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## LETTER FROM THE CHAIRMAN OF THE CDEC-SING

On behalf of the Centro de Despacho Económico de Carga del SING (CDEC-SING or Economical Load Dispatch Center of the SING), I am pleased to present to you a new version of the Operation Statistics for the Sistema Interconectado del Norte Grande (SING or Norte Grande Interconnected System). Through this publication, the generation and transfer companies that are part of the CDEC-SING put at the disposal of the agents coordinated by this CDEC and of the user and interested parties, the operational information corresponding to the 1998-2007 decade, as well as the summary of the relevant facts of the operation of the SING during 2007.

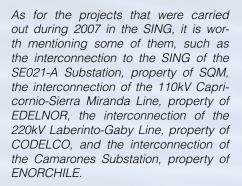
At the end of 2007, the Directory of CDEC-SING was formed by the following companies: AES GENER, CELTA, EDELNOR, ELECTROANDINA, GASATACAMA GENERACION, NORGENER and TRANSELEC NORTE.

The operation of the SING during 2007 reached a maximum hourly gross generation level of 1,751 MW, while the contribution of annual gross energy during 2007 was of 13,945 GWh, which meant an annual increase of 5.4% in relation to 2006. In terms of physical sales of energy to end clients, they were augmented to 12,674 GWh during 2007, which represents a 5.4% increase in relation to the previous year.

As for the distribution of the fuel contribution, during 2007, 57.6% of the electricity injected into the SING came from the generating plants working with coal and other solid fuels, followed by the plants based on natural gas that contributed 22.6%. The rest of the contribution was divided among the units operating with Diesel oil (16.3%), Fuel oil (0.3%) and hydraulic ones (0.5%).

When analyzing the previous figures, one must take into account that from 2004, the SING has been subject to growing restrictions in the supply of natural gas coming from Argentina, which from 2007 notoriously worsened. Consequently, the operation of the system had to be carried out under a scenario with an unusual demand for diesel for generation during 2007, which meant a greater effort for the units used with this type of fuel.

From the point of view of the supply continuity, we must mention that two major earthquakes which had their epicenter in the Second Region and took place on November 14th and December 16th respectively, represented the only two losses of the supply in the SING during the whole year were presented. As a result of these events, the generation and transmission facilities suffered different sorts of damages, whose reparation processes in some cases are still ongoing in April 2008.



With respect to the facilities of the Toll and Operation Offices of the CDEC-SING, in 2007 two major projects were concreted. The first one is the setting up of the new offices of the Dispatch and Control Center of Antofagasta. They duplicate the surface available at the old offices and allow them to have more suitable spaces to overcome the challenges presented by the Service Quality and Safety Technical Rules and Regulations. The second project corresponds to the new SCADA/ EMS or SITR information system, which involved an investment of more than USD\$1.5 million on behalf of the generation and transmission companies of the CDEC-SING, and whose implementation demanded a great deal of effort from all the companies that were a part of this project, that also included coordinated clients.

In relation to the development of the Studies requested by the Service Quality and Safety Technical Rules and Regulations, during 2007, CDEC-SING published all those stated in it, to which, for the first time, a Study for the Extreme Contingency Defense Plan was added.

In terms of rules and regulation, CDEC-SING has addressed the suitability of the Internal Rules and Regulations demanded by Supreme Decree Nº 26/2007, regarding the operations of energy substitution. At the same time, the CDEC-SING obtained favorable information, from de CNE, on the Procedures Manual Nº 20, "Manual Load Disconnection".

The operations for 2008 are foreseen as conditioned by the scarcity of natural gas for electrical generation, which may probably force the member companies to maximize their efforts to replace the said fuel by diesel, coinciding with a period of high prices for this commodity, as well as for coal prices in the world market. In addition, this CDEC will face the challenge of properly coordinating the maintenance of the units that have undergone continual operation, as well as the start up and operation of the local generation projects promoted by the mining companies, which seek to contribute to help keep continuous supply to their facilities.

Sincerely, Pedro de la Sotta Sánchez. Chairman of the Board CDEC-SING

## BOARD OF DIRECTORS OF THE CDEC-SING

CHAIRMAN

Pedro De la Sotta Sánchez GASATACAMA GENERACIÓN S.A.

**DIRECTORS** 



Francisco Promis Baeza EDELNOR S.A.

Juan Trujillo Hernández ELECTROANDINA S.A.



Juan Pablo Cárdenas Pérez NORGENER S.A.

Eduardo Soto Trincado CELTA S.A.



Carlos Aguirre Pallavicini AES GENER S.A.



Rodrigo López Vergara TRANSELEC NORTE S.A.



SUBSTITUTE DIRECTORS

Javier Alemany Martínez GASATACAMA GENERACIÓN S.A.



Maximiliano Miranda Parra EDELNOR S.A.



Juan Pablo Toledo Torres ELECTROANDINA S.A.



Carolina Valderrama Campos NORGENER S.A.



Miguel Buzunáriz Ramos CELTA S.A.



Ignacio Matus Brinck AES GENER S.A.



Belisario Maldonado Molina TRANSELEC NORTE S.A.



DIRECTOR OF OPERATIONS AND WHEELING Carlos Finat Díaz

SUBDIRECTOR OF OPERATIONS Patricio Troncoso Romero

SUBDIRECTORS OF WHEELING Claudia Carrasco Arancibia

HEAD OF THE DISPATCH AND CONTROL CENTER Raúl Moreno Tornería

HEAD OF PLANNING AND STUDIES Patricio Valenzuela Vásquez

HEAD OF TRANSFERS José Miguel Arévalo Araneda

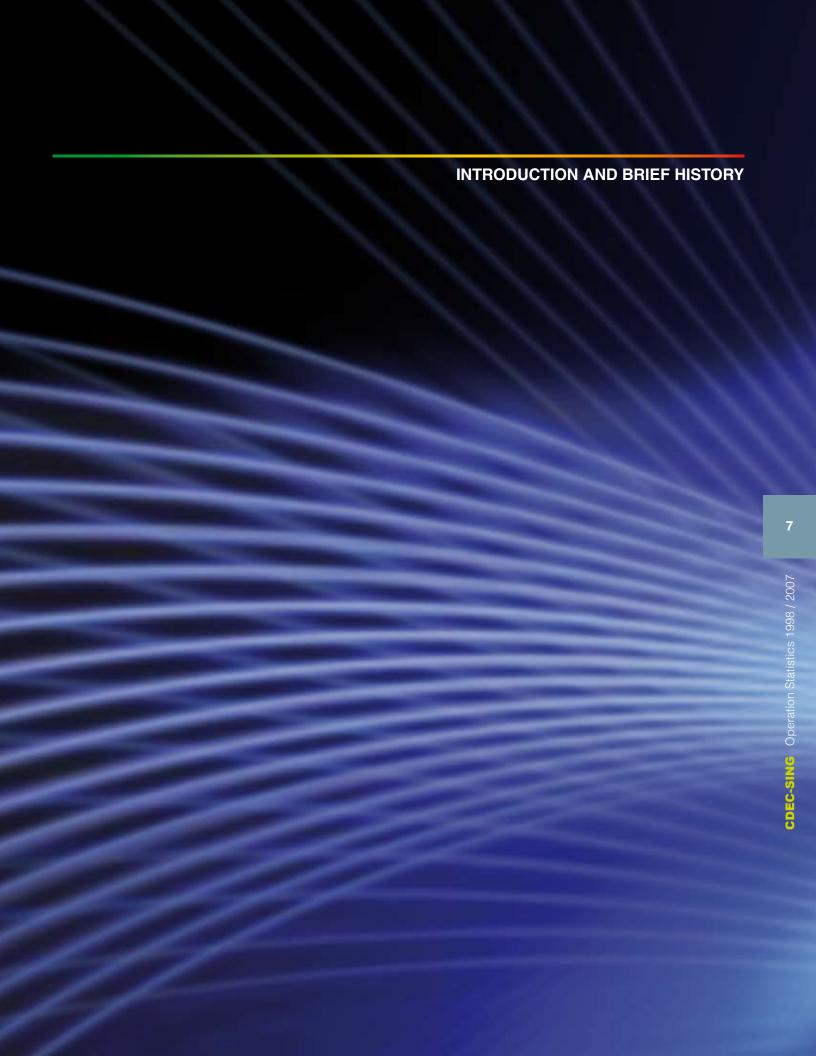
HEAD OF STUDIES Felipe Morales Silva



CDEC-SING ANTOFAGASTA STAFF



CDEC-SING SANTIAGO STAFF







#### **GENERAL DESCRIPTION**

The Sistema Interconectado del Norte Grande (SING) runs between Arica - Parinacota, Tarapaca and Antofagasta, the Fifteenth, First and Second regions of Chile, respectively, covering a surface area of 185,142 km<sup>2</sup>, which corresponds to 24.5% of the continental territory. The zone is characterized by an extremely dry climate, which explains for an arid landscape that can be quite diversified in terms of relief cross-section and height. This has greatly affected population distribution and density; people definitely favor the coastal edge. The present population, based on the 2002 Census, accounts for 6.1 percent of the national total and is concentrated in a handful of widely spaced cities and villages.

### SING highlights:

- Scant supply of water for electric power generation.
- Electric consumption centers located far apart.
- Energy used mainly by mining companies.

#### HISTORICAL BACKGROUND

Based on the SING's hydrological, climatic and geographical conditions, electric supply to consumption centers was first provided by unrelated local systems designed to meet their own needs. In late 1987 some of these systems were interconnected, giving birth to the Norte Grande Interconnected System.

Coordinated operation of the interconnected facilities began on July 30, 1993, when the Economic Load Dispatch Center (CDEC) of the SING (CDEC-SING) set to work. Initially the CDEC-SING was made up of three generating companies, EDELNOR S.A., ENDESA and the former Tocopilla Division of CODELCO-CHILE, today ELECTROANDINA S.A. By December 2007, CDEC-SING members were EDELNOR, ELECTROANDINA, NORGENER, CELTA, GASATACAMA GENERACIÓN, AES GENER and TRANSELEC NORTE.

#### CONTENTS OF THIS DOCUMENT

This document contains some of the most relevant information for the SING from January 1998 to December 2007. It is arranged in five chapters, as follows:

- Chapter 1 contains the Letter from the Chairman, the Members of the Board and the structure of the Directorate of Operation and Tolls.
- Chapter 2 shows a brief history of the CDEC-SING's creation.
- Chapter 3 describes the CDEC-SING's tasks and duties, including its governing legal framework as of December 2007, as well as its powers and responsibilities. It also includes information on the transmission network and generating plants as of December 2007, with an emphasis on the features of the transmission and generation facilities, and the identification of the SING's major consumptions.
- Chapter 4 shows the relevant events occurred within the SING during 2007. Chapter 5 illustrates system operation statistics, from January 1998 to December 2007, with charts and tables explaining the evolution of generation and consumption, along with the amounts and prices of energy and power transfers between member companies.





## **BRIEF HISTORY**

Initially, the electric supply needs of the Norte Grande region were met with electric systems that evolved along separate ways.

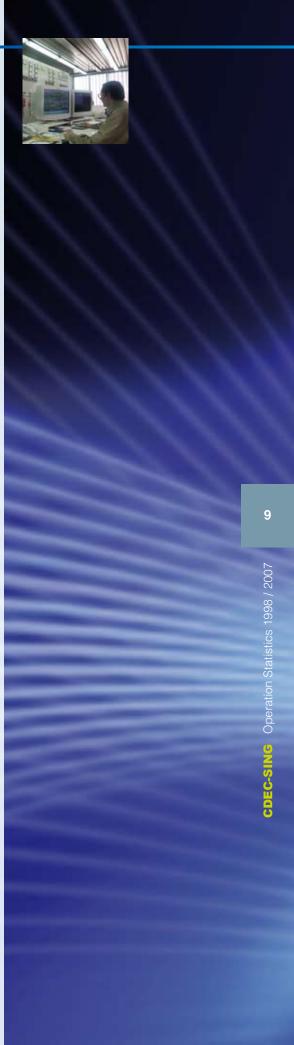
In 1980 the National Energy Commission (NEC), convinced of the benefits of interconnected electric systems, conducted a study on the feasibility of connecting the Tocopilla-Chuquicamata system of CODELCO-CHILE's Chuquicamata Division with EDELNOR's systems in the Norte Grande region. EDELNOR, CODELCO, 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: CO-DELCO and EDELNOR agreed on the construction work required for Unit № 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 National Energy Commission (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 and Chuquicamata Substations.

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.









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 N $^{\circ}$  1 of 1982) and the Coordination Regulations set forth in Supreme Decree (SD) N $^{\circ}$ 6 of 1985 (SD N $^{\circ}$ 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.

EDELNOR rented the Mantos Blancos Diesel Power Plant in September 1995. Besides, it signed a contract with EEC-SA 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 Thermal 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.

During 1999, the CDEC-SING allowed the following interconnections: CELTA's coal steam Unit N $^{\circ}$  1 at its Tarapacá Thermal Power Plant; NOPEL's combined cycles N $^{\circ}$  1 and N $^{\circ}$  2 at its Atacama Power Plant; and GENER's gas turbines N $^{\circ}$  11 and N $^{\circ}$  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 in 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 Power Plant started commercial operations in June 2000.

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

In July 2001, NEC's Exempt Resolution  $N^{\circ}$  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-Cóndores, and Cóndores-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 into service, while some existing ones were modified.

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

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 N $^\circ$  168 of SD N $^\circ$  327, HQI TRANSELEC NORTE S.A. 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, ELEC-TROANDINA announced the removal from service of its Unit U09.

In 2005, transmission facilities owned by mining companies were placed into service, as follows:

- 220/69/13.8 kV Sulfuros Substation (Minera Escondida).
- 220 kV Domeyko Sulfuros Line (Minera Escondida).
- 220/23 kV Spence Substation (Minera Spence).
- 220 kV Encuentro Spence Line (Minera Spence).
- 220/100/13.8 kV Salar Substation (Codelco Norte).
- 220 kV Crucero Salar, Tower № 323 -Salar Line (Codelco Norte).
- 220 kV Salar Chuquicamata, Salar -Tower № 323 Line (Codelco Norte).
- 110 kV Salar km6 Line (Codelco Norte).

HQI TRANSELEC NORTE S.A. changed its corporate name to TRANSELEC NORTE S.A. in October 2006.





Opening of New Offices in Antofagasta

During 2006, new transmission facilities owned by mining companies were set into service, as follows:

- 220 kV Atacama O'Higgins Line was changed into 220 kV Mejillones -O'Higgins Line (Minera Escondida).
- Nueva Victoria Substation (Soquimich).
- Tap Off Barriles Substation (Grace).
- Mantos de la Luna Substation (Grace).
- 110 kV Tap Off Barriles Mantos de la Luna Line (Grace).

In February 2007, ENORCHILE's Zofri Diesel Power Plant connected at the Iquique 13.8kV bar was incorporated. This Power Plant is represented in the CDEC-SING by NORGENER.

In September 2007, the project that makes feasible the connection of the steam turbine of Salta Power Plant, TV10, to the Sistema Argentino de Interconexión (Argentinean Interconnected System or SADI) was carried out. This way, the units of the combined cycle of the Salta Power Plant add to the existing configurations declared in the SING operation, those corresponding to one or two gas turbines connected to the SING and the steam turbine connected to the SADI.

Additionally, during 2007, new transmission installations were put into service, which are indicated as follows:

- SE021-A Substation(SQM)
- 66kV Tap Off Line La Cruz SE021;
   Mobile Substation . SE021 (SQM)
- 66kV Tap Off Line La Cruz SE021; La Cruz Tap Off - Mobile Substation (SQM)
- Capricornio Sierra Miranda 110 kV Line (EDELNOR).
- Zofri Diesel Power Plant Iquique 13.8 kV Line (ENORCHILE)
- Zofri Diesel Power Plant 13.2/0.4 kV Transformer №1 and №2 (ENORCHILE).
- Laberinto Gaby 220 kV Line (ELECTROANDINA)

Finally, the gross installed power of the SING at December 2007 reached 3,601.9

TASK AND DUTIES

## TASKS AND DUTIES OF THE CDEC-SING







## REGULATORY FRAMEWORK

The regulatory framework described below was in force as at December 31, 2006.

As stipulated in Decree Law 1/1982, amended by Law  $N^{\circ}$  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.
- Guaranteeing open access to trunk transmission and subtransmission 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; and 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 coordination of the CDEC-SING, 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 plannedoperation.
- 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.
- 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.
- 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.









## STRUCTURE OF THE CDEC-SING

In accordance with the provisions of Supreme Decree (SD)  $N^{\circ}$  327, the CDEC-SING's organizational chart is shown below:

Directorate of Operation
Director, Professional and
Technical Employees

Control and Dispatch Center
Head and Dispatchers

Board of Directors

Directors

Directorate of Toll
Director, Professional and
Technical Employees

Control and Dispatch Center

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 Min-

istry of the Economy, Promotion and Reconstruction. Operation and 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, 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, Tolls is charged with:

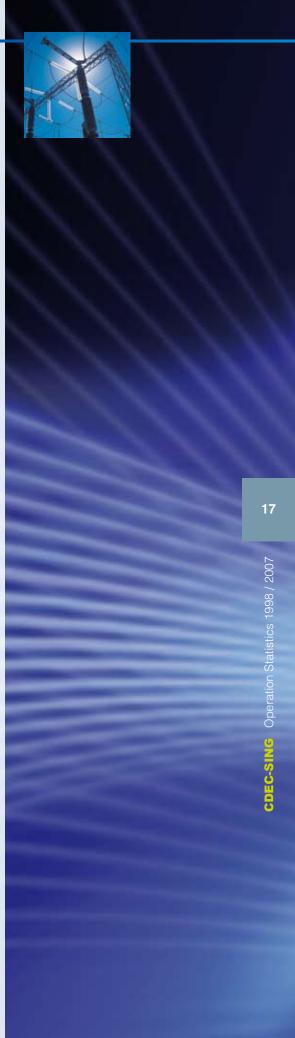
- a) Submitting to the Board of Directors for their review, the decisions and procedures aimed at guaranteeing open access to trunk transmission and subtransmission systems interconnected within the SING.
- b) Projecting capacity and use as specified by the regulations.
- c) Calculating transmission 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.
- e) 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.

## 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 autoproducers 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.

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.











## ECONOMIC OPERATION OF THE SING

The economic operation of the SING assigns priority to dispatch from units with the lowest variable production costs. The variable production cost of a generating unit is defined as specific fuel consumption multiplied by fuel price, plus a nonfuel variable cost that is chiefly accounted for by spare parts, chemical additives and lubricants.

For an appropriate comparison of generation costs at each generating unit, a variable cost table is applied. The table shows the variable production costs of each generating unit as related to the system's load center or basic node, through factors that encompass marginal losses in the transmission grid (penalty factors). The present load center is the 220-kV Crucero node.

Operations are planned and marginal costs determined on a weekly basis. The result is a generation schedule that considers hourly demand forecasts, generating unit maintenance and transmission systems. Also taken into account are the technical restrictions of generating units, such as maximum and minimum power limits, startup times and minimum operating times.

The CDEC-SING Control and Dispatch Center provides real-time coordination of the daily schedule with the corresponding Control Centers, making any real-time operation corrections required to absorb variations or deviations.

## SING GENERATING UNITS 2007

Name of Power Plant

Owner

Owilei	Naille UI FUWEI FIAIIL	Oilit	of Components	Total Power [MW]	
Celta	Termoeléctrica Tarapacá	TGTAR (1)	1	23,750	
		CTTAR	1	158,000	
Edelnor	Chapiquiña	CHAP	2	10,200	
	Diesel Arica	M1AR	3	2,997	
		M2AR	2	2,924	
		GMAR	4	8,400	
	Diesel Iquique	SUIQ	3	4,200	
		MIIQ	2	2,924	
		MAIQ	1	5,936	
		TGIQ	1	23,750	
		MSIQ	1	6,200	
	Diesel Antofagasta	MAAN	2	11,872	
		GMAN	8	16,800	
	Termoeléctrica Mejillones	CTM1	1	165,900	
		CTM2	1	175,000	
		CTM3	2	250,750	
	Diesel Mantos Blancos (2)	MIMB	10	28,640	
	Cavancha (3)	CAVA	1	2,602	
	Diesel Enaex (5)	DEUTZ	3	1,959	
		CUMMINS	1	0,722	
Electroandina	Termoeléctrica Tocopilla	U10	1	37,500	
		U11	1	37,500	
		U12	1	85,300	
		U13	1	85,500	
		U14	1	128,300	
		U15	1	130,300	
		U16	2	400,000	
		TG1	1	24,698	
		TG2	1	24,931	
		TG3 (4)	1	37,500	
AES Gener	Salta	CC SALTA (6)	3	642,800	
Gasatacama Generación	Atacama	CC1	3	395,900	
		CC2	3	384,700	
Norgener	Termoeléctrica Norgener	NTO1	1	136,300	
		NT02	1	141,040	
		ZOFRI 1-6	2	0,900	
		ZOFRI 2-5	4	5,160	
	OVETERA	TOTAL AT DECEMBER 31	07.000	3.601,855	

Unit

Gross

Notes: abbreviations will be used in tables and charts for the names of member companies, as follows:

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 Busbar	Type of Unit	Year Put into Service in the System
Tarapacá 220 kV	Diesel-Gas Turbine	1998
Tarapacá 220 kV	Steam-Coal	1999
Arica 66 kV	Run-of-the-river hydro plant	1967
Arica 66 kV	Diesel Engine	1953
Arica 66 kV	Diesel Engine	1961-63
Arica 66 kV	Diesel Engine	1973
Iquique 66 kV	Diesel Engine	1957
Iquique 66 kV	Diesel Engine	1963-64
Iquique 66 kV	No. 6 FO Engine	1972
Iquique 66 kV	Diesel-Gas Turbine	1978
Iquique 66 kV	No. 6 FO Engine	1985
Antofagasta 13,8 kV	No. 6 FO Engine	1970
Antofagasta 13,8 kV	Diesel Engine	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	No. 6 FO Engine	1995
Iquique 66 kV	Run-of-the-river hydro plant	1995
Enaex 110 kV	Diesel Engine	1996
Enaex 110 kV	Diesel Engine	1996
Central Tocopilla 110 kV	Vapor-FO 6	1970
Central Tocopilla 110 kV	Vapor-F0 6	1970
Central Tocopilla 110 kV	Steam-Coal	1983
Central Tocopilla 110 kV	Steam-Coal	1985
Central Tocopilla 220 kV	Steam-Coal	1987
Central Tocopilla 220 kV	Steam-Coal	1990
Central Tocopilla 220 kV	Natural Gas Combined Cycle	2001
Central Tocopilla 110 kV	Diesel-Gas Turbine	1975
Central Tocopilla 110 kV	Diesel-Gas Turbine	1975
Central Tocopilla 220 kV	Diesel - Natural Gas Turbine	1993
Central Salta 345 kV	Natural Gas Combined Cycle	2000
Central Atacama 220 kV	Natural Gas Combined Cycle	1999
Central Atacama 220 kV	Natural Gas Combined Cycle	1999
Norgener 220 kV	Steam-Coal	1995
Norgener 220 kV	Steam-Coal	1997
Iquique 13.8 kV	Diesel Engine	2007
Iquique 13.8 kV	Diesel Engine	2007

<sup>(1)</sup> Between January - November 1999, the power plant belonged to Endesa. On May 12, 1999, it was transferred to the SIC and rejoined the SING on November 29, 1999, under the ownership of Celta.

<sup>(2)</sup> The Diesel Mantos Blancos Power Plant is represented at the CDEC-SING by Edelnor.

<sup>(3)</sup> The Cavancha Power Plant is represented at the CDEC-SING by Edelnor.(4) The Gas Turbine has been available for natural gas operation since September 2000.

<sup>(5)</sup> The Enaex Diesel Power Plant is represented in the CDEC-SING by Gasatacama until May 2007. From June 2007 it is represented by Edelnor.

<sup>(6)</sup> The TV10 steam turbine of the Salta Power Plant, by request of the OED of the Argentian Republic, may be connected to the SADI, contributing a maximum power of 226,8 MW to it.

## SING TRANSMISSION LINES

## TRANSMISSION LINES OF CDEC-SING MEMBER COMPANIES

Owner	Transmission Line	Voltage (kV)	N° of Circuits	Approx. Legth (km)	Capacity (MVA)		Year Put into servio
Edelnor	Crucero - Lagunas 1	220	1	170,0	328	Additional	1987
	Chacaya - Crucero	220	1	152,7	328	Additional	1987
	Chacaya - Mantos Blancos	220	1	66,0	377	Additional	1996
	Chacaya - Mejillones	220	1	1,3	377	Subtransmission	1987
	Lagunas - Pozo Almonte	220	1	70,0	328	Additional	1987
	Arica - Pozo Almonte	110	1	216,0	35	Subtransmission	1987
	Capricornio - Alto Norte	110	1	44,1	137	Additional	2000
	Capricornio - Antofagasta	110	1	28,0	137	Subtransmission	2000
	Capricornio - Sierra Miranda	110	1	26,2	25,98	Additional	2007
	Chacaya - Mejillones	110	1	1,4	122	Additional	1995
	Salar - Calama	110	1	10,0	69	Subtransmission	1982
	Mejillones - Antofagasta	110	1	63,3	80	Subtransmission	1987
	Central Chapiquiña - Arica	66	1	84,0	48	Additional	1967
	Central Diesel Arica - Arica	66	1	6,8		Subtransmission / Additional	
	Central Diesel Iquique - Iquique	66	1	1,6	48	Additional	1970
		66	1				
	Iquique - Pozo Almonte 1		1	42,4	41	Subtransmission	1964
	Iquique - Pozo Almonte 2	66	l 4	41,0	56	Subtransmission	1987
	Pozo Almonte - Tamarugal	66	1	20,8	10	Subtransmission	1968
Electroandina	Central Tocopilla - Crucero	220	2	71.4 x 2	330x2	Additional	1986
	Crucero - Chuquicamata	220	1	68,0	330	Additional	1986
	Crucero - Salar (ver nota 1)	220	1	75,4	330	Additional	2005
	Salar - Chuquicamata (ver nota 2)	220	1	19,3	330	Additional	2005
	Crucero - El Abra	220	1	101,0	330	Additional	1995
	Crucero - Radomiro Tomic	220	1	82,0	450	Additional	1996
	Laberinto - Gaby	220	1	62,0	183	Additional	2007
	Central Tocopilla - A.Circuito N°1	110	1	141,0	90	Additional	1910
	Central Tocopilla - A.Circuito N°2		1	141,0	90	Additional	1910
	Central Tocopilla - A.Circuito N°3		1	141,0	90	Additional	1915
	Central Tocopilla - Salar	110	i	152,0	90	Additional	1982
	Tap Off El Loa - El Loa	220	1	8,4	91,4	Additional	2000
AES Gener	Central Salta - Andes	345	1	408,0	777	Additional	1999
AES GEHEI			•				
	Andes - Oeste	220	1	38,0	290	Additional	1999
	Andes - Nueva Zaldívar	220	2	63.3x2	370x2	Additional	1999
	Nueva Zaldívar - Zaldívar	220	1	0,2	360	Additional	1994
	Laberinto - Mantos Blancos	220	1	70,0	290	Additional	1999
Vorgener	Norgener - Crucero	220	2	72x2	948	Additional	1997
	Laberinto - Oeste	220	1	85,0	290	Additional	1998
	Laberinto - Lomas Bayas	220	1	10,0	209	Additional	1997
	Oeste - Minsal	110	1	33,0	50	Additional	1997
Transelec Norte	Atacama - Encuentro	220	2	153x2	416x2	Additional	1999
iransoloo Norto	Atacama - Esmeralda	220	1	70,0	189	Subtransmission	2001
		220	1	0,8	404		1999
	Crucero - Encuentro 1		1			Trunk	
	Crucero - Encuentro 2	220	1	0,8	404	Trunk	2000
	Crucero - Lagunas 2	220		173,2	183	Additional	1998
	Tarapacá - Lagunas	220	2	56x2	200x2	Additional	1998
	Tarapacá - Cóndores	220	1	70,0	189	Subtransmission	2002
	Cóndores - Parinacota	220	1	225,0	189	Subtransmission	2002
Total 66 kV Lines			196,6	244			
Total 110 kV Lines			997,0	1.016			
Total 220 kV Lines			2.450,4	10.359			
Total 345 kV Lines			408,0	777			
iolai 343 KV LIIIES			400,0	111			

Notes: (1) Ownership of the line is shared, as detailed below:

Crucero - Tower 340 Stretch owned by Electroandina; Tower 340 - Salar Stretch owned by Codelco Norte.

<sup>(2)</sup> Ownership of the line is shared, as detailed below:
Salar - Tower 340 Stretch owned by Codelco Norte; Tower 340 - Chuquicamata Stretch owned by Electroandina.

## OTHER OWNERS' TRANSMISSION LINES

Owner	Transmission Line	Voltage (kV)	N° of Circuits	Approx. Length (km)	Capacity (MVA)		Year Put to Servi
Minera Zaldívar	Crucero - Laberinto	220	1	133,0	330	Additional	1994
	Laberinto - Nueva Zaldívar	220	1	75,0	330	Additional	1994
Minera Escondida	Atacama - Domeyko	220	2	205x2	203x2	Additional	1999
	Mejillones - O'Higgins	220	1	73,0	183	Additional	2006
	Crucero - Escondida	220	1	236,0	270	Additional	1995
	Domeyko - Escondida	220	1	7,0	180	Additional	1999
	Domeyko - Laguna Seca	220	1	13,0	256	Additional	2001
	Domeyko - Planta Óxidos	220	1	1,0	100	Additional	1998
	Domeyko - Sulfuros	220	1	1,0	293	Additional	2005
	Nueva Zaldívar - Sulfuros	220	1	13,0	293	Additional	2006
	O'Higgins - Coloso	220	1	32,0	163	Additional	1993
	O'Higgins - Domeyko	220	1	128,0	180	Additional	1999
	Zaldívar - Escondida	220	1	14,0	300	Additional	1995
Codelco Norte	Chuquicamata - A	100	2	9	100x2	Additional	-
	Chuquicamata - Km6	100	1	5,9	100	Additional	-
	Salar - Km6	100	2	2,2	62	Additional	-
Minera Collahuasi	Lagunas - Collahuasi 1	220	1	118,0	180	Additional	1996
	Lagunas - Collahuasi 2	220	1	118,0	180	Additional	1998
	Encuentro - Collahuasi	220	1	201,0	109	Additional	2004
Minera Quebrada Blanca	Collahuasi - Quebrada Blanca	220	1	18,0	180	Additional	2002
Minera El Tesoro	Encuentro - El Tesoro	220	1	90,0	125	Additional	2000
Minera Spence	Encuentro - Spence	220	1	67,0	318	Additional	2005
Planta Molycop	Chacaya - Molycop	220	1	0,8	291	Additional	2004
Fundición Alto Norte	Antofagasta - Alto Norte	110	1	24,0	122	Subtransmission / Additional	1993
Minera Michilla	Mejillones - El Lince	110	1	72,0	30	Additional	1991
Minera Cerro Colorado	Pozo Almonte - Cerro Colorado		1	61,0	164	Additional	1993
Grace	Barriles - Mantos de la Luna	110	1	27,0	70	Additional	2005
Minera Meridian		66	1		60	Additional	1999
	Tap Off Palestina - El Peñón		<u> </u>	65,7			
naex	Endesa - Enaex	110	1	1,4	93	Additional	1999
Endesa	Mejillones - Endesa	110	1	0,08	93	Additional	1999
Minera Rayrock	Tap Off Pampa - Iván Zar	66	1	17	8	Additional	1994
/linera Haldeman	Pozo Almonte - Sagasca	66	1	55,0	5	Additional	1971
Emelari	Tap Off Quiani - Quiani	66	1	3,97	16	Subtransmission	1998
ransemel	Esmeralda - La Portada	110	1	17,1	73	Subtransmission	2001
	Esmeralda - Centro	110	1	0,6	73	Subtransmission	2001
	Esmeralda - Uribe	110	1	16,2	73	Subtransmission	2001
	Esmeralda - Sur	110	1	6,7	73	Subtransmission	2002
	Cóndores - Alto Hospicio	110	1	2,7	80	Subtransmission	2002
	Alto Hospicio - Dragón	110	1	2,2	80	Subtransmission	2002
	Cóndores - Palafitos	110	1	8,6	73	Subtransmission	2002
	Cóndores - Pacífico	110	1	10,5	73	Subtransmission	2002
	Parinacota - Quiani	66	1	3,9	44	Subtransmission	2002
	Parinacota - Chinchorro	66	1	3,5	44	Subtransmission	2002
	Parinacota - Pukará	66	1	2,5	44	Subtransmission	2002
Total 66 kV Lines				151,6	221		
Total 110 kV Lines				250,0	1.170		
Total 220 kV Lines			1.748,8	4.667			
Total Others Owners			2.150,4	6.058			
otal SING				6.202,4	18.454		

# MAJOR SING A CUSTOMERS AT DECEMBER 2007

CUSTOMER	CATEGORY	SUPPLY BUSBAR	SUPPLIER
ACF Minera	Mining	Lagunas 220 kV	Celta
Aguas del Altiplano	Industrial	Pozo Almonte 66 kV - Tamarugal 66 kV - Arica 66 kV	Edelnor - Gasatacama
Cerro Colorado	Mining	Pozo Almonte 220 kV	Edelnor - Celta
Chuquicamata	Mining	Crucero 220 kV - C.Tocopilla 110 kV	Electroandina
Cia. Portuaria Mejillones	Industrial	Mejillones 23 kV	Edelnor
Collahuasi	Mining	Lagunas 220 kV	Celta
Cosayach	Mining	Pozo Almonte 66 kV	Edelnor
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	Distribution	Esmeralda 110 kV	Gasatacama
Eliqsa	Distribution	Cóndores 110 kV	Gasatacama
Emelari	Distribution	Parinacota 66 kV	Gasatacama
Enaex	Industrial	Mejillones 110 kV	Gasatacama - Edelnor
Escondida	Mining	Crucero 220 kV - C. Atacama 220 kV - Nueva Zaldívar 220 kV	Norgener - Gasatacam
Falconbridge	Industrial	Antofagasta 110 kV	Edelnor
Gaby	Mining	Laberinto 220 kV	Electroandina
Grace	Mining	Barriles 220 kV	AES Gener
Haldeman	Mining	Pozo Almonte 66 kV	Edelnor
Inacesa	Industrial	Antofagasta 110 kV	Gasatacama
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
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, Capricornio 110 kV	Edelnor
Sociedad Chilena del Litio	Industrial	Capricornio 23 kV	Edelnor
Spence	Mining	Encuentro 220 kV	Edelnor
SQM EI 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

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#### GENERATION AND TRANSMISSION PROJECTS

During 2007 new transmission facilities were put into service, and they are indicated as follows:

- Company: Sociedad Quimica y Minera de Chile S.A.
  - Project: Connection to the SING
  - Facilities put into service:
    - SE021-A Substation
    - 66kV Tap Off Line La Cruz -SE021: Mobile Substation -SE021.
    - 66kV Tap Off Line La Cruz -SE021: La Cruz Tap Off -Mobile Substation.
- Company: EDELNOR
  - > Facilities put in service:
    - Capricornio Sierra Miranda 110kV Line.
- Company: ELECTROANDINA
  - > Facilities put in service:
    - Laberinto Gaby 220kV Line

Additionally, in 2007, ENORCHILE's Zofri Diesel Power Plant was put at the disposal of CDEC-SING. The details of the new facilities associated to this new power plant are listed as follows:

- Company: ENORCHILE.
  - Project: Connection to the SING.
  - Facilities put in service:
    - Zofri Diesel Power Plant (6 generation units: two 0.5 MW units and four 1.2MW units).
    - Zofri Diesel Power Plant -Iquique 13.8kV Line
    - Zofri Diesel Power Plant 13.2/0.4 kV №1 Transformer.
    - Zofri Diesel Power Plant
       13.2/0.4 kV №1 Transformer.

On September 28th 2007, and by request of the Organismo Encargado del Despacho (Entity in charge of Dispatch or OED) of the Argentinean Republic, the TV10 steam turbine of the combined cycle unit of the Salta Power Plant is connected for the first time to the SADI. This way, the steam component of the combined cycle can inject its power into the SING or to the SADI.

#### **OPERATION**

The annual gross production of the SING reached 13,946 GWh which is broken down according their fuel, into:

- 57.6% Coal
- 22.6% Natural Gas
- 19.3% Heavy Oil and Diesel
- 0.5% Hydraulic generation

The growth of consumption compared to 2006 reflects an increase of 5.4% of the gross energy generation and of 5.4% in the total energy sales. Divided by client type, 89.0% corresponds to free clients (mining and industrial consumption), and 11.0% to regulated clients (distribution companies).

The maximum demand of the system ocurred on April 24<sup>th</sup> 2007 at 10 PM, which is reflected by a gross generation value of 1,751 MW, representing a reduction of 1.0% over 2006.

During 2007, the application of the Service Quality and Safety Technical Rules and Regulations, published on March 21st 2005 and modified on May 28th 2005, was continued.

## **OTHERS**

On February 5th 2007, D.F.L.  $N^{\circ}$  4/2007 was published, fixing the text, the rewriting, the coordinating and the systemization of the Decree with the Force of the Law  $N^{\circ}$  1, of Mining from 1982, called General Law for Electrical Services.

On March 2<sup>nd</sup> 2007, Supreme Decree Nº 44 of 2007 was published, modifying Decree Nº 62 of 2006 that Approves the Power Transfer between Generating Companies Rules and Regulations established in the General Law for Electrical Services.

On April 28th 2007, Supreme Decree Nº 26 of 2007 was published, modifying the Supreme Decree Nº 327 of 1997, incorporating special dispositions that allow natural gas transaction agreements between electricity generating companies that use natural gas as primary supply and companies that are not generators of the respective system.

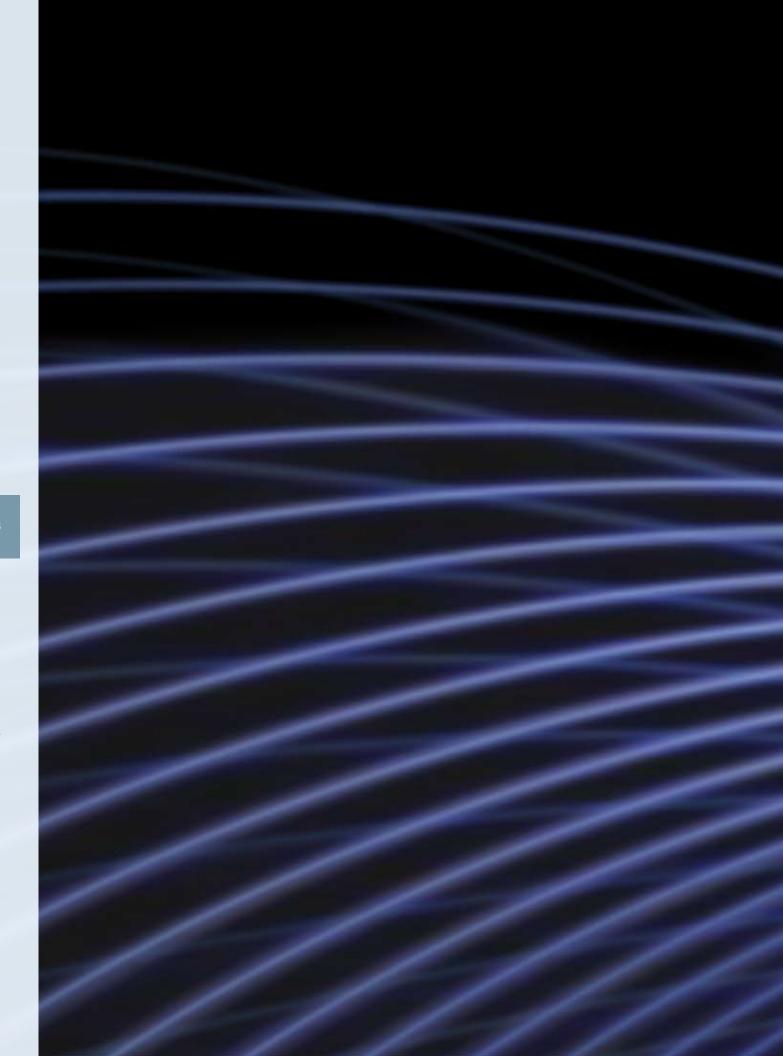
On May 25<sup>th</sup> 2007, Ministerial Resolution Nº 24 of 2007 was published, dictating a technical norm about the connection and operation of small means of generation distributed in half tension facilities.

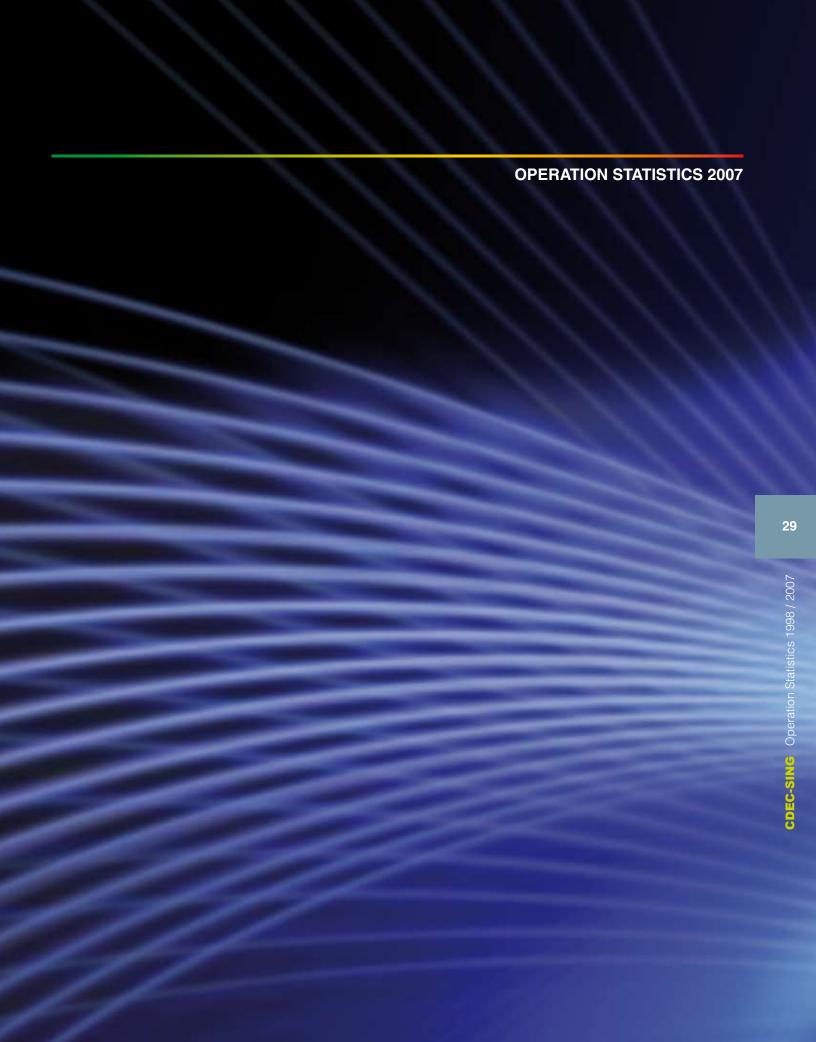
On September 14th 2007, Law № 20,220 was published, perfecting the current legal framework in order to safekeep the security of the supply to regulated clients and the sufficiency of electrical systems.

During 2007 no discrepancies were presented before the Panel of Experts associated to the CDEC-SING.

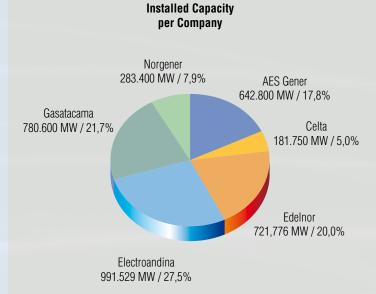
At the same time, we received from the exempt ministerial resolution  $N^{\circ}$  6/2007, from the Minister of Economy, Promotion and Reconstruction.

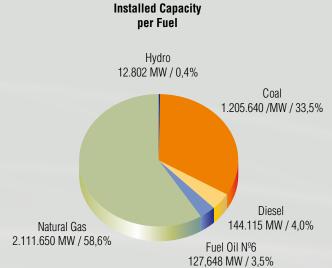






## INSTALLED CAPACITY (MW) 2007





## INSTALLED CAPACITY PER COMPANY 1998-2007

## IN PHYSICAL UNITS (MW)

Company \ Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Celta	24	158	182	182	182	182	182	182	182	182
Edelnor	471	471	722	719	719	719	719	719	719	722
Electroandina	629	629	629	1.029	1.029	1.037	992	992	992	992
Endesa	74	98								
AES Gener		416	643	643	643	643	643	643	643	643
Gasatacama		588	588	590	783	783	783	783	783	781
Norgener	277	277	277	277	277	277	277	277	277	283
TOTAL	1.475	2.637	3.040	3.440	3.633	3.641	3.596	3.596	3.596	3.602

## IN PERCENTAGES (%)

( · · )										
Company \ Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Celta	1,6%	6,0%	6,0%	5,3%	5,0%	5,0%	5,1%	5,1%	5,1%	5,0%
Edelnor	31,9%	17,9%	23,7%	20,9%	19,8%	19,8%	20,0%	20,0%	20,0%	20,0%
Electroandina	42,6%	23,9%	20,7%	29,9%	28,3%	28,5%	27,6%	27,6%	27,6%	27,5%
Endesa	5,0%	3,7%								
AES Gener		15,8%	21,1%	18,7%	17,7%	17,7%	17,9%	17,9%	17,9%	17,8%
Gasatacama		22,3%	19,3%	17,2%	21,6%	21,5%	21,8%	21,8%	21,8%	21,7%
Norgener	18,8%	10,5%	9,1%	8,1%	7,6%	7,6%	7,7%	7,7%	7,7%	7,9%
TOTAL	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

## INSTALLED CAPACITY PER TYPE OF FUEL 1998 - 2007

## IN PHYSICAL UNITS (MW)

Fuel	Company	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Hydro	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	158	158	158
	Edelnor	341	341	341	341	341	341	341	341	341	341
	Electroandina	429	429	429	429	429	429	429	429	429	429
	Norgener	277	277	277	277	277	277	277	277	277	277
Subtotal		1.048	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206
Diesel	Celta	24		24	24	24	24	24	24	24	24
	Edelnor	65	65	65	62	62	62	62	62	62	65
	Electroandina	80	80	42	42	42	50	50	50	50	50
	Endesa	74	74	98	98	74	74	98			
	Gasatacama				3	3	3	3	3	3	
	Norgener										6
Subtotal		242	242	130	130	130	138	138	138	138	144
Fuel Oil	Edelnor	53	53	53	53	53	53	53	53	53	53
	Electroandina	120	120	120	120	120	120	75	75	75	75
Subtotal		173	173	173	173	173	173	128	128	128	128
Natural Gas	Edelnor			251	251	251	251	251	251	251	251
	AES Gener		416	643	643	643	643	643	643	643	643
	Gasatacama		588	588	588	781	781	781	781	781	781
	Electroandina			38	438	438	438	438	438	438	438
Subtotal			1.004	1.519	1.919	2.112	2.112	2.112	2.112	2.112	2.112
TOTAL		1.475	2.637	3.040	3.440	3.633	3.641	3.596	3.596	3.596	3.602

Notes: \* Starting 2000, Electroandina's TG3 Unit is considered to be fueled with natural gas.

## EN PERCENTAGES (%)

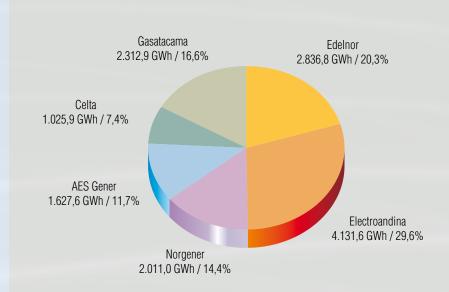
Fuel	Company	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Hydro	Edelnor	0,9%	0,5%	0,4%	0,4%	0,4%	0,4%	0,4%	0,4%	0,4%	0,4%
Subtotal		0,9%	0,5%	0,4%	0,4%	0,4%	0,4%	0,4%	0,4%	0,4%	0,4%
Coal	Celta		6,0%	5,2%	4,6%	4,3%	4,3%	4,4%	4,4%	4,4%	4,4%
	Edelnor	23,1%	12,9%	11,2%	9,9%	9,4%	9,4%	9,5%	9,5%	9,5%	9,5%
	Electroandina	29,1%	16,3%	14,1%	12,5%	11,8%	11,8%	11,9%	11,9%	11,9%	11,9%
	Norgener	18,8%	10,5%	9,1%	8,1%	7,6%	7,6%	7,7%	7,7%	7,7%	7,7%
Subtotal		71,0%	45,7%	39,7%	35,0%	33,2%	33,1%	33,5%	33,5%	33,5%	33,5%
Diesel	Celta	1,6%		0,8%	0,7%	0,7%	0,7%	0,7%	0,7%	0,7%	0,7%
	Edelnor	4,4%	2,5%	2,1%	1,8%	1,7%	1,7%	1,7%	1,7%	1,7%	1,8%
	Electroandina	5,4%	3,0%	1,4%	1,2%	1,2%	1,4%	1,4%	1,4%	1,4%	1,4%
	Endesa	5,0%	3,7%								
	Gasatacama				0,1%	0,1%	0,1%	0,1%	0,1%	0,1%	
	Norgener										0,2%
Subtotal		16,4%	9,2%	4,3%	3,8%	3,6%	3,8%	3,8%	3,8%	3,8%	4,0%
Fuel Oil	Edelnor	3,6%	2,0%	1,7%	1,5%	1,4%	1,4%	1,5%	1,5%	1,5%	1,5%
	Electroandina	8,1%	4,6%	3,9%	3,5%	3,3%	3,3%	2,1%	2,1%	2,1%	2,1%
Subtotal		11,7%	6,5%	5,7%	5,0%	4,8%	4,7%	3,5%	3,5%	3,5%	3,5%
Natural Gas	Edelnor			8,2%	7,3%	6,9%	6,9%	7,0%	7,0%	7,0%	7,0%
	AES Gener		15,8%	21,1%	18,7%	17,7%	17,7%	17,9%	17,9%	17,9%	17,8%
	Gasatacama		22,3%	19,3%	17,1%	21,5%	21,4%	21,7%	21,7%	21,7%	21,7%
	Electroandina			1,2%	12,7%	12,0%	12,0%	12,2%	12,2%	12,2%	12,1%
Subtotal			38,1%	50,0%	55,8%	58,1%	58,0%	58,7%	58,7%	58,7%	58,6%
TOTAL		100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

Notes: \* Starting 2000, Electroandina's TG3 Unit is considered to be fueled with natural gas. 
\* Edelnor's generating units using Diesel-Fuel Oil mixtures are associated to Fuel Oil.

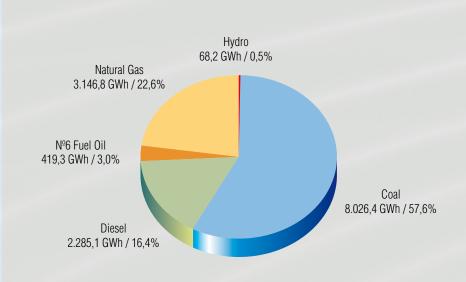
<sup>\*</sup> Edelnor's generating units using Diesel-Fuel Oil mixtures are associated to Fuel Oil.

## **GROSS GENERATION 2007**

## Gross Generation by Companies Total: 13.945,8 GWh



## Gross Generation by Fuels Total: 13.945,8 GWh



# GENERATION BY SING POWER PLANTS 2007 (GWh)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
ELECTROANDINA													
U10 - U11	0,0	4,1	8,2	7,2	18,4	13,4	0,9	16,0	31,0	23,2	31,0	33,6	186,9
U12 - U13	15,4	66,6	82,1	33,3	107,7	101,1	112,9	115,5	112,1	111,1	85,7	108,3	1.051,9
U14 - U15	108,5	157,6	169,1	159,3	176,6	171,1	178,7	165,1	152,9	162,0	157,4	146,9	1.905,2
U16	207,0	118,2	161,9	159,2	80,7	3,1	25,7	13,6	16,3	39,8	63,0	47,6	936,2
TG1	0,0	0,1	0,1	0,0	0,0	0,2	0,5	0,9	0,4	0,9	1,5	0,1	4,7
TG2	0,0	0,1	0,0	0,0	0,0	0,1	0,5	1,1	0,7	0,8	2,2	1,4	6,9
TG3	0,3	1,7	0,7	0,3	1,4	3,0	6,3	4,9	4,4	5,8	8,6	2,5	40,0
Total Gross Generation	331,2	348,4	422,0	359,4	384,8	291,8	325,5	317,1	317,8	343,6	349,5	340,5	4.131,6
Plant Consumption	16,0	21,0	24,9	20,0	24,1	20,5	21,4	21,4	18,9	22,6	21,9	21,8	254,5
Total Net Generation	315,2	327,4	397,2	339,4	360,8	271,2	304,1	295,6	298,9	320,9	327,6	318,7	3.877,1
EDELNOR													
CHAPIQUIÑA	6,1	5,5	5,9	3,6	4,1	4,0	3,9	3,9	3,8	3,9	3,9	4,2	52,8
CAVANCHA	1,4	1,3	1,4	1,3	1,3	1,2	1,3	1,2	1,2	1,3	1,3	1,3	15,4
CD ARICA	0,4	1,4	3,5	1,6	2,6	2,8	3,8	3,1	3,0	3,6	4,9	1,9	32,6
CD IQUIQUE	0,5	3,0	6,1	3,5	4,6	4,2	5,5	4,2	2,5	3,2	8,1	4,4	49,8
CD ANTOFAGASTA	1,1	2,8	4,7	0,8	2,7	2,9	2,4	3,3	4,1	3,4	4,3	0,1	32,4
CD MANTOS BLANCOS	1,3	2,4	3,2	0,2	0,1	0,0	0,0	0,0	0,0	0,0	0,0	0,0	7,2
CTM3	0,0	50,5	7,9	61,0	13,2	5,8	79,7	69,3	0,0	0,0	63,0	50,1	400,4
CTM2	107,2	107,3	111,3	113,1	117,3	114,5	119,6	119,4	103,6	118,1	21,0	35,5	1.188,1
CTM1	59,5	0,0	56,5	101,6	112,2	108,5	107,3	111,6	110,6	105,3	87,7	96,7	1.057,3
DEUTZ	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,1	0,1	0,2	0,0	0,4
CUMMINS	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,1	0,0	0,4
Total Gross Generation	177,5	174,3	200,5	286,7	258,1	243,8	323,5	316,0	228,8	238,9	194,6	194,1	2.836,8
Plant Consumption	13,4	10,2	14,3	19,7	17,9	17,4	21,1	20,7	18,8	22,0	11,9	12,7	200,2
Total Net Generation	164,1	164,1	186,1	266,9	240,2	226,4	302,4	295,3	210,0	216,8	182,7	181,4	2.636,6
CELTA													
CTTAR	72,9	89,5	87,5	73,9	32,9	101,0	101,3	104,2	100,5	103,2	58,8	86,2	1.011,8
TGTAR	0,1	0,2	0,9	0,4	0,5	0,6	1,7	1,7	1,2	1,9	4,0	0,9	14,0
Total Gross Generation	73,0	89,7	88,3	74,3	33,4	101,6	103,0	105,9	101,8	105,0	62,8	87,0	1.025,9
Plant Consumption	7,1	7,5	7,5	6,3	3,0	8,2	8,4	8,6	9,1	8,0	3,8	7,0	84,4
Total Net Generation	65,9	82,2	80,9	67,9	30,5	93,4	94,7	97,3	92,7	97,1	58,9	80,1	941,4

# GENERATION BY SING POWER PLANTS 2007 (GWh)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
NORGENER													
NTO1	92,8	84,7	10,8	0,0	71,5	91,3	94,8	94,3	86,6	93,2	85,1	91,5	896,6
NTO2	95,0	86,7	95,4	93,0	95,7	93,0	97,1	97,3	93,5	79,8	87,3	92,9	1.106,8
ZOFRI 1-6	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,1	0,3	0,1	0,6
ZOFRI 2-5	0,0	0,2	0,6	0,4	0,5	0,5	0,8	0,3	0,7	0,7	1,6	0,6	6,9
Total Gross Generation	187,8	171,7	106,8	93,3	167,7	184,9	192,6	192,0	180,9	173,8	174,3	185,1	2.011,0
Plant Consumption	12,8	11,7	7,3	6,3	11,5	13,0	13,2	13,2	12,3	12,0	11,3	13,0	137,6
Total Net Generation	175,0	160,0	99,5	87,0	156,2	171,9	179,4	178,8	168,5	161,9	163,0	172,1	1.873,3
GASATACAMA													
TG1A	47,0	41,2	13,0	21,2	13,0	17,6	6,2	12,0	27,4	20,2	24,9	57,6	301,
TG1B	64,5	0,4	49,6	9,0	12,0	23,2	9,2	1,1	40,5	33,5	25,9	62,2	331,
TV1C	69,9	25,0	37,2	17,6	13,0	21,9	9,3	7,0	38,9	31,9	22,4	75,3	369,
TG2A	0,0	19,7	17,9	29,8	42,7	25,0	59,3	65,1	65,1	37,6	49,9	22,5	434,
TG2B	0,0	5,2	26,8	37,4	44,6	45,9	54,9	62,1	36,1	50,4	26,2	10,2	400,
TV2C	0,0	14,4	25,7	40,0	51,0	41,9	68,4	75,8	58,6	53,1	32,4	15,0	476,
DEUTZ	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,
CUMMINS	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	181,5	105,9	170,3	155,0	176,3	175,6	207,3	223,1	266,7	226,7	181,7	242,9	2.312,
Plant Consumption	5,3	5,4	7,0	5,3	6,9	6,3	6,3	6,0	7,7	7,0	5,3	7,1	75,
Total Net Generation	176,2	100,5	163,4	149,7	169,5	169,3	200,9	217,2	259,0	219,7	176,4	235,7	2.237,
AES GENER													
Central Salta	210,8	167,6	210,4	209,5	180,1	153,3	20,2	13,9	71,7	96,4	148,8	144,9	1.627,
Total Gross Generation	210,8	167,6	210,4	209,5	180,1	153,3	20,2	13,9	71,7	96,4	148,8	144,9	1.627,
Plant Consumption	4,6	3,0	4,6	4,4	3,7	3,2	0,2	0,2	1,8	3,4	4,8	4,1	37,
Total Net Generation	206,2	164,6	205,8	205,1	176,4	150,1	20,0	13,7	69,9	92,9	144,1	140,9	1.589,
TOTAL SING													
Gross Generation	1.161,8	1.057,6	1.198,3	1.178,1	1.200,5	1.151,1	1.172,1	1.168,1	1.167,7	1.184,4	1.111,7	1.194,5	13.945,
Plant Consumption	59,1	58,8	65,6	62,0	67,0	68,6	70,6	70,1	68,6	75,1	59,0	65,7	790,
	1.102,7	998,8	1.132,8	1.116,1	1.133,5	1.082,4	1.101,4	1.098,0	1.099,0	1.109,3	1.052,7	1.128,8	13.155,
Transmission Losses	43,7	32,8	48,5	37,4	45,4	37,4	40,4	40,8	31,2	34,6	43,8	45,3	481,
Sales to Unregulated Customers	950,6	865,1	971,3	966,5	973,9	933,5	942,8	941,7	961,0	962,2	901,7	972,2	11.342,55
Sales to Regulated Customers	108,4	100,9	113,0	112,2	114,1	111,6	118,2	115,5	106,9	112,5	107,2	111,3	1.331,70
Total Sales	1.059,0	966,0	1.084,3	1.078,7	1.088,1	1.045,1	1.061,1	1.057,1	1.067,9	1.074,7	1.008,9	1.083,5	12.674,25

### GENERATION BY SING POWER PLANTS 1998 - 2007 (GWh)

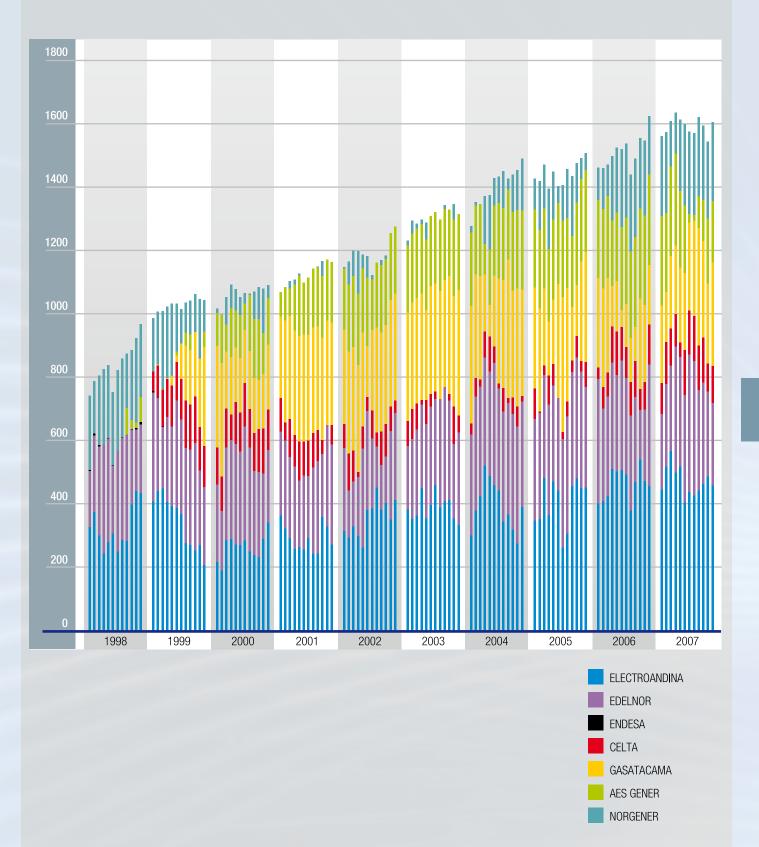
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
CELTA										
CTTAR	145	1.083	1.061	760	639	435	435	422	830	1.012
TGTAR	11	0	17	3	1	1	1	0	2	14
Total Gross Generation	156	1.083	1.079	763	640	436	436	423	832	1.026
Plant Consumption	12	82	84	67	61	40	39	39	72	84
Total Net Generation	143	1.001	994	696	579	397	398	383	760	941
EDELNOR										
CHAPIQUIÑA	35	46	43	53	54	51	51	45	55	5
CAVANCHA	15	14	13	12	13	14	15	15	15	1
CD ARICA	15	22	6	5	2	1	5	2	7	3
CD IQUIQUE	52	62	31	14	8	6	11	4	13	5
CD ANTOFAGASTA	55	58	8	5	2	2	7	2	15	3
CD MANTOS BLANCOS	43	58	9	7	6	7	16	4	25	
CD ENAEX	0	0	0							
CTM1	1.316	1.092	618	257	18	144	498,7	446,6	880	1.05
CTM2	810	1.139	984	774	918	575	1.003	849	1.033	1.18
CTM3		2	711	1.131	849	1.695	1.449	1.601	600	40
Total Gross Generation	2.341	2.493	2.424	2.257	1.870	2.495	3.054	2.970	2.643	2.83
Plant Consumption	165	174	173	131	111	113	162	159	169	20
Total Net Generation	2.176	2.319	2.251	2.125	1.759	2.382	2.892	2.810	2.475	2.63
ELECTROANDINA										
U09	45	12	0	0	0	0	0	0		
U10 - U11	40	148	56	29	1	0	7	0	19	18
U12 - U13	768	1.182	503	338	663	455	478	207	463	105
U14 - U15	1.988	1.623	1.509	664	1.266	1.304	1.409	1.549	1.688	190
U16	1.000	1.020	192	1.458	1.174	1.627	1.458	1.753	1.884	93
TG1 - TG2	2	18	22	16	7	2	2	1.700	0	1
TG3	19	20	32	43	4	11	91	43	12	4
Total Gross Generation	2.862	3.005	2.315	2.548	3.115	3.398	3.444	3.553	4.066	4.13
Plant Consumption	204	208	178	139	199	198	194	191	218	25
Total Net Generation	2.658	2.797	2.137	2.409	2.917	3.201	3.250	3.361	3.848	3.87
ENDESA (1)										
TG Mej. 1 - 2	24	0								
TG Mej. 3	0									
TGTAR		6								
Total Gross Generation	24	6								
Plant Consumption	0	0								
<b>Total Net Generation</b>	24	6								

<sup>(1)</sup> In 1993, Endesa put into service two Gas Turbines at the Mejillones Substation, with a capacity of 74 MW, which were removed from the SING starting on January 3<sup>rd</sup> 1999, to be transferred to the SIC. In 1995, Endesa put into service one Gas Turbine at the Mejillones Substation, with a capacity of 23.75 MW, which was removed from the SING on January 1<sup>st</sup> 1997. In 1998, the Tarapaca Substation is reincorporated to the SING as property of CELTA S.A. and under the name of TGTAR.

## GENERATION BY SING POWER PLANTS 1998 - 2007 (GWh)

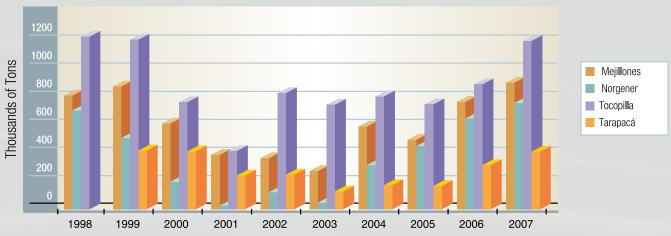
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
AES GENER										
TG11		102								
TG12		12								
CC Salta			1.217	1.386	1.813	1.950	1.903	2.154	2.285	1.628
Total Gross Generation		114	1.217	1.386	1.813	1.950	1.903	2.154	2.285	1.628
Plant Consumption		0	27	35	45	46	43	44	46	38
Total Net Generation		114	1.191	1.351	1.768	1.904	1.860	2.110	2.239	1.590
GASATACAMA										
CC1		801	970	1.462	1.431	1.434	1.168	1.144	411	1.002
CC2		116	812	1.368	1.216	1.568	1.530	1.338	1.285	1.311
ENAEX				0	0	0	0	0	0	0
Total Gross Generation		916	1.782	2.830	2.647	3.002	2.698	2.482	1.696	2.313
Plant Consumption		39	70	91	77	82	82	69	61	75
Total Net Generation		877	1.711	2.739	2.570	2.920	2.615	2.413	1.635	2.237
NORGENER										
NTO1	1.016	526	264	1	63	16	216	549	776	897
NTO2	960	858	246	67	252	126	578	528	938	1.107
ZOFRI 1-6										1
ZOFRI 2-5										7
Total Gross Generation	1.975	1.384	510	68	315	142	794	1.077	1.714	2.011
Plant Consumption	133	109	52	7	32	14	66	91	125	138
Total Net Generation	1.843	1.275	458	61	283	128	727	986	1.589	1.873
TOTAL SING										
Gross Generation	7.358	9.001	9.327	9.851	10.400	11.424	12.330	12.657	13.236	13.946
Plant Consumption	514	612	585	471	524	492	587	594	692	790
Net Generation	6.844	8.389	8. 743	9.381	9.876	10.932	11.743	12.063	12.544	13.156
Transmission Losses	227	269	345	390	394	452	503	503	515	481
Sales to Unregulated Customers	5.868	7.313	7.499	8.046	8.473	9.433	10.164	10.401	10.774	11.343
Sales to Regulated Customers	748	807	899	945	1.009	1.047	1.075	1.159	1.256	1.332
Total Sales	6.616	8.120	8.398	8.991	9.482	10.480	11.240	11.560	12.029	12.674

# AVERAGE HOURLY GENERATION PER MONTHS (MW) 1998 - 2007



## ANNUAL FUEL CONSUMPTION BY POWER PLANTS 1998 - 2007

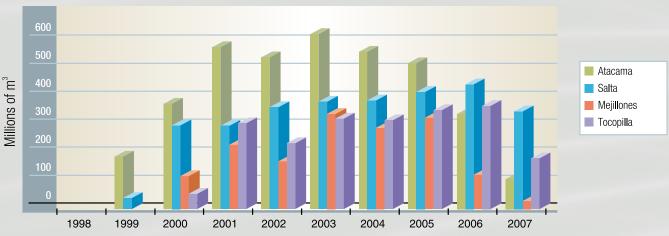
### ANNUAL CONSUMPTION OF COAL PER PLANT



Note: Starting from 2001, the consumption of the Mejillones Power Plant is based on a Coal-Petcoke mix.

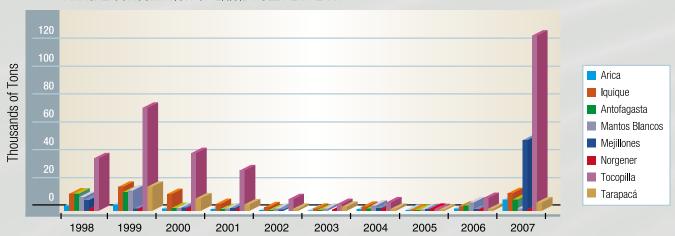
Starting from 2004, the consumption of the Tocopilla and Norgener Power Plants is based on a Coal-Petcoke mix.

### ANNUAL CONSUMPTION OF NATURAL GAS PER PLANT



Note: The use of natural gas as fuel for generation started in 1999.

### ANNUAL CONSUMPTION OF LIQUID FUEL PER PLANT



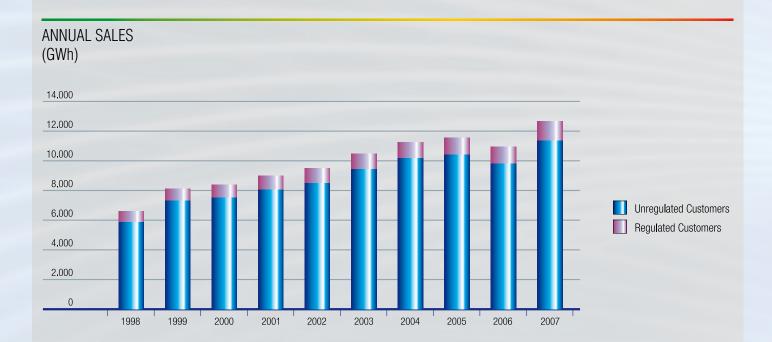
Note: The consumption of liquid fuel corresponds to Diesel Oil and Fuel Oil Nº 6.

## ANNUAL SING SALES (GWh) 1998 - 2007

		Sales			Growth	
Year	Unregulated Customers	Regulated Customers	Total	Annual	Average Growth	Accumulated
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%
2005	10.401	1.159	11.560	2,8%	12,0%	240,6%
2006	9.793	1.146	10.939	-5,4%	10,6%	222,3%
2007	11.343	1.332	12.674	15,9%	11,0%	273,4%

Note: The accumulated percent growth referes to 1994 sales (3,394.4 GWh).

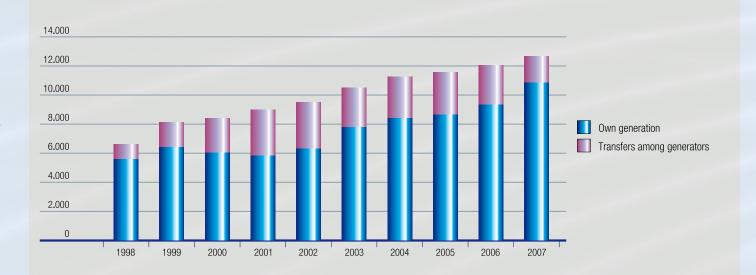
Annual sales aqual net generation less transmission losses.



# DETAILED ANNUAL SING SALES 1998-2007

Year	Energy Sales (GWh)	Own Generation (GWh)	Transfers among Generators (GWh)	Transfers Sales/Percentage (%)
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%
2005	11.560	8.654	2.905	25%
2006	12.029	9.332	2.698	22%
2007	12.674	10.838	1.836	14%

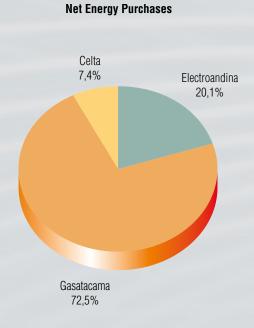
### DETAILED ANUAL SALES 1998-2007

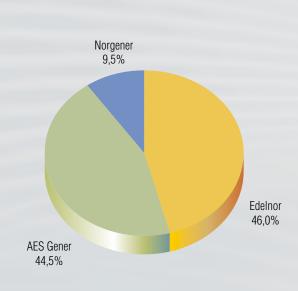


### ENERGY TRANSFERS AMONG CDEC-SING GENERATORS (GWh) 2007

COMPANY		JAN.	FEB.	MAR.	APR.	MAY.	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
CELTA	Purchases	21,3		12,1	22,6	59,9						30,1	14,1	160,0
	Sales		22,0				7,0	2,6	4,9	2,3	6,5			45,2
EDELNOR	Purchases													
	Sales	13,0	18,8	11,6	99,0	68,3	58,9	143,6	137,5	59,5	62,4	30,5	11,6	714,9
ELECTROANDINA	Purchases	35,3	1,8		16,3		65,4	39,2	55,3	66,8	42,2	17,5	42,5	382,3
	Sales			61,8		8,0								69,8
AES GENER	Purchases							59,0	61,4	0,6				121,0
	Sales	126,1	94,4	125,1	126,8	101,3	76,7				19,6	72,4	69,9	812,2
GASATACAMA	Purchases	111,3	155,4	136,1	133,0	122,7	109,0	83,1	61,7	19,5	61,2	84,6	48,6	1.126,2
	Sales													
NORGENER	Purchases			50,4	53,9									104,4
	Sales	28,7	22,1			5,1	31,8	35,0	36,0	25,1	15,0	29,3	23,7	251,7

Note: From June 1st 2007, Edelnor and Electroandina subscribed an Energy sales contract. The amounts indicated do not include the sales operations between Edelnor and Electroandina.





**Net Energy Sales** 

## ENERGY TRANSFERS AMONG CDEC-SING GENERATORS (GWh) 1998 - 2007

		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
CELTA	Purchases	0,4		21,2	263,6	390,8	601,4	663,2	628,5	343,1	160,0
	Sales	144,5	419,7	116,0	10,4					0,2	45,2
EDELNOR	Purchases	140,8	97,1	97,8	54,9					26,2	
	Sales	286,3	273,0	255,3	292,1	801,1	1.263,8	1.637,3	1.522,8	1.057,6     714,       540,8     382,	714,9
ELECTROANDINA	Purchases	683,0	733,3	1.438,0	1.497,4	1.109,5	831,7	1.000,1	968,1	540,8	382,3
	Sales	5,0	20,2					18,9		23,0	69,8
ENDESA	Purchases	210,9	260,2								
	Sales	0,3									23,0 69,
AES GENER	Purchases		397,4		2,7						121,0
	Sales			473,7	629,2	997,8	1.088,9	1.050,3	1.335,6	1.357,0	812,2
GASATACAMA	Purchases		0,3			24,0	3,5	430,2	806,1	1.638,1	1.126,2
	Sales		844,4	1.549,6	2.251,5	792,7	350,1	126,3	36,1		
NORGENER	Purchases		216,4	833,9	1.364,7	1.067,2	1.266,1	739,2	503,1	150,3	104,4
	Sales	645,6	172,0						11,3	260,7	251,7

Note: Provisional values from May 2000 to December 2007.

From June 1st 2007, Edelnor and Electroandina subscribed an Energy sales contract. The amounts indicated do not include the sales operations between Edelnor and Electroandina.

# POWER TRANSFERS AMONG CDEC-SING GENERATORS (MW) 2007

FIRM POWER BALAN	ICE 2007						
	CELTA	EDELNOR	ELECTROANDINA	AES GENER	GASATACAMA	NORGENER	TOTAL SING
Injections [MW]	78,7	310,1	450,3	290,4	415,2	120,7	1.665,4
Withdrawals [MW]	129,8	236,5	475,2	98,6	456,1	208,7	1.604,8
Balance [MW]	-51,0	73,6	-24,9	191,8	-40,9	-88,0	60,6

FIRM POWER TRANS	FER 2007						
	CELTA	EDELNOR	ELECTROANDINA	AES GENER	GASATACAMA	NORGENER	TOTAL SING
PURCHASES (MW)	55,6		41,8		55,1	91,0	243,6
SALES (MW)		64,8		178,8			243,6

# PRICE OF THE POWER OF THE CRUCERO 220kV NODE

Tariff	Те	erm	Price of Power
Setting Date	From	То	[\$/kW-month]
Oct-06	1/11/06	30/04/07	3.734,15
Apr-07	1/05/07	16/07/07	3.840,04
Apr-07 (index July)	17/07/07	15/09/07	3.795,11
Apr-07 (index September)	16/09/07	31/10/07	3.792,04
Oct-07	1/11/07	-	3.835,63

## POWER TRANSFER AMONG CDEC-SING GENERATORS (MW) 1998 - 2007

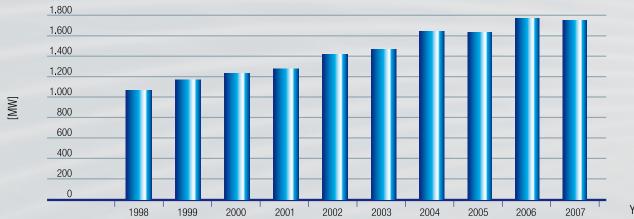
	CEL	TA	EDEL	NOR	ENDE	ESA	ELECTRO	ANDINA	AES G	ENER	GASATA	ACAMA	NORG	ENER
	Purchases	Sales	Purchases	Sales	Purchases	Sales	Purchases	Sales	Purchases	Sales	Purchases	Sales	Purchases	Sales
1998		13,0	40,8		42,1			43,5						26,4
1999	2,5		62,5					14,5	72,0			40,0		82,5
2000	45,3		81,3				206,0			156,6		242,8	66,8	
2001	59,4		33,5				146,6			152,0		172,8	85,3	
2002 (January-March)	48,5			145,8			138,0			183,2	73,0		69,4	
2002 (April-December)	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	
2005	56,4			140,1			124,2			184,6	61,4		82,7	
2006	71,8			159,1			86,8			202,9	122,9		80,4	
2007	55,6			64,8			41,8			178,8	55,1		91,0	

### SING'S PEAK ANNUAL DEMAND 1998 - 2007

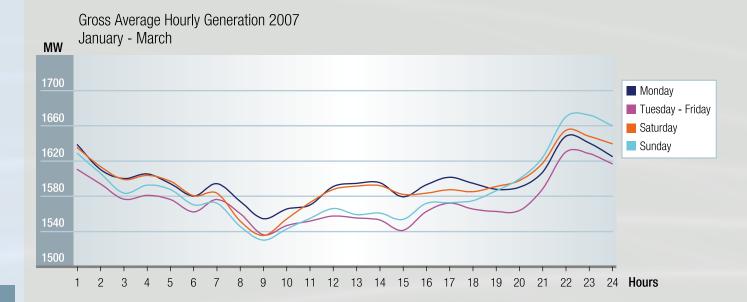
Year	Day	Time	Gross Peak Generation (MW)	Gross Peak Demand (MW)
1998	Dec 23, 98	23	1.087	1.021
1999	Dec 13, 99	22	1.173	1.094
2000	Dec 15, 00	22	1.213	1.153
2001	Nov 05, 01	22	1.281	1.221
2002	Dec 23, 02	22	1.420	1.360
2003	Dec 14, 03	22	1.467	1.416
2004	Dec 19, 04	23	1.644	1.567
2005	Nov 27, 05	22	1.635	1.566
2006	Dec 15, 06	23	1.770	1.676
2007	Apr 24, 07	22	1.751	1.665

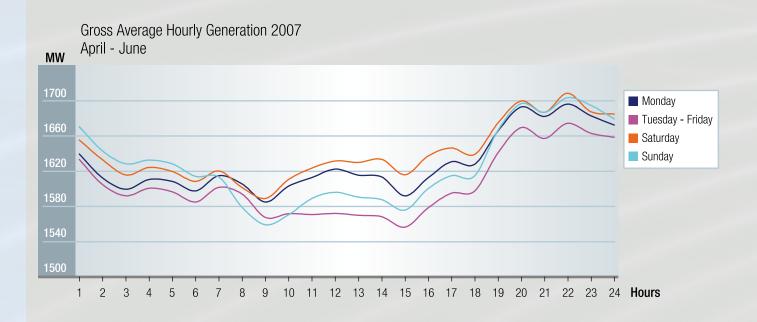
Note: Gross Peak Demand is equivalent to the power plants' gross generation less consumption.

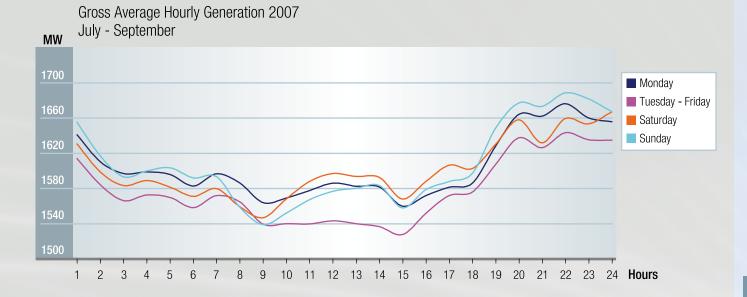
### Gross Peak Generation (MW)

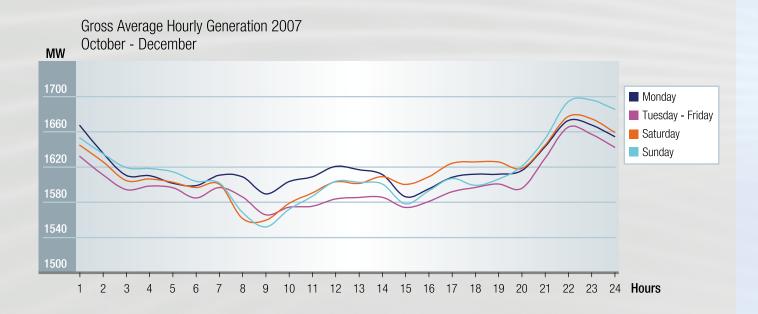


Year









# MARGINAL ENERGY COSTS - 220 kV CRUCERO NODE 2007

February

January

Day

1	16,37178	30,34977	23,51259	32,69584	47,47380	41,35716	
2	16,36508	17,04925	17,29117	21,48329	46,19400	48,69313	
3	16,03558	17,00462	16,61214	17,08675	22,33607	49,43004	
4	16,52588	22,53214	21,93084	17,18888	34,66670	23,76931	
5	25,65580	54,83452	39,66610	17,14719	37,23148	49,76225	
6	16,52324	37,45851	34,31514	16,99110	51,86214	74,17646	
7	16,64969	20,42925	42,55610	17,09116	40,98987	68,62889	
8	16,32634	16,99916	53,22428	17,07308	43,55409	56,02455	
9	16,15142	17,01648	41,05872	17,07264	29,04735	62,95166	
10	16,34165	16,91706	32,37570	22,29085	65,64069	53,49459	
11	16,69855	24,40589	31,30617	20,04136	63,18751	66,59807	
12	17,06331	37,28485	36,24347	18,21869	69,51572	47,19526	
13	17,59026	18,90479	30,85186	17,18817	73,13301	31,57362	
14	17,25826	46,19326	21,43636	16,47045	65,23530	35,98825	
15	16,81881	54,15413	53,31173	17,13388	63,46297	67,11499	
16	16,47059	41,72763	19,34974	17,26632	62,05411	70,03225	
17	16,72334	48,24015	26,79014	16,76553	64,11339	47,50525	
18	16,48051	30,25417	39,16159	16,90003	65,16236	42,49285	
19	16,61501	48,32981	40,74700	32,68877	74,75560	63,02721	
20	16,75159	40,34730	51,97181	36,66336	63,14535	52,99455	
21	16,57755	41,52329	58,33576	43,06698	65,52159	49,70108	
22	16,53107	47,01381	44,77257	68,04577	66,77130	61,95435	
23	16,62554	35,37416	59,67642	45,55100	32,78077	63,40950	
24	27,80367	25,31099	56,56981	58,18619	27,27726	28,09599	
25	16,58985	41,77148	61,32771	57,26492	51,22188	21,85682	
26	16,65061	54,39281	57,09942	69,32801	59,17157	42,92289	
27	16,43437	26,77577	44,83904	75,53008	48,89713	31,80953	
28	16,62319	45,74521	24,71491	83,23559	58,86490	75,44338	
29	23,94786		38,96004	77,14583	52,13406	65,43789	
30	26,82960		41,19532	53,11199	35,71348	100,84199	
31	58,67991		39,37416		45,47349		
Average	19,18419	34,22644	38,71979	34,53079	52,47061	53,14279	

March

April

Note: Provisional values

Daily average in \$/KWh per day

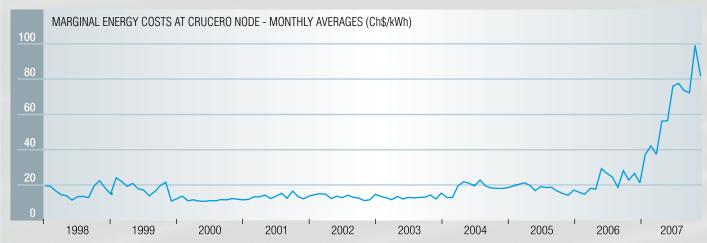
July	August	September	October	November	December
73,22417	82,71621	75,09566	67,64241	66,08673	84,23154
97,15248	113,59647	96,64019	65,48131	72,00080	67,49819
72,12232	78,11368	99,01273	64,87859	71,74079	53,66598
70,49414	91,95443	64,43316	57,50913	72,65190	71,45461
65,97350	75,14704	61,90901	79,48072	92,83533	50,01030
75,16230	61,79350	48,78431	63,21676	82,57112	49,66215
82,73345	91,45313	57,33209	75,88134	72,20410	91,66021
81,49910	81,74100	58,53757	79,14839	73,08231	65,99953
61,33131	65,55901	62,03566	26,98845	78,44752	89,68385
75,86828	79,31162	43,06104	67,00590	82,24110	98,69339
91,90528	90,98071	65,99192	78,96197	85,91107	54,54001
52,33981	74,41301	63,17064	75,99250	83,36684	64,42569
51,48995	73,49105	69,36218	71,85430	81,15365	97,16107
97,30540	63,64892	52,94864	86,14674	68,17419	63,27305
89,78332	67,83817	57,73522	53,28783	131,39220	89,93259
81,25500	47,65130	75,39419	42,85013	138,68865	116,09429
87,92987	70,44745	58,41015	44,61009	142,55719	97,34709
63,79119	37,32843	75,36849	74,97449	142,99708	110,43435
60,18511	73,18028	75,36849	58,16016	151,21860	101,78829
33,62702	78,53082	74,52664	77,80767	119,15572	102,10389
72,48174	62,55978	73,90373	105,13888	137,18631	88,07660
63,40691	58,35688	83,16249	110,16630	129,04008	98,07624
84,70631	69,74210	82,71062	101,13596	115,36615	86,63205
67,45326	81,79356	69,92449	88,38992	69,46553	89,27823
81,45690	77,96552	77,96356	84,02273	85,16702	91,86442
67,77073	80,06666	81,18453	99,37570	55,36819	89,81346
63,40427	90,84027	88,82870	104,90706	92,73496	96,98630
81,38568	87,20165	94,21777	63,37618	113,04259	78,73078
84,36532	69,82694	92,53567	52,59755	113,42703	59,41107
76,92563	69,36992	76,46465	29,03228	123,53197	80,41967
45,33420	76,56896		46,48411		47,56395
72,70529	74,94156	71,86714	70,87866	98,09356	81,50041

### MARGINALENERGY COSTS - 220 kV CRUCERO NODE 1998 - 2007

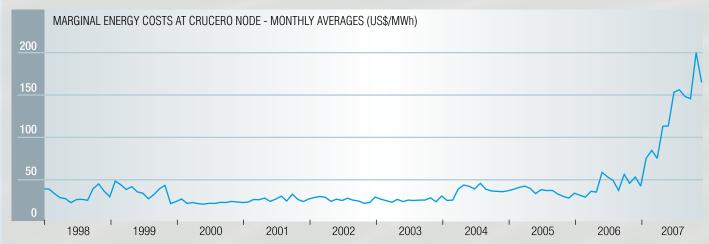
Month \ Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
January	13,7	10,7	8,9	8,8	10,7	12,0	12,6	15,5	14,9	19,2
February	13,5	17,5	10,1	8,9	11,4	11,0	10,4	16,3	13,8	34,2
March	11,7	16,1	8,1	10,2	11,9	10,4	10,6	17,3	12,9	38,7
April	10,0	14,0	8,6	10,2	11,6	9,5	16,2	18,2	16,0	34,5
May	9,6	15,3	8,1	11,0	9,7	11,0	18,3	17,1	15,7	52,5
June	7,9	13,0	7,9	9,5	10,7	9,8	17,7	14,4	26,4	53,1
July	9,3	12,4	8,3	10,5	10,1	10,6	16,4	16,6	24,2	72,7
August	9,4	10,0	8,2	12,0	11,3	10,4	19,3	16,1	22,2	74,9
September	9,0	11,9	8,8	9,7	10,5	10,6	16,4	16,4	16,9	71,9
October	14,1	14,5	8,8	13,1	10,1	10,6	15,5	14,5	25,5	70,9
November	16,2	16,0	9,3	10,6	8,9	11,7	15,3	13,2	20,6	98,1
December	13,2	7,9	9,1	9,5	9,3	9,7	15,1	12,3	24,0	81,5
Average	11,5	13,3	8,7	10,3	10,5	10,6	15,3	15,6	19,4	58,5

Note: Provisional values for April and May 1998, and from May 2000 to December 2007. Monthly averages in nominal Ch\$/kWh.

### MARGINAL ENERGY COSTS MONTHLY AVERAGES



Note: Provisional values for April and May 1998, and from May 2000 to December 2007. Marginal costs updated by CPI of December 2007.



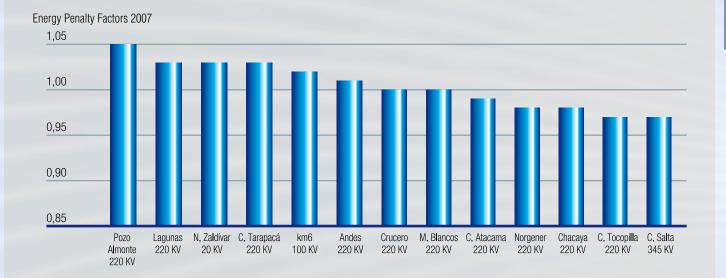
Note: Provisional values for April and May 1998, and from May 2000 to December 2007.

Marginal costs updated by CPI of December 2007 and converted to USD using the exchange rate current for December 31st 2007.

## ENERGY PENALTY FACTORS 2007

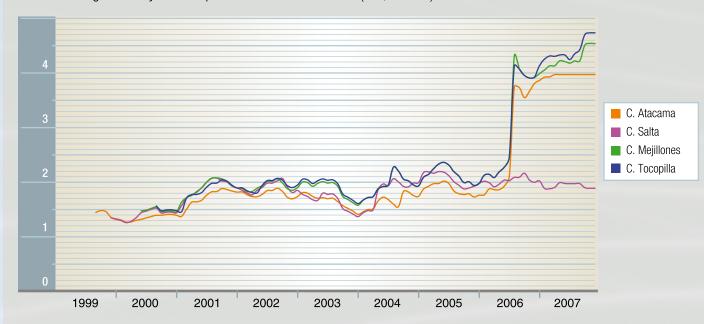
Busbar	Average	Maximum	Minimum
Pozo Almonte 220 kV	1,05	1,07	1,03
Lagunas 220 kV	1,03	1,05	0,99
N.Zaldívar 220 kV	1,03	1,06	1,01
C.Tarapacá 220 kV	1,03	1,06	0,97
km6 100 kV	1,02	1,02	0,99
Andes 220 kV	1,01	1,06	0,94
Crucero 220 kV	1,00	1,00	1,00
M.Blancos 220 kV	1,00	1,02	0,98
C.Atacama 220 kV	0,99	1,03	0,98
Norgener 220 kV	0,98	0,99	0,97
Chacaya 220 KV	0,98	1,05	0,92
C.Tocopilla 220 kV	0,97	1,00	0,96
C.Salta 345 kV	0,97	1,03	0,91

Note: Values from weekly scheduling .

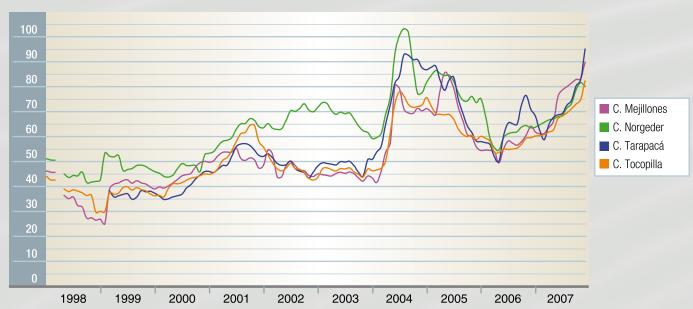


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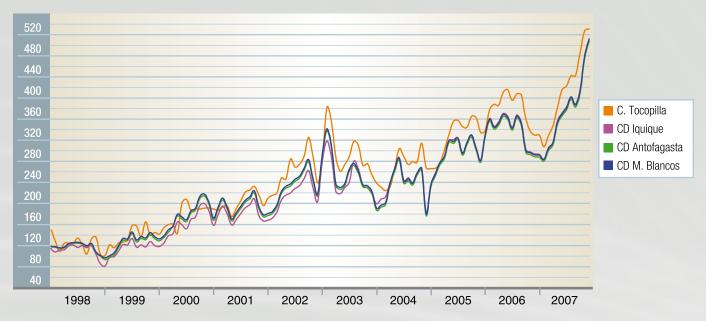
### NATURAL GAS PRICES Average monthly values updated to December 2007 (US\$ / Mbtu)



**COAL PRICES** Average monthly values updated to December 2007 (US\$/ton)



N°6 FUEL OIL PRICES Average monthly values updated to December 2007 (US\$/ton)



DIESEL OIL PRICES Average monthly values updated to December 2007 (US\$ /  $m^3$ )

