


Operation Statistics

1995 / 2004

CDEC - SING

CDEC-SING



CDEC-SING Member Companies

This issue is accompanied by a CD containing the information in electronic format, in both Spanish and English and an electronic spreadsheet showing comprehensive data. The information in the CD can be accessed at: http://www.cdec-sing.cl

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LETTER FROM CDEC-SING'S CHAIRMAN OF THE BOARD

I am pleased to present the tenth version of the Operation Statistics of the generation and transmission facilities coordinated by the Norte Grande Interconnected System's Economic Load Dispatch Center (CDEC-SING). The Statistics include a summary of the significant events related to SING operations over 2004.

The 1995-2004 issue comprises SING information about electric power generation, transmission and consumption; fuel consumption by power plants; and energy and power transfers among the CDEC-SING's member companies. Also contained are other data that might be helpful to member companies, users, and any individual or corporation interested in the Norte Grande electrical sector (Chile's First and Second Regions).

By the end of 2004 the CDEC-SING's Board of Directors represented AESGENER, CELTA, EDELNOR, ELECTROANDINA, GASATACAMA GENERACIÓN, NORGENER and TRANSELEC NORTE.

In 2004 the SING's gross maximum hourly generation rose 12.1 percent from 2003, to 1,644 MW. Gross energy output accumulated over 2004 totaled 12,330 GWh, or 7.9 percent more than in 2003. Energy sales to end customers, in turn, reached 11,240 GWh in 2004, up 7.2 percent from 2003.

The SING's electricity was generated as follows in 2004: 61.6 percent natural gas, 37.3 percent coal and other solid fuels, 0.4 percent fuel oil, 0.2 percent diesel oil, and 0.5 percent hydro. Unexpected restrictions in the supply of natural gas from Argentina affected the fuel sources of SING generators, explaining the increase in generation from solid and liquid fuels.

Regarding generation from solid fuels the SING faced a significant hike in international-market coal prices. This was added to soaring transportation costs due to a higher demand of basic inputs, mainly by the Chinese economy, and by cheerful economic indicators around the globe.

The new 220-kV Encuentro-Collahuasi transmission line owned by Compañía Minera Doña Inés de Collahuasi, put in service on June 8, 2004, was a valuable addition to the SING's facilities.

The old U-9 Unit, which started operations in 1960, was removed from the SING's generation service by owner ELECTROANDINA on December 10, 2004.

In terms of continuity of supply, an earthquake occurred on January 23, 2004, whose epicenter was in the Second Region, resulted in the only SING blackout since February 2000.

Law No. 19.940, effective as from March 13, 2004, amended Decree Law No. 1/82 with respect to the regulation of transmission systems; the description of the CDEC's corporate structures, including their Directorates of Operation and of Tolls; the bases for a complementary services market; and the creation of a new Experts Committee, one of whose functions is to solve discrepancies arising within the CDECs. To regulate the duties and activities of the Experts Committee, Decree No. 181, "Experts

Committee Regulations," was published on September 16, 2004. The Experts Committee members were appointed on July 12, 2004.

Over 2005 the CDEC-SING will confront new challenges, such as compliance with the requirements of the new Service Reliability and Quality Technical Standard for Interconnected Systems, and a recent amendment to the Electricity Law. Within the work plan targeted to the particular requirements this Technical Standard will impose, the SING will prepare and decide upon new Complementary Services procedures. Additionally, the SING will conduct technical studies to determine new operating criteria for the Directorates of Operation and of Tolls. The amendments to the Electricity Law will continue to be applied, especially for expansion, use and payment of transmission systems. At this point, the Directorate of Tolls and member companies will play an essential role.

The SING faced difficult operation conditions along 2004, resulting from restricted natural gas supplies as determined by Argentine authorities. The problem was compounded by the increased prices of solid and liquid fuels for generation, which altered the Norte Grande electricity market. Now we need the cooperation of all system agents, to adapt to these changes while maintaining a sustainable short-term and long-term power supply.

Let me conclude by expressing my appreciation for the contributions made by the Directors of the CDEC-SING's member companies; by the Director of Operation and of Tolls; and by all workers of the Directorates of Operation and of Tolls, whose efforts and enthusiasm are essential to obey the legal and regulatory provisions governing our CDEC-SING.

Sincerely,

Francisco Promis Baeza
CDEC-SING's Chairman of the Board

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CHAIRMAN

Francisco Promis Baeza

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HEAD TRANSFERS
José Miguel Arévalo Araneda

CDEC-SING
Antofagasta Personnel

CDEC-SING
Santiago Personnel

Introduction
and Brief History

CDEC - SING

INTRODUCTION AND BRIEF HISTORY

GENERAL DESCRIPTION

The Norte Grande Interconnected System (SING) extends between Tarapaca and Antofagasta, Chile's Regions One and Two, respectivily, covering an area of 185,142 km2, equivalent to 24.5% of the country's continental territory. This zone is characterized by an extremely dry climate, which explains the very arid landscape, which is diversified both by the transverse relief and the high mountains. This has had a significant effect on population distribution and density. The population is concentrated mainly on the coastal area. According to the 2002 census, the population in this area accounts for 6,1% of Chile's total population, and it is concentrated mainly in a few towns and villages that are geographically separated. The SING is characterized by:

- Scare water resources to generate electric power .
- Geographically separated electricity consumer centers.
- Mining companies are the main energy consumers.

HISTORICAL BACKGROUND

Because of the hydrological, climatic and geographic conditions in the SING area, electricity supply in the different consumer centers started with independent local systems exclusively aimed at meeting local needs.

Some of these systems were interconnected at the end of 1982, giving origin to the SING. The coordinated operation of the SING facilities started on july 30, 1993, when its Centro de Despacho Económico de Carga – CDEC (Load Economic Dispatch Center) was created (CDEC SING).

At the beginning, the CDEC – SING was made up of the following generating companies: EDELNOR, ENDESA and CODELCO-CHILE'S Tocopilla Division, currently ELECTROANDINA. At December 2004 CDEC – SING was made up by the following companies: EDELNOR, ELECTROANDINA, NORGENER, CELTA, GASATACAMA GENERACION, AES GENER and TRANSELEC NORTE.

introduction

INTRODUCTION AND BRIEF HISTORY

DOCUMENT CONTENTS

This document presents SING relevant information for the August 1993 December 2003 period. The information has been grouped into five chapters including the following topics:

- The first chaper contains the letter from the President of the Board of Directors, the composition of the Board, the structure of the Operations and Wheel Directorates.
- The second chapter includes a brief history about the creation of the CDEC-SING.
- The third chapter presents CDEC-SING tasks and responsabilities, including the legal framework in effect as of December 2004, the way it is regulated and CDEC-SING atributions and responsabilities. It also includes information about the transmission grid and the existing generators as of December 2004, describing the charasteristics of the transmission and generation facilities, and identifying SING main consumption figures.
- The forth chapter shows the significant events occurred in the SING during 2004.
- The fifth chapter contains the system's operation statistics from the beginning until December 2004, including charts and tables showing the evolution of output and consumption, together with the amounts and prices of energy and power transfers among relevant SING member companies.

BRIEF HISTORY

Initially, the electric supply needs of the Norte Grande region were met with electric systems that evolved along separate ways. In 1980 the National Energy Commission (NEC), convinced of the benefits of interconnected electric systems, conducted a study on the feasibility of connecting the Tocopilla-Chuquicamata system of CODELCO-CHILE's Chuquicamata Division with EDELNOR's systems in the Norte Grande region. EDELNOR, CODELCO, ENDESA and SOQUIMICH were of great help.

The study yielded extremely positive results, and the NEC gave the project a decided boost.

The first steps were taken in 1983: CODELCO and EDELNOR agreed on the construction work required for interconnection. Also in 1983 CODELCO placed in service Unit No. 12, the first coal steam unit to operate within the SING. Later, in 1984, a

contract provided that CODELCO-CHILE's Tocopilla Division should supply 56 MW to EDELNOR as from November 1987. This amount would subsequently grow to 101 MW.

With the decisive support of the NEC and the joint efforts of EDELNOR, CODELCO-CHILE and ENDESA, the SING saw the light in November 1987. The next logical step for CODELCO was to add a modern Load Dispatch Center in Tocopilla, equipped with a Supervisory Control and Data Acquisition (SCADA) system. Besides, CODELCO expanded its Tocopilla Power Plant by installing two 125-MW coal steam units, No. 14 and No. 15, and built 220-kV transmission lines running from the Tocopilla to the Crucero Substations and Chuquicamata Substation.

EDELNOR, in turn, set up 220-kV lines connecting the Tarapacá and Antofagasta systems. Additionally, it erected the Mejillones and Pozo Almonte Terminal Substations, together with the Crucero Substation, which provided a link to the CODELCO system. EDELNOR, furthermore, raised the Arica-Pozo Almonte voltage to 110 kV and reinforced the Iquique-Pozo Almonte connection. Finally, the company furnished a 110-kV connection between Mejillones and Antofagasta, and introduced a Load Dispatch Center equipped with a SCADA system in Antofagasta.

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In 1993 ENDESA set into operation its 74-MW Mejillones Power Plant in the city of the same name. ENDESA joined the system on July 30, 1993, giving origin to the coordinated operation of generation and transmission facilities, under the provisions of the 1982 Chilean Electricity Law (Decree Law No. 1 of 1982) and the Coordination Regulations set forth in Supreme Decree (SD) N°6 of 1985 (SD N°6/1985).

By the time the CDEC-SING came to life, total installed power amounted to 745.1 MW.

NORGENER was added to the CDEC-SING in February 1995 through the commercial operation of Unit No. 1, located in the city of Tocopilla.

brief history

BRIEF HISTORY

EDELNOR rented the Mantos Blancos Diesel Power Plant in September 1995. Besides, it signed a contract with EECSA for the total output of the Cavancha Power Plant as from November 1995. Also in 1995, ENDESA began to operate Gas Turbine No. 3 at the Mejillones Substation.

EDELNOR's Unit No. 1, at the Mejillones Thermoelectric Power Plant, was integrated in 1995. EDELNOR contracted the total production of the ENAEX Power Plant as from February 1996. During 1996 as well, CODELCO-CHILE's Tocopilla Division changed its corporate name to ELECTROANDINA.

NORGENER's Unit No. 2 was connected to the system in 1997. The NORGENER substation was also interconnected to the system, in addition to the 220-kV, double circuit transmission line extending from the NORGENER Substation to the Crucero Substation. ENDESA's gas turbine No. 3 was removed from the system on January 1, 1997.

In 1998, EDELNOR activated Unit No. 2 of the Mejillones Thermoelectric Power Plant. CELTA, in turn, joined the CDEC-SING through the commercial operation of a gas turbine called TGTAR. In October 1998, NOPEL was added to the CDEC-SING. Over 1999, the CDEC-SING allowed the following interconnections: CELTA's coal steam Unit No. 1 at its Tarapacá Thermoelectric Power Plant; NOPEL's combined cycles No. 1 and No. 2 at its Atacama Power Plant; and GENER's gas turbines No. 11 and No. 12 at its Salta Power Plant (in April 1999).

ENDESA's gas turbines in Mejillones were removed from the SING on January 3, 1999, to be transferred to the Interconnected Central System (SIC). On May 12, 1999, ENDESA's diesel gas turbine in Patache was also removed from the SING to be transferred to the SIC. ENDESA, therefore, left the CDEC-SING. On November 29, 1999, this diesel gas turbine, then owned by CELTA, was reconnected to the SING.

A number of lines were connected to the transmission system along 1999: NOPEL's 220-kV Atacama-Encuentro and Encuentro-Crucero lines in February; GENER's 220-kV Andes-Oeste line, the two circuits of its 220-kV Andes-Nueva Zaldívar line, and its 345-kV Salta-Andes line, in April; GENER's Laberinto-Mantos Blancos line in May; and EDELNOR's 110-kV Capricornio-Alto Norte and Capricornio-Antofagasta lines in November.

Steam turbine No. 10 at GENER's Salta Power Plant joined the generating system in April 2000, while EDELNOR's combined cycle Unit No. 3 at its Mejillones Thermoelectric Power Plant started commercial operations in June 2000.

ELECTROANDINA's combined cycle Unit U16 at the Tocopilla Thermoelectric Power Plant was put in service in February 2001.

In July 2001, NEC's Exempt Resolution No. 236 approved the CDEC-SING's Internal Regulations. GENER changed its corporate name to AES GENER in August 2001.

In late 2001 and early 2002, NOPEL's 220-kV Atacama-Esmeralda, Tarapacá-Condores, and Condores-Parinacota lines were connected, in order to supply electricity to the Antofagasta, Iquique and Arica distribution companies, respectively. For this purpose a new company, TRANSEMEL, was created. TRANSEMEL is not a member of the CDEC-SING; it is affiliated to the distribution companies whose transmission facilities were used. In this way new substation and transmission lines were put in service, while some existing ones were modified.

In October 2002 NOPEL changed its corporate name to GASATACAMA GENERACIÓN.

brief history

BRIEF HISTORY

GASATACAMA GENERACIÓN initiated the commercial operations of the TG2A gas turbine of combined cycle No. 2 in November 2002.

In June 2003, under the provisions contained in Article No. 168 of SD No. 327, TRANSELEC NORTE joined the CDEC-SING upon acquiring transmission assets, first from CELTA and then from GASATACAMA GENERACIÓN.

The 220-kV Encuentro-Collahuasi line owned by the Doña Inés de Collahuasi mining company was connected in June 2004.

As from December 10, 2004, ELECTROANDINA announced the removal from service of its Unit U09.

Finally, the CDEC-SING's gross installed power totaled 3595.8 MW by December 2004.

brief history

Task and
Responsabilities

CDEC - SING

CDEC-SING'S TASK AND RESPONSABILITIES

CDEC-SING REGULATORY FRAMEWORK

The regulatory framework described below was in force as at December 31, 2004.

As stipulated in Decree Law 1/1982, amended by Law No. 19.940/2004, the CDEC-SING is responsible for:

a) Maintaining reliable electric service within the SING.

b) Guaranteeing the most economic operation to SING facilities as a whole.

c) Guaranteeing open access to trunk transmission and subtranmission systems.

Coordination in accordance with the provisions of the Chilean Electricity Law should comply with the rules and regulations specified by the National Energy Commission (NEC).

Also, coordination instructions issued by the CDEC-SING are mandatory for all system facilities, including electric power generation plants; trunk transmission, subtransmission and additional lines; electric substations, including primary distribution substations and consumption bars of customers not subject to price regulations and directly supplied from a transmission system's facility, interconnected among them, allowing the generation, transportation and distribution of electric power within the system. Likewise, each member of the Economic Load Dispatch Center will be individually responsible for compliance with the requirements established by the laws or regulations. The remaining entities that, according to the laws and regulations, must subject their facilities' operations to the Center's coordination, will be equally responsible for compliance with the instructions and schedules issued by the Center.

CDEC-SING's duties include:

a) Planning the electric system's short-term operations, considering both current conditions and medium and long-term projections; as well as notifying all members of such plans, so their facilities can be operated in accordance with the resulting schedules.

b) Calculating the instantaneous marginal costs of electric energy as derived from planned operation.

c) Coordinating major preventive maintenance for the system's generating units.

d) Checking compliance with operation and major preventive maintenance schedules, and taking the required corrective measures.

e) Determining and valuing power transfers among CDEC-SING member companies.

f) Specifying the procedures needed to meet service quality requirements and the additional standards set forth by law, and include them in its Internal Regulations.

g) Setting, coordinating and checking the system's power reserve.

h) Coordinating load shedding, and taking any other steps needed to maintain overall reliability of the SING's service.

i) Issuing the reports required by the regulations.

j) Checking that all system nodes from which power is drawn exhibit service reliability levels in conformity with the law.

k) Establishing the minimum technical requirements to be met by any facility interconnected with the SING or modified by its owner. These requirements will be associated with the facility's contribution to reliability and service quality goals.

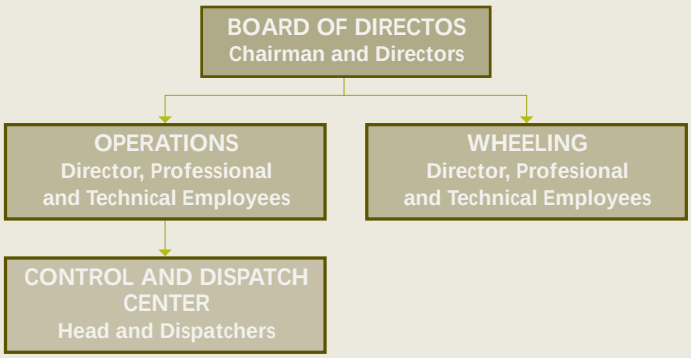
l) Defining, managing and operating complementary services in order to guarantee the system's operation, respecting the reliability and service quality requirements and minimizing the SING's operating costs.

CDEC-SING's task and responsabilities

CDEC-SING'S TASK AND RESPONSABILITIES

STRUCTURE

In accordance with the provisions of Supreme Decree (SD) No. 327, the CDEC-SING's organizational chart is shown below:



The Board of Directors oversees regulatory aspects, in addition to the correct performance of the Directorates of Operation and Tolls. The Board's chief activities include approving the CDEC-SING's Internal Regulations.

By law, discrepancies that may arise within the CDEC-SING about matters defined in the regulations will be submitted to a panel of experts for a decision. The panel will consist of seven professionals: five engineers or bachelors in economic sciences, and two lawyers, all of them with extensive professional or academic experience. These experts will be appointed through a resolution of the Ministry of the Economy, Development and Reconstruction.

The Directorate of Operation and the Directorate of Tolls, in turn, are defined as primarily technical and executive structures, carrying out their activities in agreement with the general criteria issued by the Board of Directors.

Among other functions, the Directorate of Operation is charged with:

a) Setting, coordinating and checking the system's power reserve; coordinating load disconnection; and taking any other steps needed by the system's generating and transmission units to maintain overall service reliability.

b) Planning short, medium and long-term operation, in addition to coordinating maintenance of the SING's generating units and transmission lines, and duly notifying the Dispatch and Control Center of such plans.

c) Supervising compliance with the schedules contained in operation plans, tracking deviations and their causes, and correcting undesired deviations.

d) Calculating firm power for each generating plant and checking relevant balances for each generating company.

e) Calculating instantaneous marginal costs of electric energy for all SING nodes.

f) Determining on a monthly basis the earnings yielded by each stretch of the transmission system, and valuing power transfers in line with the stipulated procedures. Among other functions, the Directorate of Tolls is charged with:

a) Submitting to the Board of Directors for their review, the decisions and procedures aimed at guaranteeing open access to the trunk transmission and subtransmission systems that are interconnected within the SING.

b) Projecting capacity and use as specified by the regulations.

c) Calculating transmission costs to be paid by the corresponding companies.

d) Announcing an open international invitation to tender for trunk transmission system expansion projects, examining the bids, announcing the winning bid and informing the relevant agencies. Additionally, performing an annual consistency analysis of development and expansion facilities.

The CDEC-SING Dispatch and Control Center, located in Antofagasta, is responsible for coordinating real-time operation not only for the system as a whole, but also for each generating unit and transmission line.

CDEC-SING MEMBER COMPANIES

In accordance with SD N°6/1985, which was in effect when the CDEC-SING was incorporated but is now repealed, electric companies with an installed generating capacity exceeding the CDEC-SING's total installed capacity by 2 percent at the time of its creation were entitled to join. Also eligible were selfproducers with an installed generation capacity that under normal conditions would surpass the sum of their peak annual demand or 2 percent of the system's installed power at the time.

CDEC-SING'S TASK AND RESPONSABILITIES

When the CDEC-SING was incorporated, the system had an installed power of 745.1 MW, so the minimum installed power required for membership totaled 14.90 MW.

SD No. 327 added other companies to the CDEC-SING as well: those whose main line of business was the management of electric power transmission systems with a voltage level equal to or higher than 23 kV, and at least one stretch of line measuring more than 100 km in length. Likewise, membership was extended to electric power companies with an installed generating capacity of over 9 MW.

SING ECONOMIC OPERATION

The SING economic operation gives priority to units with lower variable output cost.

A generating unit's variable output cost is defined as the specific fuel consumption times fuel price, plus the non-fuel variable cost that may be attributed mainly to space parts, chemical additives and lubricants.

To be able to compare the generating cost of each generating unit, a table of variable cost prepared containing the variable cost of each generating unit referred to system load center or basic node, by using factors that consider the transmission grid's marginal losses (penalty factors). The load center currently corresponds to the 220 kV CRUISE node.

The operation's planning and marginal cost calculation is carried out weekly, giving origin to a generation program which considers hourly demand, generating unit and transmission system maintenance, and the technical limitations of the generating units, among which are maximum and minimum power limits, commissioning time, and minimum time the system is in service.

The CDEC-SING Dispatch and Control Center carries cut real-time coordination of daily program execution with system member companies, implementing real-time corrections to the operation, which are needed to absorb the variations or desviations to the original program.

CDEC-SING's task and responsabilities

Facilities
Background of

CDEC - SING

SING GENERATING UNITS

Owner	Name of Power Plant	Unit	Nº of Componts	Total Gross Power [MW]
Celta	Tarapacá Thermoelectric	TGTAR (1)	1	23.75
		CTTAR	1	158.00
Edelnor	Chapiquiña	CHAP	2	10.20
	Diesel Arica	M1AR	3	3.00
		M2AR	2	2.92
		GMAR	4	8.40
	Diesel Iquique	SUIQ	3	4.20
		MIIQ	2	2.92
		MAIQ	1	5.94
		TGIQ	1	23.75
		MSIQ	1	6.20
	Diesel Antofagasta	MAAN	2	11.87
		GMAN	8	16.80
	Mejillones Thermoelectric	CTM1	1	165.90
		CTM2	1	175.00
		CTM3	2	250.75
	Diesel Mantos Blancos (2)	MIMB	10	28.64
	Cavancha (3)	CAVA	1	2.60
Electroandina	Tocopilla Thermoelectric	U09 (6)	1	45.00
		U10	1	37.50
		U11	1	37.50
		U12	1	85.30
		U13	1	85.50
		U14	1	128.30
		U15	1	130.30
		U16	2	400.00
		TG1	1	24.70
		TG2	1	24.93
		TG3 (4)	1	37.50
AES Gener	Salta	CC SALTA	3	642.80
Gasatacama Generación	Atacama	CC1	3	395.90
		CC2	3	384.70
	Diesel Enaex (5)	DEUTZ	3	1.96
		CUMMINS	1	0.72
Norgener	Norgener Thermoelectric	NTO1	1	136.30
		NTO2	1	141.04
TOTAL SYSTEM OF 31 DECEMBER OF 2004				**3,595.79**

Notes: The following abbreviations will be used on tables and charts for the names of the companies:
Celta: Celta S.A.
Edelnor: Edelnor S.A.
Electroandina: Electroandina S.A.
AES Gener: AES Gener S.A.
Gasatacama: Gasatacama Generación S.A.
Norgener: Norgener S.A.
Transelec Norte: HQI Transelec Norte S.A.

Injection Bars	Type of Unit	Year of put into Service
Tarapacá 220 kV	Diesel Turbogas	1998
Tarapacá 220 kV	Steam - Coal	1999
Arica 66 kV	Heavy hidro	1967
Arica 66 kV	Diesel Motor	1953
Arica 66 kV	Diesel Motor	1961-63
Arica 66 kV	Diesel Motor	1973
Iquique 66 kV	Diesel Motor	1957
Iquique 66 kV	Diesel Motor	1963-64
Iquique 66 kV	Motor FO 6	1972
Iquique 66 kV	Diesel Turbogas	1978
Iquique 66 kV	Motor FO 6	1985
Antofagasta 13,8 kV	Motor FO 6	1970
Antofagasta 13,8 kV	Diesel Motor	1971-74-76
Chacaya 220 kV	Steam - Coal	1995
Chacaya 220 kV	Steam - Coal	1998
Chacaya 220 kV	Natural Gas Combined Cycle	2000
Mantos Blancos 23 kV	Motor FO 6	1995
Iquique 66 kV	Heavy hidro	1995
Tocopilla 110 kV	FO 6 - Steam	1960
Tocopilla 110 kV	FO 6 - Steam	1970
Tocopilla 110 kV	FO 6 - Steam	1970
Tocopilla 110 kV	Steam - Coal	1983
Tocopilla 110 kV	Steam - Coal	1985
Tocopilla 220 kV	Steam - Coal	1987
Tocopilla 220 kV	Steam - Coal	1990
Tocopilla 220 kV	Natural Gas Combined Cycle	2001
Tocopilla 110 kV	Diesel Turbogas	1975
Tocopilla 110 kV	Diesel Turbogas	1975
Tocopilla 220 kV	Natural Gas Turbogas - Diesel	1993
Salta 345 kV	Natural Gas Combined Cycle	2000
Atacama 220 kV	Natural Gas Combined Cycle	1999
Atacama 220 kV	Natural Gas Combined Cycle	1999
Enaex 110 kV	Diesel Motor	1996
Enaex 110 kV	Diesel Motor	1996
Norgener 220 kV	Steam - Coal	1995
Norgener 220 kV	Steam - Coal	1997

(1) The Power plant belonged to Endesa during the Janueary-November 1999 period. It was transfered to the SING after May 12, 1999, and it was subsequently reintegrated to the SING on November 29, 1999, in hands of Celta.

(2) The Mantos Blancos Diesel power plant its represented in the CDEC-SING by Edelnor.

(3) The Cavancha power plant is represented in the CDEC-SING by Edelnor.

(4) The Gas Turbine is available to operate with natural gas as from September 2000.

(5) The Enaex Diesel power plant is represented in the CDEC-SING by Gasatacama.

SING TRANSMISSION LINES

TRANSMISSIONS LINES OF CDEC-SING MEMBER COMPANIES

Owner	Transmission Lines	Voltage (kV)	Nº Circuits	Aprox. Lengh (km)	Capacity (MVA)	Year put into service
Edelnor	Lagunas - Pozo Almonte	220	1	70.0	328	1987
	Crucero - Lagunas 1	220	1	174.0	328	1987
	Chacaya - Crucero	220	1	152.7	328	1987
	Chacaya - Mejillones	220	1	1.3	377	1987
	Chacaya - Mantos Blancos	220	1	66.0	377	1995
	Chacaya - Mejillones	110	1	1.4	122	1995
	Arica - Pozo Almonte	110	1	216.0	35	1987
	Mejillones - Antofagasta	110	1	63.3	80	1987
	Km6 - Calama	110	1	14.0	69	1982
	Capricornio - Alto Norte	110	1	41.0	137	2000
	Capricornio - Antofagasta	110	1	28.0	137	2000
	Chapiquiña - Arica	66	1	84.0	48	1967
	Diesel Arica - Arica	66	1	6.8	41	1974
	Iquique - Pozo Almonte 1	66	1	42.4	41	1970
	Iquique - Pozo Almonte 2	66	1	41.0	56	1987
	Pozo Almonte-Tamarugal	66	1	20.8	10	1968
	Central Diesel Iquique - Iquique	66	1	1.6	48	1970
Electroandina	Tocopilla - Crucero	220	2	71.4x2	330x2	1986
	Crucero - Chuquicamata	220	2	68x2	330x2	1986
	Crucero - El Abra	220	1	101.0	330	1995
	Crucero - Radomiro Tomic	220	1	82.0	450	1996
	Tocopilla - Chuquicamata 1	110	1	141.0	90	1910
	Tocopilla - Chuquicamata 2	110	1	141.0	90	1910
	Tocopilla - Chuquicamata 3	110	1	141.0	90	1915
	Tocopilla - Km6	110	1	152.0	90	1982
AES Gener	Salta - Andes	345	1	408.0	777	1999
	Andes - Oeste	220	1	38.0	290	1999
	Andes - Nueva Zaldívar	220	2	63.3x2	370x2	1999
	Laberinto - Mantos Blancos	220	1	70.0	290	1999
Norgener	Norgener - Crucero	220	2	72x2	948	1997
	Laberinto - Oeste	220	1	85.0	290	1998
	Laberinto - Lomas Bayas	220	1	10.0	209	1997
	Oeste - Minsal	110	1	33.0	50	1997
Transelec Norte	Atacama - Encuentro	220	2	153x2	416x2	1999
	Atacama - Esmeralda	220	1	70.0	189	2001
	Crucero - Encuentro 1	220	1	0.8	404	1999
	Crucero - Encuentro 2	220	1	0.8	404	2000
	Crucero - Lagunas 2	220	1	173.2	183	1998
	Tarapacá - Lagunas	220	2	56x2	200x2	1998
	Tarapacá - Cóndores	220	1	70.0	189	2002
	Cóndores - Parinacota	220	1	225.0	189	2002
Total Lines in 66 kV				**196.6**	**244**	
Total Lines in 110 kV				**971.7**	**990**	
Total Lines in 220 kV				**2,357.2**	**9,412**	
Total Lines in 345 kV				**408.0**	**777**	
Total CDEC-SING Companies				**3,933.5**	**11,423**	

OTHERS OWNER TRANSMISSION LINES

Owner	Transmission Lines	Voltage (kV)	Nº Circuits	Aprox. Legth (km)	Capacity (MVA)	Year Put into service
Minera Zaldívar	Crucero - Laberinto	220	1	133.0	330	1994
	Laberinto - Nueva Zaldívar	220	1	75.0	330	1994
	Nueva Zaldívar - Zaldívar	220	1	0.2	360	1994
Minera Escondida	Crucero - Escondida	220	1	236.0	270	1995
	Atacama - O'Higgins	220	1	73.0	163	2003
	O'Higgins - Domeyko	220	1	128.0	180	1999
	O'Higgins - Coloso	220	1	32.0	163	1993
	Atacama - Domeyko	220	2	205x2	406	1999
	Domeyko - Escondida	220	1	7.0	180	1999
	Domeyko - Planta óxidos	220	1	1.0	100	1998
	Zaldívar - Escondida	220	1	14.0	300	1995
Minera Collahuasi	Lagunas - Collahuasi 1 (Ver Nota)	220	1	118.0	180	1996
	Lagunas - Collahuasi 2 (Ver Nota)	220	1	118.0	180	1998
	Encuentro - Collahuasi	220	1	201.0	109	2004
Minera Quebrada Blanca	Collahuasi - Quebrada Blanca	220	1	18.0	180	2002
Minera El Tesoro	Encuentro - El Tesoro	220	1	90.0	125	2000
Planta Molycop	Chacaya - Molycop	220	1	0.8	291	2004
Fundición Alto Norte	Antofagasta - Alto Norte	110	1	24.0	122	1993
Minera Michilla	Mejillones - El Lince	110	1	72.0	30	1991
Minera Cerro Colorado	Pozo Almonte - Cerro Colorado	110	1	61.0	164	1993
Minera Meridian	Palestina - El Peñón	66	1	63.0	60	1999
Minera La Cascada	Pozo Almonte - La Cascada	66	1	55.0	5	1971
Transemel	Esmeralda - La Portada	110	1	16.9	73	2001
	Esmeralda - Centro	110	1	0.6	73	2001
	Esmeralda - Uribe	110	1	16.2	73	2001
	Esmeralda - Sur	110	1	5.8	73	2002
	Cóndores - Alto Hospicio	110	1	2.7	80	2002
	Alto Hospicio - Dragón	110	1	2.2	80	2002
	Cóndores - Palafitos	110	1	8.6	73	2002
	Cóndores - Pacífico	110	1	10.4	73	2002
	Parinacota - Quiani	66	1	3.9	44	2002
	Parinacota - Chinchorro	66	1	3.5	44	2002
	Parinacota - Pukará	66	1	3.6	44	2002
Total Lines in 66 kV				**129.0**	**197**	
Total Lines in 110 kV				**220.4**	**914**	
Total Lines in 220 kV				**1,654.2**	**3,556**	
Total Other owner				**2,003.6**	**4,667**	
Total SING				**5,937.1**	**16,090**	

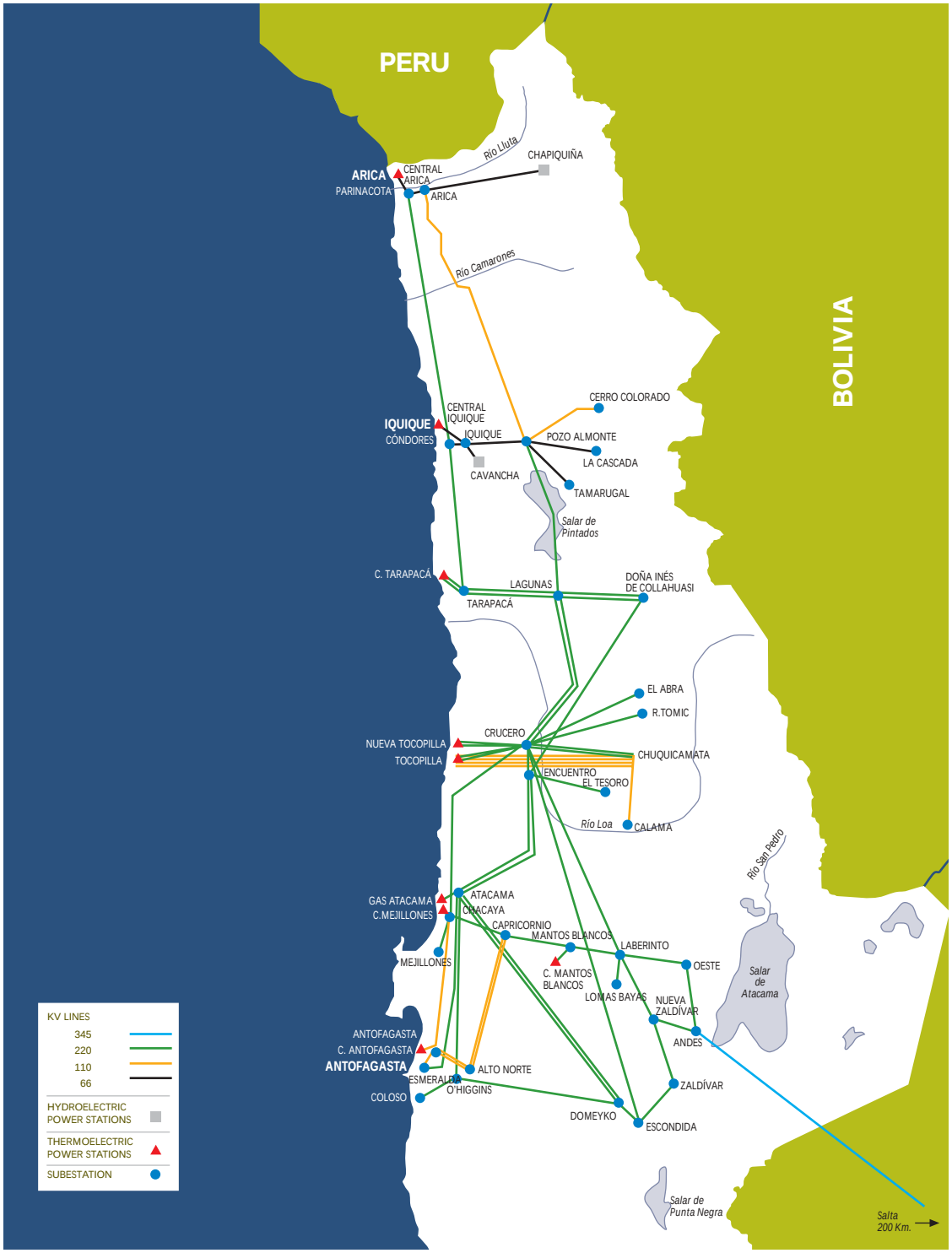
MAIN SING CLIENTS AS OF DECEMBER 2004

CLIENT	CATEGORY	SUPPLY BAR	SUPPLIER
ACF Minera	Mining	Lagunas 220 kV	Celta
Cerro Colorado	Mining	Pozo Almonte 220 kV	Edelnor - Celta
Cía. Portuaria Mejillones	Industrial	Mejillones 23 kV	Edelnor
Collahuasi	Mining	Lagunas 220 kV	Celta
Cosayach	Mining	Pozo Almonte 66 kV	Edelnor
Chuquicamata	Mining	Crucero 220 kV - C.Tocopilla 110 kV	Electroandina
Desalant	Industrial	Antofagasta 110 kV	Edelnor
DSM Minera	Mining	Lagunas 220 kV	Celta
El Abra	Mining	Crucero 220 kV	Electroandina
El Peñón	Mining	C. Atacama 220 kV	Gasatacama
El Tesoro	Mining	Encuentro 220 kV	Gasatacama
Elecda	Distributor	Esmeralda 110 kV	Gasatacama
Eliqsa	Distributor	Cóndores 110 kV	Gasatacama
Emelari	Distributor	Parinacota 66 kV	Gasatacama
Enaex	Industrial	Mejillones 110 kV	Gasatacama
Escondida	Mining	Crucero 220 kV - C. Atacama 220 kV	Norgener - Gasatacama
Essat	Industrial	Pozo Almonte 66 kV - Tamarugal 66 kV - Arica 66 kV	Edelnor - Gasatacama
Inacesa	Industrial	Antofagasta 110 kV	Edelnor
Haldeman	Mining	Pozo Almonte 66 kV	Edelnor
Lipesed	Mining	Tocopilla 5 kV	Electroandina
Lomas Bayas	Mining	Laberinto 220 kV	AES Gener
Mantos Blancos	Mining	Mantos Blancos 220 kV	Edelnor
Michilla	Mining	Mejillones 110 kV	Edelnor
Molycop	Industrial	Chacaya 220 kV	Edelnor
Noranda	Industrial	Antofagasta 110 kV	Edelnor
Polpaico	Industrial	Mejillones 23 kV	Edelnor
Quebrada Blanca	Mining	Collahuasi 220 kV	Gasatacama
Quiborax	Mining	Arica 66 kV	Edelnor
Radomiro Tomic	Mining	Crucero 220 kV	Electroandina
Rayrock	Mining	Antofagasta 110 kV	Edelnor
Santa Margarita	Mining	Calama 100 kV	Electroandina
Sermob	Industrial	Antofagasta 23 kV	Edelnor
Sierra Miranda	Mining	Capricornio 23 kV	Edelnor
Sociedad Chilena del Litio	Industrial	Capricornio 23 kV	Edelnor
SQM El Loa	Mining	Crucero 220 kV	Electroandina
SQM Nitratos	Mining	Crucero 220 kV	Norgener
SQM Nva.Victoria	Mining	Lagunas 220 kV	Electroandina
SQM Salar	Mining	Laberinto 220 kV	Norgener
SQM Salar	Mining	El Negro 110 kV	Electroandina
Zaldívar	Mining	Laberinto 220 kV	AES Gener

Note:

Edelnor supplies the withdrawal of 66 kV of Pozo Almonte as of December 2004.

SIMPLIFIED DIAGRAM OF SING - 2004



Source: HQI Transelec Chile S.A.

SING SIGNIFICANT EVENTS IN 2004

GENERATION AND TRANSMISSION PROJECTS

In June 2004, the 220 kV Encuentro–Collahuasi line, owned by Compañía Minera Doña Inés de Collahuasi, was put in service. The importance of this line is that it link the system at the Encuentro, Collahuasi and Lagunas area.

As announced by Electroandina, its U09 Unit was removed as from dispatch on December 10, 2004, since technical recovery was economically unfeasible.

OPERATION

The SING's annual gross generation totaled 12,330 GWh, which is broken down by fuels below:

- 61.5 % natural gas
- 37.3 % coal
- 0.6 % heavy oil and diesel oil
- 0,5 % hydro

Consumption growth over 2003 involved an increase of 7.9% in gross energy generation, and of 7.2% in total energy sales. In terms of types of customers, 90.0% are unregulated (industrial and mining companies), while 10% are regulated (distribution companies).

The system's peak demand occurred on December 19, at 11 pm, with a gross generation of 1,644 MW, up 12.1% from 2003.

Regarding continuity of supply, an earthquake occurred on January 23, 2004, whose epicenter was in the Second Region, resulted in the SING's only blackout since February 2000.

The regularly updated "Reliability Plan" that has been applied since late 1999 remained in place during 2004. In general, the Plan has allowed to reduce the impact of contingencies affecting generating units, transmission system elements and internal failures in customer installations, through operational actions and policies targeted at a reliable, economic supply.

Some of these actions and policies are listed below:

- To restrict the maximum injected power per generating unit.
- To perform load disconnections through low-frequency relays.
- To hold power reserves at operational units.

MISCELLANEOUS

Law No. 19.940, known as the Short-Law, became effective as from March 13, 2004. The Law amended Decree Law No. 1/82 with respect to, among other matters, the regulation of transmission systems; the description of the CDEC's corporate structures, including its Directorates of Operation and of Tolls; the supply of complementary services; and the creation of a new Experts Committee, one of whose functions is to solve discrepancies arising within the CDECs.

On June 16, 2004, the National Energy Commission delivered Exempt Resolution No. 306, dated June 15, 2004. This Resolution contained a favorable opinion about the text of the CDEC-SING's Internal Regulations – Procedures Manual No. 16, "Statement on the Prices of Fuels to be Used in the SING's Operation."

On July 12, 2004, the Court for the Defense of Free Competition reported the appointment of the Experts Committee members.

On September 16, 2004, the Official Gazette published Decree No. 181 of the Ministry of the Economy, Development and Reconstruction approving the Experts Committee Regulations. Decree No. 181 regulates the activities and duties of this new Committee.

Once the Experts Committee began to work, under the provisions of the Electricity Law, a Termination Agreement for the CDEC-SING's Experts Committee was entered into on September 17, 2004, by the CDEC-SING's Chairman of the Board and the Experts Committee members.

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relevants events in 2004

On December 14, 2004, Board of Directors Agreement No. 302.1(E)/2004 was signed. The Agreement refers to the cancellation and withdrawal from the Ministry of the Economy, Development and Reconstruction of the records about discrepancies at Board meetings No. 205(E)/2001, No. 239/2003, No. 257(E)/2003 and No. 262(E)/2003.

Over 2004, two such discrepancies were reported to the Experts Committee for review. In addition, Exempt Resolutions No. 05, No. 19, No. 24 and No. 39 were received from the Ministry of the Economy Development and Reconstruction.

relevants events in 2004

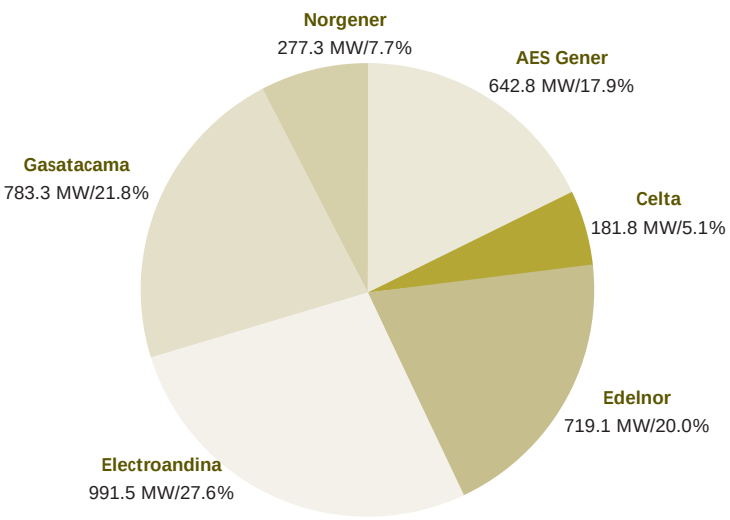
Operation Statistics

1995 / 2004

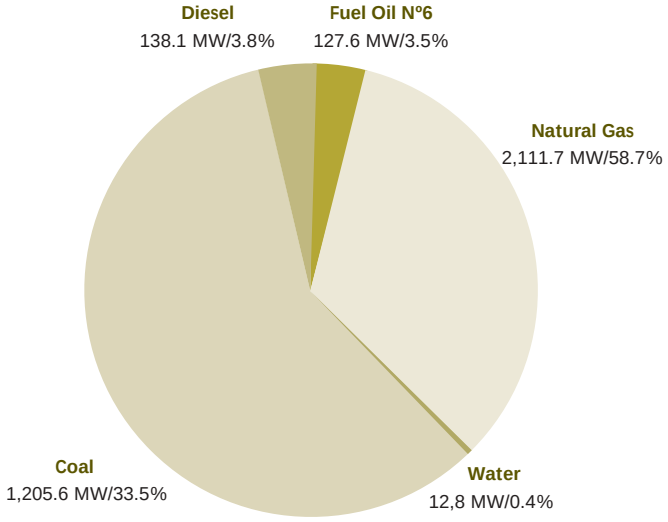
CDEC - SING

INSTALLED CAPACITY (MW) YEAR 2004

Installed Capacity per Company - Year 2004
Total 3,595.8 MW



Installed Capacity per Fuel - Year 2004
Total 3,595.8 MW



INSTALLED CAPACITY PER COMPANY 1995 - 2004 PERIOD

IN PHYSICAL UNITS (MW)

Company \ Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Celta				24	158	182	182	182	182	182
Edelnor	294	297	297	472	472	722	722	719	719	719
Electroandina	629	629	629	629	629	629	1,029	1,029	1,037	992
Endesa	98	98	74	74	98	-	-	-	-	-
AES Gener	-	-	-	-	416	643	643	643	643	643
Gasatacama	-	-	-	-	588	588	588	783	783	783
Norgener	136	136	277	277	277	277	277	277	277	277
TOTAL	1,157	1,160	1,277	1,476	2,637	3,041	3,441	3,633	3,641	3,596

IN PERCENTAGES (%)

Company \ Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Celta	-	-	-	1.6%	6.0%	6.0%	5.3%	5.0%	5.0%	5.1%
Edelnor	25.4%	25.6%	23.2%	32.0%	17.9%	23.8%	21.0%	19.8%	19.8%	20.0%
Electroandina	54.4%	54.2%	49.3%	42.6%	23.8%	20.7%	29.9%	28.3%	28.5%	27.6%
Endesa	8.4%	8.4%	5.8%	5.0%	3.7%	-	-	-	-	-
AES Gener	-	-	-	-	15.8%	21.1%	18.7%	17.7%	17.7%	17.9%
Gasatacama	-	-	-	-	22.3%	19.3%	17.1%	21.6%	21.5%	21.8%
Norgener	11.8%	11.8%	21.7%	18.8%	10.5%	9.1%	8.1%	7.6%	7.6%	7.7%
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

INSTALLED CAPACITY PER TYPE OF FUEL 1995 - 2004 PERIOD

IN PHYSICAL UNITS (MW)

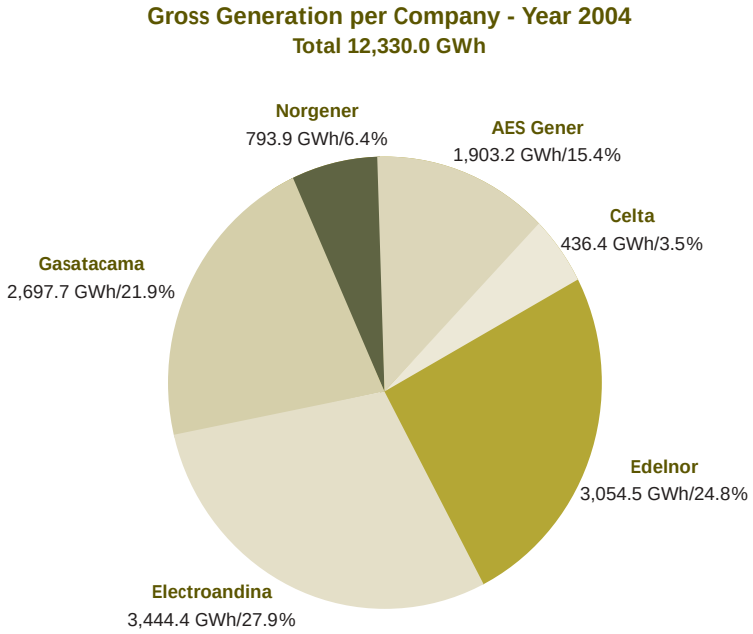
Fuel	Company	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Water	Edelnor	13	13	13	13	13	13	13	13	13	13
Subtotal		**13**	**13**	**13**	**13**	**13**	**13**	**13**	**13**	**13**	**13**
Coal	Celta					158	158	158	158	158	158
	Edelnor	166	166	166	341	341	341	341	341	341	341
	Electroandina	429	429	429	429	429	429	429	429	429	429
	Norgener	136	136	277	277	277	277	277	277	277	277
Subtotal		**732**	**732**	**873**	**1,048**	**1,206**	**1,206**	**1,206**	**1,206**	**1,206**	**1,206**
Diesel	Celta				24		24	24	24	24	24
	Edelnor	62	65	65	65	65	65	62	62	62	62
	Electroandina	80	80	80	80	80	42	42	42	50	50
	Endesa	98	98	74	74	98					
	Gasatacama							3	3	3	3
Subtotal		**239**	**242**	**218**	**242**	**242**	**130**	**130**	**130**	**138**	**138**
Fuel Oil	Edelnor	53	53	53	53	53	53	53	53	53	53
	Electroandina	120	120	120	120	120	120	120	120	120	75
Subtotal		**173**	**173**	**173**	**173**	**173**	**173**	**173**	**173**	**173**	**128**
Natural Gas	Edelnor						251	251	251	251	251
	AES Gener					416	643	643	643	643	643
	Gasatacama					588	588	588	781	781	781
	Electroandina						38	438	438	438	438
Subtotal		**0**	**0**	**0**	**0**	**1,004**	**1,519**	**1,919**	**2,112**	**2,112**	**2,112**
TOTAL		**1,156**	**1,159**	**1,276**	**1,475**	**2,637**	**3,040**	**3,440**	**3,633**	**3,641**	**3,596**

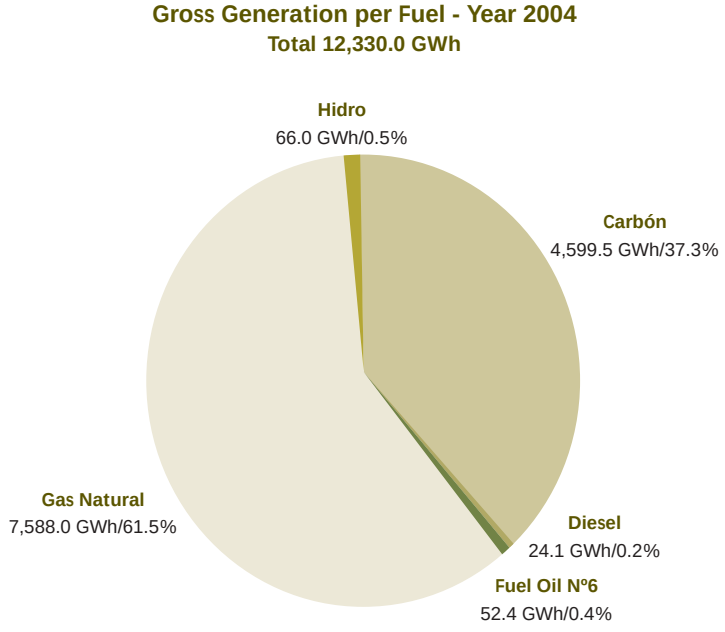
IN PERCENTAGES (%)

Fuel	Company	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Water	Edelnor	1.1%	1.1%	1.0%	0.9%	0.5%	0.4%	0.4%	0.4%	0.4%	0.4%
Subtotal		**1.1%**	**1.1%**	**1.0%**	**0.9%**	**0.5%**	**0.4%**	**0.4%**	**0.4%**	**0.4%**	**0.4%**
Coal	Celta					6,0%	5,2%	4,6%	4,3%	4,3%	4,4%
	Edelnor	14.3%	14.3%	13.0%	23.1%	12.9%	11.2%	9.9%	9.4%	9.4%	9.5%
	Electroandina	37.1%	37.1%	33.6%	29.1%	16.3%	14.1%	12.5%	11.8%	11.8%	11.9%
	Norgener	11.8%	11.8%	21.7%	18.8%	10.5%	9.1%	8.1%	7.6%	7.6%	7.7%
Subtotal		**63.3%**	**63.1%**	**68.4%**	**71.0%**	**45.7%**	**39.7%**	**35.0%**	**33.2%**	**33.1%**	**33.5%**
Diesel	Celta				1.6%		0.8%	0.7%	0.7%	0.7%	0.7%
	Edelnor	5.4%	5.6%	5.1%	4.4%	2.5%	2.1%	1.8%	1.7%	1.7%	1.7%
	Electroandina	6.9%	6.9%	6.2%	5.4%	3.0%	1.4%	1.2%	1.2%	1.4%	1.4%
	Endesa	8.5%	8.4%	5.8%	5.0%	3.7%					
	Gasatacama							0.1%	0.1%	0.1%	0.1%
Subtotal		**20.7%**	**20.9%**	**17.1%**	**16.4%**	**9.2%**	**4.3%**	**3.8%**	**3.6%**	**3.8%**	**3.8%**
Fuel Oil	Edelnor	4.6%	4.5%	4.1%	3.6%	2.0%	1.7%	1.5%	1.4%	1.4%	1.5%
	Electroandina	10.4%	10.4%	9.4%	8.1%	4.6%	3.9%	3.5%	3.3%	3.3%	2.1%
Subtotal		**14.9%**	**14.9%**	**13.5%**	**11.7%**	**6.5%**	**5.7%**	**5.0%**	**4.8%**	**4.7%**	**3.5%**
Natural Gas	Edelnor						8.2%	7.3%	6.9%	6.9%	7.0%
	AES Gener					15.8%	21.1%	18.7%	17.7%	17.7%	17.9%
	Gasatacama					22.3%	19.3%	17.1%	21.5%	21.4%	21.7%
	Electroandina						1.2%	12.7%	12.0%	12.0%	12.2%
Subtotal						**38.1%**	**50.0%**	**55.8%**	**58.1%**	**58.0%**	**58.7%**
TOTAL		**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Note: Electroandina TG3 unit will operate with natural gas as from the year 2000.

GROSS GENERATION YEAR 2004





GENERATION OF SING POWER PLANTS (GWh) - YEAR 2004

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL
CELTA													
CTTAR	25.5	39.8	16.3	58.2	82.0	37.7	12.1	54.4	11.2	39.1	45.2	13.4	434.9
TGTAR	0.4	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.5	1.5
Total Gross Generation	**25.9**	**39.8**	**16.4**	**58.3**	**82.1**	**37.7**	**12.1**	**54.5**	**11.3**	**39.2**	**45.2**	**13.9**	**436.4**
Own Consumption	2.4	3.7	1.6	5.4	7.5	2.3	1.1	4.6	1.1	3.6	4.3	1.3	38.7
Total Net Generation	**23.5**	**36.1**	**14.8**	**52.9**	**74.6**	**35.4**	**11.1**	**49.9**	**10.2**	**35.6**	**41.0**	**12.7**	**397.7**
EDELNOR													
CHAP	5.5	5.6	3.1	4.1	4.3	4.0	3.6	3.9	4.0	4.4	4.1	4.2	50.7
CAVA	1.4	1.3	1.3	1.2	1.3	1.2	1.2	1.2	1.2	1.3	1.3	1.3	15.2
Arica Power Plant	0.6	0.1	0.1	0.9	1.2	0.3	0.3	0.4	0.5	0.3	0.2	0.2	4.7
Iquique Power Plant	1.6	0.3	0.8	1.2	1.3	0.4	0.5	1.4	0.8	0.5	0.7	1.2	10.7
Antofagasta Power Plant	0.9	0.1	0.2	1.2	1.8	0.5	0.4	0.5	0.9	0.3	0.4	0.2	7.3
MIMB	1.2	0.1	1.1	2.8	3.7	1.3	0.8	1.7	1.1	0.7	0.8	0.5	15.8
CTM1	35.4	0.0	59.2	3.8	87.1	57.1	73.6	104.2	62.5	0.0	15.6	0.0	498.7
CTM2	66.6	101.8	35.1	102.1	89.9	106.0	111.3	68.2	31.9	103.8	88.5	97.3	1,002.6
CTM3	124.9	141.9	157.7	128.5	55.7	106.6	47.9	77.6	150.0	160.0	155.2	142.8	1,448.8
Total Gross Generation	**238.0**	**251.1**	**258.6**	**245.8**	**246.1**	**277.4**	**239.5**	**259.2**	**252.9**	**271.2**	**266.7**	**247.7**	**3,054.5**
Own Consumption	12.3	12.3	12.3	12.9	15.3	15.8	14.7	14.4	12.0	13.5	14.0	12.7	158.7
Total Net Generation	**225.7**	**238.8**	**246.3**	**233.0**	**230.9**	**261.6**	**224.7**	**244.8**	**240.9**	**257.8**	**252.8**	**235.0**	**2.895.7**
ELECTROANDINA													
U09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U10	0.0	0.0	0.0	0.0	1.6	0.1	0.0	0.0	0.0	0.0	1.1	2.1	4,.9
U11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.9	2.0
U12	40.2	14.4	10.3	6.4	29.8	26.9	8.3	18.8	3.3	9.2	4.5	13.2	185.2
U13	17.0	40.2	8.6	51.7	32.3	31.1	15.1	31.1	9.5	10.9	28.1	17.1	292.6
U14	0.0	22.1	80.8	76.9	80.7	30.7	75.7	82.0	43.7	76.0	71.7	22.2	662.6
U15	42.4	62.4	45.5	78.0	83.5	70.9	56.0	78.1	42.8	67.3	61.1	58.3	746.5
U16	120.0	123.7	162.9	161.9	133.6	170.0	159.3	28.3	164.0	57.0	10.7	166.6	1,457.8
TG1	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.6	1.4
TG2	0.3	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.3	0.8
TG3	2.6	0.9	7.7	0.8	1.0	1.0	14.5	17.7	1.1	16.0	19.3	8.0	90.6
Total Gross Generation	**222.9**	**263.8**	**315.8**	**375.6**	**362.5**	**330.7**	**328.9**	**256.1**	**264.6**	**236.6**	**197.6**	**289.4**	**3,444.4**
Own Consumption	11.1	15.5	16.4	20.1	20.6	17.0	17.0	17.1	13.8	15.2	14.7	15.7	194.1
Total Net Generation	**211.8**	**248.3**	**299.4**	**355.5**	**341.9**	**313.7**	**311.8**	**239.0**	**250.8**	**221.4**	**182.9**	**273.6**	**3,250.3**

GENERATION OF SING POWER PLANTS (GWh) - YEAR 2004

	ENE	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL
AES GENER													
Salta Power Plant	172.2	152.1	169.1	68.4	130.0	158.1	178.5	168.8	160.1	183.3	178.0	184.4	1,903.2
Total Gross Generation	**172.2**	**152.1**	**169.1**	**68.4**	**130.0**	**158.1**	**178.5**	**168.8**	**160.1**	**183.3**	**178.0**	**184.4**	**1,903.2**
Own Consumption	4.3	3.7	3.9	2.5	3.0	3.2	3.5	3.5	3.6	4.0	4.0	4.3	43.3
Total Net Generation	167.9	148.5	165.2	66.0	127.0	154.9	175.0	165.3	156.5	179.3	174.0	180.2	1,859.8
GASATACAMA													
CC1	126.4	112.9	120.6	41.5	0.6	55.0	120.9	121.9	117.2	112.9	117.7	119.9	1,167.7
CC2	149.1	115.0	122.6	89.2	73.5	106.9	124.7	132.1	197.1	138.8	150.0	131.1	1,530.0
ENAEX	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Gross Generation	**275.5**	**227.9**	**243.2**	**130.7**	**74.1**	**161.9**	**245.6**	**254.1**	**314.3**	**251.7**	**267.6**	**251.1**	**2,697.7**
Own Consumption	8.0	6.7	8.2	6.7	5.1	5.9	6.7	7.0	7.8	6.7	7.0	6.7	82.3
Total Net Generation	**267.6**	**221.2**	**235.0**	**124.0**	**69.0**	**156.0**	**238.9**	**247.0**	**306.6**	**245.1**	**260.6**	**244.4**	**2,615.4**
NORGENER													
NTO1	1.9	0.0	0.0	40.8	60.9	18.0	1.8	19.4	0.0	23.4	10.0	39.4	215.7
NTO2	13.3	6.8	0.0	68.3	66.6	44.4	60.5	66.3	24.2	64.6	81.3	81.9	578.2
Total Gross Generation	**15.2**	**6.8**	**0.0**	**109.1**	**127.5**	**62.4**	**62.3**	**85.7**	**24.2**	**88.0**	**91.3**	**121.3**	**793.9**
Own Consumption	1.5	0.7	0.0	8.8	9.6	5.6	5.6	7.5	2.4	6.8	8.3	9.7	66.5
Total Generación Neta	**13.7**	**6.1**	**0.0**	**100.3**	**117.9**	**56.8**	**56.7**	**78.2**	**21.8**	**81.2**	**83.0**	**111.6**	**727.4**
TOTAL SING													
Gross Generation	**949.7**	**941.5**	**1003.1**	**988.0**	**1,022.4**	**1,028.2**	**1,066.9**	**1,078.4**	**1,027.4**	**1,070.1**	**1,046.5**	**1,107.9**	**12,330.0**
Own Consumption	39.6	42.5	43.2	56.3	61.1	49.8	48.6	54.1	40.5	49.7	52.2	50.5	583.7
Net Generation	**910.1**	**899.0**	**960.8**	**931.6**	**961.3**	**978.4**	**1,018.2**	**1,024.3**	**986.9**	**1,020.4**	**994.3**	**1,057.4**	**11,746.3**
Own Consumption	45.6	37.7	45.0	36.3	39.1	43.4	41.7	39.4	43.9	42.0	41.4	51.4	506.7
Sales to non-regulated clients	779.1	778.8	823.8	808.1	832.8	846.0	884.4	893.0	854.1	885.6	863.1	915.5	10,164.2
Sales to regulated clients	86.9	82.5	94.1	87.2	89.3	89.0	92.2	92.0	89.0	92.8	89.8	90.5	1,075.3
Total Sales	**865.9**	**861.2**	**918.0**	**895.3**	**922.1**	**935.0**	**976.6**	**984.9**	**943.1**	**978.4**	**953.0**	**1,006.1**	**11,239.6**

GENERATION OF SING POWER PLANTS (GWh) - 1995 - 2004 PERIOD

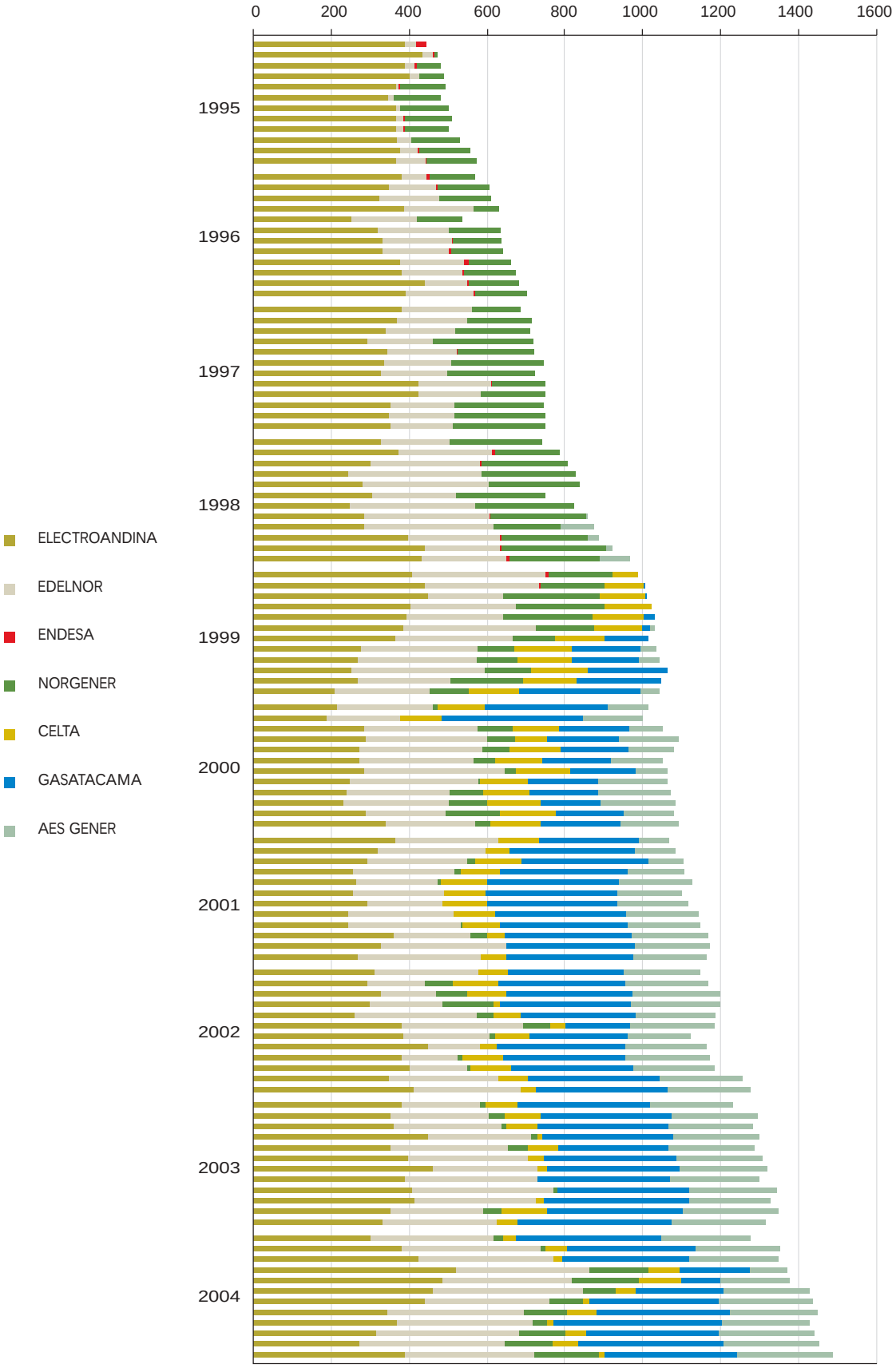
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
CELTA										
CTTAR	-	-	-	145	1,083	1,061	760	639	435	435
TGTAR	-	-	-	11	0	17	3	1	1	1
Total Gross Generation	**-**	**-**	**-**	**156**	**1,083**	**1,079**	**763**	**640**	**436**	**436**
Own Consumption	-	-	-	12	82	84	67	61	40	39
Total Net Generation	**-**	**-**	**-**	**143**	**1,001**	**994**	**696**	**579**	**397**	**398**
EDELNOR										
CHAP	36	35	42	35	46	43	53	54	51	51
CAVA	2	12	14	15	14	13	12	13	14	15
Arica Power Plant	25	20	17	15	22	6	5	2	1	5
Iquique Power Plant	70	74	57	52	62	31	14	8	6	11
Antofagasta Power Plant	58	51	38	55	58	8	5	2	2	7
MIMB	19	69	42	43	58	9	7	6	7	16
ENAEX	-	-	-	-	-	-	-	-	-	-
CTM3	-	-	-	-	2	711	1,131	849	1,695	498.7
CTM1	35	1,064	1,299	1,316	1,092	618	257	18	144	1,003
CTM2	-	-	-	810	1,139	984	774	918	575	1,449
Total Gross Generation	**245**	**1,325**	**1,510**	**2,341**	**2,493**	**2,424**	**2,257**	**1,870**	**2,495**	**3,054**
Own Consumption	8	85	101	165	174	173	131	111	113	162
Total NetGeneration	**237**	**1,240**	**1,409**	**2,176**	**2,319**	**2,251**	**2,125**	**1,759**	**2,382**	**2,892**
ELECTROANDINA										
U09	206	19	101	45	12	-	-	-	-	-
U10 - U11	228	194	58	40	148	56	29	1	-	7
U12 - U13	1,079	1,126	927	768	1,182	503	338	663	455	478
U14 - U15	1,785	1,775	2,040	1,988	1,623	1,509	664	1,266	1,304	1,409
U16	-	-	-	-		192	1,458	1,174	1,627	1,458
TG1 - TG2	1	1	1	2	18	22	16	7	2	2
TG3	2	16	8	19	20	32	43	4	11	91
Total Gross Generation	**3,301**	**3,129**	**3,135**	**2,862**	**3,005**	**2,315**	**2,548**	**3,115**	**3,398**	**3,444**
Own Consumption	244	225	223	204	208	178	139	199	198	194
Total Net Generation	**3,057**	**2,904**	**2,912**	**2,658**	**2,797**	**2,137**	**2,409**	**2,917**	**3,201**	**3,250**
ENDESA (1)										
TG Mej. 1 - 2	47	29	8	24	-	-	-	-	-	-
TG Mej. 3	2	1	-	-	-	-	-	-	-	-
TGTAR	-	-	-	-	6	-	-	-	-	-
Total Gross Generation	**49**	**30**	**8**	**24**	**6**	**-**	**-**	**-**	**-**	**-**
Own Consumption	-	-	-	-	-	-	-	-	-	-
Total Net Generation	**49**	**30**	**8**	**24**	**6**	**-**	**-**	**-**	**-**	**-**

(1) In 1993 Endesa started operating two 74 MW capacity Gas Turbines in the Mejillones Substation, which were withdrawn from the SING as from January 3, 1999 to be transferred to the SIC. In 1995, Endesa STARTED OPERATINGA 23.75 Mw capacity Gas Turbine in the Mejillones Substation, lawhich was withdrawn from SING on January 1ª, 1997. In 1998 it was reintegrated to The SING in the Tarapaca Substation as property of Celta S.A. under the name of TGTAR.

GENERATION OF SING POWER PLANTS (GWh) - 1995 - 2004 PERIOD

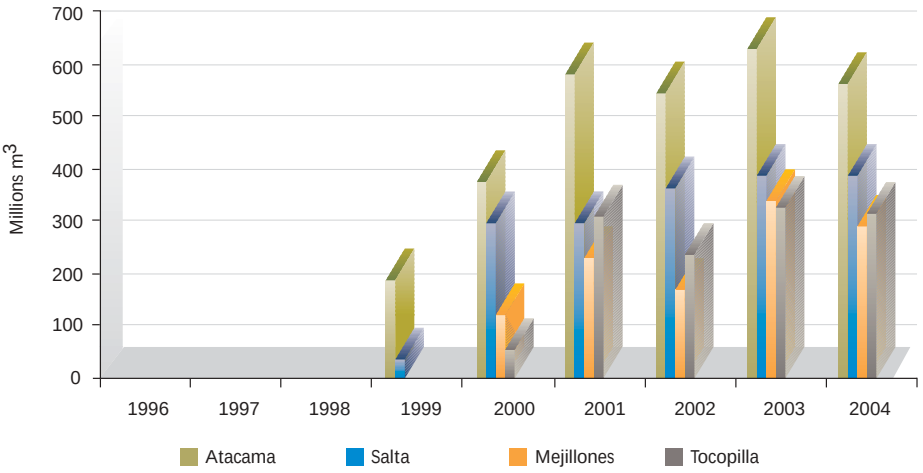
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
AES GENER										
TG11	-	-	-	-	102	-	-	-	-	-
TG12	-	-	-	-	12	-	-	-	-	-
Salta Power Plant	-	-	-	-	-	1,217	1,386	1,813	1,950	1,903
Total Gross Generation	**-**	**-**	**-**	**-**	**114**	**1,217**	**1,386**	**1,813**	**1,950**	**1,903**
Own Consumption	-	-	-	-	-	27	35	45	46	43
Total Net Generation	**-**	**-**	**-**	**-**	**114**	**1,191**	**1,351**	**1,768**	**1,904**	**1,860**
GASATACAMA										
CC1	-	-	-	-	801	970	1,462	1,431	1,434	1,168
CC2	-	-	-	-	116	812	1,368	1,216	1,568	1,530
ENAEX	-	-	-	-	-	-	-	-	-	-
Total Gross Generation	**-**	**-**	**-**	**-**	**916**	**1,782**	**2,830**	**2,647**	**3,002**	**2,698**
Own Consumption	-	-	-	-	39	70	91	77	82	82
Total Net Generation	**-**	**-**	**-**	**-**	**877**	**1,711**	**2,739**	**2,570**	**2,920**	**2,615**
NORGENER										
NTO1	809	1,061	856	1,016	526	264	1	63	16	216
NTO2	-	-	883	960	858	246	67	252	126	578
Total Gross Generation	**809**	**1,061**	**1,740**	**1,975**	**1,384**	**510**	**68**	**315**	**142**	**794**
Own Consumption	61	75	120	133	109	52	7	32	14	66
Total Net Generation	**749**	**986**	**1,620**	**1,843**	**1,275**	**458**	**61**	**283**	**128**	**727**
TOTAL SING										
Gross Generation	**4,404**	**5,545**	**6,392**	**7,358**	**9,001**	**9,327**	**9,851**	**10,400**	**11,424**	**12,330**
Own Consumption	313	385	444	514	612	585	471	524	492	584
Net Generation	**4,091**	**5,159**	**5,948**	**6,844**	**8,389**	**8,743**	**9,381**	**9,876**	**10,932**	**11,746**
Transmission Losses	143	172	200	227	269	345	390	394	452	507
Sales non-regulated clients	3,377	4,359	5,019	5,868	7,313	7,499	8,046	8,473	9,433	10,164
Sales regulated clients	612	622	730	748	807	899	945	1,009	1,047	1,075
Total Sales	**3,989**	**4,981**	**5,749**	**6,616**	**8,120**	**8,398**	**8,991**	**9,482**	**10,480**	**11,240**

MONTHLY AVERAGE HOURLY GENERATION (MW) - 1995-2004 PERIOD

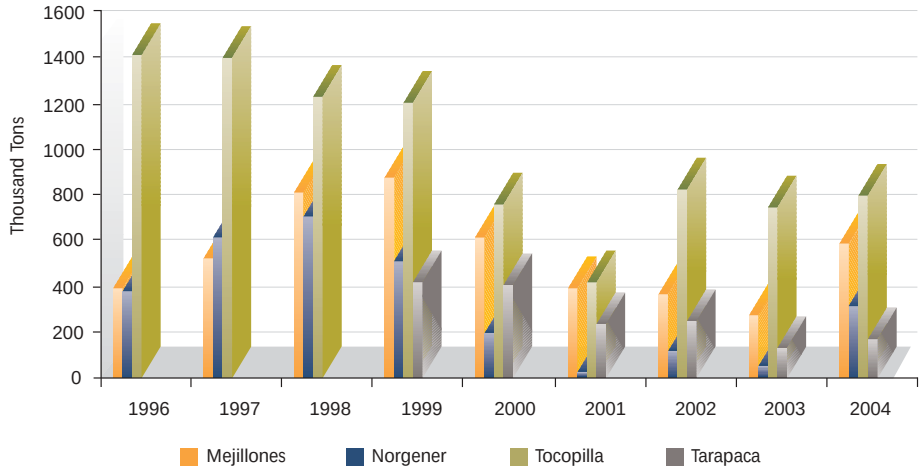


ANNUAL CONSUMPTION OF FUELS PER POWER PLANT 1996 - 2004 PERIOD

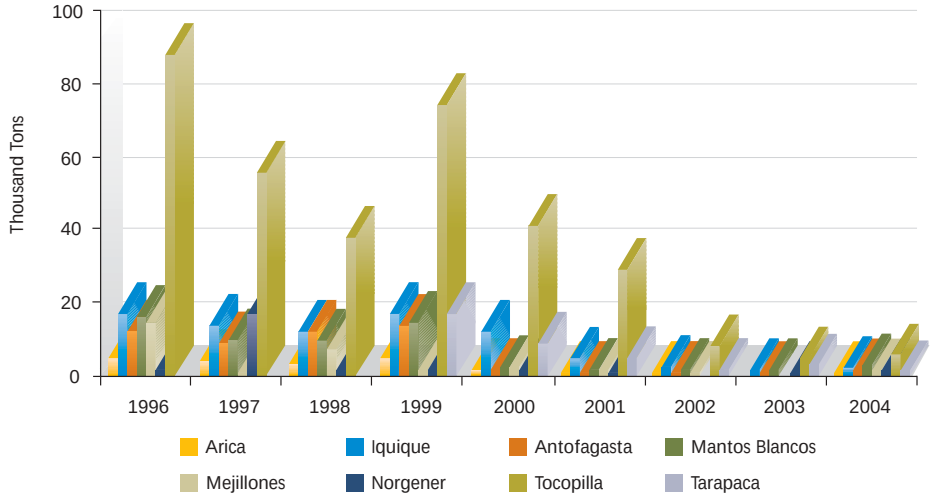
Annual Natural Gas Consumption per Power Plant



Annual Coal Consumption per Power Plant



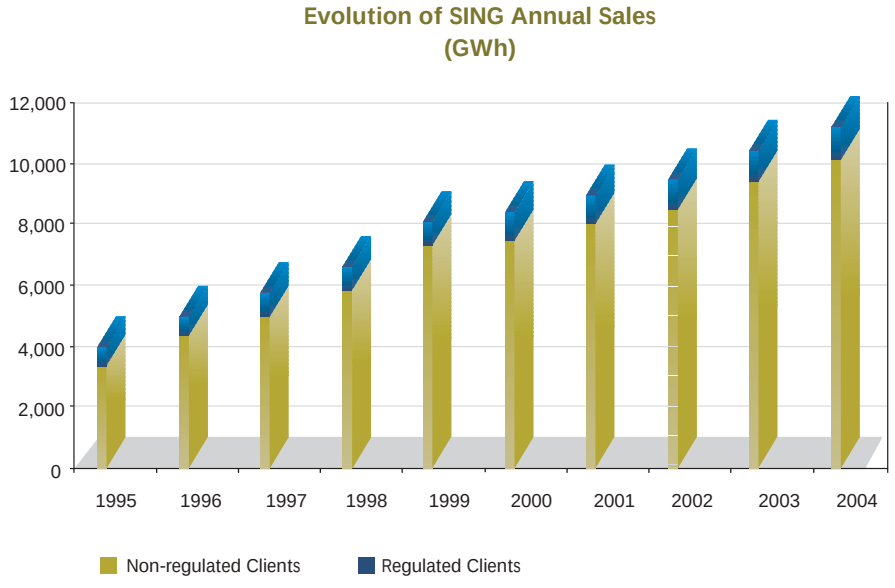
Annual Liquid Fuels Consumption per Power Plant



ANNUAL SING SALES (GWh) 1995 - 2004 PERIOD

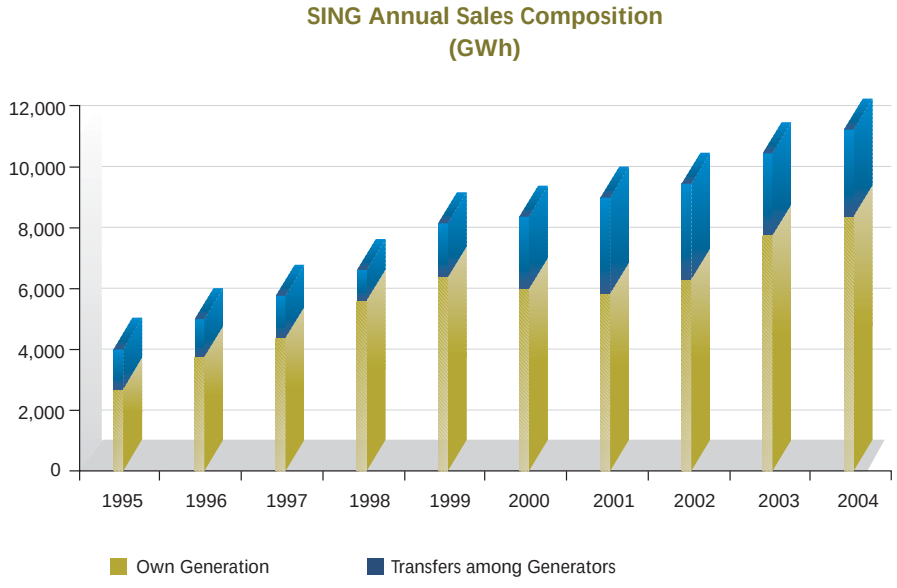
Year	Sales			Growth		
	Non-Reg Clients	Regulated Clients	Total	Annual	Accumulated Average	Accumulated
1995	3,377	612	3,989	17.5%	17.5%	17.5%
1996	4,359	622	4,981	24.9%	21.2%	46.8%
1997	5,019	730	5,749	15.4%	19.3%	69.4%
1998	5,868	748	6,616	15.1%	18.2%	94.9%
1999	7,313	807	8,120	22.7%	19.1%	139.2%
2000	7,499	899	8,398	3.4%	16.5%	147.4%
2001	8,046	945	8,991	7.1%	15.2%	164.9%
2002	8,473	1,009	9,482	5.5%	13.9%	179.3%
2003	9,433	1,047	10,480	10.5%	13.6%	208.8%
2004	10,164	1,075	11,240	7.2%	12.9%	231.1%

Note: The accumulated growth in percentage refers to 1994 sales (3,394.4 GWh). Annual sales correspond to net generation minus tranmission losses.



SING ANNUAL SALES COMPOSITION (GWh) 1995 - 2004 PERIOD

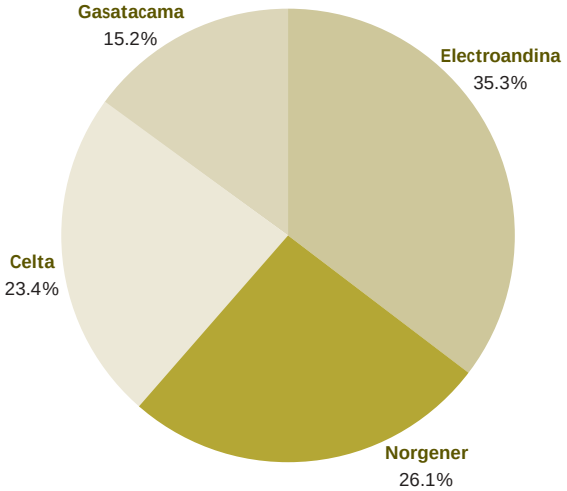
Year	Energy Sales (GWh)	Own Generation (GWh)	Transfers among Generators (GWh)	Porcentage Transfers/Saless (%)
1995	3,989	2,720	1,269	32%
1996	4,981	3,792	1,190	24%
1997	5,749	4,380	1,369	24%
1998	6,616	5,581	1,035	16%
1999	8,120	6,415	1,705	21%
2000	8,398	6,007	2,391	28%
2001	8,991	5,808	3,183	35%
2002	9,482	6,299	3,183	34%
2003	10,480	7,777	2,703	26%
2004	11,240	8,407	2,832	25%



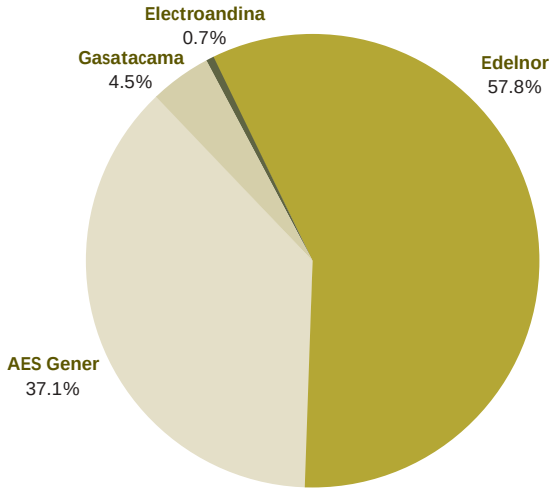
ENERGY TRANSFERS AMONG CDEC-SING GENERATORS COMPANIES (GWh) YEAR 2004

COMPANY		JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
CELTA	Purchases	56.0	35.1	59.8	28.7	15.5	64.3	85.0	45.8	82.9	58.5	49.2	82.3	**663.2**
	Sales													
EDELNOR	Purchases													
	Sales	123.1	141.2	139.3	135.6	130.0	160.7	121.9	141.2	133.6	143.7	142.8	124.2	**1,637.3**
ELECTROANDINA	Purchases	107.3	81.8	62.1			38.6	57.9	130.3	105.6	132.6	175.3	108.5	**1,000.1**
	Sales				18.2	0.7								**18.9**
AES GENER	Purchases													
	Sales	96.1	80.9	94.0	0.6	58.1	88.3	104.6	96.4	96.1	114.6	110.4	110.2	**1,050.3**
GASATACAMA	Purchases				100.6	167.3	82.2	16.0	12.7		22.8		28.6	**430.2**
	Sales	48.6	9.6	7.8						55.8		4.5		**126.3**
NORGENER	Purchases	104.6	114.8	119.1	25.1	6.0	63.9	67.5	48.8	96.9	44.4	33.2	14.9	**739.2**
	Sales													

Purchases of Power in the CDEC



Sales of Power in the CDEC



ENERGY TRANSFERS AMONG CDEC-SING GENERATORS COMPANIES (GWh) 1995 - 2004 PERIOD

		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
CELTA	Purchases	-	-	-	0.4	-	21.2	263.6	390.8	601.4	663.2
	Sales	-	-	-	-	-	144.5	419.7	116.0	10.4	-
EDELNOR	Purchases	387,0	273,8	458,2	140,8	97,1	97,8	54,9	-	-	-
	Sales	-	7.2	-	286.3	273.0	255.3	292.1	801.1	1,263.8	1,637.3
ELECTROANDINA	Purchases	147.9	41.5	173.4	683.0	733.3	1,438.0	1,497.4	1,109.5	831.7	1,000.1
	Sales	19.5	261.1	105.2	5.0	20.2	-	-	-	-	18.9
ENDESA	Purchases	99.6	251.6	23.2	210.9	260.2	-	-	-	-	-
	Sales	22.4	-	0.7	0.3	-	-	-	-	-	-
AES GENER	Purchases	-	-	-	-	397.4	-	2.7	-	-	-
	Sales	-	-	-	-	-	473.7	629.2	997.8	1,088.9	1,050.3
GASATACAMA	Purchases	-	-	-	-	0.3	-	-	24.0	3.5	430.2
	Sales	-	-	-	-	844.4	1,549.6	2,251.5	792.7	350.1	126.3
NORGENER	Compras	-	11.6	3.7	-	216.4	833.9	1,364.7	1,067.2	1,266.1	739.2
	Ventas	-	-	592.4	342.9	604.6	645.6	172.0	-	-	-

Note: Provisional values for May 2000 to December de 2004.

POWER TRANSFERS AMONG CDEC-SING GENERATORS COMPANIES (MW) YEAR 2004

2004 Firm Power Balance

	CELTA	EDELNOR	ELECTROANDINA	AES GENER	GASATACAMA	NORGENER	TOTAL SING
Inyections [MW]	69	287	398	288	366	104	1511
Withdrawals [MW]	129	145	498	94	396	184	1446
Balance [MW]	-60	142	-100	194	-30	-80	65

2004 Firm Power Transfers

	CELTA	EDELNOR	ELECTROANDINA	AES GENER	GASATACAMA	NORGENER	TOTAL SING
PURCHASES (MW)	66	-	119	-	43	84	312
SALES (MW)	-	132	-	180	-	-	312

Price of 220 kV Cruise Node Power

Pricing	Term		Price of Power [$/kW-month]	Price of Power [US$/kW-month]
	From	To		
Oct. - 2003	01/01/2004	28/01/2004	3,895.710	5.768
Oct. - 2003 (1)	29/01/2004	30/04/2004	3,586.781	5.909
Apr. - 2004	01/05/2004	31/10/2004	3,637.220	6.023
Oct. - 2004	01/11/2004	31/12/2004	3,713.710	6.023

(1): Indexación enero de 2004.

POWER TRANSFERS AMONG CDEC-SING GENERATORS COMPANIES (MW) 1995 - 2004 PERIOD

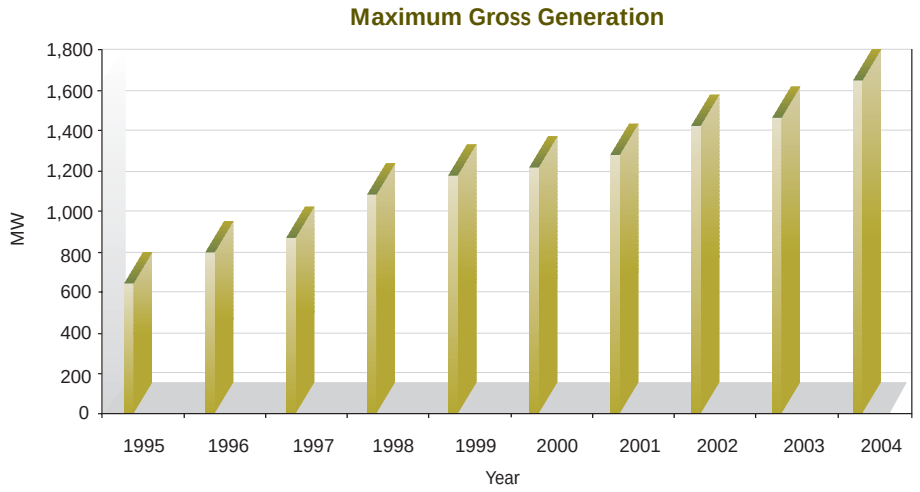
	CELTA		EDELNOR		ENDESA		ELECTROANDINA		AES GENER		GASATACAMA		NORGENER	
	Purchases	Sales	Purchases	Sales	Purchases	Sales	Purchases	Sales	Purchases	Sales	Purchases	Sales	Purchases	Sales
1995	-	-	88.9	-	-	30.3	-	28.2	-	-	-	-	-	30.5
1996	-	-	36.1	-	-	11.3	-	19.6	-	-	-	-	-	5.3
1997	-	-	92.5	-	-	22.9	-	21.7	-	-	-	-	-	47.9
1998	-	13.0	40.8	-	42.1	-	-	43.5	-	-	-		-	26.4
1999	2.5	-	62.5	-	-	-	-	14.5	72.0	-	-	40.0	-	82.5
2000	42.5	-	80.4	-	-	-	206.7	-	-	155.2	-	243.3	68.8	-
2001	63.0	-	37.4	-	-	-	138.2	-	-	150.7	-	182.5	94.6	-
2002	55.1	-	-	141.7	-	-	174.0	-	-	178.9	9.8	-	81.7	-
2003	52.9	-	-	123.9	-	-	117.5	-	-	164.4	34.9	-	83.1	-
2004	65.5	-	-	132.3	-	-	119.3	-	-	179.6	43.0	-	84.2	-

Note: Provisional values for the years 2000 to 2004.

SING ANNUAL MAXIMUM DEMAND 1995 - 2004 PERIOD

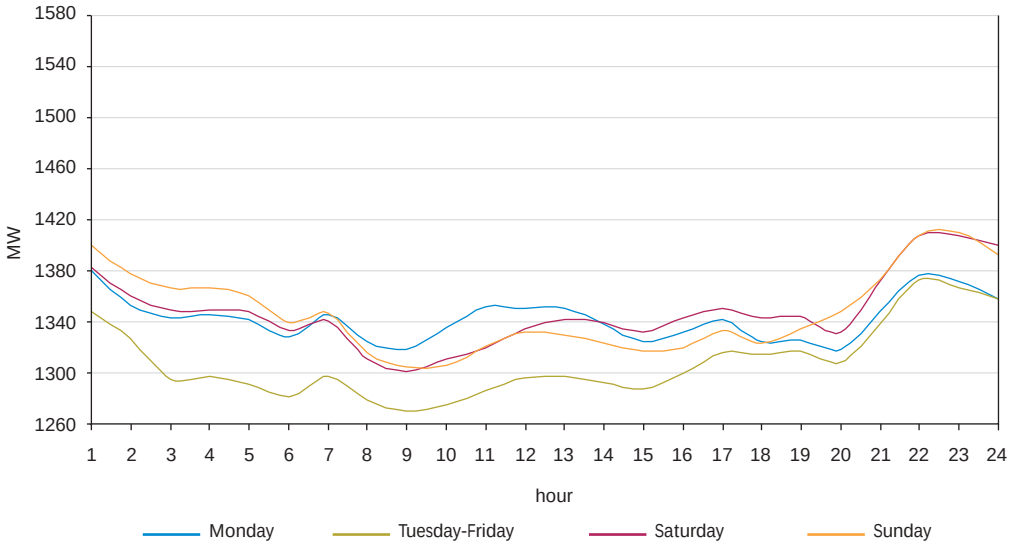
YEAR	DAY	HOUR	MAXIMUM GROSS GENERATION (MW)	MAXIMUM GROSS DEMAND (MW)
1995	22-Dec-95	23	645	611
1996	26-Dec-96	23	795	747
1997	25-Nov-97	22	866	812
1998	23-Dec-98	23	1,087	1,021
1999	13-Dec-99	22	1,173	1,094
2000	15-Dec-00	22	1,213	1,153
2001	05-Nov-01	22	1,281	1,221
2002	23-Dec-02	22	1,420	1,360
2003	14-Dec-03	22	1,467	1,416
2004	19-Dec-04	23	1,644	1,567

Note:
Maximum Gross Deman is obtained as gross generation minus the power plant's own consumption.

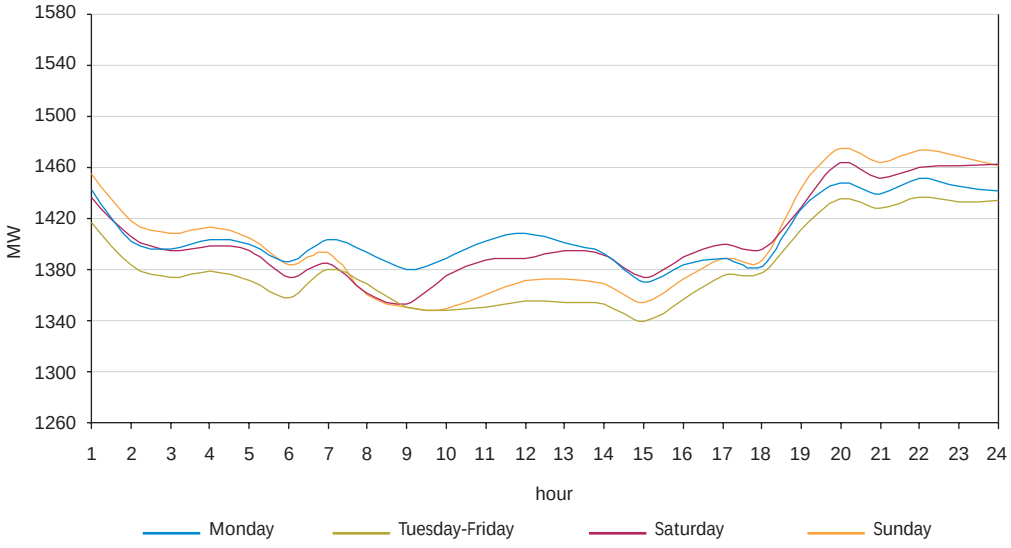


HOURLY GROSS GENERATION. TYPICAL DAILY CURVES - YEAR 2004

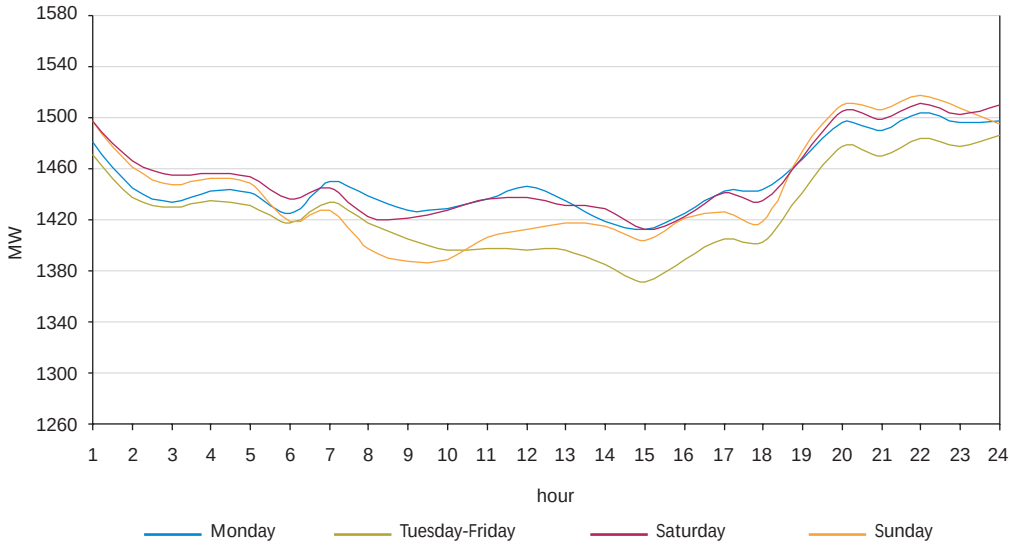
January - March, 2004 Average Hourly Gross Generation



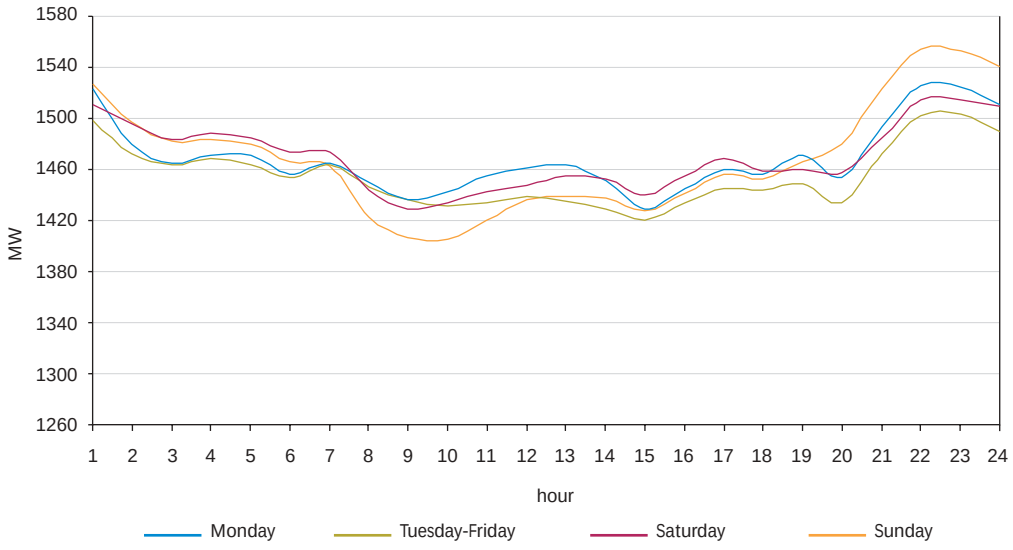
April - June, 2003 Average Hourly Gross Generation



July - September, 2004 Average Hourly Gross Generation



October - December, 2004 Average Hourly Gross Generation



MARGINAL ENERGY COSTS OF 220 kV ($/kWh) CRUCERO NODE - YEAR 2004

DAY	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
1	7.25555	11.98679	9.48558	50.00989	15.60148	16.31086
2	8.54055	12.13178	7.11370	11.10251	15.07745	18.50859
3	8.83223	11.20221	8.48925	12.02714	15.69143	17.23724
4	7.64435	11.78778	10.50823	12.32821	15.67010	15.05288
5	7.95740	9.14411	12.39359	13.04791	15.55338	16.05623
6	7.51947	9.53461	15.58739	12.96017	22.90287	16.24392
7	9.53107	10.28554	12.19009	12.47544	15.95743	16.41270
8	8.98714	10.25388	9.53793	15.57293	15.63282	14.64328
9	9.45866	10.76172	8.51601	12.15356	15.19479	16.09250
10	8.61309	10.76094	8.65829	12.95875	16.81244	21.61866
11	9.77770	10.44160	10.05087	11.63385	15.24424	20.75804
12	16.01295	9.89209	9.88351	12.17202	16.11603	19.98095
13	10.27012	10.04622	9.82608	13.16603	16.53259	20.99753
14	9.23823	9.89974	9.28418	14.78275	16.29224	21.07136
15	9.67952	10.28049	9.84644	15.19639	16.45533	20.31181
16	10.14241	10.35145	10.07091	18.79016	16.49044	21.46438
17	8.88922	10.41645	10.49854	15.30425	15.83851	17.67857
18	10.35945	10.41515	11.74010	15.11840	14.65288	15.56169
19	10.39127	10.36413	11.85079	18.21325	13.50081	16.32324
20	8.63611	10.78068	11.90831	15.14950	15.00435	16.76789
21	12.71176	10.96169	11.99242	15.26164	16.52699	16.66791
22	10.78892	10.76843	11.82421	15.19298	16.39506	15.25834
23	64.85060	11.24305	11.45268	15.50610	20.49249	15.34279
24	37.65098	9.56626	11.74727	16.23379	16.38999	25.74756
25	11.66920	8.86460	10.29068	17.29818	16.43802	18.22527
26	11.48005	9.45460	10.27188	17.23666	17.00552	13.23330
27	13.93229	9.25665	11.17813	18.53502	18.07909	16.35451
28	10.65989	10.68625	10.14746	18.69641	21.00480	16.41156
29	12.94785	10.08246	10.77480	15.66881	26.08425	18.21233
30	10.96640	-	10.17704	21.39834	34.33821	16.09644
31	11.62923	-	10.80246	-	43.27999	-
Promedio	**12.59651**	**10.40073**	**10.58281**	**16.17303**	**18.26632**	**17.68807**

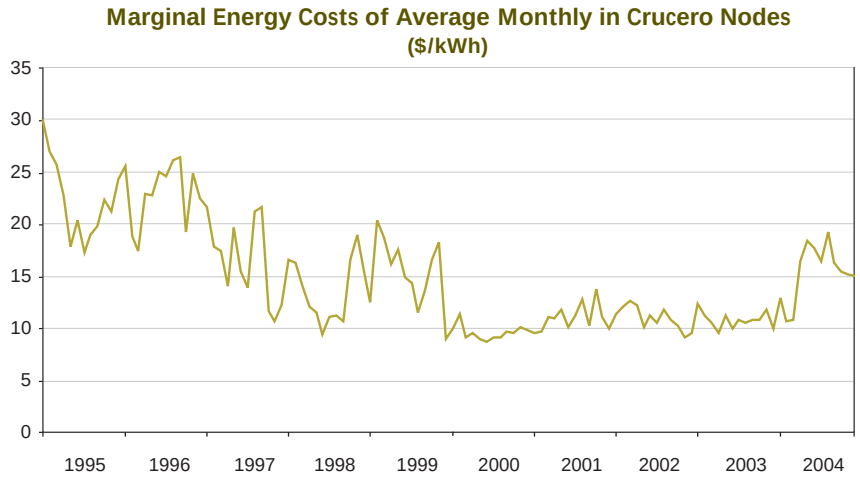
Note: Provisional values. Daily averages in $/kWh.

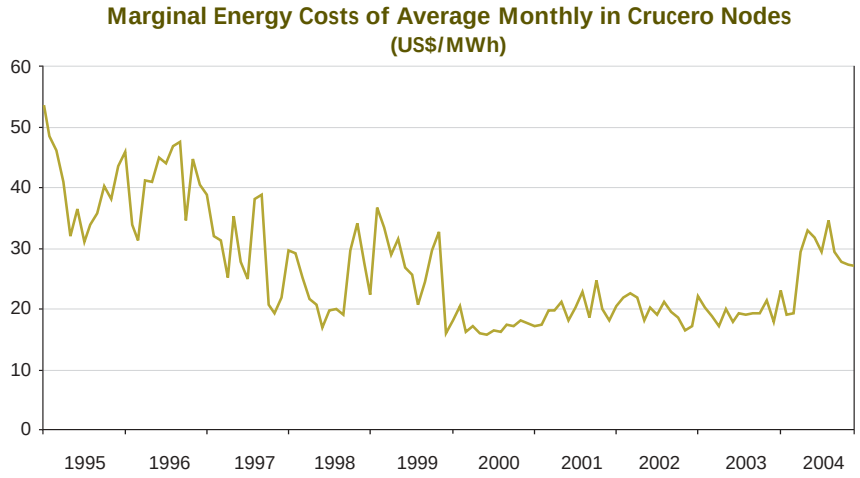
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
14.82374	17.58566	12.86653	9.64958	15.34257	12.13215
14.98808	18.26209	16.05221	14.19931	14.51608	16.03052
16.10334	23.48107	14.26613	14.66499	13.86171	8.56343
16.99740	16.20674	24.67186	15.75327	9.75769	13.62333
17.06055	17.87845	16.30845	17.12473	15.36619	14.50323
14.45060	17.22275	18.07529	13.41326	15.10504	12.40172
14,61902	17.43809	18.61256	11.36875	13.24278	11.50789
12,19434	17.78688	17.43926	12.79596	15.19494	14.87892
12,52153	17.77837	16.76421	14.31961	15.16132	12.93251
14.34213	18.58117	16.69436	11.85925	14.59091	15.95556
16.33425	19.33038	14.97447	15.75914	17.72494	14.03880
13.54717	17.98651	16.61245	17.60040	15.98931	15.14041
15.43159	19.23617	18.86332	16.76021	15.02718	15.00725
16.09314	21.50385	12.18064	17.85563	16.23896	14.97711
16.77866	20.98503	15.60868	20.27870	18.63427	15.01850
17.03162	20.04130	15.56885	16.45887	15.61983	16.51671
17.19017	15.56155	11.36113	15.66216	14.94184	16.68229
17.16376	16.82505	13.20675	15.74092	16.71346	16.45800
17.09240	17.90090	15.62483	15.69118	22.21793	15.48366
17.22044	18.16823	15.46432	15.45167	16.44578	14.94868
16.61251	21.67226	18.79717	16.01855	16.31266	17.17629
16.98691	21.66313	13.77458	15.97805	17.65492	16.68677
17.01001	21.93007	14.26047	15.17954	14.99702	15.49335
16.88196	21.78473	13.00307	14.74497	18.52481	16.16263
16.02447	21.02417	11.06756	14.84327	14.51983	15.78726
15.67977	21.42886	10.06470	14.78016	12.14838	14.92594
16.02740	19.28505	10.90036	17.65002	9.40220	13.14182
17.20961	20.15177	12.50788	17.71774	15.37345	15.93498
28.30608	18.09182	32.16639	16.64288	16.26016	24.48603
17.60864	18.00722	33.76112	19.40066	13.51327	16.91544
17.89965	24.15874	-	15.93120	-	16.13596
16.39454	**19.32122**	**16.38398**	**15.53056**	**15.34664**	**15.14990**

MARGINAL ENERGY COSTS OF 220 kV ($/kWh) CRUCERO NODE - 1995 - 2004 PERIOD

Month \ Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
January	20.3	18.6	16.9	13.7	10.7	8.9	8.8	10.7	12.0	12.6
February	18.3	13.8	13.7	13.5	17.5	10.1	8.9	11.4	11.0	10.4
March	17.6	12.8	13.7	11.7	16.1	8.1	10.2	11.9	10.4	10.6
April	15.7	17.1	11.0	10.0	14.0	8.6	10.2	11.6	9.5	16.2
May	12.3	17.1	15.6	9.6	15.3	8.1	11.0	9.7	11.0	18.3
June	14.2	18.9	12.3	7.9	13.0	7.9	9.5	10.7	9.8	17.7
July	12.1	18.6	11.1	9.3	12.4	8.3	10.5	10.1	10.6	16.4
August	13.5	19.8	17.0	9.4	10.0	8.2	12.0	11.3	10.4	19.3
September	14.3	20.2	17.5	9.0	11.9	8.8	9.7	10.5	10.6	16.4
October	16.2	14.8	9.5	14.1	14.5	8.8	13.1	10.1	10.6	15.5
November	15.4	19.2	8.8	16.2	16.0	9.3	10.6	8.9	11.7	15.3
December	17.6	17.5	10.0	13.2	7.9	9.1	9.5	9.3	9.7	15.1
Average	15.6	17.4	13.1	11.5	13.3	8.7	10.3	10.5	10.6	15.3

Note: Provisional values for April and May 1998, and from May 2000 to December de 2004.
Monthly averages in nominal $/kWh.



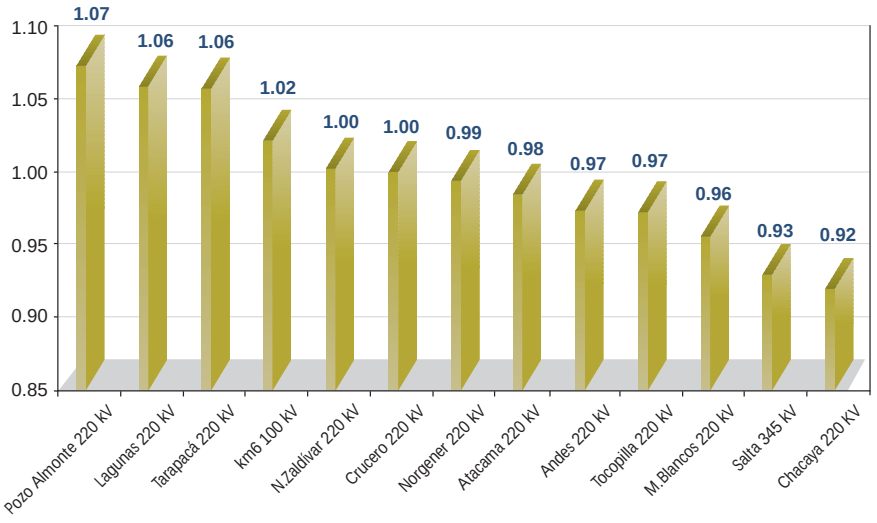


ENERGY PENALTY FACTORS YEAR 2004

Bar	Average	Maximum	Minimum
Pozo Almonte 220 kV	1.07	1.09	1.06
Lagunas 220 kV	1.06	1.07	1.05
Tarapacá 220 kV	1.06	1.07	1.04
km6 100 kV	1.02	1.02	1.02
N.Zaldívar 220 kV	1.00	1.03	0.97
Crucero 220 kV	1.00	1.00	1.00
Norgener 220 kV	0.99	1.00	0.99
Atacama 220 kV	0.98	1.01	0.97
Andes 220 kV	0.97	1.02	0.90
Tocopilla 220 kV	0.97	0.98	0.96
M.Blancos 220 kV	0.96	0.98	0.92
Salta 345 kV	0.93	1.01	0.85
Chacaya 220 KV	0.92	0.95	0.89

Note: Values correspond to weekly planning.

Energy Penalty Factors - Year 2004

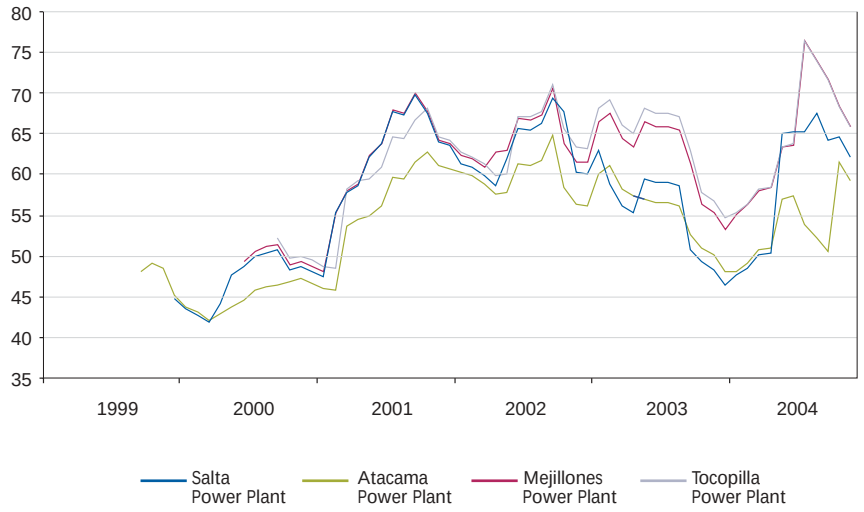


Note: Values correspond to average penalty factors.

FUEL PRICES PER POWER PLANT

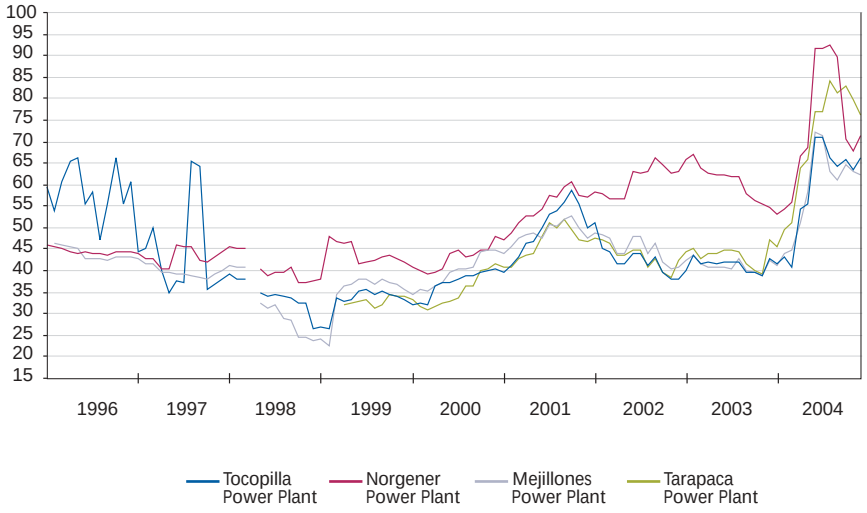
PRICE OF NATURAL GAS

Values at the end of each month and update as of December 2004
(million US$ /m^3)



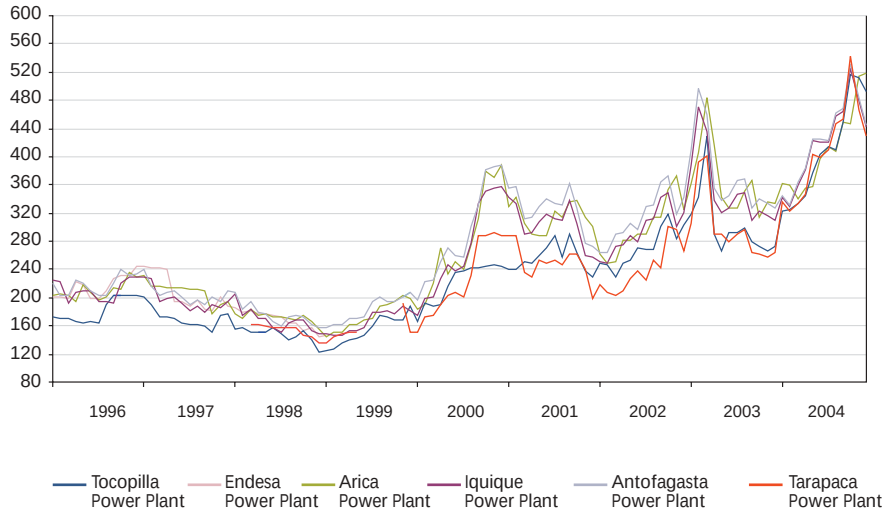
PRICE OF COAL

Values at the end of each month and update as of December 2004
(US$ /Ton)



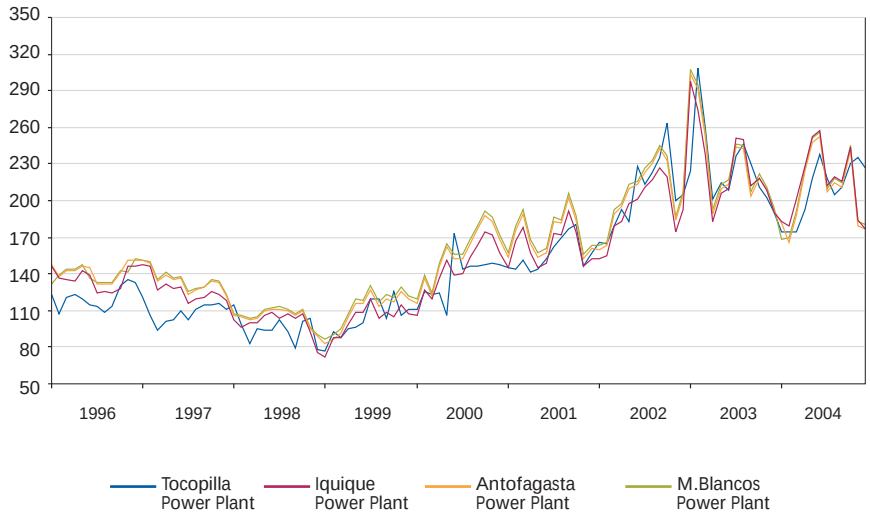
PRICE OF OIL DIESEL

Values at the end of each month and update as of December 2004
(US$ /Ton)



PRICE OF FUEL OIL Nº 6

Values at the end of each month and update as of December 2004
(US$ /Ton)



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