fuego*, this being the first gas pipeline interconnecting Chile and Argentina to transport gas from Argentina to meet the requirements of METHANEX's methanol plant expansion. For that same purpose, 1999 saw the launch of a significant partial extension of the Posesión – *Cabo Negro* and two new interconnections with Argentina in the continental sector of the Magellan Strait (Dungeness – DAU 2 and Cóndor – Posesión).

In August 1997, natural gas imports from Argentina to the central region of Chile began through the international GASANDES gas pipeline, which transports gas from the Neuquén basin to supply the Santiago distribution company and 3 thermoelectric plants of the interconnected system. Region V, starting at the GASANDES city gate, has been supplied by the national ELECTROGAS gas pipeline since 1998.

MAPA DE GASODUCTOS



In 1999, the GASATACAMA and NORANDINO gas pipelines began operations in Region II. Both transport natural gas from Argentina to combined cycle plants located at the *Sistema Interconectado del Norte Grande* (SING), and to mining and industrial centers in the area.



Gasoducto del Pacífico began transporting natural gas from the Neuquén basin to Region VIII in October 1999, primarily to supply the industrial and residential distribution companies in the area. In this context, *INNERGY Transportes* was created as a partner project of the *Gasoducto del Pacífico*, for the purpose of filling the natural gas demand of industrial customers in the region.

During 2000, the Taltal gas pipeline began operations as project associated to the GAS ATACAMA gas pipeline, in order to supply future generation plants in the northern part of the interconnected system.

The following natural gas transportation companies are currently operating in Chile:

Gas Atacama: A gas pipeline that starts in Cornejo and ends in Mejillones.

Norandino: A gas pipeline that starts in Pichanal and ends in Quebrada Ordoñez.

Taltal: A gas pipeline that starts in Mejillones and ends in Taltal.

Gas Andes: A gas pipeline that starts in La Mora and ends in San Bernardo.

Electrogas: A gas pipeline that starts in San Bernardo and ends in Quillota.

Gas Pacífico: A gas pipeline that starts in Cullen and ends in Nacimiento.

Innergy – Transportes: A gas pipeline that starts in Lirquén and ends in Coronel.

ENAP Magallanes: A company of the ENAP group that owns the Posesión – Cabo Negro gas pipeline.

d. Distribution and Marketing

Currently, natural gas distribution is carried out in five regions of the country: Region II (currently only thermoelectric plants), Region V, the Metropolitan Region, and Regions VIII and XII. All distribution companies, both existing and new, require a gas distribution concession to be built and operated, except when their only business is marketing and they do not have their own networks and facilities.

The following natural gas distribution companies are currently operating in Chile:

Energas: A natural gas distribution company in Region V.

GasValpo: A natural gas distribution company in Region V.

Metrogas: A natural gas distribution company in the Metropolitan Region.

Gas Sur: A natural gas distribution company in Region VIII.

Gasco Magallanes: A company belonging to the GASCO group that distributes natural gas in Region XII.

Ecogas (Intergas): A diluted propane distribution company in Region IX.

The following natural gas marketing companies are currently operating in Chile:

Progas: A natural gas marketing company in Region II.

Distrinor: A natural gas marketing company in Region II.

Innergy Soluciones Energéticas: A natural gas marketing company for the companies of the [...]

e. Projects

Currently in the feasibility and execution stages are oil sector projects for exploration, development, petrochemicals, refineries, oil pipelines, and storage plants.

On a national scale, the most important gas sector project that will soon be executed is the extension of the *Gas Andes* pipeline until Region VI, which will supply the combined-cycle Caletones plant in *El Teniente* and eventually industrial, commercial and residential consumers in the area around Rancagua.

**NATURAL GAS DEMAND PROJECTION FOR 2003–2012
DOMESTIC AND IMPORTED NATURAL GAS CONSUMPTION
(Source: *Comisión Nacional de Energía – CNE*)**

Consumo Anual (Mm3)					
	Nacional Magallanes (XII)	Importado Cuenca Austral (Arg)	Importado Cuenca Neuquén (Arg)	Importado Cuenca Noroeste (Arg)	TOTAL
2003	2,077,299	1,737,000	2,601,611	1,700,611	8,116,522
2004	2,096,215	1,789,000	2,949,026	2,196,496	9,030,737
2005	2,208,433	2,358,000	3,511,511	2,360,745	10,438,689
2006	2,218,962	2,369,436	3,964,621	2,466,070	11,019,089
2007	2,229,812	2,381,445	4,582,263	2,544,922	11,738,443
2008	2,240,993	2,393,692	5,257,468	2,607,126	12,499,279
2009	1,595,515	3,051,406	5,462,565	3,267,712	13,377,198
2010	1,608,388	3,052,134	5,734,407	3,321,435	13,716,365
2011	1,620,623	3,052,877	6,021,587	3,332,930	14,028,017
2012	1,633,232	3,053,635	6,866,664	3,333,130	14,886,660

Consumo Acumulado (MMm3)					
	Nacional Magallanes (XII)	Importado Cuenca Austral (Arg)	Importado Cuenca Neuquén (Arg)	Importado Cuenca Noroeste (Arg)	TOTAL
2003	2,077	1,737	2,602	1,701	8,117
2004	4,174	3,526	5,551	3,897	17,147
2005	6,382	5,884	9,062	6,258	27,586
2006	8,601	8,253	13,027	8,724	38,605
2007	10,831	10,635	17,609	11,269	50,343
2008	13,072	13,029	22,867	13,876	62,843
2009	14,667	16,080	28,329	17,144	76,220
2010	16,276	19,132	34,063	20,465	89,936
2011	17,896	22,185	40,085	23,798	103,964
2012	19,529	25,239	46,952	27,131	118,851

Consumo Diario Medio (MMm3)					
	Nacional Magallanes (XII)	Importado Cuenca Austral (Arg)	Importado Cuenca Neuquén (Arg)	Importado Cuenca Noroeste (Arg)	TOTAL
2003	5.69	4.76	7.13	4.66	22.24
2004	5.74	4.90	8.08	6.02	24.74
2005	6.05	6.46	9.62	6.47	28.60
2006	6.08	6.49	10.86	6.76	30.19
2007	6.11	6.52	12.55	6.97	32.16
2008	6.14	6.56	14.40	7.14	34.24
2009	4.37	8.36	14.97	8.95	36.65
2010	4.41	8.36	15.71	9.10	37.58
2011	4.44	8.36	16.50	9.13	38.43
2012	4.47	8.37	18.81	9.13	40.79

Yearly Consumption (Mm3)			
Accrued Consumption (MMm3)			
Daily Mean Consumption (MMm3)			
National Magallanes (XII)	Imported Southern Basin (Arg)	Imported Neuquén Basin (Arg)	Imported Northeastern Basin (Arg)

**COMPARISON OF TYPICAL CONSUMPTION
AMOUNTS FOR NATURAL GAS (in \$)**

CONSUMPTION OF 19.3 m2 OF NATURAL GAS					
ENERGAS	GASVALPO	METROGAS	GASSUR	INTERGAS	GASCO MAGALLANES
Region V	Region V	Metropolitan Region	Region VIII	Region VIII	Region XII
			This company began natural gas distribution in August 2000		

CONSUMO DE 19,3 m ³ DE GAS NATURAL						
	ENERGAS V Región	GASVALPO V Región	METROGAS R. Metropolitana	GASSUR VIII Región	INTERGAS VIII Región	GASCO MAGALLANES XII Región
Enero-00	4,505	5,538	4,983			1,715
Febrero-00	4,505	5,538	4,983	ESTA EMPRESA		1,723
Marzo-00	4,505	5,538	5,105	INICIO		1,740
Abril-00	4,549	5,538	5,794	LA DISTRIBUCIÓN		1,750
Mayo-00	5,122	5,538	5,794	DE GAS NATURAL		1,765
Junio-00	5,122	5,538	5,794	EN		1,782
Julio-00	5,122	5,538	5,794	AGOSTO DE 2000		1,790
Agosto-00	5,392	5,538	5,794	6,268		1,800
Septiembre-00	5,392	5,538	6,156	6,268		1,814
Octubre-00	5,426	5,726	7,053	6,268		1,823
Noviembre-00	6,112	6,042	7,053	6,268		1,835
Diciembre-00	6,112	6,338	7,053	6,268		1,851
Enero-01	6,112	6,338	7,053	6,268		1,852
Febrero-01	6,723	6,338	7,053	6,268		1,858
Marzo-01	6,723	6,338	7,053	6,268		1,869
Abril-01	6,723	6,338	7,714	6,268		1,881
Mayo-01	6,723	6,338	7,714	6,268		1,893
Junio-01	6,390	6,338	7,714	6,268		1,902
Julio-01	6,390	6,338	6,848	6,268		1,915
Agosto-01	6,390	6,612	6,848	6,582		1,929
Septiembre-01	6,390	6,612	6,848	6,582		1,935
Octubre-01	6,592	6,853	6,848	6,582		1,937
Noviembre-01	6,592	6,853	6,848	7,180		1,877
Diciembre-01	6,592	6,853	6,848	7,180		1,953
Enero-02	6,592	6,853	6,848	7,180		1,952
Febrero-02	6,592	6,853	6,848	7,180		1,957
Marzo-02	6,592	7,614	6,848	7,180		1,968
Abril-02	6,811	7,614	6,848	7,180		1,978
Mayo-02	6,811	7,614	6,848	7,180		1,989
Junio-02	6,811	7,614	6,848	7,180		2,002
Julio-02	6,811	7,614	6,848	7,323		2,004
Agosto-02	6,811	7,614	6,848	7,323		2,004
Septiembre-02	6,811	7,614	6,848	7,323		2,109
Octubre-02	7,584	8,243	7,532	7,742		2,144
Noviembre-02	7,584	8,243	7,532	7,742		2,192
Diciembre-02	7,584	8,243	7,532	7,742		2,215
Enero-03	7,584	8,527	7,532	7,742		2,211
Febrero-03	7,584	8,527	8,259	7,973		2,210
Marzo-03	7,584	8,527	8,259	9,050		2,231
Abril-03	7,584	8,527	8,259	9,050		2,266
Mayo-03	7,584	8,527	8,259	7,962		2,299
Junio-03	7,777	8,527	8,259	8,358		2,288
Julio-03	7,777	8,527	8,259	8,358		2,270
Agosto-03	7,777	8,527	8,259	8,358		2,256
Septiembre-03	7,777	8,602	8,259	8,358		2,254
Octubre-03	7,777	8,602	8,259	8,358		2,267
Noviembre-03	7,777	8,602	8,259	8,358		2,241
Diciembre-03	7,777	8,602	8,259	8,358		2,216
Enero-04	7,777	8,602	8,259	8,358		2,163
Febrero-04	7,777	8,602	8,259	8,358		2,147
Marzo-04	7,777	8,602	8,259	9,111		2,131
Abril-04	7,777	8,602	8,259	9,111		2,114
Mayo-04	7,777	8,602	8,259	9,111		2,099
Junio-04	8,395	8,602	8,259	9,111		2,150
Julio-04	8,395	8,969	8,259	9,476		2,201
Agosto-04	8,395	8,969	8,259	10,646		2,219
Septiembre-04	8,395	8,969	8,259	11,764		2,235
Octubre-04	9,072	8,969	8,259	11,764		2,230
Noviembre-04	9,072	8,969	8,259	11,764		2,209
Diciembre-04	9,072	8,969	8,259	11,764		2,192
Enero-05	9,072	8,969	9,221	9,777		2,197
Febrero-05	9,072	8,969	9,221	9,777		2,170
Marzo-05	9,072	8,969	9,230	9,777		2,161
Abril-05	9,072	8,969	9,850	11,183		2,164
Mayo-05	10,429	9,419	9,850	11,183		2,182
Junio-05	10,429	9,419	9,850	11,183		2,194
Julio-05	10,429	9,419	9,850	11,183		2,210
Agosto-05	10,429	9,419	9,850	11,183		2,217
Septiembre-05	10,429	10,057	9,850	11,966	7,810	2,214
Octubre-05	10,429	10,057	9,850	12,923	7,810	2,202
Noviembre-05	10,429	10,057	9,850	13,246	7,810	2,178
Diciembre-05	10,429	10,057	9,850	13,246	7,810	2,152
Enero-06	10,429	10,057	9,850	13,246	7,810	2,261

II. Operating Companies in the Hydrocarbons Sector

Source: List developed by the *Comisión Nacional de Energía (CNE)*

OIL EXPLORATION (ENAP)				
COMPANY:	DESCRIPTION	WEB	ADDRESS	CITY
Empresa Nacional del Petróleo (ENAP)	A State-owned company created in 1950, whose energy business goes from exploration and development to refining, inside and outside of Chile.	www.enap.cl	Av. Vitacura 2736	Santiago, Chile
OIL REFINERIES (ENAP)				
COMPANY:	DESCRIPTION	WEB	ADDRESS	CITY
RPC	A company of the ENAP group, whose purpose is to acquire, industrialize, store, transport, and market hydrocarbons	www.enap.cl	Av. Borgoño S/Nº	Valparaiso, Chile
Petrox	A company of the ENAP group, whose purpose is to purchase, industrialize, store, transport, and market hydrocarbons	www.enap.cl	Camino a Lengua 2001	Concepcion, Chile
ENAP Magallanes	A company of the ENAP group, whose purpose is to explore and develop hydrocarbons reservoirs, and to process, store, and transport hydrocarbons.	www.enap.cl	José Nogueira 1101	Punta Arenas, Chile
FUEL STORAGE AND DISTRIBUTION COMPANIES				
COMPANY:	DESCRIPTION	WEB	ADDRESS	CITY
Emalco	Belongs to the ENAP group, and provides storage services for companies marketing hydrocarbons in Chile.	www.enap.cl	Tajamar 183, 5º Piso	Santiago, Chile
Gasmar	<i>Gases y Graneles Líquidos S.A.</i> , A company that purchases, stores, sells, and transports liquefied gas.	www.gasco.cl	Av. Apoquindo 3200 8º PISO	Santiago, Chile
Comap	<i>Compañía Almacenadora de Petróleo</i> , made up of Shell and COPEC		Agustinas 1382	Santiago, Chile
Comaco	<i>Compañía Almacenadora de Combustibles</i> , made up of Shell and Esso			
Jose Luis Capdevilla	A fuel distribution company that has its own storage infrastructure		Aillavilú 15780	Maipu, Chile
SIAV	An aviation investment partnership, with COPEC, Esso and Shell having equal parts.		Av. P. De Valdivia 291	Santiago, Chile

FUEL STORAGE AND DISTRIBUTION COMPANIES				
COMPANY:	DESCRIPTION	WEB	ADDRESS	CITY
TerQuim	A fuel storage company.			
<i>Graneles Generales de San Antonio</i>	A fuel storage company.			
<i>Petróleos Marinos de Chile</i>	An IFO and asphalt storage company			
COPEC	Chile's <i>Compañía de Petróleos</i> , with the largest market share in liquid fuel distribution.	www.copec.cl	Agustinas 1382, 5º Piso	Santiago, Chile
Esso	A fuel distribution company belonging to the Exxon Mobil group.	www.exxon.mobil.com	Av. P. De Valdivia 291	Santiago, Chile
Shell	A fuel distribution company belonging to the Royal Dutch group.	www.shell.cl	Av. Del Parque 5250, Ciudad Empresarial	Huechuraba, Santiago, Chile
Texaco	A fuel distribution company belonging to the Chevron Texaco group.	www.texaco.cl	Camino a Melipilla 9330	Maipu, Chile
YPF	A fuel distribution company belonging to the Repsol YPF group.	www.ypf.cl	Av. El Bosque Norte 0177 of. 1801	Santiago, Chile
Jose Luis Capdevilla	A fuel distribution company		Aillavilú 15780	Maipu, Chile
Enersur	A fuel distribution company in Region XII.	www.enersur.cl	Av. Pdte. Ibañez 05871	Punta Arenas, Chile
Petropac	A fuel distribution company in Region IV.		Pedro Pablo Muñoz 675	La Serena, Chile

LIQUEFIED GAS DISTRIBUTION COMPANIES				
COMPANY:	DESCRIPTION	WEB	ADDRESS	CITY
Abastible	A liquefied gas distribution company that covers the area between Regions III and X.	www.abastible.cl	Av. V. Mackenna 55, 3º Piso	Santiago, Chile
Lipigas	A liquefied gas distribution company that covers the area between Regions I and IV.	/www.lipigas.cl	2 Norte 200	Con – Con, Chile
Uligas	A company belonging to the Lipigas group that distributes liquefied gas in Regions I and II.	/www.lipigas.cl	Quinta Sur 1919	Iquique, Chile
Agrogas	A company belonging to the Lipigas group, that distributes liquefied gas in the Metropolitan and VII Regions.	/www.lipigas.cl	Casilla 237	Rancagua, Chile
Codigas	A company belonging to the Lipigas group, that distributes liquefied gas in Region VII.	www.lipigas.cl	Las Urbinas 53 , 13º Piso	Santiago, Chile
Enagas	A company belonging to the Lipigas group, that distributes liquefied gas in Regions VII and XI.	www.lipigas.cl	Tucapel 374, 8º Piso	Concepcion, Chile
Gasco	A liquefied gas distribution company that covers Regions V and VI.	www.gasco.cl	Santo Domingo 1061	Santiago, Chile
Gasco Norte	A company belonging to the GASCO group, that distributes liquefied gas in Region VI.	www.gasco.cl	El Esfuerzo 549, Sector el Belloto	Quilpue, Chile
Gasco Sur	A company belonging to the GASCO group, that distributes liquefied gas in Regions VII and X.	www.gasco.cl	Av. Arturo Prat 175	Concepcion, Chile

TRANSPORTATION COMPANIES				
COMPANY:	DESCRIPTION	WEB	ADDRESS	CITY
YPFB	<i>Yacimientos Petrolíferos Fiscales Bolivianos</i>		Santa Cruz de la Sierra, Km 2 1/2	Santa Cruz, Bolivia
SONACOL	A company that transports fuel through oil pipelines and coastal shipping	www.sonacol.cl	Av. Isabel la Católica 4472	Santiago, Chile
Lipigas	Liquefied gas distribution company	www.lipigas.cl	Las Urbinas 53 , 13º Piso	Santiago, Chile

Petrox	Liquefied Petroleum Gas transportation	www.enap.cl	Camino a Lengua 2001	Talcahuano, Chile
ENAP Magallanes	A company of the ENAP group	www.enap.cl	José Nogueira 1101	Punta Arenas, Chile
Emalco	A company of the ENAP group	www.enap.cl	Tajamar 183, 5º Piso	Santiago, Chile
O&T	The <i>Trasandino</i> oil pipeline		Av. El Bosque Norte 0177 of. 1501	Santiago, Chile

NATURAL GAS DISTRIBUTION COMPANIES

COMPANY:	DESCRIPTION	WEB	ADDRESS	CITY
Energas	A natural gas distribution company in Region V.	www.energasc.cl	General Cruz 222 3º Piso	Valparaíso, Chile
GasValpo	A natural gas distribution company in Region V.	www.gasvalpo.cl	Camino Internacional 1420	Reñaca Alto, Viña del Mar, Chile
Metrogas	A natural gas distribution company in the Metropolitan Region.	www.metrogas.cl	Av. El Bosque Norte 0177, Piso 11º	Santiago, Chile
Gas Sur	A natural gas distribution company in Region VIII.	www.gasco.cl	Anibal Pinto 299	Concepción, Chile
Gasco Magallanes	A company belonging to the GASCO group that distributes natural gas in Region XII.	www.gasco.cl	O'Higgins 860	Punta Arenas, Chile
Intergas	A company distributing diluted propane in Region IX and natural gas in Region VIII.	www.intergas.cl	Bulnes 756	Temuco, Chile

NATURAL GAS COMMERCIALIZATION COMPANIES				
COMPANY:	DESCRIPTION	WEB	ADDRESS	CITY
Progas	A natural gas marketing company in Region II.		Isidora Goyenechea 3365, Piso 8º	Santiago, Chile
Distrinor	A natural gas marketing company in Region II.		Edmundo Perez Zujovic 5554	Antofagasta, Chile
Innergy Soluciones Energéticas	A company marketing natural gas TO the companies of Region VIII.	www.innergy.cl	O'Higgins 940 Piso 10º	Concepcion, Chile

NATURAL GAS TRANSPORTATION COMPANIES				
COMPANY:	DESCRIPTION	WEB	ADDRESS	CITY
Gas Atacama	A gas pipeline that starts in Cornejo and ends in Mejillones.		Isidora Goyenechea 3365, Piso 8º	Santiago, Chile
Norandino	A gas pipeline that starts in Pichanal and ends in Quebrada Ordoñez.		Av. Apoquindo 3721 of. 92	Santiago, Chile
Taltal	A gas pipeline that starts in Mejillones and ends in Taltal.		Isidora Goyenechea 3365, Piso 8º	Santiago, Chile
Gas Andes	A gas pipeline that starts in La Mora and ends in San Bernardo.		Isidora Goyenechea 3600, Piso 4º	Santiago, Chile
Electrogas	A gas pipeline that starts in San Bernardo and ends in Quillota.		Evaristo Lillo 78 of. 41	Santiago, Chile
Gas Pacífico	A gas pipeline that starts in Cullen and ends in Nacimiento.		Isidora Goyenechea 3120 Piso 13º	Santiago, Chile
Innergy – Transportes	A gas pipeline that starts in Lirquén and ends in Coronel.	www.innergy.cl	O'Higgins 940 Piso 10º	Concepcion, Chile
ENAP Magallanes	A company of the ENAP group that owns the Posesión – Cabo Negro gas pipeline.			Punta Arenas, Chile