



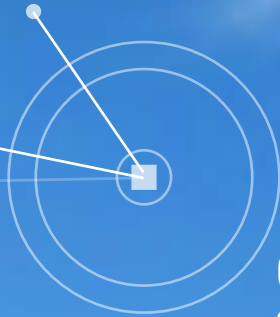
CDEC-SING



Center for Economic Load Dispatch for the Northern Interconnected System

2013 Annual Report and Operational Statistics





CDEC-SING

2013 Annual Report and Operational Statistics





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LETTER FROM THE PRESIDENT OF THE BOARD OF DIRECTORS

As the representative of the Board of the CDEC-SING (Center for Economic Load Dispatch for the Northern Interconnected System), it is an honor to present you with the 2013 Annual Report and Operational Statistics for the CDEC-SING, where you will find the outcomes of our 2013 operations and the statistics for the system encompassing the 10 year period from 2004-2013.

These outcomes highlight the relevant data in terms of energy, power and system capacitance. Compared to 2012, there was a 2.9% increase in power generation, totaling 17,237 GWh by December, 2013. In regards to maximum power levels, in 2013 this reached 2,226 MW, an increase of 2.6% from the maximum power levels in the previous year.

The addition of new projects during the 2013 year increased the system's power generation by 3.6 MW, thanks to the interconnection of two diesel-based generators; whereas the transmission segment incorporated four projects, of which we should highlight the Encuentro-Ministro Hales Transmission Line, with a capacitance of 220kV and a length of 74 kilometers; and the 40 MVar Capacitor Bank at the Lagunas substation; both of which have enabled the SING to continue growing and maintain its high service quality standards.

As will be seen throughout the annual report, 2013 is a key year in regards to changes for the CDEC and its relation to the companies that are part of this organization. Executive Decree 115, which supports the modification of the Regulation that defines the structure, functioning, and financing of the CDEC, has mandated the duties of this Board of Directors, which I preside.



As of the second semester of 2013, we have been moving forward in a transparent and efficient manner towards the goal of electing a new Board of Directors, which in accordance with the Regulations will be, for the first time, completely independent of the companies that are part of the SING.

We are fully committed to this process, just as we were committed to the national debate that led to this change, because we understand and share in the strategic role held by the organization that coordinates the system within the national electrical industry.

Since 1993, when the coordinated operation of the SING through the CDEC-SING began, and the subsequent implementation of the Technical Directives in 1999, the companies that operate the system have had a permanent commitment to supply the CDEC with tools and mechanisms to provide for a highly technical and professional coordinator and operator. Therefore, the steps we take today towards greater independence and autonomy, must be understood within this framework in which we've been operating for these past 15 years.

It is with pleasure and satisfaction that I can firmly state that the CDEC-SING, where I have presided since November 2013, has always been and always will be ready to face the challenges that may present themselves in our country's electrical industry.

It is our expectation that the 2013 annual report can be a useful source of information to all those that are part of the SING, as well as for those that monitor or analyze its progress, and for all investors interested in better understanding the electrical market in the country's Norte Grande (Northern region).

"We are fully committed to the change process that is being implemented because we understand and share in the strategic role played by the CDEC-SING in the national electrical industry."

ALFREDO CARDENAS OCAMPO

President of the Board of Directors
of the CDEC-SING



LETTER FROM THE EXECUTIVE DIRECTOR

As we do every year, it is our pleasure to present you with the Annual Report and Operational Statistics for the Center for Economic Load Dispatch for the Northern Interconnected System (CDEC-SING) which comprises the decade from 2004-2013.


And we do this fully engaged with and aware of the huge challenges faced by our sector. The study and evaluation of the interconnection between the national and regional systems and the implementation of Executive Decree 115, which modifies the structure and functioning of the CDEC, are, to name a few, some of the tasks that have kept us busy during 2013.

As far as operations are concerned, it is important to highlight the fact that since March 2013, the coordination of the system in real time has been conducted from the new installations of the Center for Control Dispatch and its Backup Station, both of which are located in Santiago. This has allowed us to increase quality exponentially, as we now have a control room that is up to international standards in regards to infrastructure, communications system, backup, tools, and technologies.

In the regulatory arena, following the Regulation for Supplementary Services (ED 130/2011), in the year 2013 we applied ourselves to the modification of the calculations of marginal costs and simulations derived from the application of Ministerial Resolution #39, and likewise began introducing procedures that would allow us to implement the new system of Supplementary Services.

In terms of developing new tools and operational platforms we took two approaches. One was to define the strategy foreseen by the CDEC-SING to implement an Automatic Generation Control (ACG), in order to improve the performance and management of the operational reserves in the power generating facilities. And the other was to develop the WAM pilot project geared towards better monitoring and evaluation of the system's dynamic performance; which already has the first three measurement stations in operation, located in the substations of Angamos, Crucero, and Lagunas.

In regards to economic efficiency and increased transparency, in 2013 we made great strides in the transference process through the development and trial run of the Centralized Measurement System



Project. This system will enable us to obtain higher quality and more transparent information--invoicing measurements--for the different processes tied to the payments and economic transfers between member companies, as well as provide better processing and access to this information both for the companies and the public in general. Once the trial run, currently under way, is completed in 2014, we will begin the exploitation of this system, which will be an important milestone for the CDEC-SING.

Furthermore we have progressed in the study and analysis of a potential interconnected operation between the SING and SADI (Argentina) systems, to take advantage of surplus opportunities that could be transferred between both systems. This enabled us to program and undertake the first operational test with both systems synchronized; an important milestone towards further understanding the analyses and studies that have been undertaken to date.

In regards to operations, and continuing with our successes from 2011, in 2013 we incorporated two new processes to the Quality Control System that was certified under ISO 9001:2008. These are the "Energy Balance" and "Project Coordination" processes, which together with the previously certified "Work Coordination Service for the Companies Coordinated by SING" process, indicate the organization's commitment to quality and excellence in the services provided.

Likewise in 2013, we focused on the objective planning process, which enabled us to institute a strong follow-up and accountability system, achieving close to 94% of our global goals.

The institution has continued to place great importance on the roles of human resources and internal and external communications. This is due to our commitment towards better relations with the public through greater transparency, by providing clear, timely, and quality information, and internally, by strengthening integration and promoting a corporate identity.

Since 2013 our Human Resources Department has given rise to the People Management area, with the aim of promoting an organizational environment based on the values and strategic guidelines of the CDEC-SING. Among the many tasks undertaken by this area we should highlight the Training Policy and the implementation of various programs for strategic support and development of personal competencies.

We invite you to review the information on the work undertaken by the different Management Divisions of the CDEC-SING and the operational outcomes observed during 2013. As well as the process of continued improvement that we are committed to, with the aim of fully achieving our organization's strategic function within the electric sector and within the country.

"Quality in the processes, greater transparency and economic efficiency, better communication systems, backup, cutting edge tools and technologies, are testimony to the process of continued improvement that we, as an organization, are committed to."



DANIEL SALAZAR JAQUE

Executive Director



An abstract geometric design on the left side of the page. It features several concentric circles of varying sizes, some with a small square in the center. Lines radiate from these circles and connect various points, some of which are marked with small dots or triangles. The design is minimalist and modern, using a light gray color scheme.

ABOUT US

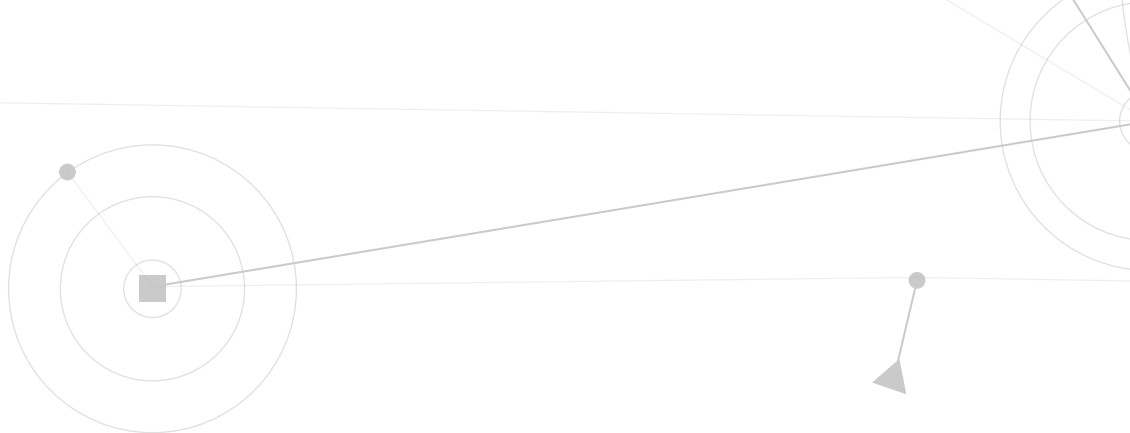
The Center for Economic Load Dispatch for the Northern Interconnected System (CDEC-SING) is the organization in charge of coordinating the operation of the electric installations in the country's Norte Grande (Northern Region), thus guaranteeing a safe, high quality service.

The Chilean government considers the CDEC-SING to be a strategic organization, due to the public nature of its function and the relationship between the supply of electricity, the safety of the population, and the normal functioning of the country's industry and economy.

The CDEC-SING is made up of a team of high-level executives that are dedicated to developing more efficient processes and are committed to their environment. The CDEC-SING is comprised of 45 companies that operate within the sectors of power generation, transmission, and consumption in the country's northern region.

The interconnected installations for electrical generation, transmission, and consumption that are part of the SING encompass the territory that spans the regions of Arica-Parinacota, Tarapacá, and Antofagasta, which is equivalent to 24.5% of the country's continental territory.

Our task is focused on creating more efficient processes with a commitment to environmental awareness.



Participating Companies and Members of the CDEC-SING

as of December 31, 2013

Segment A Power generating companies with a capacitance below 200 MW

N°	Company name	Capacitance [MW]
1	Cavancha S.A.	2,8
2	Central Termoeléctrica Andina S.A.	168,8
3	Compañía Eléctrica Tarapacá S.A.	181,8
4	Enaex S.A. (*)	2,7
5	Enorchile S.A.	12,5
6	Equipos de Generación S.A.	6,8
7	Inversiones Hornitos S.A.	170,1
8	Noracid S.A.	17,5
9	On Group S.A.	2,0
10	Sociedad Anglo American Norte S.A. (*)	28,6
11	SPS La Huayca S.A.	1,4
12	Valle de los Vientos S.A.	-

Segment B Power generating companies with a capacitance greater than 200 MW

N°	Company name	Capacitance [MW]
1	AES Gener S.A.	642,8
2	E-CL S.A. (*)	1764,6
3	Empresa Eléctrica Angamos S.A.	545,0
4	Gasatamarca Chile S.A.	780,6
5	Norgener S.A.	277,3

Segment C Transmission Line Companies

N°	Company name	Kilometers of Line
1	Transelect Norte S.A. (*)	383,3
2	Transelect S.A.	174,0

Segment D Substation Companies

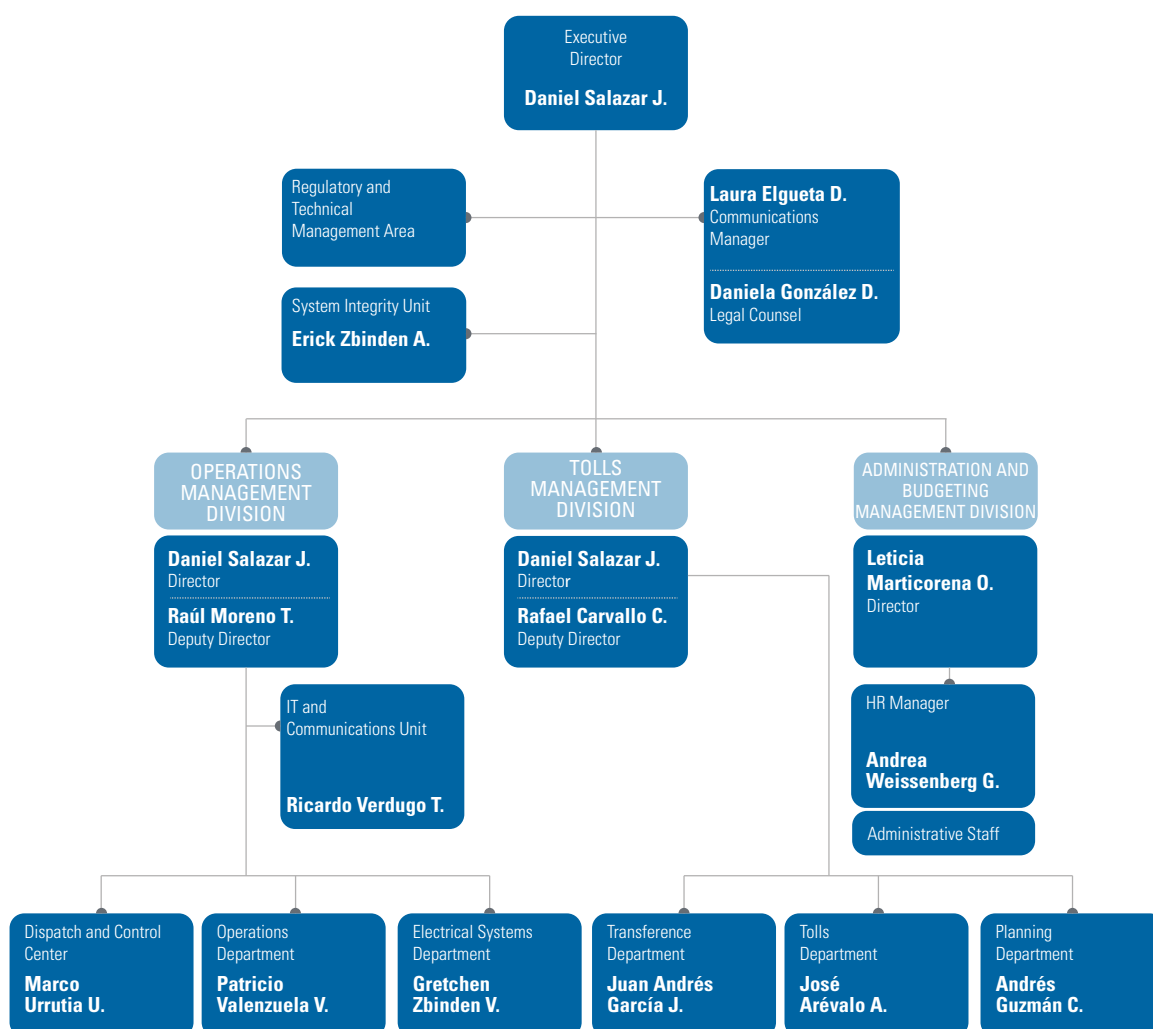
N°	Company name	Kilometers of Line
1	E-CL S.A. (*)	240,4
2	Empresa de Transmisión Eléctrica Transemel S.A.	74,6
3	Transelect Norte S.A. (*)	361,3

Segment E Standalone Clients

N°	Company name	Connected Power [MW]
1	Algorta S.A.	8,0
2	Atacama Agua y Tecnología Ltda.	14,0
3	Atacama Minerals Chile S.C.M.	15,0
4	Codelco Chile	1498,8
5	Compañía Minera Cerro Colorado Ltda.	92,0
6	Compañía Minera Doña Inés de Collahuasi SCM.	500,0
7	Compañía Minera Teck Quebrada Blanca S.A.	50,0
8	Compañía Minera Xstrata Lomas Bayas	133,2
9	Compañía Minera Zaldivar S.A.	134,0
10	Enaex S.A. (*)	15,5
11	Grace S.A.	25,0
12	Haldeman Mining Company S.A.	19,3
13	Minera El Tesoro	52,0
14	Minera Escondida Ltda.	1468,3
15	Minera Esperanza	370,0
16	Minera Meridian Ltda.	20,0
17	Minera Michilla S.A.	31,2
18	Minera Spence S.A.	180,0
19	Moly-Cop Chile S.A.	30,0
20	Sierra Gorda SMC	135,0
21	Sociedad Anglo American Norte S.A.	50,0
22	Sociedad Contractual Minera El Abra	187,5
23	Sociedad GNL Mejillones S.A.	16,0
24	Sociedad Química y Minera de Chile S.A.	160,0
25	Xstrata Copper - Altonorte	104,0

(*) Companies belonging to two or more Segments

CDEC-SING Organizational chart



Board of Directors

It is the duty of the Board of Directors of the CDEC-SING to ensure that the system adheres to the regulatory framework, that the CDEC Management functions well, and also to appoint the directors of the organization, draft the internal regulations, and approve the yearly budget.

In 2013 the Board of Directors of the CDEC-SING was comprised of two representatives from the segment of power generating compa-

nies with an installed capacity below 300 MW (segment A), three representatives from the segment of power generating companies with an installed capacity equal to or greater than 300 MW (segment B), two representatives from transmission line companies (segment C), two representatives from the segment of substation companies (segment D), and one representative from the segment of standalone clients (segment E).

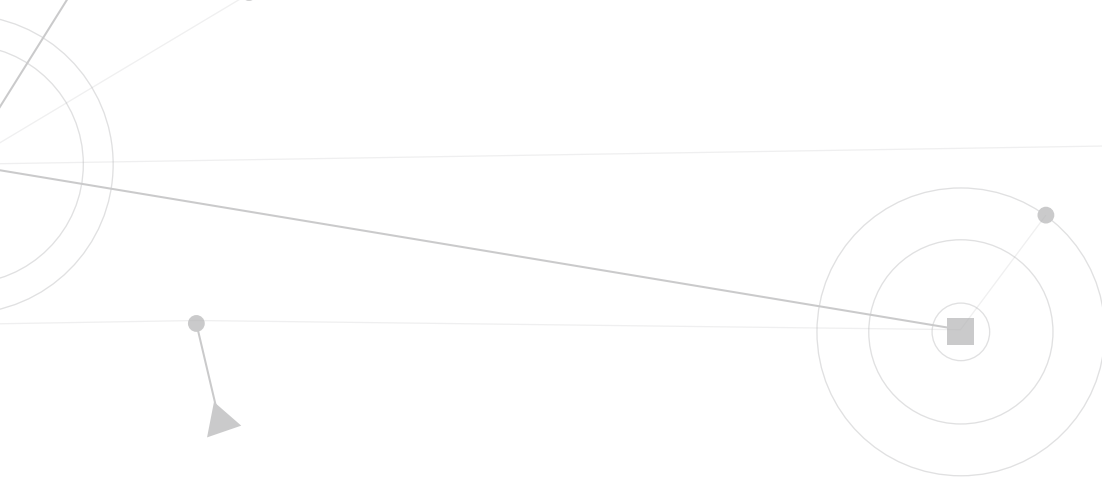
On November 10, 2013, the Board of Directors elected as its President, Mr. Alfredo Cardenas Ocampo, who is tasked with leading the process of transition towards the creation of the new Board of Directors for the organization, which in accordance with the modifications established in Transitory Article #1 of Executive Decree #115/2012, which changed the regulation that established the structure, functioning, and financing of the CDEC, must be elected within the first semester of 2014.



Segment A



Segment B



Segment A

(Principals)

Eduardo Soto Trincado (1)
Juan Pablo Cárdenas Péreznonsil (2)

(Substitutes)

Miguel Buzunáriz Ramos
Marcos Cisterna Orellana

Segment B

(Principals)

Enzo Quezada Zapata (3)
Carlos Aguirre Pallavicini (4)
Pedro de la Sotta Sánchez (5)

(Substitutes)

Francisco Promis Baeza
Felipe Rodríguez Chacón
Jaime de los Hoyos Silva

Segment C

(Principals)

Belisario Maldonado Molina (6)
Rodrigo López Vergara (7)

(Substitutes)

Jaime Cancino Castro
Robín Cuevas Canales

Segment D

(Principals)

Hugo Toro Álvarez (8)
Alfredo Cárdenas Ocampo (9)

(Substitutes)

Juan Muñoz Tapia
Claudia Carrasco Arancibia

Segment E

(Principals)

Alejandro Heilbron Batista (10)

(Substitutes)

Verónica Cortéz Silva



Segment C



Segment D



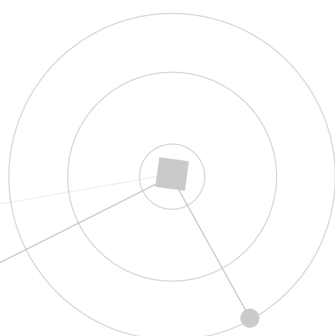
Segment E



MISSION, VISION AND VALUES CDEC-SING

Our Mission

"To carry out with excellence the SING's operation coordination and to lead its development, contributing to maintain safety and efficiency, guaranteeing Access to the System"



Our Vision

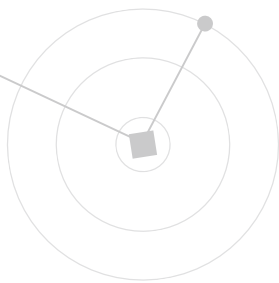
"To be a technical model for the Chilean electric sector, offering coordination services for the operation and development of the Northern Interconnected System, being reliable and efficient for our clients; having an excellence-oriented poly-functional team which carries out high quality processes and uses technology and state-of-the art tools optimally"



Our Values







2013 ENVIRONMENT

In 2013 there was landmark legislation in the electric sector.

Important bills were passed such as: the Law of Interconnectivity of Independent Electric Systems, the Law of Electric Concessions and Easements, and Law ERNC (Renewable Energy) 20/25, among others, that impose modifications and new requirements to all those involved in the sector. These will be felt gradually as the transmission segment develops, as more diversity and environmental sustainability is seen in the electrical grid, and with greater competence, efficiency, and backups.

Some ideas that even a few years ago were considered to be futuristic, are finally going to be implemented thanks to this legal framework that paves the way and represents a great leap forward in the implementation of projects that are indispensable to guaranty the levels of energy required for the country's progress.





The Chilean government considers the CDEC-SING to be a strategic organization.

However, there are other areas where the country, and particularly the electric sector, still have much work to do. It is common knowledge that, although steps have been taken to address technical and economic issues, other issues, particularly those related to the relationship between communities and the industry, still have a long way to go to overcome the rampant misunderstandings and distrust that still exist.

The enactment of laws, such as the ones stated, have a direct impact on the industry and bring the focus back to normative and regulatory issues. In this regard, the CDEC's have performed their usual duties as well as these new ones required by the new norms; in particular those required by the new Regulation that defines its structure, functioning, and financing.

The new Regulation, approved through Executive Decree #115, published on August 5, 2013, modifies, among other things: the new composition of the Board of Directors that governs each CDEC and the creation of a new Management Division, that of Planning and Development, alongside the existing ones of Operations, Tolls, and Administration and Budgeting.

The new composition of the Board of Directors, which will be smaller, with new selection standards, and will recognize and address potential weaknesses, will be implemented in 2014 and will be a milestone towards greater independence and professionalism of the coordinating organization.

The new Planning and Development Management Division is a strong indicator to



the CDEC's that, along with their short-term operating goals, they must also concentrate on long-term objectives for further development and growth of the transmission lines, on incorporating new technologies and possible applications, and on evaluating and studying future scenarios of the system as a whole.

In this way, the authorities and the industry are attempting to strengthen this entity by giving it greater autonomy and public function.

The Law of Interconnected Electrical Systems, which are currently independent, presents a challenge to the CDED-SING both at the national and international level.

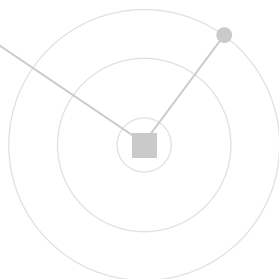
The Northern Interconnected System is a gateway to the Chilean electrical market if we consider its geography, as a neighbor to Peru in the North (SINAC) and to the Argentine

electrical system (SADI) in the East. And at a national level it is the northern arm of the country when we evaluate the national interconnection with the SIC.

This gives rise to highly complex scenarios, with multiple operational and coordination challenges, that those in the industry and the CDEC-SING are already preparing for.

These are some of the milestones that the Chilean electrical system, and in particular the Northern Interconnected System, have achieved during 2013. Within this context we can understand the core tasks, which are permanently geared towards shaping an organization that is cutting-edge in its operations, that contributes to the development of the SING and the national electric sector, and is guided by a stamp of excellence in everything it undertakes.



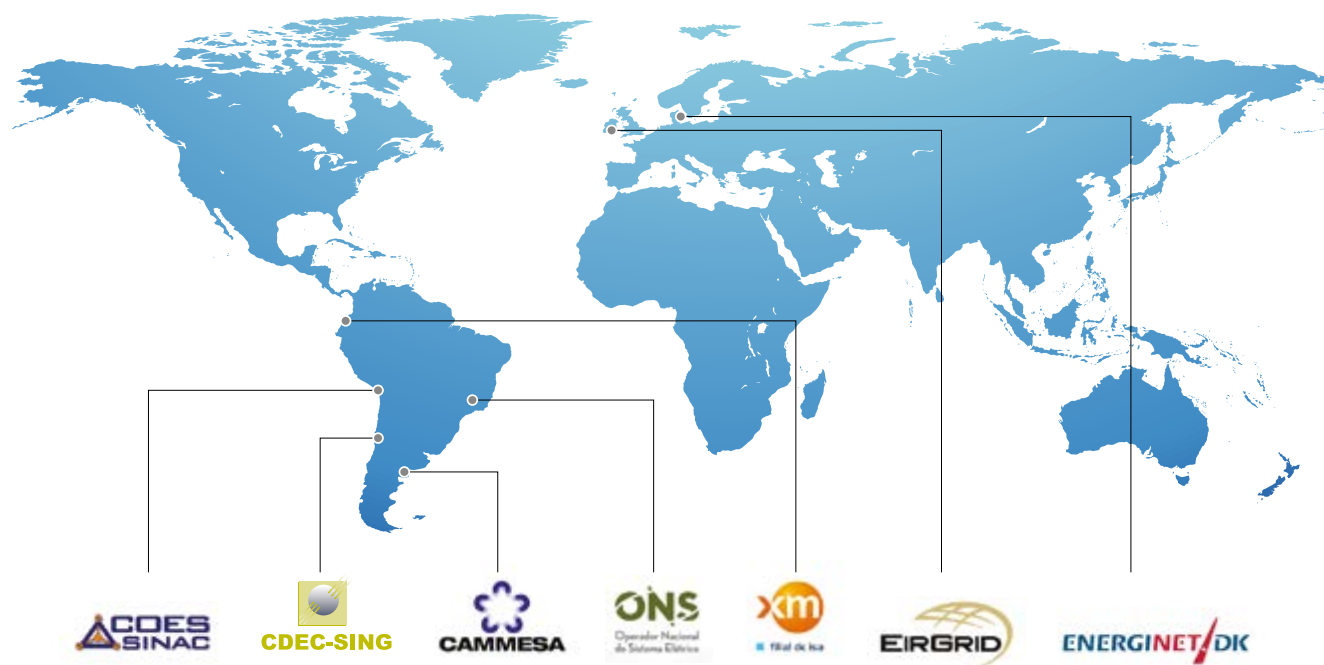


OUR RELATIONSHIP WITH OUR ENVIRONMENT

One of our challenges is to establish ourselves as an entity that is connected to its environment, promoting solid relationships with each of the stakeholders within our sector.

Due to our public function, our role as a strategic organization for the government requires us to assist in the duties of the Technical Management Divisions and to shape the issues related to market development.

In this regard, we have established stronger ties with various national and international entities, which along with the tasks undertaken to improve the internal environment, have allowed us to position ourselves, to orient our vision towards future opportunities and challenges, and to share these with our partners.



CDEC-SING 2013 Technical Workshops

At the national level, we would like to highlight the various “CDEC-SING Technical Workshops.”

Following in the footsteps of the dialogues and technical exchanges established in 2012 between the companies participating in the SING and the organizations associated to the CDEC-SING, 2013 instituted a new cycle of Technical Workshops.

Over 300 people came together in Antofagasta to discuss operational policies, operational performance, Supplementary Service implementation, interconnectivity, and other important topics, all of which provided the participants with industry best practices.

At the international level, we should highlight the work begun the previous year by the Working Group comprised of the Operators and Administrators of the CIER (Regional Energy Integration Commission) Market. This enabled us to continue reviewing issues that are of public concern, to strengthen the transference of our experiences in the implementation of tools and market standards, and to actively participate in the International Congress of System Operations and Energy Markets, held in Medellin in September 2013.

Within the framework of projects developed with the CIER, towards the end of 2013 we held the first workshop for the International Index of System Operators project. The aim of this

project is to undertake an in-depth study of the operators in different countries in order to determine the gaps in their skill-set that need to be addressed to meet international best practices, so that each operator can in turn create their own improvement plan to address these gaps.

The CDEC-SING participated in the Second Conference of the Bi-national Chile-Peru Energy Group, which was held in Santiago. At this conference there was a bilateral meeting in our offices with the Peruvian delegation, headed by the Peruvian Energy Vice Minister, which enabled them to see our work up close and to visit our newly inaugurated Control Dispatch.

Dialogue, participation,
and technical exchanges.

Safety, integrity, and efficiency
in the operation.



Our children at the CDEC-SING

At the internal level, we would like to highlight one of our dearest and most emblematic projects, the “Bring Your Child to Work Day”.

In July, the CDEC-SING opened its doors to its workers’ children: 22 girls and boys between the ages of 4 and 15 which graced our offices with their presence.

The goal of this activity was to provide the children with an opportunity to learn about and to better understand the organization and the duties their mothers and fathers undertake outside the family home. This activity was held within a playful, entertaining environment and was well-received by all.

The children asked...

What is the CDEC-SING?

What do you bring for lunch?

How do you handle energy?





QUALITY

Continuing with our successes from 2011, in 2013 we incorporated two new processes to the Quality Control System under ISO 9001:2008. These are the “Energy Balance” and “Project Coordination” processes, which together with the previously certified “Work Coordination Service for the Companies Coordinated by SING” process, indicate the organization’s commitment to quality and excellence in the services provided.

Our Commitment to Quality

The CDEC-SING Management Divisions are committed to deliver quality services in the coordination of the operation and to support the Northern Interconnected System, with a level of professionalism and responsibility that places the organization at a higher level of excellence.

The services are delivered strictly within the framework of current standards and incorporate lessons learned as well as industry best practices, which are undertaken through the Quality Control System that the organization has established as its base.

In regards to the quality of its processes and services, the Management Divisions of the CDEC-SING have set down the following global objectives:

- 1) Safeguard service safety and efficiency in the operation of the SING and continually improve the quality of its processes and services.
- 2) Perform with excellence the economic transfers between the SING electrical companies.
- 3) Undertake the integration of new installations to the SING, ensuring that high levels of service quality and safety are maintained as established in the current standards.
- 4) Perform its functions at all times with competent personnel that is responsible, motivated, and focused on its clients.
- 5) Deliver the services covered within the reach of the Quality Control System, in a timely manner, within the high levels of trust and quality required by our customers.
- 6) Develop and maintain permanent high quality communication channels with its clients and principals.

To reach these objectives, the Directors of the CDEC-SING, are committed to provide the resources needed to ensure continuity in terms of quality, professionalism, and efficiency in the services provided.

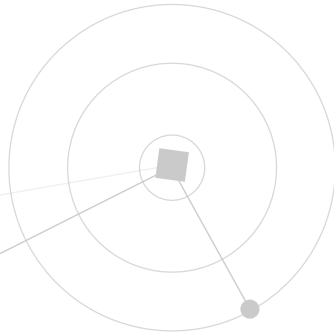




THE MANAGEMENT DIVISIONS OF THE CDEC-SING AND THEIR ACCOMPLISHMENTS IN 2013

The CDEC-SING is comprised of three Technical Management Divisions: Operations (DO), Tolls (DP), and Administration and Budgeting (DAP); all of which are coordinated by an Executive Director.

Along with these Technical Management Divisions, which are under the leadership of the Executive Director, we also have the System Integrity Unit, the Area of Technical and Regulatory Projects, as well as the areas responsible for the oversight of Communications, Legal, and People Management.





In 2013, the SING reached a maximum power of 2,226 MW. Consumption increased by 2.9% from 2012.

Operations Management Division

Its goal is to coordinate the operation of the installations that are part of the Northern Interconnected System with safety and economic efficiency. It encompasses three departments: the Center for Dispatch and Control (CDC), the Operations Department, and the Electrical System Department. Plus the IT and Communications Unit, which provides support to the whole organization.

2013 ACCOMPLISHMENTS

During 2013 the Operations Management Division tackled areas of security, integrity, and operational efficiency.

Since March 2013 real time coordination of operations is being managed from the new installations of the Center for Dispatch and Control and its Backup Site, both located in Santiago. This has provided the organization with a control room that is up to international standards in terms of infrastructure, communication systems, backups, tools and technologies.

In regards to system operation security, it is important to highlight the two modifications to Operational Policies.

Firstly, the new Policy of Transferences, which was launched in October for the central zone of the SING, specifically between the Encuentro-Crucero substations. The goal of this new policy is to ensure that the transferences via transmission lines do not exceed capacity, in order to guarantee n-1 conditions in that zone.

The other modification impacts the northern zone of the SING and was instituted in September 2013, following the completion of the expansion of the Crucero-Lagunas line, which allowed for operations to begin in that zone during the previous year.

As far as the integrity of the system, a major milestone in 2013 was stage III of the Study for the Verification of Protection Switch Coordination (EVCP), which has enabled us to detect deviations in the design, programming, and adjustments to the protection switches in the main transmission system. Based on this we have recommended and requested various improvements that will result in greater integrity and better performance of the SING.

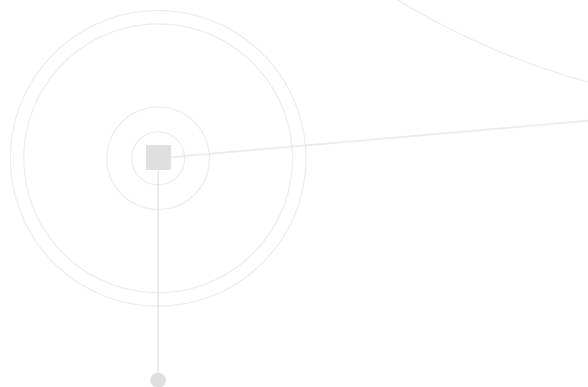
In 2013 we added a new task to our existing duties: the advancement of effective design criteria in order to improve operations of existing and projected installations. Thus, in 2013 we launched the "CDEC-SING Technical Guide", whose aim is to recompile, incorporate,



and disseminate “best practices” in engineering solutions and processes, both for new projects and for existing SING installations.

Furthermore we have progressed in the study and analysis of a potential interconnected operation between the SING and SADI (Argentina) systems, to take advantage of surplus opportunities that could be transferred between both systems.

These changes along with the exchange and coordination with CAMMESA, towards the end of 2013, helped us determine the minimal conditions and requirements needed to start operational tests (of short duration and reduced transferences) with both systems in synchronization. This enabled us to plan and perform the first operational test with synchronized systems, which is an important milestone towards delving into the analyses and studies undertaken to date.



2013 SIMULATION

In order to test its current Service Recovery Plan (PRS), on the 22nd of October the CDEC-SING held a simulation of a total system blackout, simulating an earthquake with a magnitude of 7.5 on the Richter Scale.

This simulation was part of the organization’s yearly activities, which are meant to evaluate, analyze and validate the existing procedures, provide the personnel with experience managing these contingencies, verify alternate communication resources, review the length of time associated with these events, and identify and improve the specific tasks that arise from these practices.

In order to avoid an interruption or alteration to the system’s normal operations, the simulation was held entirely in the new Backup Site, located in the district of Macul, which has all the necessary voice and data systems to coordinate the system, should it be necessary.

All the Control Centers (CC) coordinated by the CDEC-SING participated in this activity and it was positively evaluated by all those involved, within the framework of a day of analysis and evaluation of all the CC in the CDC, who shared the vision of a coordinated activity and instigated an evaluation with observations and proposals for improvement.



Tolls Management Division

Its goal is to administer the economic transfers and guarantee open access to transmission lines, substations and ancillary systems that make up the Northern Interconnected system.

It is comprised of three departments: Transference Department, Tolls Department, and Planning Department. The latter was created in 2013 by the Unit for Planning and Development, which was created in 2012. The main goal for this new department is to tackle the growing requirements for planning and development in the transmission system, in regards to the needs of future demands and available supply.

2013 ACCOMPLISHMENTS

In 2013 the Tolls Management Division focused its attention on areas related to quality, efficiency, and process transparency.

With these goals in mind we implemented the Centralized Measurement System Project, which had been researched and defined in 2012, and whose objective is to define and implement a remote electricity meter reading that will:

- Ensure timely and higher quality meter readings in those processes that are part of the CDEC-SING, through regular monitoring of meter performance and corrections when anomalies are observed.
- Facilitate measurement processing, by centralizing the process through the CDEC-SING, for all process stages, from readings to usage.
- Facilitate access to measurements to all actors involved that operate and/or monitor SING operations, by providing access, in multiple formats, to the measurement information stored in the database.

The implementation of this project in 2013 involved the following stages:

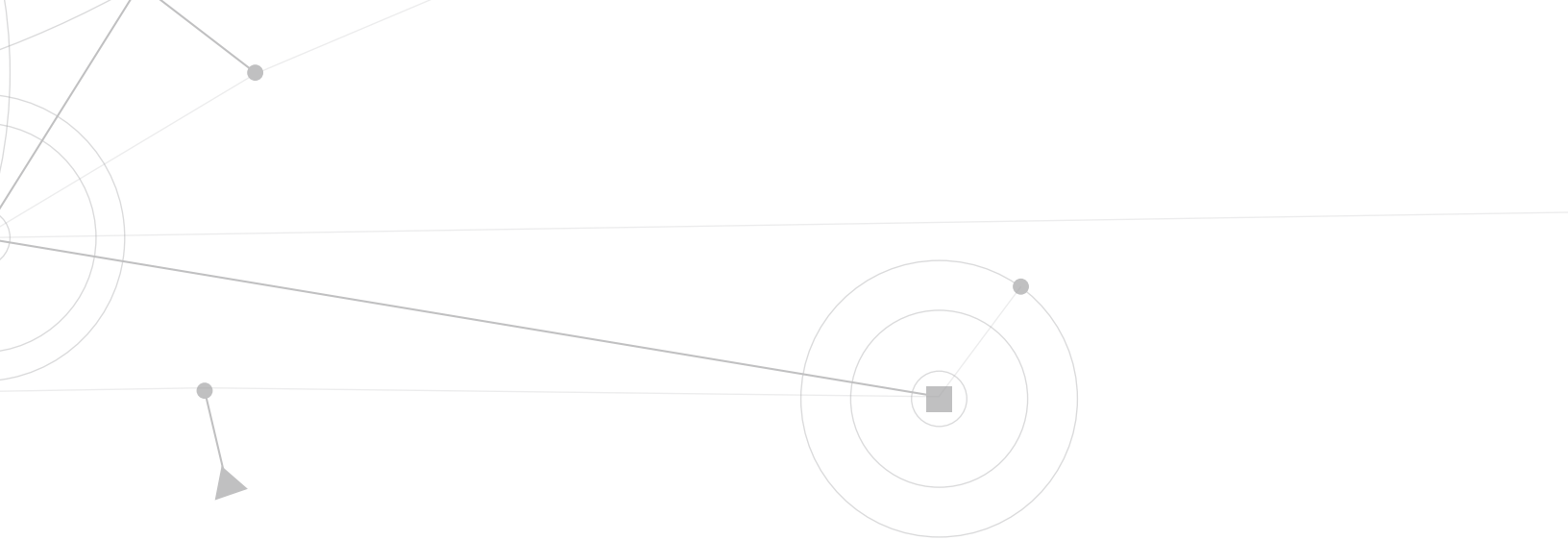
- Local platforms: this includes monitoring the connectivity status of meter boxes for the coordinated companies and presenting proposals for connectivity solutions and referential valuation of associated costs, for said companies.
- Remote System Readings: includes the purchase of a remote meter reading system, including relevant hardware

and software, to be implemented in the CDEC-SING installations. Issues related to the configuration of this system and the integration of meter boxes will be undertaken in early 2014, prior to the start of exploitation.

Along the same lines, and with an emphasis on quality and greater efficiency in its processes, in 2013 the Tolls Management Division added to its Quality Control System, under ISO 9001:2008, the process for Energy Balance, which is a critical process to the economic transfers between the CDEC-SING member companies.

In regards to expansion, we put out an RFP and awarded the execution and exploitation of the new core transmission line for the SING, designated as the New 2x220 kV Encuentro-Lagunas Line, first circuit. This process was begun in 2012 with an international RFP, all participants were given the necessary technical and administrative information, and with the management and support of technical site visits.

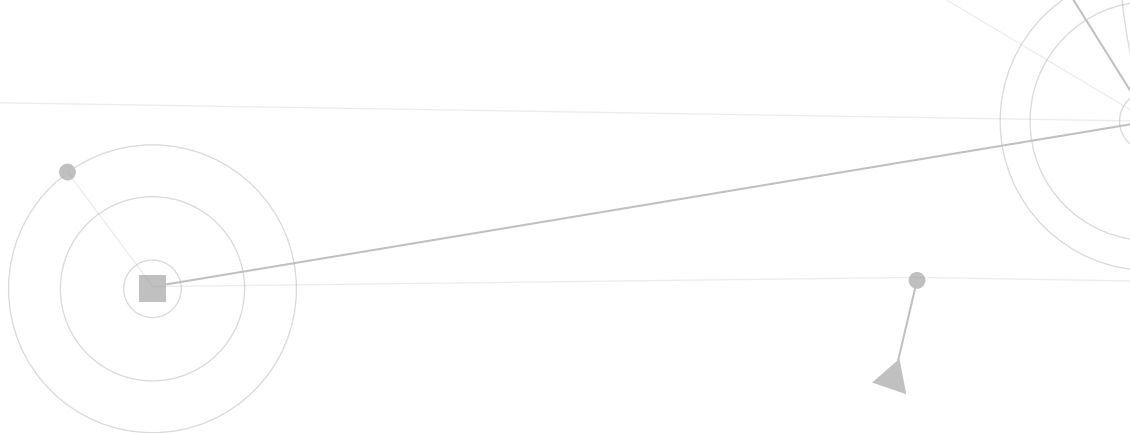
As far as economic transfers between members of the CDEC-SING are concerned, in 2012 we instituted several improvements for better



flexibility, continuity and accuracy in the payment process of companies that participate in SING transfers. This was highlighted in the Report on Transfer Valuations (IVT), which is issued every month, and presented high standards in the processes that determine the Energy Balance, Firm Power Balance, and the Core Toll and Substation Reports.

A new study was undertaken to review and analyze the consistency of the installations in the Transmission System, in accordance with what the law stipulates. The analysis indicated that the transmission system installations are up to par, in particular the core system is prepared to fully supply the future demands of the SING, under normal operating conditions and under contingency conditions, and furthermore follows the standards established by the Technical Standard for Quality and Service Assurance.





Administration and Budgeting Management Division (DAP)

The DAP is charged with creating and managing the organization's financing and yearly budget. It also defines and manages all programs and policies related to human resources, administration, purchasing and contracts, and oversees management of the CDEC-SING.

It is comprised of two units: human resources and accounting and budgeting, and is responsible for the institution's administrative staff.

2013 ACCOMPLISHMENTS

In 2013 the DAP was focused on strengthening its strategic plan, establishing a policy

for people management and training, and maintaining high quality and efficiency in its financing and accounting areas.

During 2013 the organization redefined its planning process based on the Balanced Scorecard methodology, which helped it establish a continual review of operational and strategic objectives that will be regularly monitored and allow for greater accountability. The yearly evaluation of the CDEC-SING Strategic Map reached 90% of its global goals, which enabled the organization to implement new and better practices and management systems, which in turn provide more efficient results.

In 2013 the area for People Management reached its goal of creating policies and procedures geared towards professional development and supporting the growth of the organization. In this regard we should mention the strategic support program, implemented during the year, to support the development of the organization's human capital, promoting a culture of teamwork and a work environment founded on our institutional values.

In March 2013 we implemented a new Training Policy whose aim was to address the gaps in knowledge and competencies, which had been previously identified. This policy includes a scholarship program for all professionals, aimed towards acquiring technical knowledge and improving leadership and relationship competencies.

In the areas of administration and finance and accounting, the purchase of tools-such as the ERP Laudus system-have meant a great leap forward in quality and reliability, by providing us with control alerts and greater autonomy in IT management, and thus strengthening budget implementation, as well as investment control and the administration of cash flow and liquid assets.





System Integrity Unit 2013 Accomplishments

In 2013 a new team was created to strategically support the safeguarding of the system's integrity and its expansion under secure conditions.

Among its duties, it has been responsible for implementing the first stage of the WAM Pilot Project, performing technical audits of the

companies that are part of the system, as well as creating Technical Guides, whose aim is to promote the use of efficient design criteria to improve existing and projected installations.

In 2013 two technical guides were created: "Coordination criteria and protection switch adjustment for installations over 200 kV" and

"Configuration and Definition of Parameters for Oscillographic Recording of failures in COMTRADE format".

Regulatory and Technical Management Area (AGTR) 2013 Accomplishments

In 2013 this area was primarily focused on working towards certification of its "Project Coordination" process under ISO 9001:2008, which was a milestone for the organization.

Within this framework we would like to highlight the optimization of technical information requested from the new projects through the Technical Information Forms, the improvement and upgrade of the Minimum Requirement Forms (FEM), and the establishment of the process for early detection of design deviation in projects: "early intervention".

Furthermore, the AGTR was focused on managing the proceedings of the Technical Management Divisions, on monitoring and controlling compliance with the Technical Standard for Safety and Service Quality-which

this year incorporated a Control System-and in its regular duties related to the process of connecting new projects to the system.

As of 2013, we have a portfolio of 89 projects. Of these, 53 are inactive, while the other 36 have shown some progress, along the lines of

what is detailed in the Operations Management Division's Procedure for "Interconnectivity, Modification, and Removal of Installations from the SING".

Thus, 9 projects began commercial operations or exploitation in the SING in 2013.

SING INTERCONNECTED PROJECTS FOR 2013

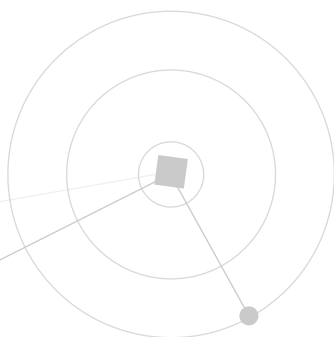
Project	Company	Type	Date
Central Diesel Aguas Blancas	Ingenova S.A.	Gx	Junio 2013
Mina Ministro Hales S/E MMH	Codelco Chile	Tx-Cx	Agosto 2013
Ampliación Central Estandartes	Enorchile S.A.	Gx	Octubre 2013
Ampliación S/E Tap Off La Cruz	Norgener	Tx	Noviembre 2013
EBPEIII S/E Booster	Minera Escondida	Tx-Cx	Diciembre 2013
Banco Condensadores S/E Lagunas 40 MVar	Minera Collahuasi	Tx	Diciembre 2013

Gx: GENERATION- Tx: TRANSMISSION- Cx: CONSUMPTION



OUR PROJECTS

We do our utmost to have cutting-edge technology platforms that enable us to fully operate the system with quality and safety.





WAM

(Wide Area Measurement)

In 2013 we launched the first stage of the WAM Pilot Project, which is headed up by the System Integrity Unit and is responsible for undertaking the analyses and technical studies necessary to guarantee the SING's integrity and its secure expansion.

Its objective is to monitor the SING's performance and dynamic response. Evaluate its performance regarding primary and secondary frequencies; its tools for monitoring power transferences; and the platform's flexibility in incorporating new applications in accordance with the needs of a secure and efficient operation.

The Wide Area Measurement (WAM) technology has provided the CDEC-SING the means necessary to optimize the system's diagnostic process at a resolution level of 50 samples per second, allowing for better reaction times to unforeseen circumstances in the operation, for detection of stress zones and for blueprints for system protections via adaptive adjustments that enable preventive and predictive measures.

As of 2013 the WAM pilot project has three operating stations in the substations of Angamos, Crucero, and Lagunas.

SCM

(Centralized Measurement System)

The SCM Project is headed by the Tolls Management Division along with the IT and Communications Unit (UTIC).

Its objective is to receive high quality and reliable information on energy measurements in a timely manner, so that it can ensure that the processes associated with the system's economic transfers are more efficient.

The project's goal is for the Tolls Management Division of the CDEC-SING to read the meters remotely and directly, thus ensuring the quality of these, facilitating the process, and providing transparency to the electric market.

In 2013 various stages of the project were completed in relation to connectivity, proposals for connectivity solutions and estimated valuations of associated costs, and the implementation of software and hardware for the integration of 200 existing meters. In 2014 the project's trial period will be completed and move into the exploitation phase.

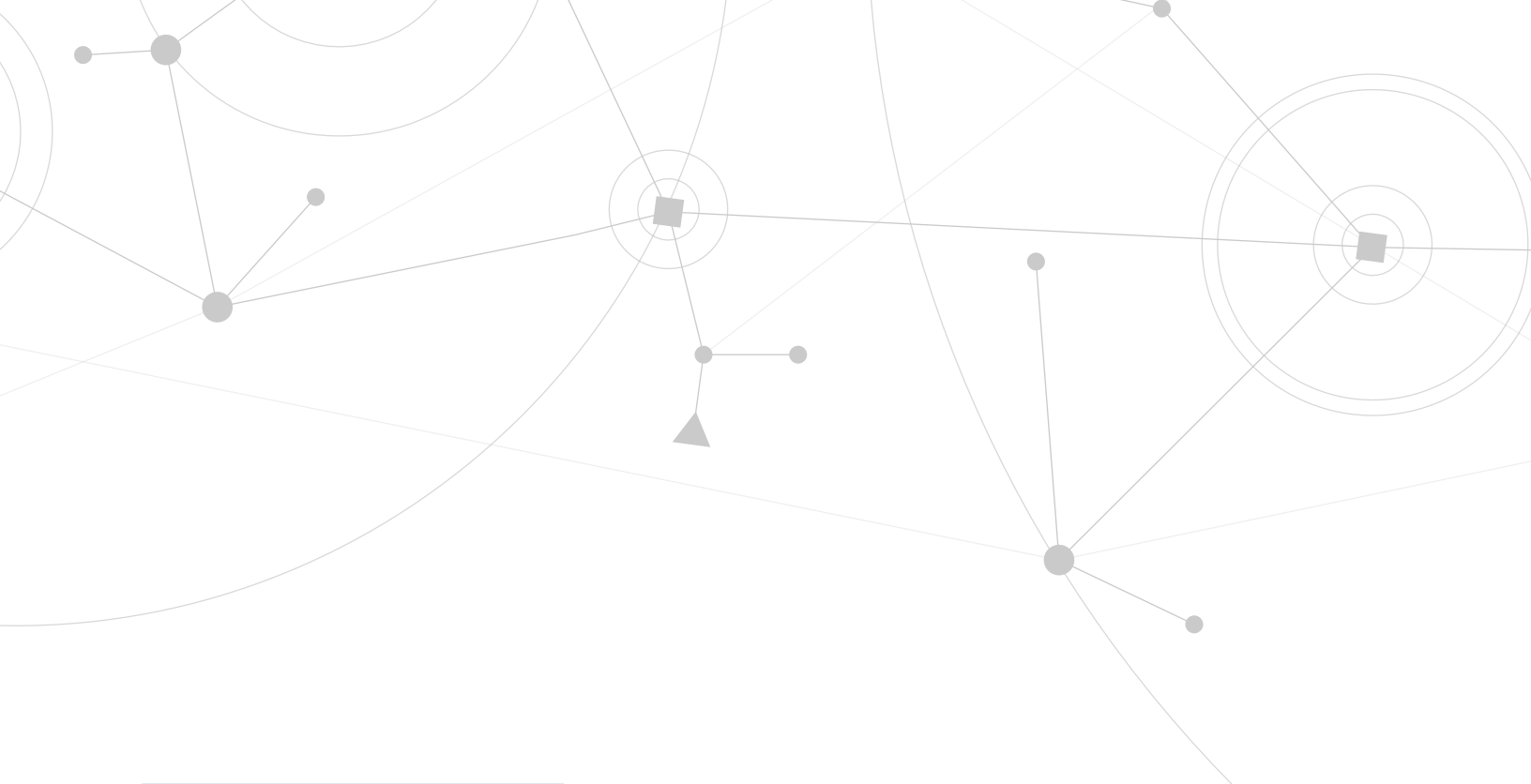
AGC

(Automated Power Generation Control)

In regards to operational safety, performance, and efficiency, one of the CDEC-SING strategic projects was the implementation of an Automated Power Generation Control (AGC) whose primary goal is to perform an effective secondary frequency control of the SING. In 2013 we implemented the platform design and implementation stage that will provide equipment and flexibility support to the AGC and to the generating units that participate in the control, in accordance with the Technical Standard for Service Safety and Quality.

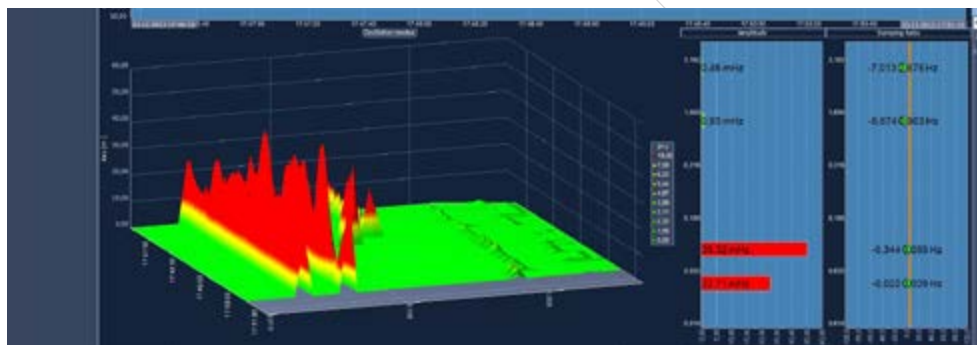
The AGC is a key tool to improve the efficiency of the secondary frequency control for current and future system conditions, within which we foresee the integration of Renewable Energies and interconnections.

In 2014 we will determine the requirements for the tender process and we plan to start a trial run in 2015.



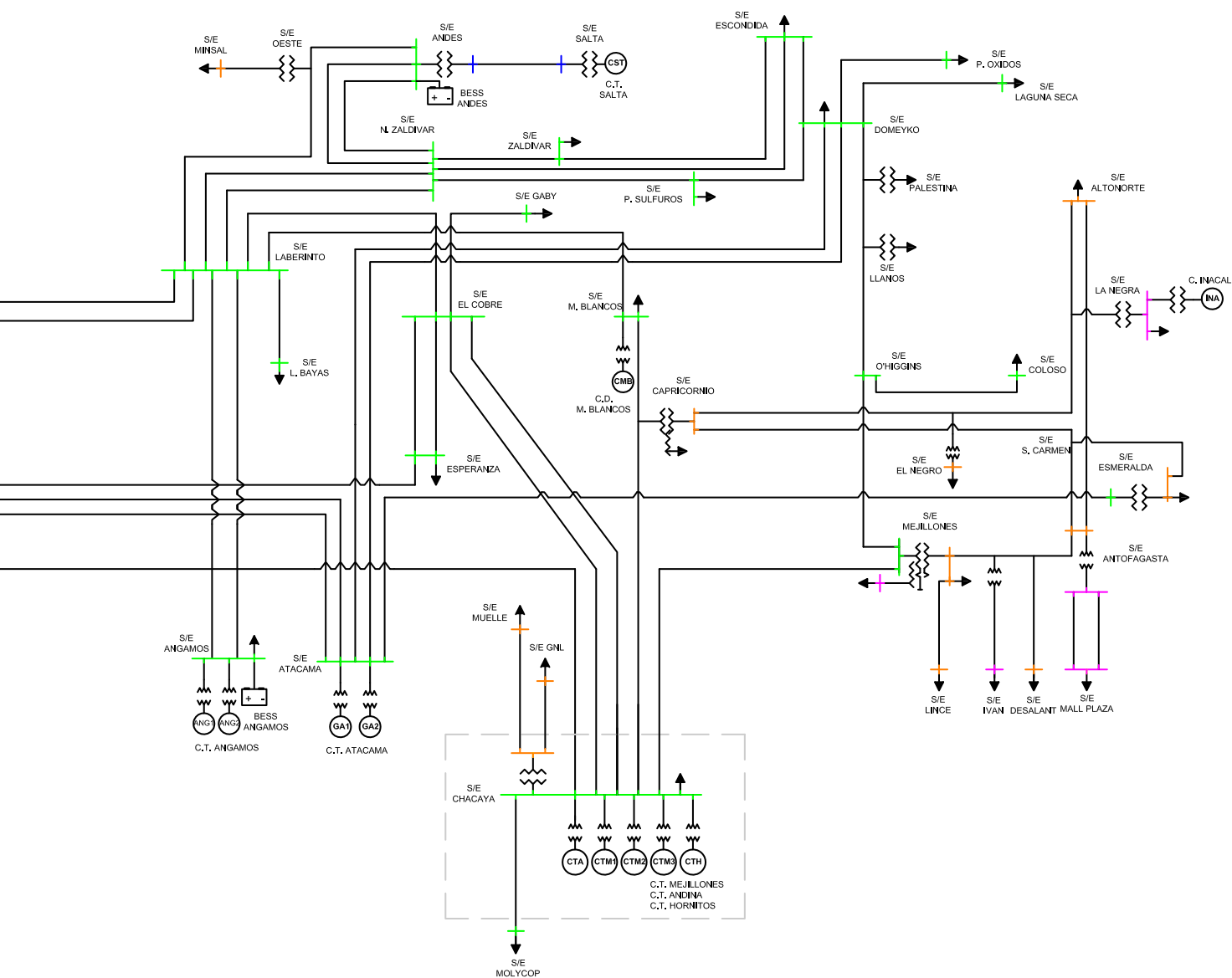
Following in the footsteps of operators in other countries in the region, the CDEC-SING is at the forefront in the implementation of WAM networks in Chile, which enables real-time monitoring of the SING's performance and dynamic response.

SCM:
Greater Transparency Greater
Reliability and Better performance
of the Electric Market.



AGC:AGC
Safety. Performance.
Operational Efficiency.







SING CLIENTS AND INSTALLATIONS



GENERATING UNITS AS OF DECEMBER 2013

Owner	Station Name	Unit	N° Components	Gross Total Power [MW]	Injection Bar	Type of Unit	System's Start-up year
Celta	Termoeléctrica Tarapacá	TGTAR (1)	1	23,8	Tarapacá 220 kV	Turbogas Diesel	1999
		CTTAR	1	158,0	Tarapacá 220 kV	Steam- Coal	1999
		CHAP	2	10,2	Arica 66 kV	Hydroelectric	1967
E-CL	Diesel Arica	M1AR	3	3,0	Arica 66 kV	Diesel engine	1953
		M2AR	2	2,9	Arica 66 kV	Diesel engine	1964
		GMAR	4	8,4	Arica 66 kV	Diesel engine	1973
		SUIQ	3	4,2	Iquique 66 kV	Diesel engine	1957
	Diesel Iquique	MIIQ	2	2,9	Iquique 66 kV	Diesel engine	1963
		MAIQ	1	5,9	Iquique 66 kV	Engine FO 6	1972
		TGIQ	1	23,8	Iquique 66 kV	Turbogas Diesel	1978
		MSIQ	1	6,2	Iquique 66 kV	Engine FO 6	1985
	Termoeléctrica Mejillones	CTM1	1	165,9	Chacaya 220 kV	Steam- Coal	1995
		CTM2	1	175,0	Chacaya 220 kV	Steam- Coal	1998
		CTM3	2	250,8	Chacaya 220 kV	Natural Gas Combined Cycle	2000
	Diesel Enaex (4)	DEUTZ	3	2,0	Enaex 110 kV	Diesel engine	1996
		CUMMINS	1	0,7	Enaex 110 kV	Diesel engine	1996
	Termoeléctrica Tocopilla (6)	U10	1	37,5	Central Tocopilla 110 kV	Steam-FO6	1960
		U11	1	37,5	Central Tocopilla 110 kV	Steam-FO6	1960
		U12	1	85,3	Central Tocopilla 110 kV	Steam- Coal	1983
		U13	1	85,5	Central Tocopilla 110 kV	Steam- Coal	1985
		U14	1	136,4	Central Tocopilla 220 kV	Steam- Coal	1987
		U15	1	132,4	Central Tocopilla 220 kV	Steam- Coal	1987
		U16	2	400,0	Central Tocopilla 220 kV	Natural Gas Combined Cycle	2001
		TG1	1	24,7	Central Tocopilla 110 kV	Turbogas Diesel	1975
		TG2	1	24,9	Central Tocopilla 110 kV	Turbogas Diesel	1975
		TG3 (3)	1	37,5	Central Tocopilla 220 kV	Turbogas Gas Natural - Diesel	1993
		Diesel Tamaya (6)	SUTA	103,7	Central Tamaya 110 kV	Motor FO 6	2009
AES Gener	Salta	CC SALTA (5)	3	642,8	Central Salta 345 kV	Natural Gas Combined Cycle	1999
Gasatacama Chile	Atacama	CC1	3	395,9	Central Atacama 220 kV	Natural Gas Combined Cycle	1999
		CC2	3	384,7	Central Atacama 220 kV	Natural Gas Combined Cycle	1999
Norgener	Termoeléctrica Norgener	NT01	1	136,3	Norgener 220 kV	Steam- Coal	1995
		NT02	1	141,0	Norgener 220 kV	Steam- Coal	1997
Enorchile	Zofri	ZOFRI_1-6	2	0,9	Iquique 13,8 kV	Diesel engine	2007
		ZOFRI_2-5	4	5,2	Iquique 13,8 kV	Diesel engine	2007
	Diesel Estandartes	ZOFRI 7-12	6	4,8	Iquique 13,8 kV	Diesel engine	2009
		ZOFRI 13	1	1,6	Iquique 13,8 kV	Diesel engine	2013
	Diesel Mantos Blancos (2)	MIMB	10	28,6	Mantos Blancos 23 kV	Motor FO 6	1995
Equipos de Generación	Diesel Inacal	INACAL	4	6,8	La Negra 23 kV	Motor FO 6	2009
Termoeléctrica Andina	Termoeléctrica Andina	CTA	1	168,8	Chacaya 220 kV	Steam- Coal	2011
Inversiones Hornitos	Termoeléctrica Hornitos	CTH	1	170,1	Chacaya 220 kV	Steam- Coal	2011
Eléctrica Angamos	Termoeléctrica Angamos	ANG1	1	272,4	Angamos 220 kV	Steam- Coal	2011
		ANG2	1	272,6	Angamos 220 kV	Steam- Coal	2011
Noracid (7)	Planta de Ácido Sulfúrico Mejillones	PAM	1	17,5	Mejillones 110 kV	Cogeneration	2012
Ingenova	Diesel Aguas Blancas	AGB	1	2,0	Aguas Blancas 13,2 kV	Diesel engine	2013

TOTAL TO DECEMBER 31 ST OF 2013

4601,0

Owner	Station Name	Unit	N° Components	Gross Total Power [MW]	Primary SE Bar for Associated Distribution	Type of Unit	System's Start-up year
Cavancha	Cavancha	CAVA	1	2,8	Cerro Dragón 13,8 kV	Hydroelectric	2010
Enernuevas	Minihidro Alto Hospicio	MHAH	1	1,1	Alto Hospicio 13,8 kV	Hydroelectric	2010
Enernuevas	Minihidro El Toro N° 2	MHT2	1	1,1	Alto Hospicio 13,8 kV	Hydroelectric	2010
SPS La Huayca	La Huayca	HUAYCA1	1	1,4	Tamarugal 23 kV	Solar	2012

TOTAL PMGD TO DECEMBER 31 ST 2013

6,4

TOTAL SING TO DECEMBER 31 ST 2013

4.607,364

- Notes: (1) During the term January – November 1999 the TGTAR Unit belonged to Endesa. As from May 12, 1999 it was transferred to the SIC and returned to the SING on November 29, 1999 owned by Celta.
- (2) Mantos Blancos diesel station is represented at the CDEC-SING by E-CL.
- (3) The TG3 Unit is available for operation with natural gas as from September, 2000.
- (4) Enaex diesel station is represented at the CDEC-SING by Gasatacama until May, 2007. As from June, 2007 it is represented by E-CL
- (5) The TG11 and TG12 Units (Natural Gas) and TV10 (Steam) of CC Salta unit, at the requirement of the Organization in Charge of Dispatch (OED) of the Republic of Argentina, may connect to the Argentinian Interconnection System (SADI), contributing with a maximum power of 643 [MW].
- (6) Electroandina's generation units started to be a part of E-CL as from December 1, 2011.
- (7) Co-generation station, its power corresponds to the maximum surplus to be injected to the system.

SING TRANSMISSION LINES

Owner	Transmission line	Voltage (kV)	N° Circuits	Approximate length (km)	Capacity ⁽⁷⁾ (MVA)	System type	Start-up year
AES GENER	Andes - Tap Off Oeste	220	1	38	277	Additional	1998
	Andes - Nueva Zaldívar	220	2	63,3x2	363,9x2	Additional	1999
	Laberinto - Mantos Blancos	220	1	70	272,07	Additional	1999
	Nueva Zaldívar - Zaldívar	220	1	0,2	308,65	Additional	1994
	Central Salta - Andes	345	1	408	777	Additional	1999
ANGAMOS	Angamos - Laberinto	220	2	142x2	700x2	Additional	2010
CODELCO NORTE	Chuquicamata - 10	100	1	6,5	111,06	Additional	1988
	Chuquicamata - 10A	100	1	7,5	111,06	Additional	1988
	Chuquicamata - A	100	2	0,8x2	198,15x2	Additional	1988
	Chuquicamata - Chamy	100	1	12	111,06	Additional	1990
	Chuquicamata - K1	100	1	5,9	111,06	Additional	1988
	Chuquicamata - KM6	100	1	11	111,06	Additional	1988
	K1 - 10	100	1	1,3	111,06	Additional	1985
	KM6 - 10A	100	1	5,5	111,06	Additional	1988
	KM6 - Sopladores	100	1	2,0	447,5	Additional	1993
	Salar - km6	100	2	2,2x2	111,06x2	Additional	2005
	Encuentro - MMH	220	1	74	273,98	Additional	2013
	10A - 10	100	1	0	198,15	Additional	N/I
	Central Chapiquiña - Arica	66	1	84	48,01	Additional	1967
E-CL	Central Diesel Arica - Arica (5)	66	1	6,8	41,15	Sub-transmission / Additional	1964
	Central Diesel Iquique - Iquique	66	1	1,6	48,01	Additional	1970
	Iquique - Pozo Almonte.Circuito N°1	66	1	44	41,15	Additional	1964
	Iquique - Pozo Almonte.Circuito N°2	66	1	40	56,01	Additional	1987
	Pozo Almonte - Tamarugal	66	1	21	41,15	Sub-transmission	1968
	Tap Off Llanos - Aguas Blancas	66	1	28,2	N/I	Additional	N/I
	Arica - Pozo Almonte	110	1	216	68,59	Sub-transmission	1987
	Capricornio - Alto Norte	110	1	44	137,18	Additional	2000
	Capricornio - Antofagasta	110	1	28	137,18	Additional	2000
	Capricornio - Sierra Miranda	110	1	25	121,94	Additional	2007
	Chacaya - GNL Mejillones	110	1	11	122	Additional	2010
	Mejillones - Enaex	110	1	1,4	182,9	Additional	N/I
	Mejillones - Antofagasta	110	1	63	121,94	Additional	1987
	Central Diesel Tamaya - A	110	1	127	144,8	Additional	2009
	Central Diesel Tamaya - Salar	110	1	138	144,8	Additional	2009
	Central Tocopilla - A. Circuito N°1	110	1	143	79,35	Additional	1910
	Central Tocopilla - A. Circuito N°2	110	1	141	93,36	Additional	1910
	Central Tocopilla - Central Diesel Tamaya N°3	110	1	14	93,36	Additional	2009
	Central Tocopilla - Central Diesel Tamaya N°4	110	1	14	79,35	Additional	2009
	Chacaya - El Cobre	220	2	144x2	350,5x2	Additional	2011
	Laberinto - El Cobre	220	1	2,7	360,86	Additional	2012
	Chacaya - Crucero	220	1	153	327,7	Additional	1987
	Chacaya - Mantos Blancos	220	1	66	377,24	Additional	1996
	Chacaya - Mejillones	220	1	1,4	377,24	Additional	1987
	Lagunas - Pozo Almonte	220	1	70	327,7	Additional	1987
	El Cobre - Gaby	220	1	57	327,7	Additional	2010
	Central Tocopilla - Crucero	220	2	71,4x2	419x2	Additional	1986
	Crucero - Chuquicamata	220	1	70	442,02	Additional	1986
	Crucero - El Abra	220	1	101	457,26	Additional	1995
	Crucero - Radomiro Tomic	220	1	82	457,26	Additional	1996
	Crucero - Salar (1)	220	1	75	442,0	Additional	2005
	Salar - Chuquicamata (2)	220	1	13	442,0	Additional	2005
	Tap Off El Loa - El Loa	220	1	8,4	327,7	Additional	2000
	Tap Off Desalant - Desalant	110	1	1,9	33,91	Additional	2003
	KM6 - ACL	100	1	6,1	N/I	Additional	N/I
EMELARI	Parinacota - Quiani (4)	66	1	7,1	25,33	Sub-transmission	2002
GRACE	Tap Off Quiani - Quiani	66	1	0,5	39,18	Sub-transmission	2002
HALDEMAN	Tap Off Barriales - Mantos de la Luna	110	1	27	70,69	Additional	2006
MINERA CERRO COLORADO	Pozo Almonte - Sagasca	66	1	55	12	Additional	1971
MINERA COLLAHUASI	Pozo Almonte - Cerro Colorado	110	1	61	164,04	Additional	1993
	Encuentro - Collahuasi. Circuito N°1	220	1	201	170,71	Additional	2004
	Encuentro - Collahuasi. Circuito N°2	220	1	201	170,71	Additional	2012
MINERA EL TESORO	Lagunas - Collahuasi	220	2	118x2	109x2	Additional	1998
	Encuentro - El Tesoro	220	1	90	327,7	Additional	2000
	Atacama - Domeyko	220	2	205x2	245,8x2	Additional	1999
MINERA ESCONDIDA	Crucero - Laberinto. Circuito N°1	220	1	133	293	Additional	2010
	Domeyko - Escondida	220	1	7,0	245,8	Additional	1999
	Domeyko - Laguna Seca	220	1	13	245,8	Additional	2001
	Domeyko - Planta Óxidos	220	1	1,0	245,8	Additional	1998
	Domeyko - Sulfuros	220	1	1,0	293	Additional	2005
	Laberinto - Nueva Zaldívar. Circuito N°1	220	1	95	293	Additional	2010
	Mejillones - O'Higgins	220	1	74	260,64	Additional	2006
	Nueva Zaldívar - Escondida	220	1	14	293	Additional	2010
	Nueva Zaldívar - Sulfuros	220	1	13	293	Additional	2006

Owner	Transmission line	Voltage (kV)	N° Circuits	Approximate length (km)	Capacity (MVA) ⁽⁷⁾	System type	Start-up year
MINERA ESCONDIDA	O'Higgins - Coloso	220	1	32	245,78	Additional	1993
	O'Higgins - Domeyko	220	1	128	245,78	Additional	1993
	Zaldivar - Escondida (3)	220	1	14	293	Additional	1996
	Escondida - Monturaqui	69	1	80	54,98	Additional	2008
	Laguna Seca - Tap Off 418	69	1	13	19,12	Additional	2002
	Escondida - 940	69	1	30	50,55	Additional	2002
	Escondida - Escondida Norte	69	1	13	94,41	Additional	2004
	Escondida - Neurara	69	1	65	54,98	Additional	2008
	Laguna Seca - 640	69	1	12	70,51	Additional	2002
	Lixiviación - Booster	69	2	2,5x2	64,54x2	Additional	2013
	Lixiviación - Sulfuros	69	2	14x2	77,08x2	Additional	2006
	Neurara - Monturaqui	69	1	15	54,98	Additional	2008
MINERA ESPERANZA	Chacaya - Muelle	110	1	55	97,55	Additional	2010
	Muelle - Guayaques	110	1	50	93,36	Additional	2010
	El Cobre - Esperanza	220	2	81,3x2	179x2	Additional	2010
	El Tesoro - Esperanza	220	1	13	293,41	Additional	2010
MINERA LOMAS BAYAS	Lomas Bayas - Fortuna	220	1	6,3	187,93	Additional	2012
MINERA MERIDIAN	Tap Off Palestina - El Peñón	66	1	66	36,01	Additional	1999
MINERA MICHILLA	Mejillones - El Lince	110	1	74	28,58	Additional	1991
MINERA QUEBRADA BLANCA	Collahuasi - Quebrada Blanca	220	1	18	197,38	Additional	2002
MINERA RAYROCK	Tap Off Pampa - Iván Zar	69	1	17	8,01	Additional	1994
MINERA SPENCE	Encuentro - Spence	220	1	67	318,18	Additional	2005
MINERA ZALDIVAR	Crucero - Laberinto. Circuito N°2	220	1	133	377,24	Additional	1994
	Laberinto - Nueva Zaldivar. Circuito N°2	220	1	73	377,24	Additional	1994
MOLY-COP	Chacaya - Molycop	220	1	0,8	327,7	Additional	2004
NORGENER	Tap Off Oeste - Minsal	110	1	33	41,15	Additional	1997
	Laberinto - Lomas Bayas	220	1	10	272,07	Additional	1997
	Tap Off Oeste - Laberinto	220	1	85	272,07	Additional	1998
	Norgener - Crucero	220	2	72x2	426,78x2	Additional	1997
SIERRA GORDA SCM	Tap Off Pampa Lina - Sierra Gorda	220	1	14	115,08	Additional	2012
TRANSELEC NORTE	Atacama - Encuentro	220	2	153x2	386x2	Troncal	1999
	Atacama - Esmeralda	220	1	69	197,4	Sub-transmission	2001
	Crucero - Encuentro	220	2	1x2	384,86x2	Troncal	1999
	Crucero - Lagunas 1 (6)	220	1	174	182,9	Troncal	1987
	Crucero - Lagunas 2	220	1	173	182,9	Troncal	1998
	Cóndores - Parinacota	220	1	222	197,38	Sub-transmission	2001
	Tarapacá - Cóndores	220	1	70	197,38	Sub-transmission	2002
	Tarapacá - Lagunas	220	2	56x2	254x2	Troncal	1996
TRANSEMEL	Cóndores - Cerro Dragón	110	1	4,9	104,41	Sub-transmission	2001
	Cóndores - Pacífico	110	1	11	104,4	Sub-transmission	2001
	Cóndores - Palafitos	110	1	8,6	104,41	Sub-transmission	2001
	Esmeralda - Centro	110	1	0,6	104,41	Sub-transmission	2001
	Esmeralda - La Portada	110	1	17	104,41	Sub-transmission	2001
	Esmeralda - Sur	110	1	6,7	104,41	Sub-transmission	2001
	Esmeralda - Uribe	110	1	16	104,41	Additional	2001
	Salar - Calama	100	1	17	150,17	Sub-transmission	2011
	Tap Off Alto Hospicio - Alto Hospicio	110	1	0,1	104,41	Sub-transmission	2001
	Parinacota - Chinchorro	66	1	3,5	62,64	Sub-transmission	2002
	Parinacota - Pukará	66	1	2,4	61,84	Sub-transmission	2003
XSTRATA COPPER - ALTONORTE	Antofagasta - Tap Off La Negra	110	1	19	121,94	Additional	1993
	Tap Off La Negra - Alto Norte	110	1	4,8	121,94	Additional	1993
SQM	Tap Off Nueva Victoria - Llamara	66	1	22,9	42,41	Additional	2006
	Tap Off Nueva Victoria - Sur Viejo	66	1	16,4	42,41	Additional	2006
Total Lines 66 kV				398	597		
Total Lines 69 kV				278	691		
Total Lines 100 kV				80	2.192		
Total Lines 110 kV				1.357	3.135		
Total Lines 220 kV				5.238	21.049		
Total Lines 345 kV				408	777		
TOTAL SING TO DECEMBER 31 ST 2013 (8)				7.759	28.441		

Notes:

- (1) The line is of shared ownership, according to the following detail: Crucero-Torre 340 section owned by E-CL, Torre 340-Salar section owner by Codelco Norte.
- (2) The line is of shared ownership, according to the following detail: Salar-Torre 340 section owned by Codelco Norte, Torre 340-Chuquicamata section owned by E-CL.
- (3) The line is of shared ownership between Minera Escondida and Minera Zaldivar.
- (4) The line is of shared ownership between EMELARI and TRANSEMEL
- (5) Arica - Tap Arica section is for Sub-transmission; Tap Arica - Arica Diesel Section is additional
- (6) Line owned by Transelec S.A., formed by two sections: Crucero - Nueva Victoria and Nueva Victoria - Lagunas
- (7) Capacities of lines reported correspond to the thermal capacity of conductor. (8) SING's total lengths as per circuit.

SING MAIN CLIENTS AS OF DECEMBER 2013

Client	Category	Connected Power [MVA]	Maximum Demand [MW]	Annual Consumption [GWh]	Supplier	Supply Bar	Type
ACF Minera	Mining	2,61	2,80	18,7	CELTA	Lagunas 220 kV	Free
Algorta Norte	Mining	5,00	5,54	22,6	E-CL; NORACID	Chacaya 110 kV	Free
Alto Norte	Industrial	104,00	43,57	333,6	E-CL	Alto Norte 110 kV	Free
Atacama Agua y Tecnología	Industrial	14,00	10,20	77,8	E-CL	Desalant 110 kV	Free
Atacama Minerals	Mining	40,00	5,17	26,2	E-CL; ON_GROUP	Zaldivar 220 kV; Atacama 220 kV; Mejillones 220 kV; Aguas Blancas 13 kV	Free
Camiña	Distribution	-	0,18	0,6	E-CL	Dolores 110 kV	Regulated
Cerro Colorado	Mining	90,00	39,92	246,5	E-CL	Pozo Almonte 220 kV	Free
Cerro Dominador	Mining	13,52	7,35	35,3	E-CL	Encuentro 220 kV; Calama 110 kV	Free
Cientes Chapiquiña	-	0,37	0,42	1,7	E-CL	Chapiquiña 66 kV	Free
Cientes Menores	-	0,04	0,07	0,6	E-CL	Arica 110 kV	Free
Codelco - Chuquicamata	Mining	1.292,00	277,52	2.059,9	ANDINA; E-CL	Chuquicamata 220 kV	Free
Codelco - Ministro Hales	Mining	99,60	45,28	75,3	NORGENER	Crucero 220 kV; Salar 110 kV; Encuentro 220 kV	Free
Codelco - Radomiro Tomic	Mining	300,00	108,98	745,0	E-CL	Crucero 220 kV	Free
Collahuasi	Mining	912,50	185,89	1.281,2	CELTA; ENORCHILE; GASATACAMA	Collahuasi 220 kV	Free
Cosayach	Mining	37,80	5,26	36,3	E-CL	Dolores 110 kV; Pozo Almonte 23 kV; Tamarugal 66 kV	Free
El Abra	Mining	150,00	97,07	794,9	E-CL	Crucero 220 kV	Free
El Tesoro	Mining	104,00	72,60	289,9	E-CL; HORNITOS; NORACID	Encuentro 220 kV; El Cobre 220 kV	Free
Eledda	Distribution	-	171,34	926,8	E-CL	Antofagasta 110 kV; Atacama 220 kV; Mantos Blancos 220 kV; Calama 110 kV; La Negra 110 kV; Mejillones 110 kV; Encuentro 220 kV; El Cobre 220 kV; Uribe 110 kV; Tocopilla 5 kV	Regulated
Eliqsa	Distribution	-	87,36	498,4	E-CL	Alto Hospicio 110 kV; Cerro Dragón 110 kV; CD Iquique 13,8 kV; Alto Hospicio 110 kV; Iquique 13,8 kV; Tamarugal 66 kV; Pozo Almonte 23 kV; Lagunas 220 kV; Tarapacá 220 kV; Dolores 110 kV	Regulated
Emelari	Distribution	-	55,59	299,7	E-CL	Arica 13,8 kV; CD Arica 13,8 kV; Arica 110 kV; Tap Off Quiani 66 kV	Regulated
Enaex	Industrial	12,00	6,63	41,1	E-CL	Mejillones 110 kV	Free
GNL Mejillones	Industrial	12,50	4,54	22,1	E-CL	Chacaya 110 kV	Free
Grace	Mining	25,00	12,24	70,1	AES GENER	Barriles 220 kV	Free
Haldeman	Mining	17,25	8,08	54,6	E-CL	Pozo Almonte 66 kV	Free
Inacesa	Industrial	18,95	8,96	53,9	ENORCHILE	La Negra 23 kV	Free
Lomas Bayas	Mining	38,00	41,00	298,5	E-CL	Laberinto 220 kV	Free
Mall Antofagasta	Industrial	5,66	5,54	25,5	E-CL	Antofagasta 110 kV	Free
Mamiña	Mining	-	0,19	0,7	E-CL	Pozo Almonte 220 kV	Free
Mantos Blancos	Mining	100,00	39,67	219,7	E-CL; ENORCHILE	Mantos Blancos 23 kV	Free
Megapuerto	Industrial	0,78	2,03	4,7	E-CL	Mejillones 23 kV	Free
Michilla	Mining	31,20	20,11	142,7	E-CL	Mejillones 110 kV	Free
Minera Escondida	Mining	2.267,00	760,16	3.396,5	ANGAMOS; NORGENER	Atacama 220 kV; Mejillones 220 kV; Zaldivar 220 kV	Free
Minera Esperanza	Mining	130,00	120,27	881,9	HORNITOS	Encuentro 220 kV; El Cobre 220 kV	Free
Minera Gaby	Mining	100,00	74,60	416,5	ANDINA	El Cobre 220 kV	Free
Minera Meridian	Mining	20,00	16,82	117,4	GASATACAMA	Atacama 220 kV; Mejillones 220 kV; Zaldivar 220 kV	Free
Minera Sierra Gorda	Mining	134,00	8,96	41,7	E-CL; NORGENER	Encuentro 220 kV	Free
Minera Zaldivar	Mining	134,00	71,25	542,5	E-CL	Zaldivar 220 kV	Free
Molycop	Industrial	30,00	16,29	69,3	E-CL	Chacaya 220 kV	Free
Molynor	Industrial	1,50	1,81	11,6	E-CL	Mejillones 23 kV	Free
Noracid (*)	Industrial	-	6,66	4,0	NORACID	Mejillones 110 kV	Free
Otros Clientes	Varios	-	3,36	20,3	CELTA	Tarapacá 220 kV	Free
Polpaico	Industrial	3,83	2,39	13,4	E-CL	Mejillones 23 kV	Free
Puerto Mejillones	Industrial	4,00	1,04	4,3	E-CL	Mejillones 110 kV	Free
Punta de Lobos	Industrial	3,00	1,92	0,9	E-CL	Tarapacá 220 kV	Free
Quebrada Blanca	Mining	150,00	16,12	86,2	AES GENER; GASATACAMA; NORGENER	Collahuasi 220 kV	Free
Quiborax	Mining	1,70	2,74	17,8	E-CL	El Águila 66 kV	Free
Sabo	Industrial	7,00	1,23	16,3	GASATACAMA	Antofagasta 110 kV; Centro 110 kV	Free
Spence	Mining	180,00	75,60	468,0	ANGAMOS	Encuentro 220 kV	Free
SQM	Mining	119,49	80,03	537,3	E-CL; NORGENER	El Loa 220 kV; El Negro 110 kV; Lagunas 220 kV	Free

(*) Autoproducción





OPERATION STATISTICS



I. SING: Generation Installed Capacity

INSTALLED CAPACITY AS PER COMPANY TERM 2004-2013

IN PHYSICAL UNITS (MW)

Company \ Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Celta	182	182	182	182	182	182	182	182	182	182
E-CL	719	719	719	722	705	693	691	1.796	1.796	1.767
Electroandina	992	992	992	992	1.000	1.105	1.105			
Endesa										
AES Gener	643	643	643	643	643	643	643	643	643	643
Gasatacama	783	783	783	781	781	781	781	781	781	781
Norgener	277	277	277	283	283	277	277	277	277	277
Enorchile						11	11	11	11	41
Equipos de Generación (3)						7	7	7	7	7
Cavancha (1)							3	3	3	3
Enernuevas (2)							2	2	2	2
Termoeléctrica Andina								169	169	169
Inversiones Hornitos								170	170	170
Eléctrica Angamos								545	545	545
Noracid									18	18
SPS La Huayca									1	1
On Group										2
TOTAL	3.596	3.596	3.596	3.602	3.593	3.699	3.701	4.585	4.604	4.607

IN PERCENTAGES (%)

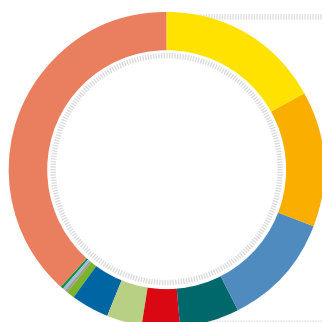
Company \ Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Celta	5,1%	5,1%	5,1%	5,0%	5,1%	4,9%	4,9%	4,0%	3,9%	3,9%
E-CL	20,0%	20,0%	20,0%	20,0%	19,6%	18,7%	18,7%	39,2%	39,0%	38,4%
Electroandina	27,6%	27,6%	27,6%	27,5%	27,8%	29,9%	29,9%			
Endesa										
AES Gener	17,9%	17,9%	17,9%	17,8%	17,9%	17,4%	17,4%	14,0%	14,0%	14,0%
Gasatacama	21,8%	21,8%	21,8%	21,7%	21,7%	21,1%	21,1%	17,0%	17,0%	16,9%
Norgener	7,7%	7,7%	7,7%	7,9%	7,9%	7,5%	7,5%	6,0%	6,0%	6,0%
Enorchile						0,3%	0,3%	0,2%	0,2%	0,9%
Equipos de Generación (3)						0,2%	0,2%	0,1%	0,1%	0,1%
Cavancha (1)							0,1%	0,1%	0,1%	0,1%
Enernuevas (2)							0,1%	0,0%	0,0%	0,0%
Termoeléctrica Andina								3,7%	3,7%	3,7%
Inversiones Hornitos								3,7%	3,7%	3,7%
Eléctrica Angamos								11,9%	11,8%	11,8%
Noracid									0,4%	0,4%
SPS La Huayca									0,0%	0,0%
On Group										0,0%
TOTAL	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

(1) Since November 3, 2010 Cavancha Station belongs to PMGD. Before, it was represented at the CDEC-SING by E-CL.

(2) Enernuevas units correspond to PMGD.

(3) Former Inacal

INSTALLED CAPACITY AS PER COMPANY



CELTA	3,9%	INVERSIONES HORNITOS	3,7%
E-CL (1)	38,4%	ELÉCTRICA ANGAMOS	11,8%
AES GENER	14,0%	CAVANCHA	0,1%
GASATACAMA GENERACIÓN	16,9%	ENERNUEVAS (3)	0,048%
NORGENER	6,0%	NORACID	0,4%
ENORCHILE	0,9%	SPS LA HUAYCA (4)	0,029%
EQUIPOS DE GENERACIÓN (2)	0,1%	ON GROUP (5)	0,043%
TERMOELÉCTRICA ANDINA	3,7%		

(1) Electroandina's power generation assets were transferred to E-CL as of December 1, 2011.

(2) Former INACAL.

(3) With an installed capacity of 2.2 MW, Enernuevas makes up 0.05% of the SING.

(4) With an installed capacity of 1.35 MW, SPS La Huayca makes up 0.03% of the SING.

(5) With an installed capacity of 2.0 MW, On Group makes up 0.04% of the SING.

INSTALLED CAPACITY AS PER FUEL TYPE TERM 2004-2013

IN PHYSICAL UNITS (MW)

Fuel	Company	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Hydro	E-CL	13	13	13	13	13	10	10	10	10	10
	Cavancha (2)						3	3	3	3	3
	Enernuevas							2	2	2	2
Subtotal		13	13	13	13	13	13	15	15	15	15
Coal	Celta	158,0	158,0	158,0	158,0	158,0	158,0	158,0	158,0	158,0	158,0
	E-CL	340,9	340,9	340,9	340,9	340,9	340,9	340,9	340,9	780,5	780,5
	Electroandina	429,4	429,4	429,4	429,4	437,5	439,6	439,6	439,6		
	Norgener	277,3	277,3	277,3	277,3	277,3	277,3	277,3	277,3	277,3	277,3
	Andina								168,8	168,8	168,8
	Hornitos								170,1	170,1	170,1
	Angamos								545,0	545,0	545,0
Subtotal		1.206	1.206	1.206	1.206	1.214	1.216	1.216	2.100	2.100	2.100
Diesel	Celta	24	24	24	24	24	24	24	24	24	24
	E-CL	62	62	62	65	48	48	48	48	98	98
	Electroandina	50	50	50	50	50	50	50	50		
	Endesa										
	Gasatacama	3	3	3							
	Enorchile				6	6	11	11	11	11	12
	On Group										2
Subtotal		138	138	138	144	127	132	132	132	132	135,715
Fuel Oil	E-CL (1)	53	53	53	53	53	41	41	41	219	191
	Electroandina	75	75	75	75	75	179	179	179		
	Equipos de Generación (3)						7	7	7	7	7
	Enorchile (4)										29
Subtotal		128	128	128	128	128	226	226	226	226	226
Natural Gas	E-CL	251	251	251	251	251	251	251	251	688	688
	AES Gener	643	643	643	643	643	643	643	643	643	643
	Gasatacama	781	781	781	781	781	781	781	781	781	781
	Electroandina	438	438	438	438	438	438	438	438		
Subtotal		2.112	2.112	2.112	2.112	2.112	2.112	2.112	2.112	2.112	2.112
Cogeneration	Noracid									18	18
Subtotal										18	18
Solar	SPS La Huayca									1	1
Subtotal										1	1
TOTAL		3.596	3.596	3.596	3.602	3.593	3.699	3.701	4.585	4.604	4.607

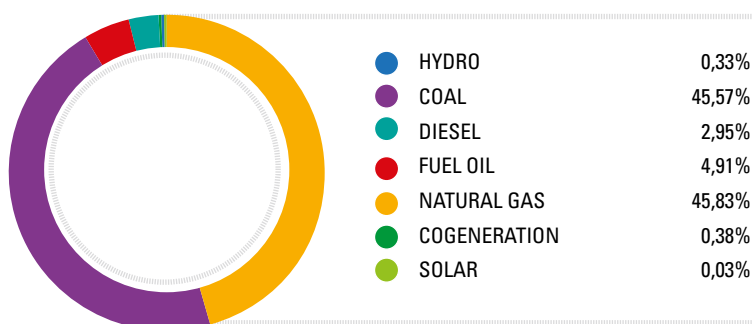
(1) The E-CL power generation units that use a Diesel-Fuel Oil mix, have been associated to Fuel Oil.

(2) As of November 3, 2010 Cavancha Station has become a part of PMGD.

(3) Former INACAL.

(4) The Enorchile power generation units that use a Diesel-Fuel Oil mix, have been associated to Fuel Oil.

INSTALLED CAPACITY AS PER FUEL TYPE



II. SING: Energy Generation

GENERATION AS PER COMPANY AND UNIT (GWh)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	ANNUAL
E-CL													
CHAPIQUINA	4,48	3,77	4,18	3,32	3,21	3,48	3,69	3,28	3,22	3,66	3,75	3,94	43,99
CD ARICA	2,12	1,16	0,95	1,39	1,28	2,13	1,21	0,20	1,00	1,40	1,09	0,78	14,72
CD IQUIQUE	1,76	0,55	0,63	1,04	1,00	1,50	1,31	0,13	0,78	1,43	0,60	0,20	10,92
CD MANTOS BLANCOS	3,93	2,54	1,55	4,79	2,59	3,60	1,62	0,01	0,12	0,00	0,00	0,00	20,73
CTM3	28,93	21,42	6,69	30,18	2,38	41,04	15,99	0,00	0,00	0,00	8,14	0,00	154,76
CTM2	113,78	100,43	90,93	111,45	114,88	105,18	112,38	99,04	110,44	112,82	29,09	0,00	1.100,44
CTM1	109,69	85,71	109,79	48,89	93,13	96,53	111,07	105,33	92,04	104,22	83,67	105,88	1.145,95
DEUTZ	0,03	0,02	0,03	0,01	0,02	0,01	0,02	0,01	0,01	0,02	0,02	0,01	0,20
CUMMINS	0,01	0,01	0,04	0,01	0,01	0,01	0,01	0,00	0,00	0,01	0,01	0,00	0,13
U10 - U11 (1)	3,39	5,46	2,27	8,18	7,03	2,57	1,78	1,06	0,00	0,00	0,00	0,00	31,74
U12 - U13 (1)	113,38	61,11	75,65	80,84	43,72	63,32	57,42	50,19	96,85	108,44	97,73	87,69	936,35
U14 - U15 (1)	169,30	103,04	90,13	163,87	167,40	168,32	166,97	174,70	163,44	170,81	161,85	174,67	1.874,50
U16 (1)	128,03	89,71	176,40	108,82	137,63	2,47	127,44	150,07	114,32	120,98	142,90	151,95	1.450,72
TG1 (1)	0,36	0,29	0,47	0,27	0,49	0,10	0,07	0,07	0,06	0,28	0,24	0,00	2,70
TG2 (1)	0,28	0,31	0,41	0,18	0,33	0,06	0,07	0,07	0,05	0,15	0,24	0,00	2,16
TG3 (1)	1,51	1,72	1,55	2,17	1,81	1,59	1,02	0,37	0,93	1,12	0,14	0,06	13,98
Solar El Águila (3)	0,00	0,00	0,00	0,00	0,00	0,00	0,22	0,28	0,39	0,41	0,41	0,38	2,09
SUTA (1)	20,25	16,55	16,65	24,43	19,71	17,35	23,02	26,91	12,69	27,84	26,74	26,10	258,24
Total Gross Generation	701,25	493,80	578,32	589,84	596,61	509,24	625,31	611,73	596,34	653,60	556,61	551,68	7.064,32
Own Consumption	44,60	33,30	34,00	35,50	34,71	34,40	43,30	41,98	37,60	32,33	24,12	33,27	429,10
Total Net Generation	656,65	460,50	544,32	554,34	561,90	474,84	582,01	569,75	558,74	621,27	532,49	518,41	6.635,22
CELTA													
CTTAR	67,54	94,36	101,00	65,96	76,30	99,18	96,10	104,25	91,02	0,00	54,08	62,62	912,41
TGTAR	0,89	0,67	0,49	0,46	0,51	0,74	0,37	0,10	0,29	0,90	0,58	0,38	6,38
Total Gross Generation	68,43	95,03	101,49	66,42	76,81	99,92	96,46	104,36	91,31	0,90	54,66	63,00	918,79
Own Consumption	5,57	7,70	8,20	5,10	6,21	8,10	7,80	8,29	7,10	0,00	5,14	5,25	74,47
Total Net Generation	62,86	87,33	93,29	61,32	70,60	91,82	88,66	96,07	84,21	0,90	49,52	57,75	844,33
NORGENER													
NT01	100,32	89,84	99,15	84,41	97,66	97,65	101,05	100,29	97,47	99,22	17,32	87,23	1.071,61
NT02	96,22	86,65	97,93	86,33	98,47	87,72	12,34	90,90	96,79	100,13	97,54	95,93	1.046,94
Total Gross Generation	196,54	176,50	197,08	170,74	196,13	185,37	113,39	191,19	194,26	199,35	114,86	183,15	2.118,55
Own Consumption	13,13	12,60	15,30	12,40	14,32	13,60	8,10	13,93	14,29	14,69	8,40	13,55	154,31
Total Net Generation	183,41	163,90	181,78	158,34	181,81	171,77	105,29	177,26	179,97	184,66	106,46	169,60	1.964,24
GASATACAMA													
TG1A	38,11	11,05	6,74	0,00	29,31	12,33	11,62	0,00	0,00	14,35	50,06	3,29	176,87
TG1B	22,78	6,29	14,85	0,00	46,61	28,12	1,59	12,08	13,04	19,68	54,57	47,55	267,16
TV1C	33,29	9,20	7,90	0,00	40,65	22,31	7,17	6,42	7,01	18,32	60,75	27,07	240,10
TG2A	0,50	1,76	0,23	15,51	0,95	10,48	7,63	12,46	0,00	2,64	4,78	9,15	66,08
TG2B	2,39	0,00	0,00	28,35	4,08	8,83	33,88	15,92	0,00	0,00	6,09	1,94	101,47
TV2C	1,07	0,00	0,00	24,25	2,13	10,14	21,41	13,59	0,00	0,16	2,99	4,38	80,13
Total Gross Generation	98,14	28,30	29,72	68,11	123,72	92,21	83,29	60,47	20,06	55,15	179,24	93,39	931,80
Own Consumption	4,03	2,20	2,30	3,20	4,20	3,80	3,60	2,97	1,93	2,75	5,91	3,78	40,66
Total Net Generation	94,11	26,10	27,42	64,91	119,52	88,41	79,69	57,50	18,13	52,40	173,33	89,61	891,13
AES GENER													
Central Salta	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Total Gross Generation	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Own Consumption	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Total Net Generation	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
CAVANCHA													
CAVA	1,41	1,37	1,45	1,39	1,42	1,36	1,39	1,44	1,38	1,45	1,46	1,53	17,07
Total Gross Generation	1,41	1,37	1,45	1,39	1,42	1,36	1,39	1,44	1,38	1,45	1,46	1,53	17,07
Own Consumption	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Total Net Generation	1,41	1,37	1,45	1,39	1,42	1,36	1,39	1,44	1,38	1,45	1,46	1,53	17,07

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	ANNUAL
ENORCHILE													
ZOFRI 1-6	0,11	0,07	0,05	0,07	0,07	0,12	0,07	0,01	0,06	0,07	0,06	0,04	0,80
ZOFRI 2-5	0,45	0,30	0,20	0,33	0,31	0,50	0,29	0,05	0,24	0,31	0,27	0,18	3,44
ZOFRI 7-12	0,80	0,35	0,28	0,47	0,41	0,83	0,46	0,09	0,41	0,56	0,36	0,23	5,26
ZOFRI 13	0,00	0,00	0,00	0,00	0,01	0,03	0,00	0,00	0,00	0,06	0,13	0,08	0,32
MIMB	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,50	0,80	1,30
Total Gross Generation	1,36	0,72	0,54	0,87	0,81	1,47	0,81	0,15	0,70	1,01	1,32	1,34	11,11
Own Consumption	0,02	0,00	0,02	0,02	0,02	0,02	0,03	0,03	0,03	0,02	0,02	0,07	0,30
Total Net Generation	1,34	0,72	0,52	0,85	0,79	1,45	0,78	0,12	0,67	0,99	1,30	1,27	10,81
EQUIPOS DE GENERACIÓN (2)													
INACAL1 - 4	1,44	0,85	1,06	1,63	1,32	2,20	2,67	2,72	1,33	2,67	1,90	1,79	21,58
Total Gross Generation	1,44	0,85	1,06	1,63	1,32	2,20	2,67	2,72	1,33	2,67	1,90	1,79	21,58
Own Consumption	0,00	0,00	0,05	0,10	0,06	0,10	0,10	0,12	0,06	0,12	0,08	0,07	0,86
Total Net Generation	1,44	0,85	1,01	1,53	1,26	2,10	2,57	2,60	1,27	2,55	1,82	1,72	20,72
ANDINA													
CTA1	22,60	104,63	99,56	110,81	107,01	104,24	116,11	115,58	111,33	101,15	84,87	112,58	1.190,48
Total Gross Generation	22,60	104,63	99,56	110,81	107,01	104,24	116,11	115,58	111,33	101,15	84,87	112,58	1.190,48
Own Consumption	3,56	10,50	11,10	11,20	11,46	8,70	15,20	11,82	11,51	10,22	9,91	11,31	126,48
Total Net Generation	19,04	94,13	88,46	99,61	95,55	95,54	100,91	103,76	99,82	90,93	74,96	101,27	1.063,99
ANGAMOS													
ANG1	148,16	139,74	143,09	160,56	56,06	141,50	157,76	166,09	151,40	159,13	165,41	170,03	1.758,93
ANG2	173,53	167,56	181,71	51,79	186,00	178,88	113,73	78,51	139,82	188,42	187,05	190,71	1.837,70
Total Gross Generation	321,69	307,30	324,80	212,35	242,07	320,38	271,49	244,60	291,22	347,54	352,46	360,74	3.596,64
Own Consumption	34,53	33,10	35,40	27,50	25,97	34,80	31,90	28,40	32,45	36,66	36,63	39,19	396,53
Total Net Generation	287,16	274,20	289,40	184,85	216,10	285,58	239,59	216,20	258,77	310,88	315,83	321,55	3.200,11
ENERNUEVAS													
MHAH - MHT2	1,52	1,30	1,50	1,42	1,43	1,36	1,34	1,42	1,35	1,49	1,45	1,50	17,08
Total Gross Generation	1,52	1,30	1,50	1,42	1,43	1,36	1,34	1,42	1,35	1,49	1,45	1,50	17,08
Own Consumption	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Total Net Generation	1,52	1,30	1,50	1,42	1,43	1,36	1,34	1,42	1,35	1,49	1,45	1,50	17,08
HORNITOS													
CTH1	37,00	105,81	117,42	102,23	96,48	105,25	115,11	113,00	110,16	113,79	92,21	117,03	1.225,47
Total Gross Generation	37,00	105,81	117,42	102,23	96,48	105,25	115,11	113,00	110,16	113,79	92,21	117,03	1.225,47
Own Consumption	4,73	10,70	11,80	10,80	10,90	11,20	12,00	11,92	11,68	12,16	9,77	12,07	129,72
Total Net Generation	32,27	95,11	105,62	91,43	85,58	94,05	103,11	101,08	98,48	101,63	82,44	104,96	1.095,74
NORACID													
PAM	9,70	8,26	9,12	11,65	2,18	12,71	11,86	12,56	11,88	10,94	11,45	8,37	120,66
Total Gross Generation	9,70	8,26	9,12	11,65	2,18	12,71	11,86	12,56	11,88	10,94	11,45	8,37	120,66
Own Consumption	0,00	0,00	0,20	0,10	2,01	0,00	0,30	0,00	0,00	0,17	0,01	0,00	2,79
Total Net Generation	9,70	8,26	8,92	11,55	0,17	12,71	11,56	12,56	11,88	10,77	11,44	8,37	117,87
SPS LA HUAYCA													
HUAYCA1	0,14	0,21	0,24	0,23	0,18	0,19	0,15	0,24	0,24	0,23	0,20	0,18	2,43
Total Gross Generation	0,14	0,21	0,24	0,23	0,18	0,19	0,15	0,24	0,24	0,23	0,20	0,18	2,43
Own Consumption	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Total Net Generation	0,14	0,21	0,24	0,23	0,18	0,19	0,15	0,24	0,24	0,23	0,20	0,18	2,43
ONGROUP													
AGB	0,00	0,00	0,00	0,00	0,00	0,11	0,13	0,03	0,12	0,16	0,12	0,11	0,78
Total Gross Generation	0,00	0,00	0,00	0,00	0,00	0,11	0,13	0,03	0,12	0,16	0,12	0,11	0,78
Own Consumption	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Total Net Generation	0,00	0,00	0,00	0,00	0,00	0,11	0,13	0,03	0,12	0,16	0,12	0,11	0,78

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	ANNUAL
TOTAL SING													
Gross Generation	1.461,20	1.324,08	1.462,31	1.337,71	1.446,16	1.436,02	1.439,51	1.459,49	1.431,68	1.489,44	1.452,79	1.496,39	17.236,77
Own Consumption	110,17	110,10	118,37	105,92	109,86	114,72	122,33	119,46	116,65	109,12	99,99	118,56	1.355,22
Net Generation	1.351,03	1.213,98	1.343,94	1.231,79	1.336,30	1.321,30	1.317,18	1.340,03	1.315,03	1.380,32	1.352,80	1.377,83	15.881,55
Transmission losses	32,10	40,90	32,90	29,00	44,80	51,90	45,70	31,20	36,70	51,20	12,70	59,00	468,00
Sales to free clients	1.167,30	1.032,40	1.159,30	1.055,60	1.136,00	1.118,30	1.113,70	1.152,60	1.133,10	1.171,10	1.186,90	1.165,50	13.591,80
Sales to regulated clients	151,70	140,70	151,80	147,20	155,50	151,10	157,80	156,20	145,30	158,00	153,20	153,40	1.821,90
Total Sales	1.319,00	1.173,10	1.311,10	1.202,80	1.291,50	1.269,40	1.271,50	1.308,80	1.278,40	1.329,10	1.340,10	1.318,90	15.413,70

TOTAL SING (IN %)

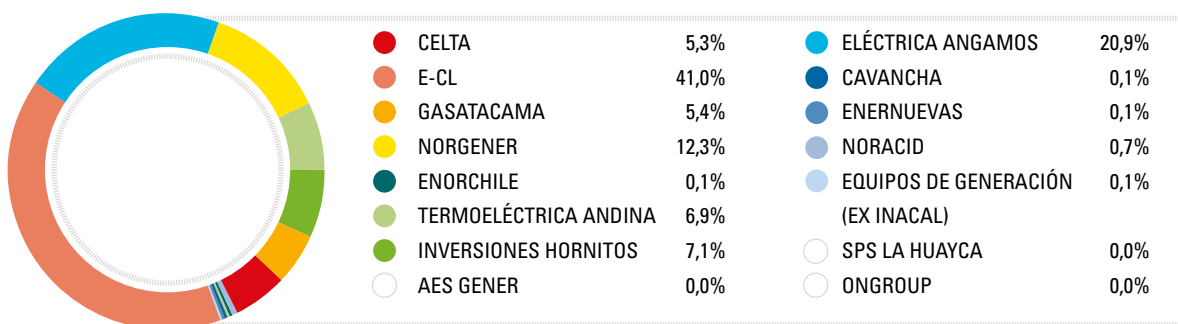
Gross Generation	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Own Consumption	8%	8%	8%	8%	8%	8%	8%	8%	8%	7%	7%	8%	8%
Net Generation	92%	92%	92%	93%	92%	92%	92%	92%	92%	92%	92%	92%	92%
Transmission losses	2%	3%	2%	2%	3%	4%	3%	2%	3%	3%	1%	4%	3%
Sales to free clients	80%	78%	79%	79%	79%	78%	77%	79%	79%	79%	82%	78%	79%
Sales to regulated clients	10%	11%	10%	11%	11%	11%	11%	11%	10%	11%	11%	10%	11%
Total Sales	90%	89%	90%	90%	89%	88%	88%	90%	89%	89%	92%	88%	89%

(1) As of December 1, 2011, the units that were represented by Electroandina in the CDEC-SING, are now represented by E-CL.

(2) Former INACAL.

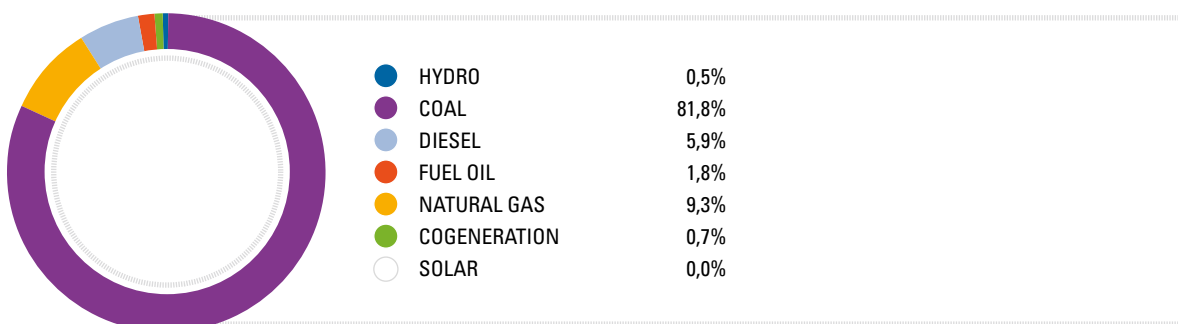
(3) Power plant undergoing trial period.

GROSS GENERATION AS PER COMPANY



(1) Electroandina generation assets became a part of E-CL as from December 1, 2011

GROSS GENERATION AS PER FUEL



GENERATION OF SING STATIONS TERM 2004 - 2013 (GWh)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
CELTA										
CTTAR	435	422	830	1.012	981,0	1.065	1.076,3	972,7	848	912
TGTAR	1	0	2	14	17,9	11	9,6	8,1	4	6
Total Gross Generation	436	423	832	1026	999	1.076	1.085,9	980,8	852	919
Own Consumption	39	39	72	84	81	86	86,5	74,7	74	74
Total Net Generation	398	383	760	941	918	990	999,4	906,2	778	844
E-CL										
CHAPIQUINA	51	45	55	53	53	47	42	40	49	44
CAVANCHA (1)	15	15	15	15	15	15	13			
CD ARICA	5	2	7	33	32	17	25	16	12	15
CD IQUIQUE	11	4	13	50	60	31	42	34	18	11
CD ANTOFAGASTA (4)	7	2	15	32	6	0	0			
CD MANTOS BLANCOS	16	4	25	7	0	69	88	49	40	21
CD ENAEX				1	0	1	1		0	0
CTM1	498,7	446,6	880	1.057	1.202	1.191	1.114	1.118	1.204	1.146
CTM2	1.003	849	1.033	1.188	1.298	1.282	1.220	1.159	1.163	1.100
CTM3	1.449	1.601	600	400	814	632	367	310	306	155
U10 - U11 (3)								0	7	32
U12 - U13 (3)								22	986	936
U14 - U15 (3)								127	1.915	1.875
U16 (3)								102	1.422	1.451
TG1 - TG2 (3)								0	2	5
TG3 (3)								1	8	14
Solar El Águila										2
SUTA (3)								9	137	258
Total Gross Generation	3.054	2.970	2.643	2.837	3.480	3.285	2.912	2.988	7.270	7.064
Own Consumption	162	159	169	200	230	225	199	219	472	429
Total Net Generation	2.892	2.810	2.475	2.637	3.250	3.060	2.713	2.769	6.798	6.635
ELECTROANDINA										
U09	0	0								
U10 - U11 (3)	7	0	19	187	322	112	45	32		
U12 - U13 (3)	478	207	463	1.052	1.125	1.121	1.167	609		
U14 - U15 (3)	1.409	1.549	1.688	1.905	1.784	1.820	1.888	1.447		
U16 (3)	1.458	1.753	1.884	936	474	732	1.527	1.095		
TG1 - TG2 (3)	2	1	0	12	25	12	4	7		
TG3 (3)	91	43	12	40	56	33	20	16		
SUTA (3)						184	187	151		
Total Gross Generation	3.444	3.553	4.066	4.132	3.785	4.014	4.838	3.357		
Own Consumption	194	191	218	255	254	249	294	215		
Total Net Generation	3.250	3.361	3.848	3.877	3.531	3.764	4.545	3.142		
AES GENER										
CC Salta	1.903	2.154	2.285	1.628	1.154	1.348	958	734	0	0
Total Gross Generation	1.903	2.154	2.285	1.628	1.154	1.348	958	734	0	0
Own Consumption	43	44	46	38	22	7	5	2	0	0
Total Net Generation	1.860	2.110	2.239	1.590	1.132	1.341	953	733	0	0
GASATACAMA										
CC1	1.168	1.144	411	1.002	2.331	1.405	1.244	1.230	444	684
CC2	1.530	1.338	1.285	1.311	639	1.801	1.729	897	332	248
ENAEX	0	0	0	0						
Total Gross Generation	2.698	2.482	1.696	2.313	2.971	3.205	2.973	2.127	776	932
Own Consumption	82	69	61	75	73	90	85	71	38	41
Total Net Generation	2.615	2.413	1.635	2.237	2.898	3.116	2.888	2.056	738	891
NORGENER										
NT01	216	549	776	897	1.039	1.049	1.099	1.104	1.145	1.072
NT02	578	528	938	1.107	1.061	911	1.170	1.120	998	1.047
ZOFRI 1-6 (Hasta 2008)				1	2					
ZOFRI 2-5 (Hasta 2008)				7	11					
Total Gross Generation	794	1.077	1.714	2.011	2.113	1.960	2.269	2.225	2.143	2.119
Own Consumption	66	91	125	138	145	134	149	149	142	154
Total Net Generation	727	986	1.589	1.873	1.969	1.826	2.120	2.076	2.001	1.964

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
CAVANCHA (2)										
CAVA							2	15	15	17
Total Gross Generation							2	15	15	17
Own Consumption							0	0	0	0
Total Net Generation							2	15	15	17
EQUIPOS DE GENERACIÓN (5)										
CD Inacal						13	44	24	8	22
Total Gross Generation						13	44	24	8	22
Own Consumption						0	0	0	0	1
Total Net Generation						13	44	24	8	21
ENORCHILE										
Central Estandartes						6	17	6	1	6
ZOFRI 1-6								1	3	1
ZOFRI 2-5								4	4	3
MIMB										1
Total Gross Generation						6	17	11	8	11
Own Consumption						0	0	0	0	0
Total Net Generation						6	17	10	8	11
ANDINA										
CTA							1	756	1.312	1.190
Total Gross Generation							1	756	1.312	1.190
Own Consumption							0	63	132	126
Total Net Generation							1	692	1.180	1.064
ANGAMOS										
ANG1							0	1.280	1.480	1.759
ANG2								708	1.879	1.838
Total Gross Generation							0	1.988	3.359	3.597
Own Consumption							0	201	371	397
Total Net Generation							0	1.787	2.988	3.200
ENERNUEVAS										
MHAH - MHT2							3	17	18	17
Total Gross Generation							3	17	18	17
Own Consumption							0	0	0	0
Total Net Generation							3	17	18	17
HORNITOS										
CTH1								668	969	1225
Total Gross Generation								668	969	1.225
Own Consumption								70	99	130
Total Net Generation								598	871	1.096
NORACID										
PAM									25	121
Total Gross Generation									25	121
Own Consumption									4	3
Total Net Generation									21	118
ONGROUP										
AGB										1
Total Gross Generation										1
Own Consumption										0
Total Net Generation										1

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
SPS LA HUAYCA										
HUAYCA1									0	2
Total Gross Generation									0	2
Own Consumption									0	0
Total Net Generation									0	2
TOTAL SING										
Gross Generation	12.330	12.657	13.236	13.946	14.502	14.907	15.104	15.889	16.756	17.237
Own Consumption	587	594	692	790	804	792	818	1.066	1.331	1.355
Net Generation	11.743	12.063	12.544	13.156	13.698	14.115	14.286	14.824	15.424	15.882
Transmission losses	503	503	515	481	479	459	493	561		468
Sales to free clients	10.164	10.401	10.774	11.343	11.832	12.240	12.297	12.703	13.132	13.592
Sales to regulated clients	1.075	1.159	1.256	1.332	1.387	1.417	1.496	1.560	1.699	1.822
Total Sales	11.240	11.560	12.029	12.674	13.219	13.656	13.792	14.263	14.831	15.414
Gross Generation	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Own Consumption	5%	5%	5%	6%	6%	5%	5%	7%	8%	8%
Net Generation	95%	95%	95%	94%	94%	95%	95%	93%	92%	92%
Transmission losses	4%	4%	4%	3%	3%	3%	3%	4%	4%	3%
Sales to free clients	82%	82%	81%	81%	82%	82%	81%	80%	78%	79%
Sales to regulated clients	9%	9%	9%	10%	10%	10%	10%	10%	10%	11%
Total Sales	91%	91%	91%	91%	91%	92%	91%	90%	89%	89%

(1) Cavancha was represented by E-CL in the CDEC-SING until November 3, 2010.

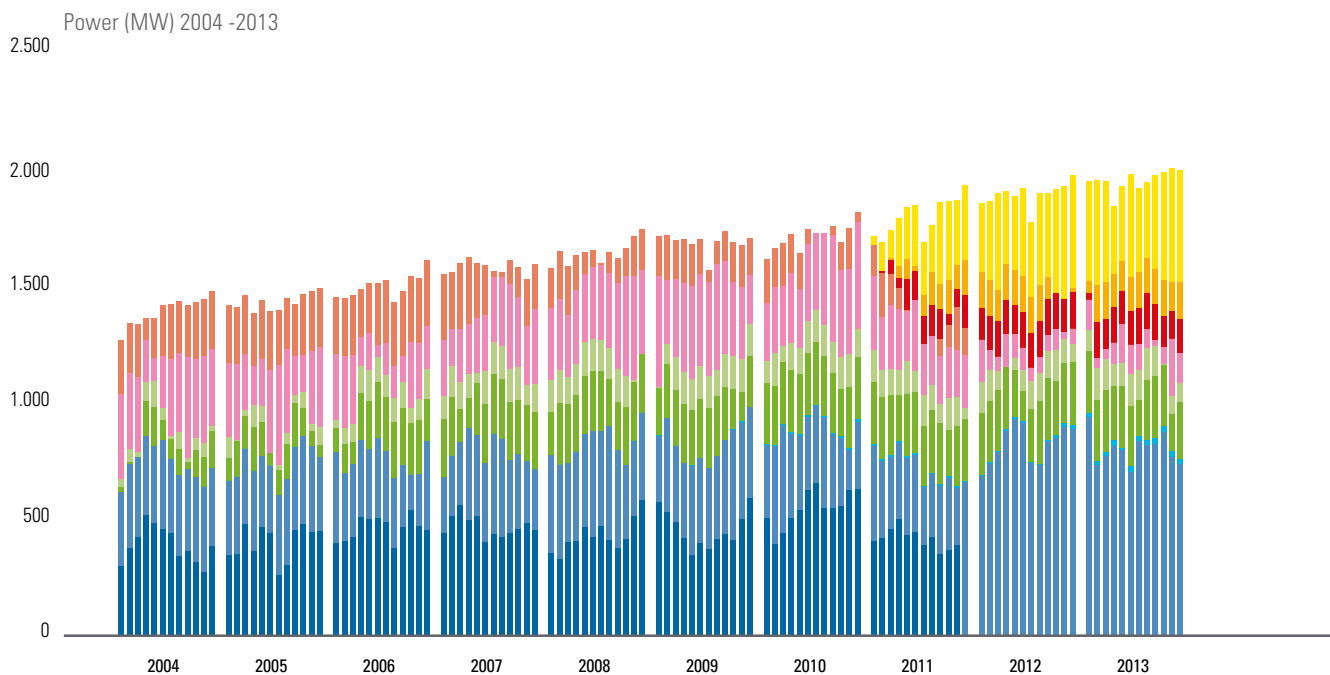
(2) As of November 3, 2010 Cavancha has become a part of PMGD.

(3) As of December 1, 2011, the units that were represented by Electroandina in the CDEC-SING, are now represented by E-CL.

(4) Units out of commission

(5) Former INACAL.

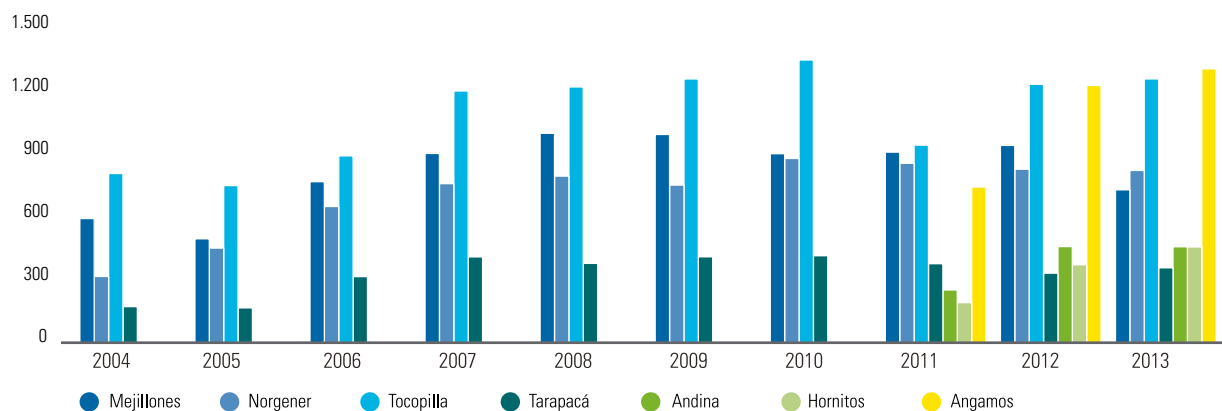
MONTHLY HOURLY MEDIUM GENERATION



III. Fuels: Consumption and Prices

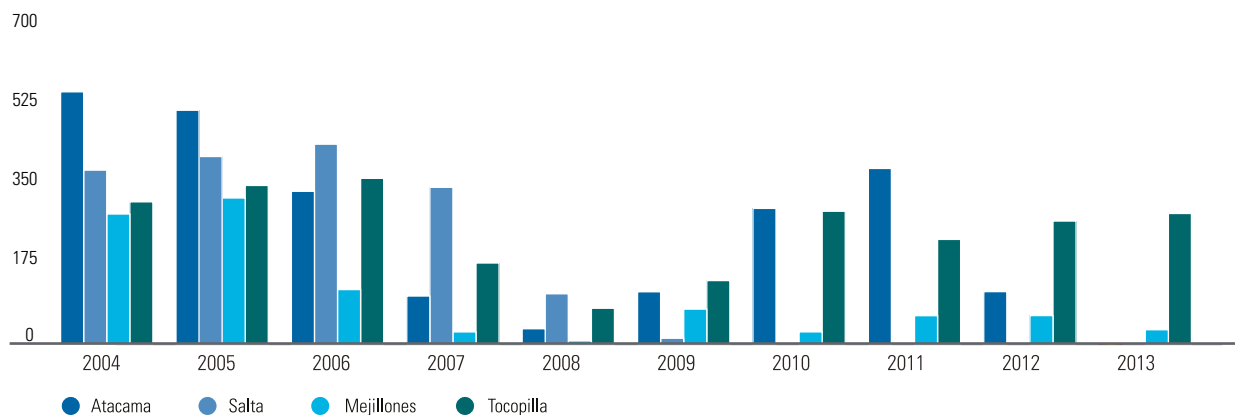
CARBON ANNUAL CONSUMPTION AS PER STATION

Thousands of Tons



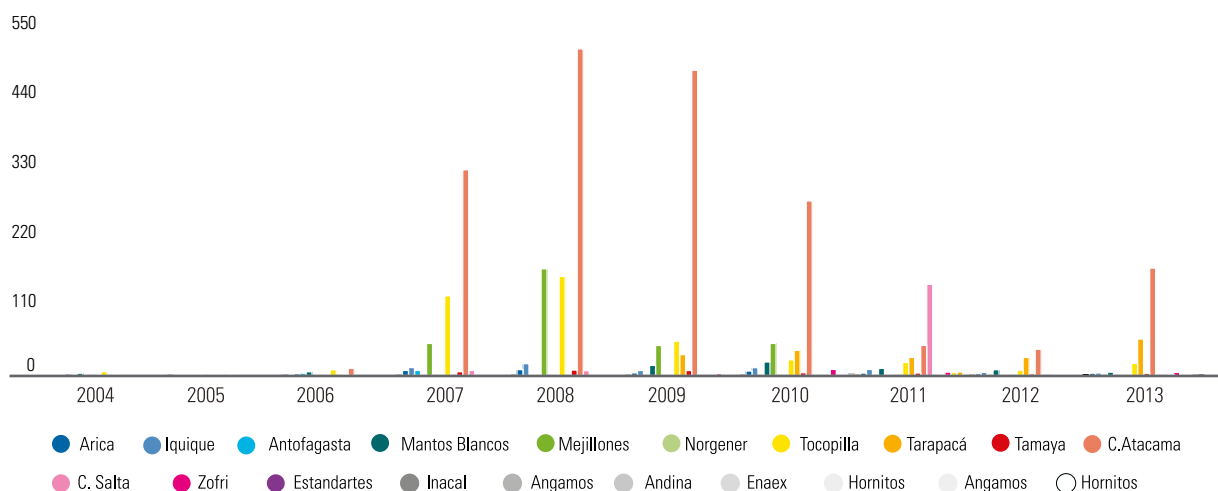
NATURAL GAS ANNUAL CONSUMPTION AS PER STATION

Millions of m³



LIQUID FUELS ANNUAL CONSUMPTION AS PER STATION

Thousands of Tons



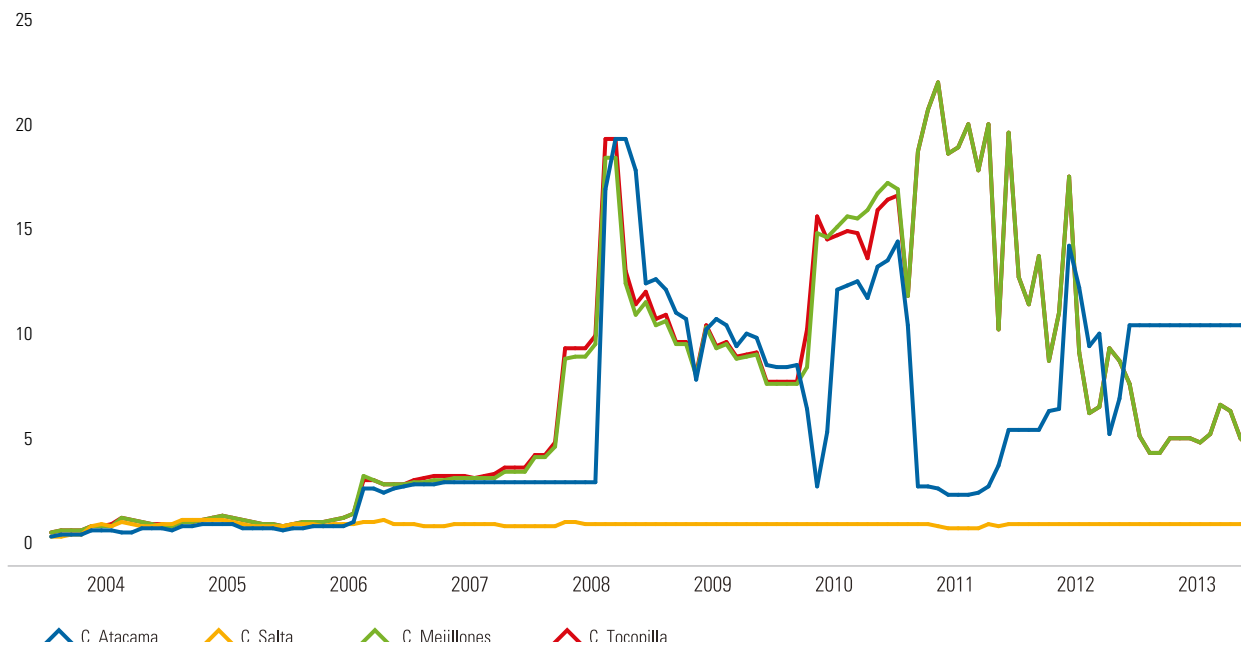
CARBON PRICE

US\$/TON



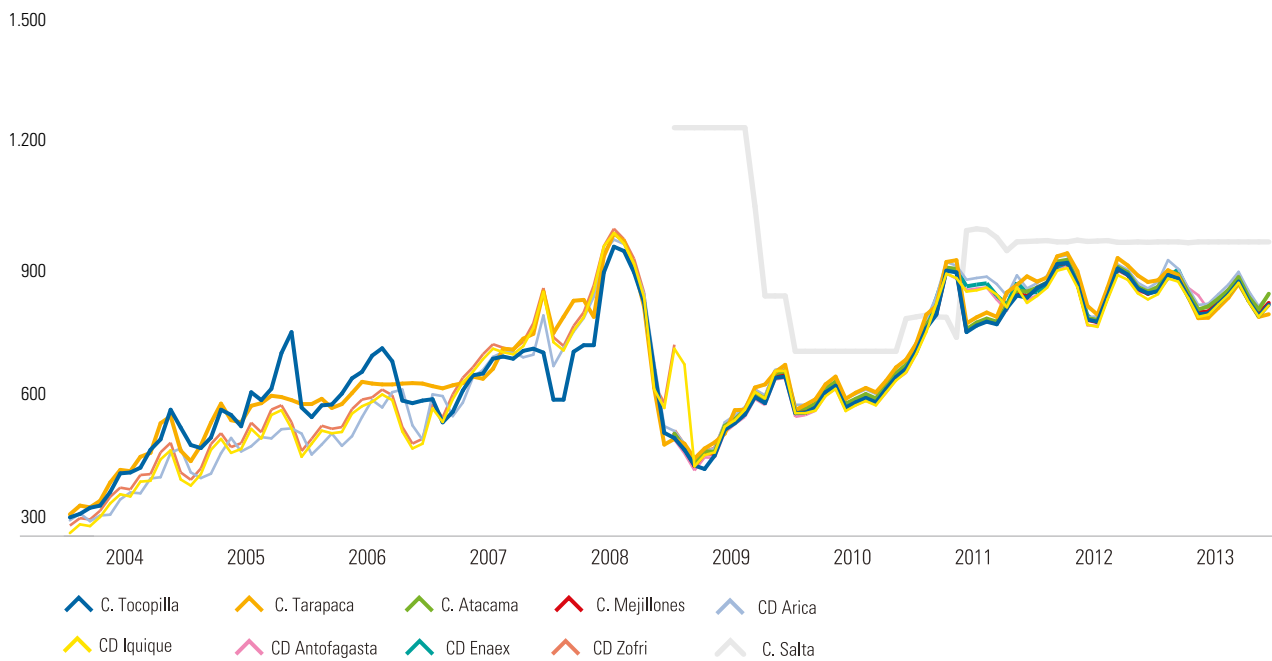
NATURAL GAS PRICE

US\$/MMBTU



DIESEL OIL PRICE

US\$/ m3



FUEL OIL PRICE

US\$/ Ton



IV. Energy and Power Prices

MARGINAL COSTS OF ENERGY CRUCERO NODE 220 KV TERM 2004 - 2013

Month /\ Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
January	12,6	15,5	14,8	19,2	98,3	69,6	50,4	49,7	32,4	46,9
February	10,4	16,3	13,8	34,2	81,4	54,5	78,9	45,7	42,4	32,5
March	10,6	17,3	12,9	38,7	72,6	54,4	75,6	56,9	38,1	31,1
April	16,2	18,2	16,0	34,5	89,8	61,1	74,9	62,2	54,5	38,8
May	18,3	17,1	15,7	52,5	108,2	59,4	53,9	48,9	55,8	35,3
June	17,7	14,4	26,4	53,1	114,4	66,6	64,7	59,2	67,2	37,4
July	16,4	16,6	24,2	72,7	120,9	66,5	60,5	35,4	36,8	41,4
August	19,3	16,1	22,2	74,9	150,3	69,6	55,0	34,8	32,5	41,0
September	16,4	16,4	16,9	71,9	125,0	76,9	60,1	32,2	34,1	32,5
October	15,5	14,5	25,5	70,8	112,0	60,2	52,6	54,0	32,8	45,1
November	15,3	13,2	20,6	98,3	106,7	61,4	59,7	42,3	39,2	45,8
December	15,1	12,3	24,0	81,5	68,9	44,8	58,4	33,9	40,5	50,3
Average	15,3	15,6	19,4	58,5	104,0	62,1	62,1	46,3	42,2	39,8

Notes: Monthly averages in \$/kWh.

MONTHLY AVERAGE MARGINAL COSTS OF ENERGY IN CRUCERO NODE

\$ / kWh



MONTHLY AVERAGE MARGINAL COSTS OF ENERGY IN CRUCERO NODE

US \$ / kWh



MARGINAL COSTS OF ENERGY CRUCERO NODE 220 KV – YEAR 2013

Day	January	February	March	April	May	June	July	August	September	October	November	December
1	29,6	23,9	37,1	50,9	22,8	23,6	25,1	51,8	30,2	42,4	63,8	75,6
2	30,4	23,6	24,0	27,8	23,4	35,8	25,2	43,4	47,9	59,5	72,4	44,3
3	35,7	23,8	24,1	23,0	22,9	23,9	25,2	89,1	22,7	42,8	67,2	54,8
4	60,6	79,7	40,7	23,1	49,4	64,5	43,6	25,4	23,1	24,5	45,5	60,3
5	56,9	45,3	23,8	22,6	36,4	30,2	41,0	25,1	21,7	24,7	39,1	68,7
6	65,0	23,4	67,8	23,0	67,4	25,9	37,3	48,9	22,4	34,4	49,7	33,2
7	59,0	27,1	23,8	85,1	22,4	48,1	28,4	30,7	26,9	50,2	35,3	33,8
8	29,2	24,1	23,8	74,3	44,1	31,5	52,4	74,5	58,2	24,7	27,6	60,6
9	27,6	23,7	101,6	26,5	25,6	24,8	27,0	26,3	58,0	24,5	35,2	49,7
10	28,1	36,1	23,6	22,2	48,6	62,2	42,7	26,0	24,2	43,4	67,9	52,2
11	27,7	23,9	24,0	55,9	22,5	24,2	47,8	25,6	25,5	68,5	32,3	25,7
12	52,8	30,1	46,7	59,9	24,3	50,6	24,9	25,5	25,6	60,7	40,9	25,4
13	27,2	23,5	53,1	50,1	35,2	24,1	63,7	25,2	57,1	39,6	28,1	33,8
14	53,1	24,1	24,1	22,9	23,7	43,0	33,9	24,1	25,4	57,5	51,5	68,0
15	40,0	24,1	23,4	35,6	58,1	81,8	28,1	23,6	23,9	47,6	100,6	43,3
16	35,6	24,3	23,6	22,5	62,1	28,1	54,4	27,0	24,3	27,4	29,1	72,9
17	83,5	36,5	24,1	71,8	25,5	64,1	26,9	26,1	29,6	31,8	46,2	24,6
18	43,5	28,3	24,0	49,9	43,3	42,3	25,0	24,9	26,7	43,9	35,6	55,5
19	27,8	23,2	23,9	37,4	25,8	26,7	44,6	67,5	25,1	28,1	38,0	25,4
20	77,2	28,5	24,0	25,4	57,0	37,7	69,7	40,0	25,4	27,4	25,4	73,2
21	54,6	24,2	23,7	24,3	37,6	37,4	63,1	25,1	24,4	56,8	47,5	88,6
22	72,6	37,3	36,3	55,6	37,1	24,9	74,3	26,2	24,7	69,2	34,7	49,9
23	58,1	42,3	23,6	24,4	50,7	25,9	24,9	65,4	24,0	72,5	24,8	79,2
24	57,8	46,0	23,7	30,2	23,8	40,0	24,9	76,0	67,4	42,3	28,1	47,2
25	85,6	91,3	24,2	66,5	23,5	39,8	44,9	44,6	47,4	24,8	25,3	61,3
26	61,5	23,6	25,6	59,0	23,3	25,0	45,1	49,8	24,0	36,2	25,4	43,6
27	32,0	23,8	23,4	23,6	22,3	25,5	65,1	56,3	24,1	66,1	46,1	52,8
28	60,2	24,1	23,9	23,2	22,9	61,0	33,5	71,0	39,5	58,5	47,6	25,7
29	27,7		23,2	23,3	22,9	25,6	24,7	54,5	48,9	67,1	86,6	25,6
30	28,5		23,9	23,3	27,4	25,4	28,7	26,8	26,3	30,7	77,9	26,2
31	24,0		31,2		61,6		86,1	25,2		71,2		78,1
Average	46,9	32,5	31,1	38,8	35,3	37,4	41,4	41,0	32,5	45,1	45,8	50,3

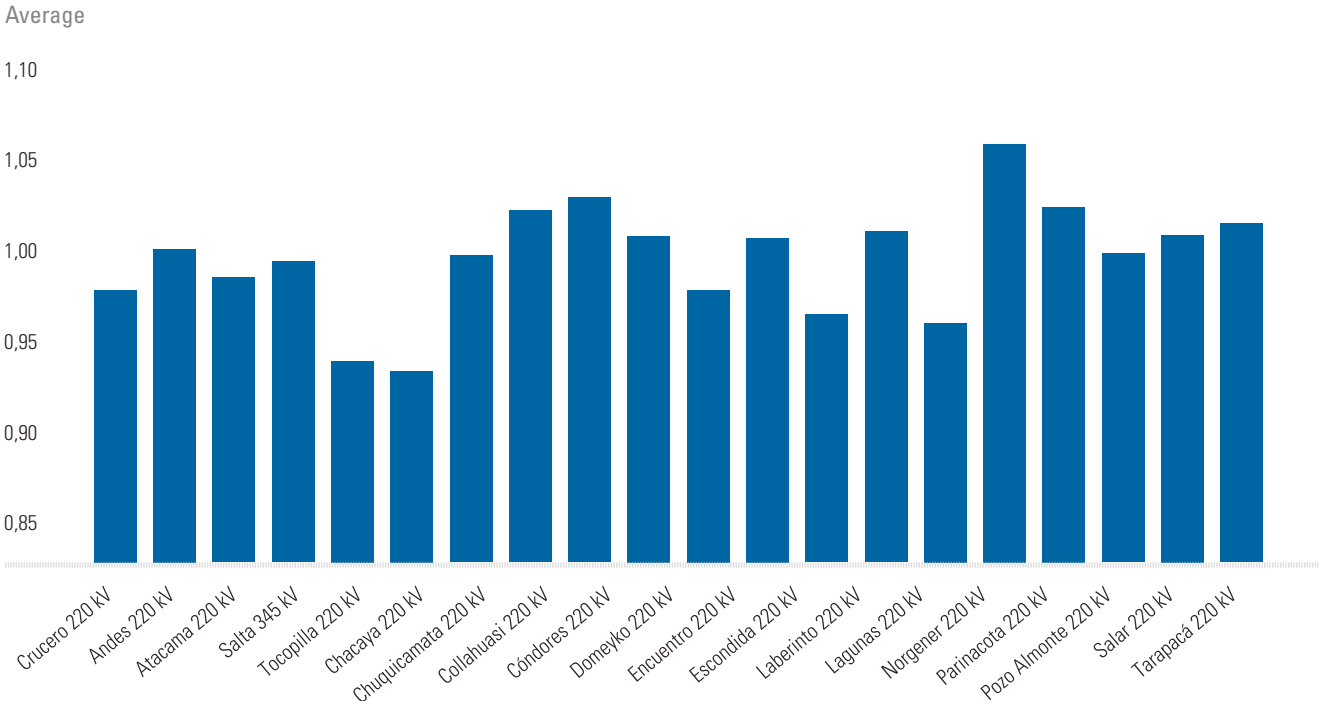
Note: Daily Average of Real Marginal Costs for Crucero Node 220 kV

ENERGY PUNISHMENT FACTORS YEAR 2013

Bar	Average	Maximum	Minimum
Crucero 220 kV	1,0000	1,0000	1,0000
Andes 220 kV	1,0227	1,0320	1,0093
Atacama 220 kV	1,0070	1,0138	0,9959
Salta 345 kV	1,0157	1,0245	1,0036
Tocopilla 220 kV	0,9609	0,9757	0,9545
Chacaya 220 kV	0,9553	0,9752	0,9313
Chuquicamata 220 kV	1,0189	1,0267	1,0121
Collahuasi 220 kV	1,0438	1,0605	1,0289
Cóndores 220 kV	1,0510	1,0803	1,0391
Domeyko 220 kV	1,0297	1,0389	1,0166
Encuentro 220 kV	1,0001	1,0006	1,0000
Escondida 220 kV	1,0286	1,0381	1,0152
Laberinto 220 kV	0,9864	0,9978	0,9710
Lagunas 220 kV	1,0322	1,0549	1,0219
Norgener 220 kV	0,9818	0,9829	0,9805
Paríacota 220 kV	1,0806	1,1098	1,0705
Pozo Almonte 220 kV	1,0458	1,0681	1,0362
Salar 220 kV	1,0200	1,0292	1,0133
Tarapacá 220 kV	1,0303	1,0599	1,0184

Note: Average values correspond to weekly schedule.

ENERGY PUNISHMENT FACTORS – YEAR 2013



PEAK POWER CRUCERO NODE 220 KV PRICE

Year	Rates setting	Validity		Power Price [\$ /kW-month]
		Desde	Hasta	
2004	oct-03	01-01-04	28-01-04	3.895,71
	oct-03 (index jan-04)	29-01-04	30-04-04	3.586,78
	apr-04	01-05-04	31-10-04	3.637,22
	oct-04	01-11-04	31-12-04	3.713,71
2005	oct-04	01-01-05	30-04-05	3.713,71
	apr-05	01-05-05	31-10-05	3.696,46
	oct-05	01-11-05	31-12-05	3.594,48
2006	oct-05	01-01-06	30-04-06	3.594,48
	apr-06	01-05-06	26-06-06	3.662,67
	apr-06 (index jun-06)	27-06-06	19-10-06	3.672,49
	apr-06 (index oct-06)	20-10-06	31-10-06	3.769,31
	oct-06	01-11-06	31-12-06	3.734,15
2007	oct-06	01-01-07	30-04-07	3.734,15
	abr-07	01-05-07	16-07-07	3.840,04
	apr-07 (index jul-07)	17-07-07	15-09-07	3.795,11
	apr-07 (index sep-07)	16-09-07	31-10-07	3.792,04
	oct-07	01-11-07	31-12-07	3.835,63
2008	oct-07	01-01-08	15-02-08	3.835,63
	oct-07 (index feb-08)	16-02-08	30-04-08	3.692,18
	apr-08	01-05-08	15-08-08	3.455,74
	apr-08 (index aug-08)	16-08-08	15-10-08	3.882,18
	apr-08 (index oct-08)	16-10-08	31-10-08	4.124,06
	oct-08	01-11-08	31-12-08	4.198,66
2009	oct-08	01-01-09	18-01-09	4.198,66
	oct-08 (index jan-09)	19-01-09	30-04-09	5.053,92
	apr-09	01-05-09	15-08-09	5.054,71
	apr-09 (index aug-09)	16-08-09	31-10-09	4.762,80
	oct-09	01-11-09	31-12-09	4.662,80
2010	oct-09	01-01-10	15-04-10	4.662,80
	oct-09 (index apr-10)	16-04-10	30-04-10	4.571,04
	apr-10	01-05-10	31-10-10	4.520,17
	oct-10	01-11-10	31-12-10	4.373,28
2011	oct-10	01-01-11	30-04-11	4.373,28
	apr-11	01-05-11	31-10-11	4.319,82
	oct-11	01-11-11	31-12-11	4.451,54
2012	oct-11	01-01-12	30-04-12	4.451,54
	apr-12	01-05-12	31-10-12	4.170,82
	oct-12	01-11-12	31-12-12	4.186,75
2013	oct-12	01-01-12	30-04-12	4.186,75
	apr-13	01-05-12	31-10-12	4.180,54
	oct-13	01-11-12	31-12-12	4.258,87

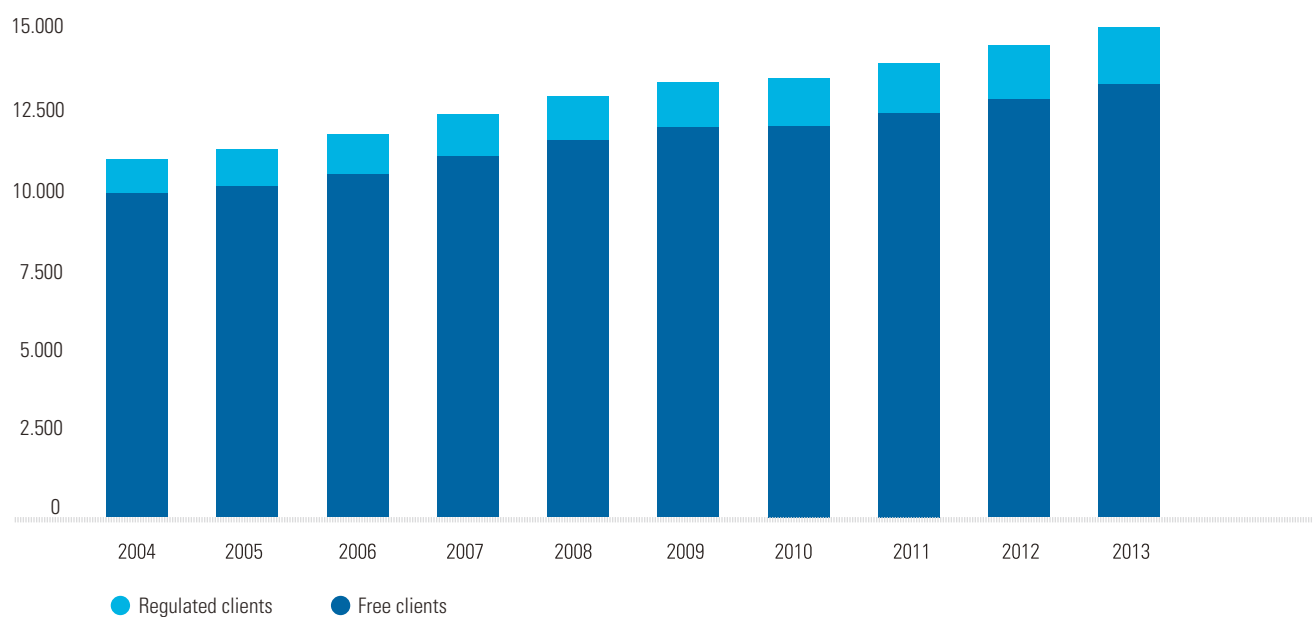
V. Energy Annual Sales

SING ANNUAL SALES TERM 2004-2013

Year	Sales [GWh]			Growth		
	Free Clients	Regulated Clients	Total	Annual	Average Accrued	Accrued
2004	10.164	1.075	11.240	7,2%	7,7%	25,0%
2005	10.401	1.159	11.560	2,8%	6,5%	28,6%
2006	10.774	1.256	12.029	4,1%	6,0%	33,8%
2007	11.343	1.332	12.674	5,4%	5,9%	41,0%
2008	11.832	1.387	13.219	4,3%	5,7%	47,0%
2009	12.240	1.417	13.656	3,3%	5,4%	51,9%
2010	12.297	1.496	13.792	1,0%	4,9%	53,4%
2011	12.703	1.560	14.263	3,4%	4,8%	58,6%
2012	13.132	1.699	14.831	4,0%	4,7%	65,0%
2013	13.592	1.822	15.414	3,9%	4,6%	71,4%

Note: Cumulative growth rates are based on 2001 sales (8,991 GWh).
Yearly sales cover net power generation minus transmission loss.

SING ANNUAL SALES EVOLUTION (GWh)

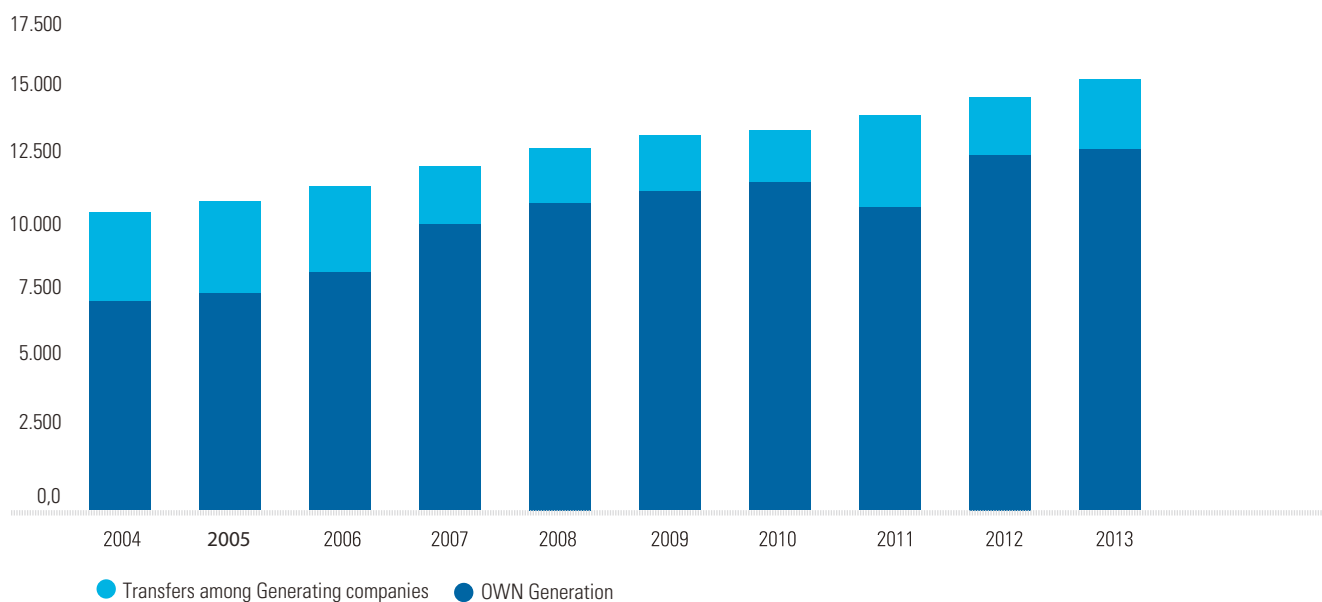


SING ANNUAL SALES COMPOSITION TERM 2004 - 2013

Year	Energy Sales	Own Generation	Transfers among Generating companies	Transfer Percentage /Sales
	(GWh)	(GWh)	(GWh)	(%)
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%
2008	13.219	11.513	1.706	13%
2009	13.656	11.890	1.766	13%
2010	13.792	12.154	1.639	12%
2011	14.263	11.385	2.878	20%
2012	14.831	13.026	1.805	12%
2013	15.414	13.202	2.212	14%

SING ANNUAL SALES COMPOSITION

(GWh)



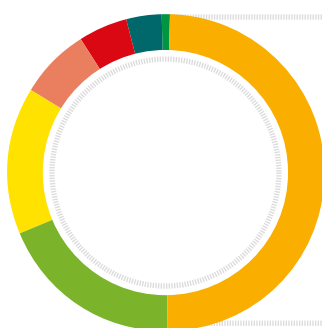
VI. 2004-2013 SING Energy and Power Transfers

ENERGY TRANSFERS AMONG SING GENERATING COMPANIES (GWH) YEAR 2013

COMPANY		January	February	March	April	May	June	July	August	September	October	November	December	Total	NET
AES GENER	Purchases	8,7	9,2	9,2	13,7	7,7	7,8	8,5	9,6	8,3	7,2	3,5	5,7	99,1	99,1
	Sales														
ANDINA	Purchases	56,2										4,2		60,4	
	Sales		14,6	1,8	30,0	23,8	18,6	19,8	22,7	21,9	9,0		39,7	201,9	141,5
ANGAMOS	Purchases														
	Sales	107,2	120,5	107,5	16,4	37,4	108,0	98,5	55,5	91,4	139,0	142,5	134,4	1.158,3	1.158,3
CAVANCHA	Purchases														
	Sales	1,4	1,4	1,5	1,4	1,4	1,4	1,4	1,4	1,4	1,5	1,5	1,5	17,2	17,2
CELTA	Purchases	21,4				10,3		4,5		1,6	92,2	40,2	30,3	200,5	146,9
	Sales		18,0	17,7	9,8		2,8		5,3					53,6	
E-CL	Purchases		141,4	101,6	67,8	86,6	162,0	70,0	71,8	68,5	26,8	93,4	118,8	1.008,7	1.004,3
	Sales	4,4												4,4	
ENERNUEVAS	Purchases														
	Sales	1,5	1,3	1,5	1,4	1,4	1,4	1,3	1,4	1,4	1,5	1,4	1,5	17,0	17,0
ENORCHILE	Purchases	3,3	3,7	3,9	3,1	4,2	33,8	33,8	35,2	33,5	52,4	51,6	44,2	302,7	302,7
	Sales														
EQUIPOS DE GENERACION	Purchases														
	Sales	1,3	0,8	1,1	1,5	1,2	2,1	2,5	2,6	1,2	2,5	1,8	1,7	20,3	20,3
GASATACAMA	Purchases		17,6	22,5										40,1	
	Sales	44,0			33,9	75,1	72,7	61,8	40,3	2,7	34,0	156,8	68,4	589,7	549,6
HORNITOS	Purchases	69,4			1,3	16,0			1,6			19,1		107,4	74,1
	Sales		7,9	3,8			7,3	3,3		1,8	3,2		6,0	33,3	
NORGENER	Purchases	10,0	0,5	6,7	20,2	15,7	21,3	81,6	21,4	19,7	20,7	100,9	60,6	379,3	379,3
	Sales														
NORACID	Purchases														
	Sales	9,1	7,7	8,7	11,5		12,7	11,7	12,5	11,8	10,6	11,0	7,6	114,9	114,9
SPS LA HUAYCA	Purchases														
	Sales	0,1	0,2	0,3	0,2	0,2	0,2	0,2	0,2	0,2	0,3	0,2	0,2	2,5	2,5
ON GROUP	Purchases						2,3	2,1	2,3	2,2	2,3	2,3	1,4	14,9	14,9
	Sales														

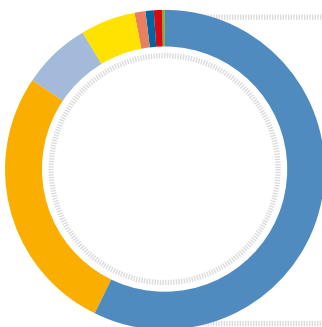
Note: The indicated amounts do not include purchase-sale operations agreed among generating companies.

ENERGY NET PURCHASES AT THE CDEC-SING



● AES GENER	4,9%
● CELTA	7,3%
● E-CL	49,7%
● ENORCHILE	15,0%
● HORNITOS	3,7%
● NORGENER	18,8%
● ON GROUP	0,7%

ENERGY NET SALES AT THE CDEC-SING



● ANDINA	7,0%
● ANGAMOS	57,3%
● CAVANCHA	0,9%
● ENERNUEVASENER	0,8%
● EQUIPOS DE GENERACIÓN	1,0%
● GAS ATACAMA	27,2%
● NORACID	5,7%
● SPS LA HUAYCA	0,1%

ENERGY TRANSFERS AMONG THE CDEC-SING GENERATING COMPANIES (GWH) TERM 2004 - 2013

		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
CELTA	Purchases	663,2	628,5	343,1	160,0	162,0	102,0	64,7	138,8	218,1	200,5
	Sales	0,0	0,0	0,2	45,2	162,0	119,8	85,1	62,6	23,4	53,6
E-CL	Purchases	0,0	0,0	26,2	0,0	115,0	189,2	548,6	433,9	928,2	1.008,7
	Sales	1.637,3	1.522,8	1.057,6	714,9	695,0	193,5	75,4	18,6	6,7	4,4
ELECTROANDINA	Purchases	1.000,1	968,1	540,8	382,3	740,0	663,6	158,5	473,9		
	Sales	18,9	0,0	23,0	69,8	41,0	89,8	418,3	20,1		
AES GENER	Purchases	0,0	0,0	0,0	121,0	13,0	0,0	17,5	46,5	102,4	99,1
	Sales	1.050,3	1.335,6	1.357,0	812,2	676,0	1.201,4	836,0	643,3	0,0	0,0
GASATACAMA	Purchases	430,2	806,1	1.638,1	1.126,2	617,0	594,0	795,0	1.517,6	74,6	40,1
	Sales	126,3	36,1	0,0	0,0	29,0	66,9	19,9	0,0	118,0	589,7
NORGENER	Purchases	739,2	503,1	150,3	104,4	60,0	217,3	40,6	75,6	190,1	379,3
	Sales	0,0	11,3	260,7	251,7	103,0	82,7	150,2	219,0	20,2	0,0
EQUIPOS DE GENERACION	Purchases						0,0	0,0	0,0	0,0	0,0
	Sales						12,1	42,4	23,1	7,4	20,3
ANGAMOS	Purchases							1,5	0,0	0,0	0,0
	Sales							0,0	1.476,4	1.215,8	1.158,3
ENORCHILE	Purchases							12,2	46,7	65,0	302,7
	Sales							5,5	0,0	0,0	0,0
CAVANCHA	Purchases							0,0	0,0	0,0	0,0
	Sales							2,5	14,5	15,0	17,2
ANDINA	Purchases							0,0	81,7	0,0	60,4
	Sales							0,4	282,6	222,3	201,9
ENERNUEVAS	Purchases							0,0	0,0	0,0	0,0
	Sales							2,9	16,6	17,6	17,0
HORNITOS	Purchases								63,1	227,6	107,4
	Sales								101,4	134,1	33,3
NORACID	Purchases								63,1	0,0	0,0
	Sales								101,4	24,0	114,9
SPS LA HUAYCA	Purchases								63,1	0,0	0,0
	Sales								101,4	0,4	2,5
ON GROUP	Purchases										14,9
	Sales										

FIRM POWER AND PEAK HOURS POWER DEMAND AS PER COMPANY – YEAR 2013

FIRM POWER	TOTAL SING	AES GENER	ANGAMOS	C.T. ANDINA	C.T. HORNITOS	CAVANCHA	CELTA	EQUIPOS DE GENERACIÓN (**)	E-CL (*)	ENERNUEVAS	ENORCHILE	GASATACAMA	NORGENER	NORACID	SPS LA HUAYCA	ON GROUP
Firm Power - Injections [MW]	2.024,4	0,0	243,5	80,2	75,9	1,8	81,9	3,7	923,7	1,4	10,6	461,8	130,1	8,9	0,0	0,8
Net Demand HP [MW]	1.989,4	10,4	245,3	127,0	143,1		119,9		940,7		15,2	65,4	311,4	8,7		2,4
Losses [MW]	35,0	-10,4	-1,8	-46,8	-67,2	1,8	-38,0	3,7	-16,9	1,4	-4,6	396,4	-181,3	0,2	0,0	-1,7
FIRM POWER BALANCE [MW]		AES GENER	ANGAMOS	C.T. ANDINA	C.T. HORNITOS	CAVANCHA	CELTA	EQUIPOS DE GENERACIÓN (**)	E-CL (*)	ENERNUEVAS	ENORCHILE	GASATACAMA	NORGENER	NORACID	SPS LA HUAYCA	ON GROUP
Purchases [MW]		12,6	6,4	48,0	68,5		42,4		52,4		5,5		160,5			1,7
Sales [MW]						1,9		3,7		1,4		390,8		0,1	0,0	

Proposals:

(*) Since the Definitive Firm Power calculation in 2011, the Electroandina units became part of the E-CL.

(**) Since the Definitive Firm Power calculation in 2011, the INACAL units became part of the POWER GENERATION TEAMS.

POWER TRANSFERS AMONG THE CDEC-SING GENERATING COMPANIES (MW) TERM 2004 - 2013

	E-CL (*)		ELECTROANDINA (*)		NORGENER		CELTA		GASATACAMA		AES GENER		EQUIPOS DE GENERACIÓN (**)		ENORCHILE		CAVANCHA		ENERNUEVAS		C.T. ANDINA		C.T. HORNITOS		ANGAMOS		NORACID		SPS LA HUAYCA		ON GROUP	
	Purchases	Sales	Purchases	Sales	Purchases	Sales	Purchases	Sales	Purchases	Sales	Purchases	Sales	Purchases	Sales	Purchases	Sales	Purchases	Sales	Purchases	Sales	Purchases	Sales	Purchases	Sales	Purchases	Sales	Purchases	Sales	Purchases	Sales	Purchases	Sales
2004		132,3	119,3		84,2		65,5		43,0			179,6																				
2005		140,1	124,2		82,7		56,4		61,4			184,6																				
2006		159,1	86,8		80,4		71,8		122,9			202,9																				
2007		64,8	41,8		91,0		55,6		55,1			178,8																				
2008		33,5	5,5		81,6		27,0			14,3		66,3																				
2009	20,2			59,3	102,9		20,8		26,2			109,4		1,3	0,1																	
2010	84,92			106,7	96,02		11,64		27,66			105,9		4,9	2,2		0,4	0,2														
2011		173,1			111,5		10,8		52,3			62,9		4,6	4,0		2,2	1,6	35,5		57,8				99,8							
2012	120,9				119,1		42,9			354,7	12,7			3,8	4,7		1,9	1,5	46,2		49,0				33,6		0,1		0,0		0,0	
2013	52,4				160,5		42,4			390,8	12,6			3,7	5,5		1,9	1,4	48,0		68,5				6,4		0,1		0,0	1,7		

(*) Since the Definitive Firm Power calculation in 2011, the Electroandina units became part of the E-CL.

(**) Since the Definitive Firm Power calculation in 2011, the INACAL units became part of the POWER GENERATION TEAMS.

VII. Tolls: Payment for the use of SING Transmission System

TOLLS FOR TRUNK SYSTEM – YEAR 2013

PAYMENTS FROM GENERATING COMPANIES TO TRUNK COMPANIES [THOUSAND OF CH\$] – YEAR 2013

From/To	ETSA			TRANSELEC			TRANSELEC NORTE			TOTAL
	Injection Toll	Withdrawal Toll	PUB and CUE Adjustment ^(*)	Injection Toll	Withdrawal Toll	PUB and CUE Adjustment ^(*)	Injection Toll	Withdrawal Toll	PUB and CUE Adjustment ^(*)	
AES GENER	0	381	0	0	3.065	0	0	4.406	0	7.852
ANDINA	4.466	972	0	0	0	0	22.216	20.731	0	48.386
ANGAMOS	11.201	10.029	0	0	0	0	60.659	208.299	0	290.188
CELTA	22.084	52.840	-4.151	0	495.577	-19.715	1.799.758	671.379	-41.806	2.975.967
E-CL	106.761	116.537	2.446	0	1.039.207	11.633	2.277.916	1.763.379	24.657	5.342.536
ENORCHILE	29	10.500	0	0	104.731	0	190	141.339	0	256.789
GASATACAMA	23	11.761	379	0	95.346	1.796	1.618	148.914	3.811	263.647
HORNITOS	4.606	4.167	0	0	0	0	22.903	33.426	0	65.102
E-GENERACION	45	0	0	0	0	0	275	0	0	320
NORACID	541	9	49	0	0	246	2.744	114	513	4.215
NORGENER	40.150	12.350	1.276	0	32.325	6.040	913.835	310.691	12.825	1.329.493
ON GROUP	0	54	0	0	0	0	0	1.636	0	1.690
TOTAL	189.906	219.599	0	0	1.770.252	0	5.102.113	3.304.314	0	10.586.184

(*) PUB: Unit Toll per Bar, CUE: Unique Expected Charge

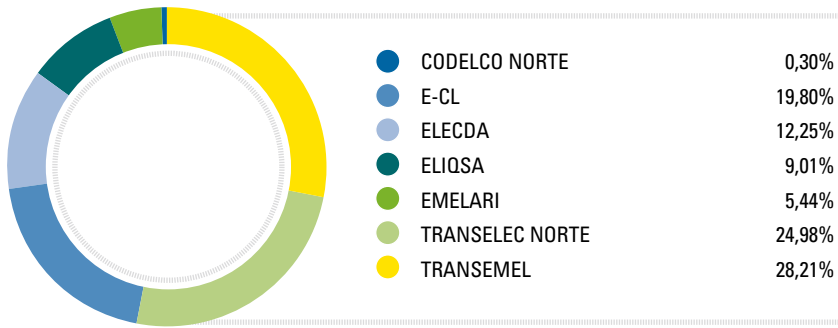
2013 SUB-TRANSMISSION SYSTEM TOLLS

VASTX PAYMENT FROM GENERATING COMPANIES TO SUB-TRANSMITTERS [THOUSAND OF CH\$] – YEAR 2013

From/To	E-CL	ENORCHILE	GASATACAMA	NORACID	NORGENER	TOTAL
CODELCO NORTE	42.492	1.123	348	6	15	43.985
E-CL	2.828.048	73.924	22.915	364	1.019	2.926.270
ELECDA	1.747.356	47.331	14.705	245	653	1.810.290
ELIQUA	1.285.466	34.862	10.835	180	481	1.331.824
EMELARI	775.415	21.026	6.533	109	290	803.374
TRANSELEC NORTE	3.570.323	91.086	28.190	433	1.255	3.691.287
TRANSEMEL	4.032.008	103.090	31.910	491	1.421	4.168.919
TOTAL	14.281.108	372.443	115.436	1.826	5.135	14.775.949

(*) PUB: Single Toll per Bar, CUE: Unique Expected Load

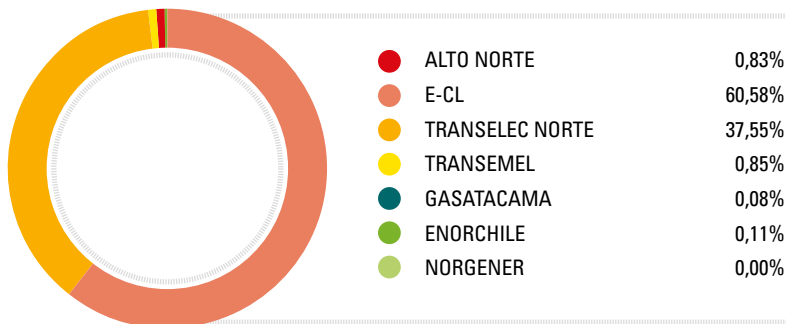
COLLECTION AS PER VASTX - YEAR 2013



PAYMENT FROM SUB-TRANSMITTERS TO GENERATING COMPANIES DUE TO ENERGY AND POWER LOSSES [THOUSAND OF CH\$] – YEAR 2013

From/To	E-CL	ENORCHILE	GASATACAMA	NORGENER	ANGAMOS	NORACID	ON GROUP	ELECDA	TRANSELEC NORTE	TRANSEMEL	ELIQSA	EMELARI	TOTAL
ALTO NORTE	8.139	217	482	65	330	55	11						9.300
E-CL	168.843	2.408	5.558	1.083	3.575	530	234	19.412	454.397	19.944	2.189	1.950	680.124
TRANSELEC NORTE	368.072	9.934	22.154	3.017	15.197	2.328	808						421.508
TRANSEMEL	9.194	64	109		97	41	27						9.532
GASATACAMA	0							48	810	7			865
ENORCHILE								1.255					1.255
NORGENER	23												23
TOTAL	554.271	12.623	28.303	4.166	19.200	2.954	1.080	20.715	455.207	19.951	2.189	1.950	1.122.607

PAYMENT FOR ENERGY AND POWER LOSSES – YEAR 2013



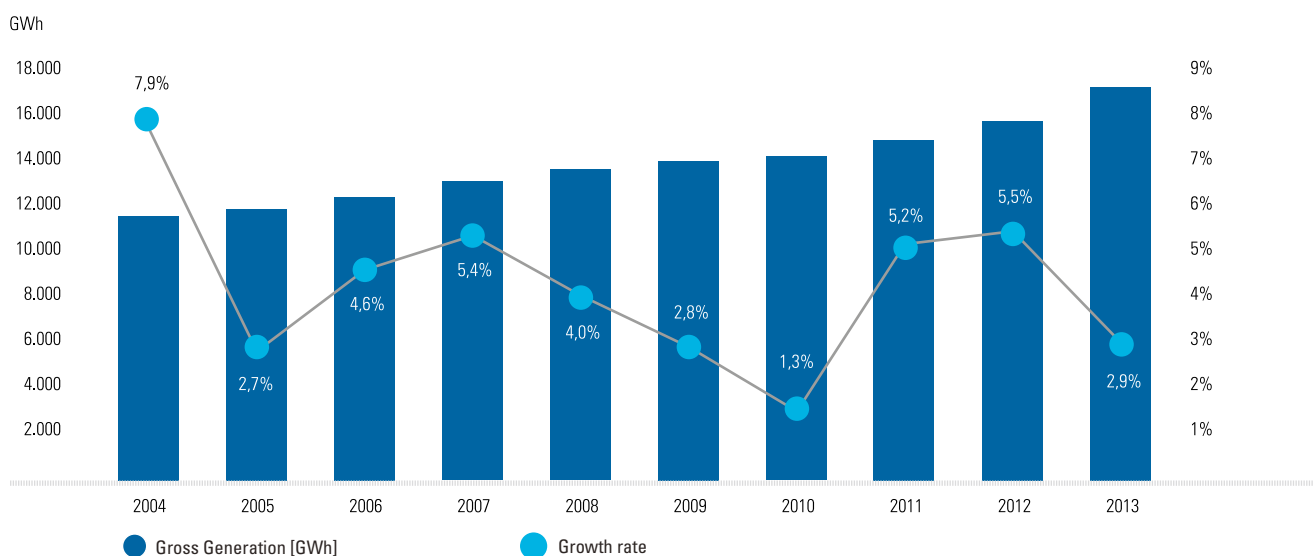
VIII. Energy and Power Demand SING 2004-2013

SING GROSS ENERGY DEMAND

Year	Gross Generation [GWh]	Growth Rate
2004	12.330,0	7,9%
2005	12.657,4	2,7%
2006	13.236,0	4,6%
2007	13.945,8	5,4%
2008	14.502,3	4,0%
2009	14.906,7	2,8%
2010	15.103,8	1,3%
2011	15.889,2	5,2%
2012	16.755,7	5,5%
2013	17.236,8	2,9%

SING GROSS ENERGY DEMANDT

ERM 2004-2013



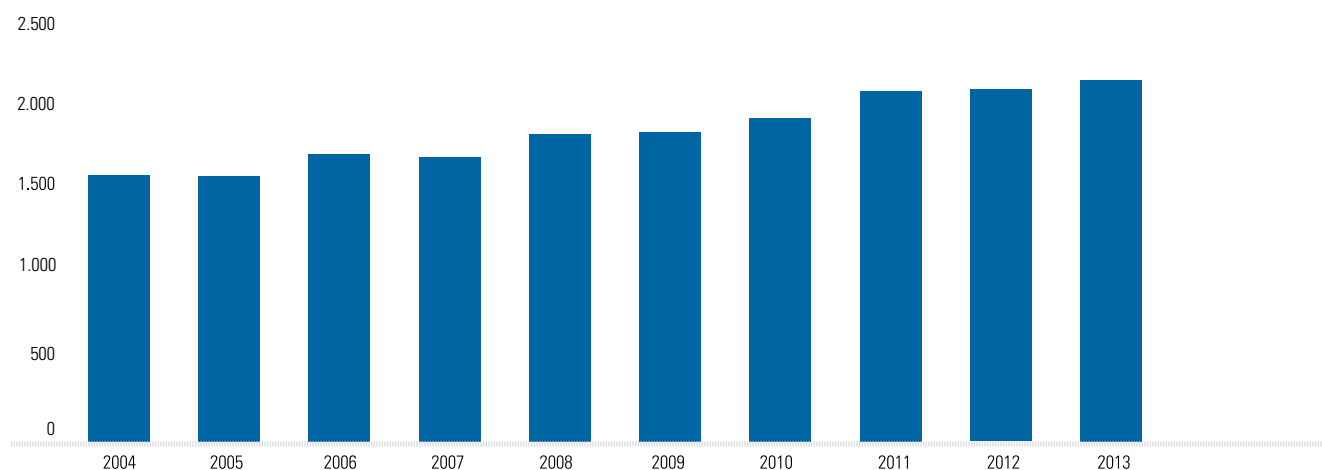
SING POWER MAXIMUM ANNUAL DEMAND TERM 2004-2013

Year	Day	Time	Gross Maximum Generation (MW)	Net Maximum Demand (MW)
2004	19-dic-04	23	1.644	1.567
2005	27-nov-05	22	1.635	1.566
2006	15-dic-06	23	1.770	1.676
2007	24-abr-07	22	1.751	1.665
2008	21-dic-08	22	1.897	1.805
2009	27-sep-09	22	1.907	1.816
2010	26-dic-10	23	1.995	1.900
2011	23-dic-11	22	2.162	2.003
2012	25-dic-12	22	2.169	2.013
2013	01-dic-13	22	2.226	2.060

The Maximum Net Demand is equivalent to the gross power generation minus the stations' own consumption.

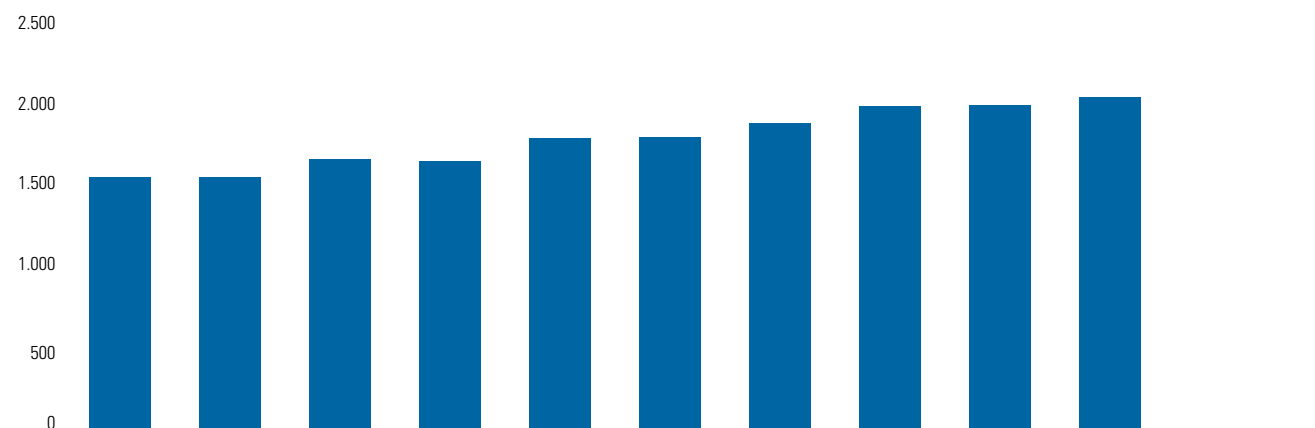
MAXIMUM GROSS ANNUAL GENERATION TERM 2004 - 2013

(MW)

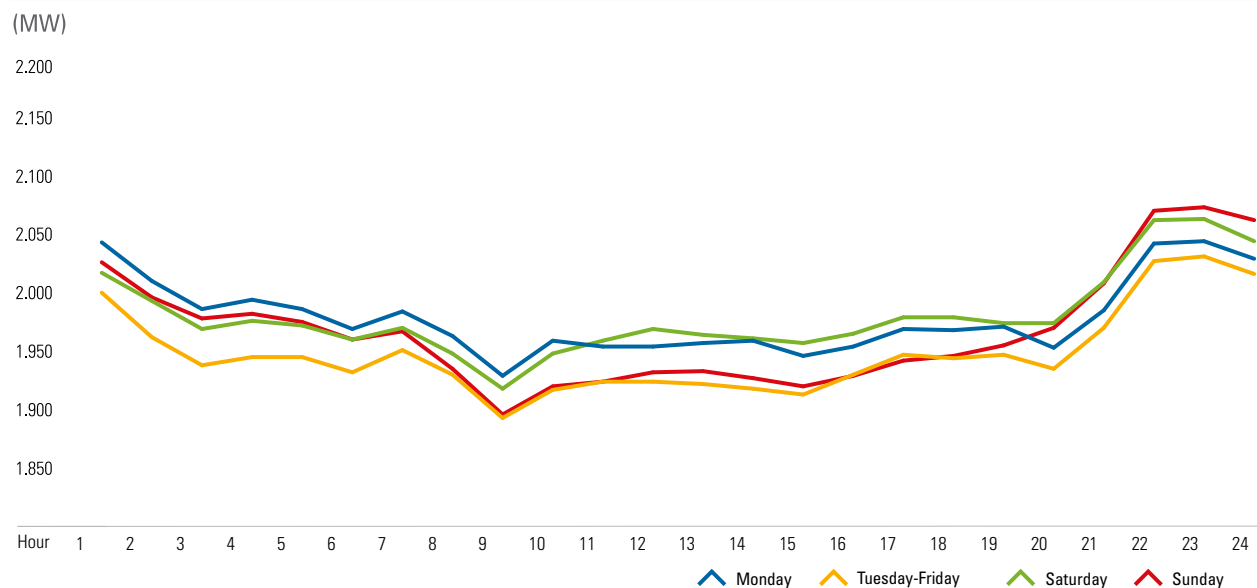


NET MAXIMUM DEMAND TERM 2004 - 2013

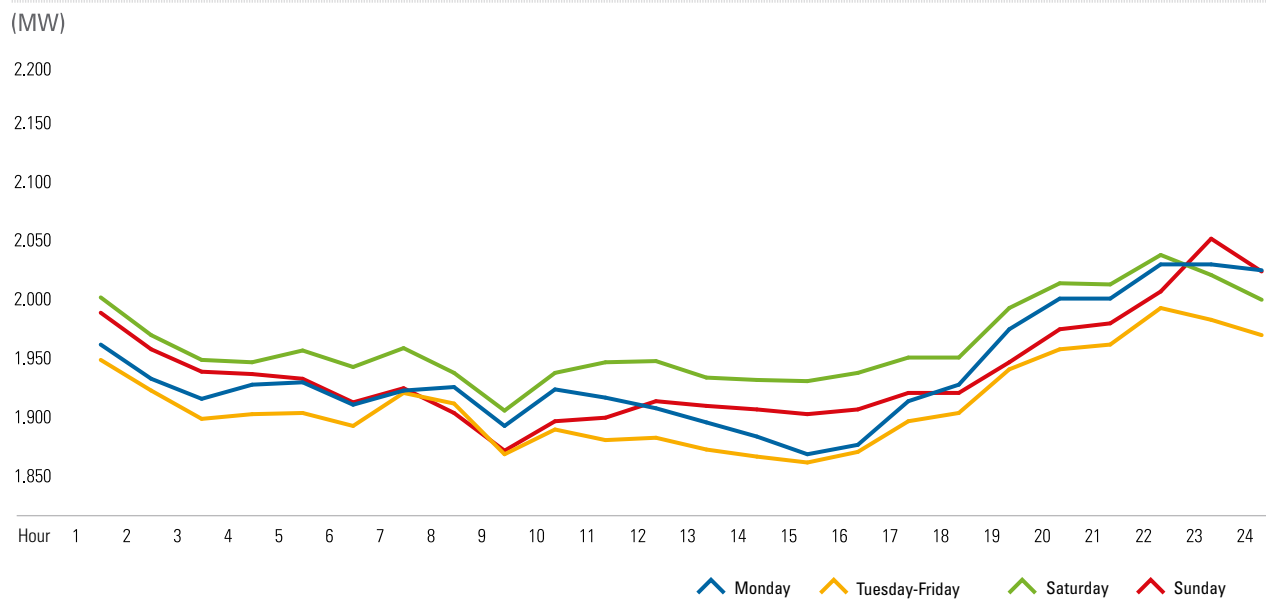
(MW)



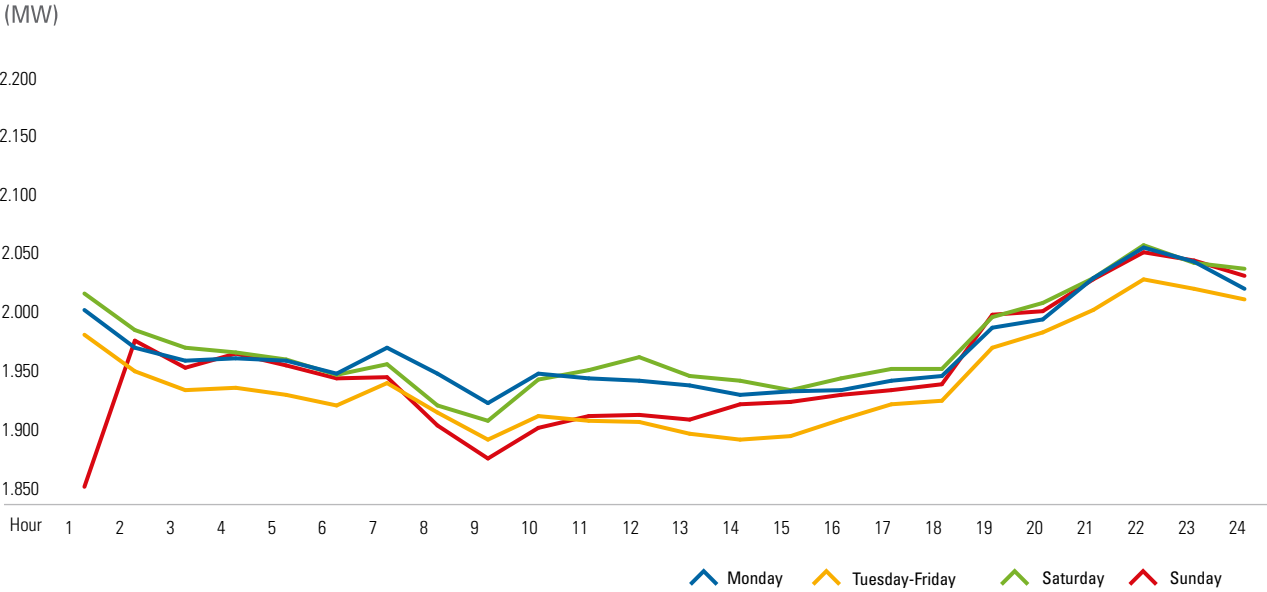
HOURLY AVERAGE GROSS GENERATION 2012 JANUARY - MARCH



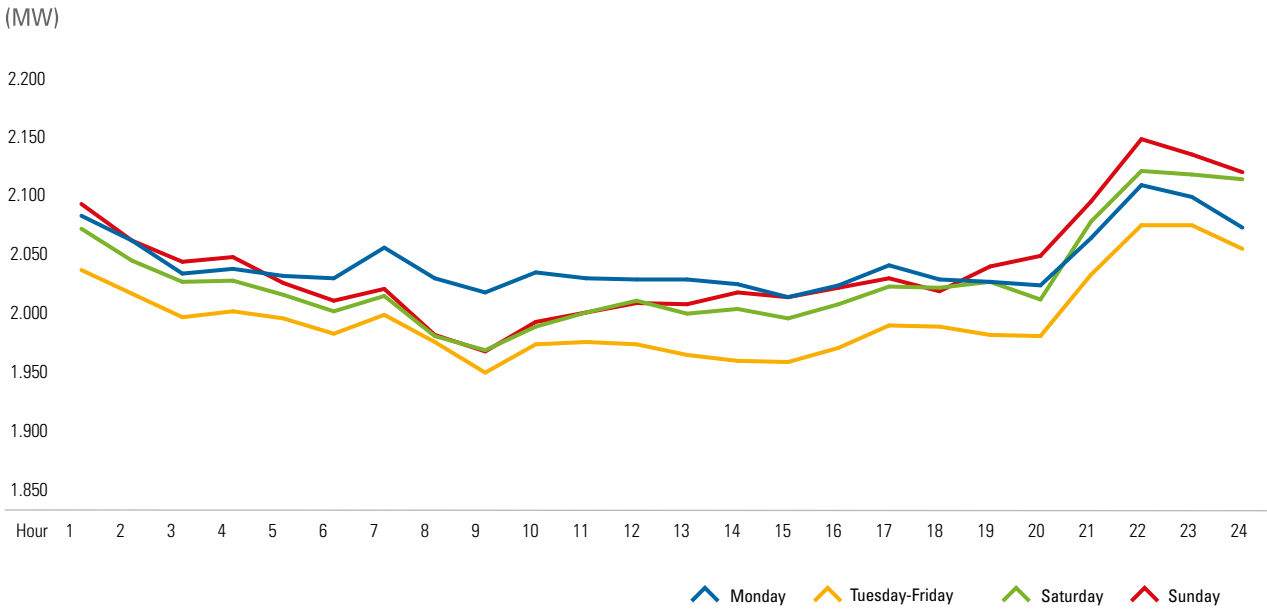
HOURLY AVERAGE GROSS GENERATION 2012 APRIL - JUNE



HOURLY AVERAGE GROSS GENERATION 2012 JULY - SEPTEMBER



HOURLY AVERAGE GROSS GENERATION 2012 OCTOBER - DECEMBER



IX. Non-Conventional Renewable Energies (ERNC)

2013 ERNAC BALANCE

Withdrawals subject to obligation	
System	Energy [GWh]
SIC	28.262,7
SING	7.701,6
Total	35.964,4

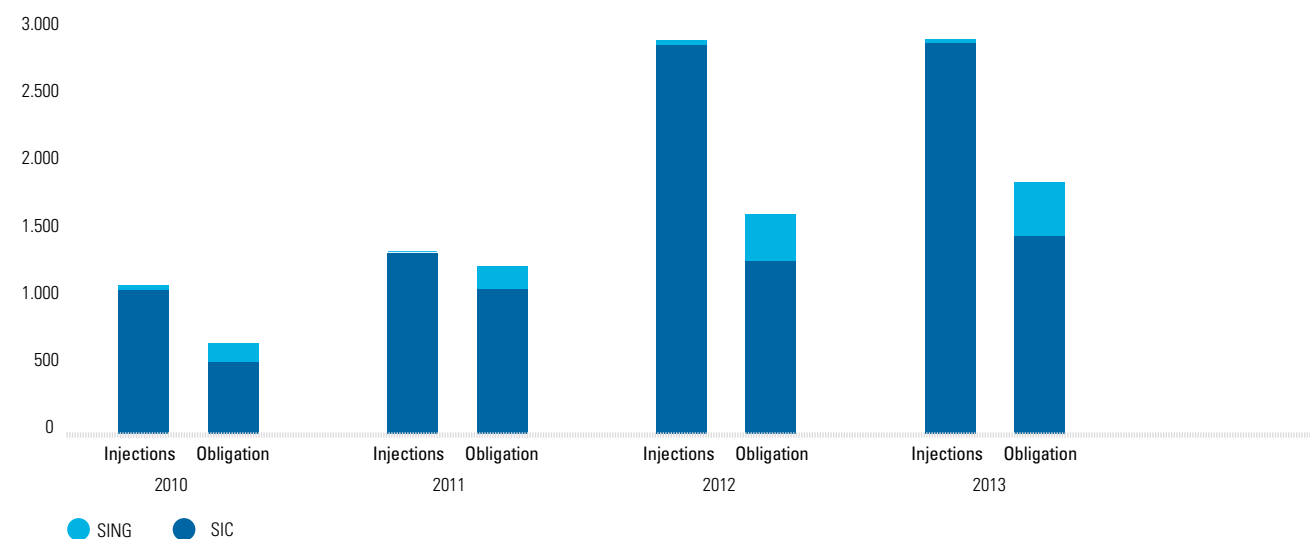
NCRE acknowledged injections	
System	Energy [GWh]
SIC	2.796,0
SING	21,9
Total	2.817,8

NCRE obligation (5% subject withdrawals)	
System	Energy [GWh]
SIC	1.413,1
SING	385,1
Total	1.798,2

NCRE Net Surplus / Shortage	
System	Energy [GWh]
SIC	1.382,8
SING	-363,2
Total	1.019,6

BALANCE NCRE 2010 - 2013

GWh



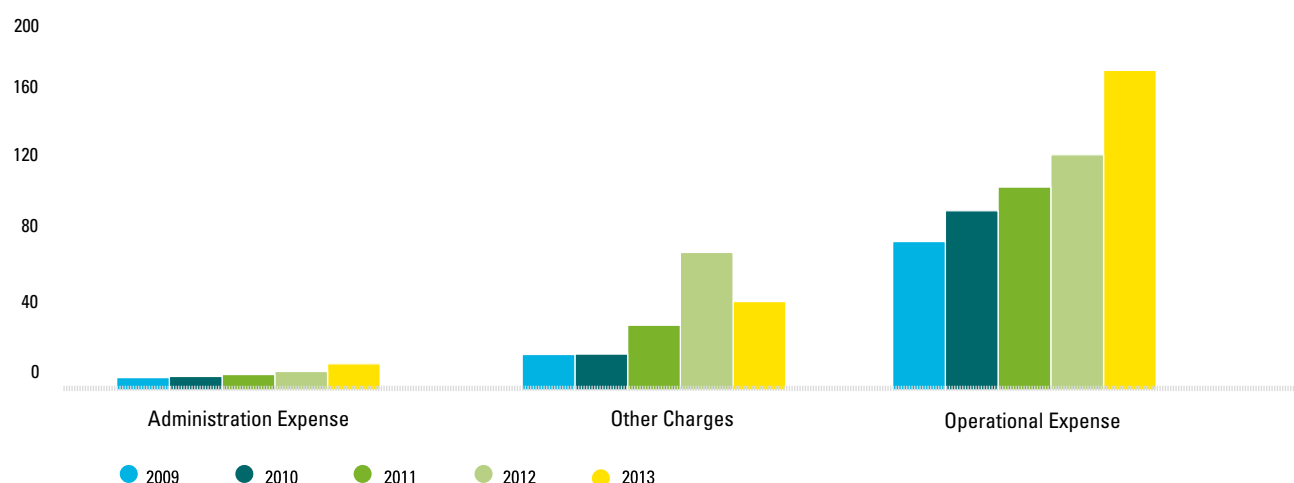
X. CDEC-SING Budget

CDEC-SING BUDGET

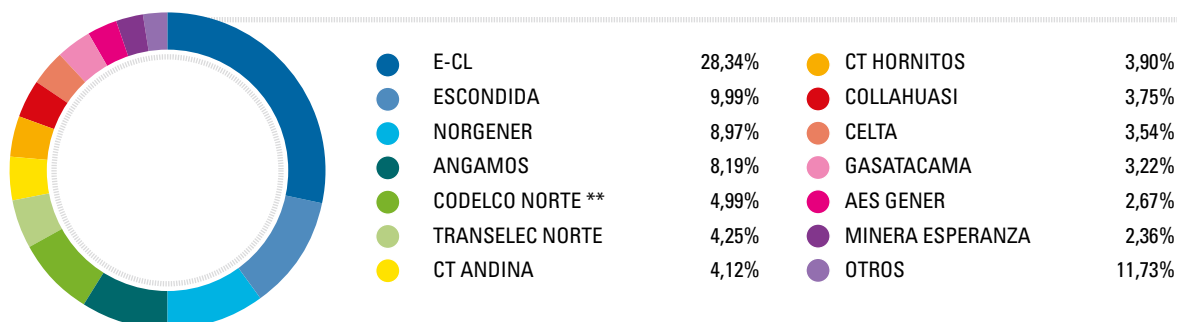
CDEC-SING Budget [thousand UF]	2009	2010	2011	2012	2013	Variation (Thousands UF)	Variation % [Last year]
Administration expense	6,5	7,1	8,1	9,7	13,7	4,0	41,3%
Other charges	18,6	18,8	33,9	72,0	46,3	-25,8	-35,8%
Operational costs	77,7	93,8	106,2	123,1	167,3	44,2	35,9%
Remuneration and Other related	57,8	63,2	72,5	86,9	112,6	25,7	29,6%
Office lease and related expense	7,1	7,8	10,4	10,5	11,5	1,0	9,1%
External Services and Advising	2,2	2,7	2,9	3,9	4,4	0,5	14,1%
Equipment, Software and Services lease	10,5	20,1	20,4	21,8	38,8	17,0	77,8%
Total	103	120	148	204,8	227,2	22	10,93%

CDEC-SING BUDGET

(thousands of UF)



BUDGET PARTICIPATION OF CDEC-SING'S MEMBERS



Note: Only those CDEC-SING members with a participation rate greater than 2% are represented individually.

** Includes 4 operations: Chuquicamata, R. Tomic, M. Hales and G. Mistral



CDEC-SING

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