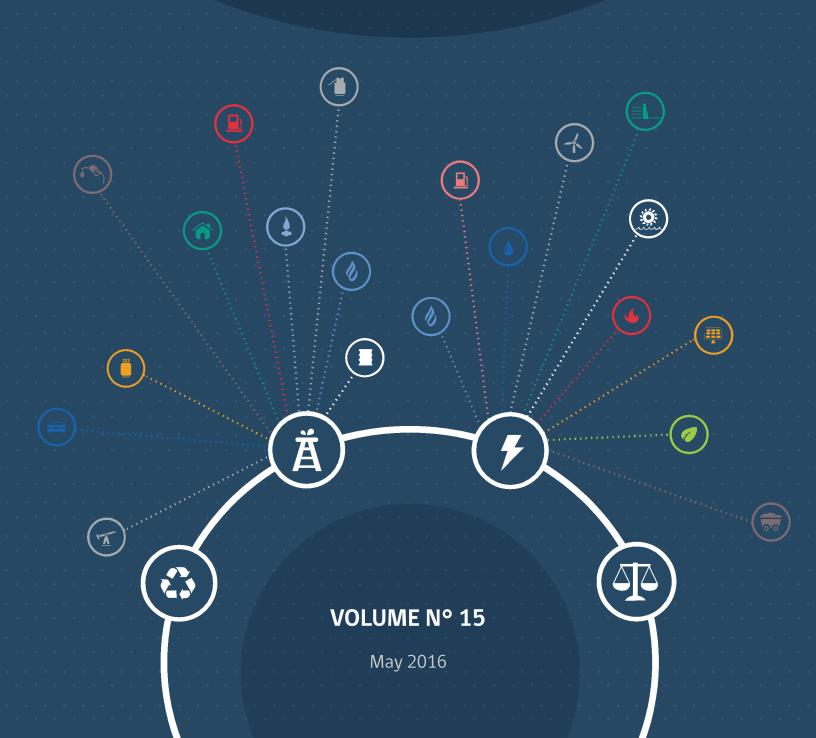
MONTHLY ENERGY SECTOR REPORT NATIONAL ENERGY COMMISSION



HIGHLIGHTS

During the last month, the energy sector has witnessed a series of milestones that reflect the hard work of both the National Energy Commission and the Ministry of Energy. The following are among the principal achievements:

Government and senators introduced indications to the bill of electrical transmission.

The government and the five senators of the commission of mining and energy presented on Thursday, April 28 at the national Congress a set of instructions to the draft law establishing new systems of electric power transmission and creates an independent agency from the national electricity system.

Among the suggestions made, are those included, concerning the compensation because of the unavailability of supply, the new independent coordinator of the national electricity system, the regulation of the panel of experts and the definition of certain areas of the country as poles of power generation.

Energy Minister makes participatory public account of their management from 2015 to 2016.

In Arica, at the Cultural Center, a former customs, the Minister of Energy, Maximo Pacheco, surrounded by the public makes a participatory public account of their management 2015-2016, in which he highlighted the record in energy investment and sustained progress in the electrical interconnection between our country and Peru.

The Minister noted that on March 31 this year, 59 power plants in the country were being built, equivalent to a capacity of 4,105 MW and more than US \$ 12,000 million in investment. In March 2014, when the government of President Bachelet assumed, there were only 29 projects under construction by just under 2,000 MW of capacity.

CNE publishes preliminary report about a tender.

The National Energy Commission published the preliminary report of bidding for power supply in compliance with the General Electricity Services Law.

This preliminary report contains technical aspects of the analysis of demand projections of the concessionaires of public distribution service abided by the obligation to tender,

on the expected situation in the important period and, if any special conditions existed in the tender. It also foresees a projection of the supply tender process should be completed within the next four years.

Congress members of the Committee on Mining and Energy know about the project of Tariff Equity and Recognition of Local Generation.

After obtaining the unanimous approval in the Senate on Wednesday, April 6 the Commission of Mining and Energy of the Deputy Chamber started the discussion in the legislative process for the bill of Tariff Equity and Recognition of Local Generation.

Currently, there is a very uneven receipt in residential electricity rates throughout the country, ranging from \$ 19.344 (in Santiago) to \$ 36.159 (Linares) (calculation, based on account type 180 kWh, January 2015).

The bill introduces mechanisms of equity in electricity tariffs and aims to reduce the differences in the final clients' electricity bills from the different areas of the country, with a clear objective of territorial equity. On the same line, this initiative also contemplates the recognition of power generation in the precinct that produces it.

Open Energy is finalist in the National Competition for Public Civil Service Innovation.

The National Energy Commission presented on Friday, April 1 open data portal, Open Energy, to the members of the jury of the national contest of public innovation Funciona! (Ex Desafío Innovación), that is organized by the Civil Service and Government Laboratory and recognizes innovation and creativity of the civil servants in their institutions.

136 applications from 74 public services were received in the contest, of which 10 initiatives passed to the final stage, between them, Open Energy.

SUMMARY

This report was prepared in **May 2016** in order to provide energy information and statistics **April 2016**.

The report's content has been organized into four chapters to facilitate analysis. These four chapters provide information about the electricity sector, international and domestic markets for oil and gas, the status and progress of environmental approvals for energy projects, and finally the main regulatory aspects affecting the sector during the month of May.

This publication contains official information from external sources as well as from the National Energy Commission (NEC).

To prepare the report, an average exchange rate of **669.93 CLP per USD** observed in **April 2016**.

According to Exempt Resolution No. 397, there were **59** electricity generation projects under construction in the SIC and SING, equivalent to a capacity of **5,089 MW**.

The installed capacity of the SIC in **April** was **15,852** MW and it was **4,062** MW, plus the installed capacity in the Aysén (SEA) and Magallanes (SEM) electricity systems. Together, the four systems with Easter Island and Los Lagos; in aggregate represent an installed capacity of **20,080** MW.

Meanwhile, total electric power generation in the SIC in April was **4,317 GWh**, and in the SING it reached **1,550 GWh**. Therefore, the total generated was **5,868 GWh**, -**8.4%** lower than in March **2016**.

The maximum hourly demand recorded in the SIC and the SING in **April** were **7,212** MW and **2,432** MW, respectively. The maximum in the SIC was recorded on April 15th while the measurement in the SING corresponds to April 17th,2016.

Regarding electricity tariffs, it is important to note that the average marginal cost in **April** in the SIC was **51.5** USD/MWh, -**30.4**% lower than **March 2016**. In the SING meanwhile, the average marginal cost was **52.3** USD/MWh, **5.5**% higher than the previous month.

It is worth noting the average market prices recorded in April in the SIC and SING which were **91.8 USD/MWh** and **83.2 USD/MWh**, respectively.

In terms of international fuel prices, the Brent crude price was **41.5 USD/bbl**, **7.7%** higher than the previous month. Meanwhile, the average price of WTI crude was **41.0 USD/bbl**, and **8.4%** higher than the previous month.

The Henry Hub price (international natural gas price reference) decreased **11.7%** compared to March, with an average value of **1.90 USD/MMBtu**.

The average price of coal was **75.1 USD/ton**, down -**1.6%** over the previous month.

In terms of gasoline prices, those of 93-octane gasoline (unleaded) and diesel should be noted. In April the average domestic price of the former was **CLP 655** /liter, while the average price of the latter was **CLP 421** /liter. In terms of percentages, these represent a rise of **2.0%** and rise of **5.7%** respectively in comparison to March 2016.

A total of **12** energy sector projects were submitted to the Environmental Impact Evaluation System (Sistema de Evaluación de Impacto Ambiental, SEIA): 9 in electricity generation, 2 for electricity transmission energy project and 1 for .Oil and/or gas energy project. Meanwhile, those already being evaluated represent a total investment of **USD 30,243 million**. In addition, **10** projects related to the energy sector obtained favorable environmental qualification resolutions (Resolución de Calificación Ambiental, or RCA) in April, and of those, 5 were for electricity generation , 4 were for highvoltage electricity transmission line projects and 1 was oil and/or gas energy project.

In conclusion, it should be highlighted among all the important policy issues that occurred in April, the exempt resolution No. 375, which modifies the Technical Standard Safety and Quality of Service. Likewise, it should be highlighted the resolution No. 372 and No. 373, both from April 22th, that approves the implementation of the dictum No.2-2016 about trunk system plan expansion, and rectifies the technical inform for determination of annual value and the expansion of national trunk systems, approve it by the exempt resolution No. 616-2015.



CONTENTS

F Elec	tricity Sector	5
	1. Electricity Generation Projects Under Construction	5
	2. Installed Electricity Generation Capacity	7
	3. Electricity Generation	8
	4. Maximum Hourly Demand	9
	5. Marginal Costs	9
	6. Average Market Price	10
	7. Short-term Node Prices	10
	8. Node Price in Medium-size Systems	11
	9. Evolution of Variable Distribution Cost Indexes	12
	10. Hydrological Statistics	12
(ğ) Oil a	and Gas Sector	14
	1. International Fuel Market Prices	14
	2. Domestic Liquid Fuel Prices	15
	3. Fuel Gross Margins	16
	4. Domestic Prices of Network Gas Supplied through Concessions	17
	5. Domestic Prices of Bottled Liquefied Petroleum Gas	18
	6. Fuel Imports and Exports	19
	7. Fuel Sales	21
	8. Fuel Inventory	21
Enei	rgy Projects Undergoing Environmental Evaluation	22
	1. Projects Submitted for Environmental Evaluation	22
	2. Energy Projects Currently Being Evaluated	22
	3. Projects with Approved Environmental Qualification Resolution	23
Sect	tor Regulations	24
	1. Proposed Legislations in Process	24
	2. Sector Regulations Published in the Official Bulletin	24
	3. Sector Regulations Not Published in the Official Bulletin	25
	4. Expert Panel Rulings	25



ELECTRICITY SECTOR

1 Electricity Generation Projects Under Construction

As indicated in Article 31 of the Node Price Setting Regulation (0586/2012), "installations under construction" are defined as generation units, transmission lines and electrical substations that have been granted the respective construction permits for civil works or have been granted the order to proceed in the fabrication and/or installation of the corresponding electrical or electromagnetic equipment for electricity generation, transmission or transformation. For more information about NCRE projects, please go to the CIFES Monthly Energy Report.

According to Exempt Resolution Num. 397, "Works under Construction Update and Report," as of May 04 th there were 27 power generation projects under construction in the SING. Together they represent capacity of 2,233 MW and are projected to begin operation between May 2016 and June 2018.

Projects under Construction in the SING

Category	Date Proyect Name	Region	Technology	Capac. [MW]
	may-16 Pampa Camarones I	XV Región	Solar Photovoltaic	6
	may-16 Bolero I	II Región	Solar Photovoltaic	42
	jun-16 Finis Terrae II	II Región	Solar Photovoltaic	69
	jun-16 Bolero II	II Región	Solar Photovoltaic	42
	ago-16 Sierra Gorda	II Región	Wind	112
	ago-16 Bolero III	II Región	Solar Photovoltaic	21
	oct-16 Blue Sky 1	II Región	Solar Photovoltaic	34
	oct-16 Blue Sky 2	II Región	Solar Photovoltaic	52
	oct-16 Uribe Solar	II Región	Solar Photovoltaic	50
	oct-16 PV Cerro Dominador	II Región	Solar Photovoltaic	100
	oct-16 Bolero IV	II Región	Solar Photovoltaic	41
NCRE	dic-16 Cerro Pabellón	II Región	Geothermal	48
NCIL	ene-17 Arica Solar I	XV Región	Solar Photovoltaic	18
	ene-17 Arica Solar II	XV Región	Solar Photovoltaic	22
	mar-17 Quillagua I	II Región	Solar Photovoltaic	23
	jun-17 Cerro Dominador	II Región	Cogeneration	110
	jun-17 Pular	II Región	Solar Photovoltaic	29
	jun-17 Paruma	II Región	Solar Photovoltaic	21
	jun-17 Lascar I	II Región	Solar Photovoltaic	30
	jun-17 Lascar II	II Región	Solar Photovoltaic	35
	sep-17 Huatacondo	I Región	Solar Photovoltaic	98
	oct-17 Quillagua II	II Región	Solar Photovoltaic	27
	oct-17 Usya	II Región	Solar Photovoltaic	25
	jun-18 Quillagua III	II Región	Solar Photovoltaic	50
	may-16 Kelar	II Región	NLG	517
Thermoelectric	oct-16 Cochrane U2	II Región	Coal	236
	feb-18 Infraestructura Energética Mejillones	II Región	Coal	375

Source: NEC

Source: NEC

Total under construction in the SING, by technology

2% 5% 5% 27% Natural Gas 2,233 Solar Photovoltaic [MW] 23% Concentrated Solar Power 38% Geothermal

Projected operation start date, SING











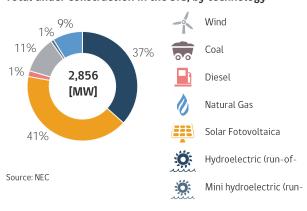
According to Exempt Resolution No. 397, "Works under Construction Update and Report," as of May 04 there were **32** power generation projects under construction in the SIC. Together they represent capacity of **2,856 MW** and are projected to begin operation between May 2016 and October 2020.

Projects under Construction in the SIC

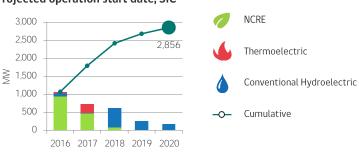
Category	Date Proyect Name	Region	Technology	Capac. [MW]
	may-16 La Montaña I	III Region	Mini hydroelectric (run-of-river)	3
	may-16 Los Loros	III Region	Solar Photovoltaic	50
	may-16 Chuchiñí	III Region	Solar Photovoltaic	3
	may-16 Santa Julia	III Region	Solar Photovoltaic	3
	may-16 Conejo I	III Region	Solar Photovoltaic	105
	may-16 Las Peñas	III Region	Wind	8
	jun-16 Río Colorado	III Region	Mini hydroelectric (run-of-river)	15
	jun-16 Carrera Pinto II	III Region	Solar Photovoltaic	77
	jul-16 San Juan	III Region	Wind	185
	ago-16 Abasol	III Region	Solar Photovoltaic	62
	ago-16 Quilapilún	III Region	Solar Photovoltaic	103
	sep-16 El Romero	III Region	Solar Photovoltaic	196
	oct-16 El Pelícano	III Region	Solar Photovoltaic	100
NCRE	oct-16 Chaka I	III Region	Solar Photovoltaic	27
	oct-16 Chaka II	III Region	Solar Photovoltaic	23
	ene-17 Guanaco Solar	III Region	Solar Photovoltaic	50
	ene-17 PFV Olmué	III Region	Solar Photovoltaic	144
	ene-17 Valleland	III Region	Solar Photovoltaic	67
	abr-17 Malgarida	III Region	Solar Photovoltaic	28
	abr-17 Las Nieves	III Region	Mini hydroelectric (run-of-river)	7
	abr-17 Cabo Leones I	III Region	Wind	116
	ago-17 Divisadero	III Region	Solar Photovoltaic	65
	ago-18 Valle Solar	III Region	Solar Photovoltaic	74
	jun-16 Ancoa	III Region	Hydroelectric (run-of-river)	27
	sep-16 La Mina	III Region	Hydroelectric (run-of-river)	34
	oct-18 Ñuble	III Region	Hydroelectric (run-of-river)	136
	dic-18 Los Cóndores	III Region	Hydroelectric (run-of-river)	150
	dic-18 Las Lajas	III Region	Hydroelectric (run-of-river)	267
	may-19 Alfalfal II	III Region	Hydroelectric (run-of-river)	264
Conventional	oct-20 San Pedro	III Region	Hydroelectric (run-of-river)	170
Conventional Hydroelectric	oct-16 Doña Carmen	III Region	Diesel	48
Tiyurbetectric	jun-17 CTM-3*	III Region	Diesel	251

Source: NEC

Total under construction in the SIC, by technology



Projected operation start date, SIC



Source: NEC





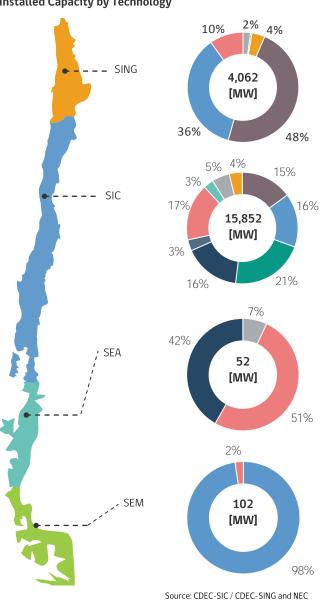




2 Installed Electricity Generation Capacity

The installed electricity generation capacity as of April 2016 was (*)20,080 MW. Of that, 15,852 MW (78.9%) corresponded to the SIC and 4,062 MW (20.2%) to the SING. The remaining 0,8% was distributed among the Aysén and Magallanes electricity systems. As of April, 56.8% the country's total installed capacity is represented by thermoelectric generation, while 13.3% is NCRE. For more information about NCRE projects, please go to the CIFES Monthly Energy Report

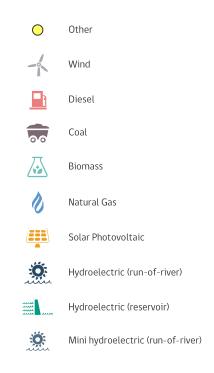
Installed Capacity by Technology



Installed capacity by system

System	Capacity [MW]	Capacity [%]
• SING	4,062	20.2%
• SIC	15,852	79.0%
• SEA	54	0.3%
SEM	102	0.5%

Source: CDEC-SIC / CDEC-SING and NEC



Power generation plants in testing phase

In addition to the total installed capacity, there are 27 synchronous power generation plants with their respective electricity systems that have not yet been approved for dispatch by the CDEC (in the testing phase). Of these, 21 plants are in the SIC (with a total capacity of 317.9 MW) and 6 are in the SING (with a total capacity of 657.7 MW). Thus, there is a total of 975.6 MW in the testing phase.

^{*} The total installed capacity also includes Los Lagos (6 MW) and Easter Island (4 MW) systems.

^{*}Is not considered in this total the Natural Gas power plant, located in Salta (Argentina); connected to the SING (380 MW)





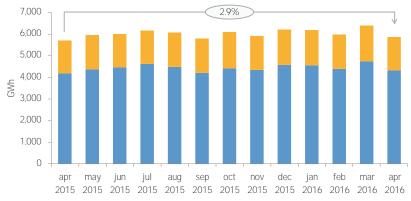




3 Electricity Generation

Power generation in the SIC during April 2016 reached a total of **4,317 GWh**, which were classified as 56% thermoelectric, 32% conventional hydroelectric and 12% NCRE. In the SING, **1,550 GWh** of electric power were generated, 6% from thermoelectric plants and 94% from NCRE. Together the systems reached a total of **5,868 GWh**, a decrease of **-8.4%** over the previous month and increase **2.9%** in comparison to April 2016. In resume, if we sort by generation category, we distinguish: 34.0% NCRE, 23.2% hydroelectric and 42.8% thermoelectric generation.

Evolution of gross electric power generation, SIC-SING



Generation variation, by system

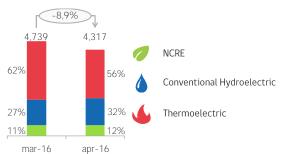
Energy Generation [GWh]		Monthly		Annual	
• Total	5,868	$\overline{}$	-8.4%		2.9%
SING	4,317	$\overline{}$	-8.9%	_	3.4%
• SIC	1,550	$\overline{}$	-7.1%	_	1.4%

Source: CDEC-SIC / CDEC-SING

Source: CDEC-SIC / CDEC-SING

Following is a breakdown of power generation by technology in the SIC and SING.

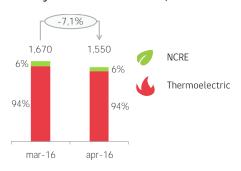
Monthly Variation in Generation, SIC



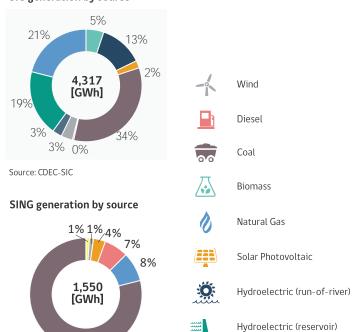
Source: CDEC-SIC

Source: CDEC-SIC

Monthly Variation in Generation, SING



SIC generation by source



Source: CDEC-SIC

79%

Mini hydroelectric (run-of-ririver)







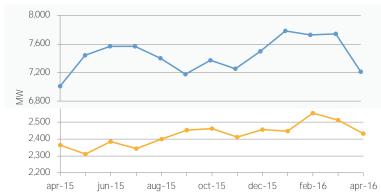


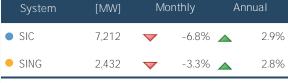
4 Maximum Hourly Demand

In April 2016, The maximum hourly demand recorded in the SIC was **7,212 MW** on 15th, -**6.8%** loer than the previous month and **2.9%** higher over the same month of 2015. In the SING, the maximum hourly demand recorded on 17th was **2,432 MW**, which represented a -**3.3%** lower over the maximum hourly demand recorded in the previous month and **2.8%** higher over the same month of 2015

Evolution of maximum hourly demand, SIC - SING

Variation in maximum hourly demand, by system





Source: CDEC - SIC / CDEC - SING

Source: CDEC - SIC / CDEC - SING

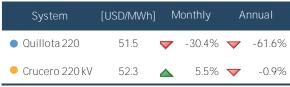
5 Marginal Costs

The marginal cost is the variable cost of the most expensive generation unit operating at a specific point in time. In this case, the Quillota 220 kV busbar was used as the reference to obtain the marginal cost in the SIC while the Crucero 220 kV busbar was used as the reference in the SING. The value given for each system corresponds to the monthly average of hourly marginal costs. In **April**, the average marginal cost in the SIC was **51.5 USD/MWh**, -**30.4%** lower than the previous month and -**61.6%** lower than April 2015. In the SING, the average marginal cost was **52.3 USD/MWh**, **5.5%** more than he previous month and -**0.9%** less the same month of 2015.

Evolution of marginal costs, SIC - SING

Variation in marginal costs, SIC - SING





Source: CDEC - SIC / CDEC - SING

Source: CDEC - SIC / CDEC - SING









6 Average Market Price

The average market price (AMP) for each system is based on the average price of free customer contracts and long-term supply contracts held by distribution companies as applicable, reported to the National Energy Commission by the distribution companies operating in the Norte Grande Interconnected System and the Central Interconnected System. The AMP calculation takes into consideration a four-month window ending with the third month prior to the AMP publication date.

The AMP recorded in **April** for the SIC was **91.8 USD/MWh**, **2.3%** higher than the previous month and -**3.9%** lower than April 2015. The AMP in the SING was **83.2 USD/MWh**, **0.7%** more than the previous month and -**10.1%** down than the same month in 2015.

Evolution of market prices, SIC - SING



Variation in average market prices, by system

System	[USD/MWh]*	Monthl	y Ar	nnual
• SIC	91.8	2 .	3% 🔻	-3.9%
SING	83.2	a 0.	7% 🔻	-10.1%

Source: CDEC - SIC / CDEC - SING

Source: CDEC - SIC / CDEC - SING

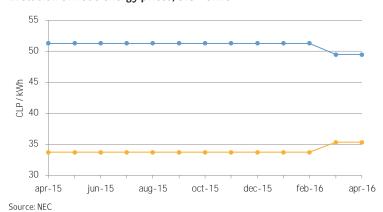
7 Short-term Node Prices

Short-term node prices are set twice each year, in May and October. These prices may be indexed monthly, depending on the conditions established in the twice-yearly decree that sets node prices for electricity supply. The prices are calculated by the National Energy Commission (NEC) which submits a technical report with the results to the Energy Ministry. The ministry then proceeds to set the prices via a decree published in the Official Bulletin.

Node Energy Price

The node energy price is the average over time of the marginal cost of energy in the electricity system operating at the minimum, updated operation and rationing cost. The node energy price in the SIC in **April** was **49.5 CLP/kWh**, -**3.5%** decrease over the same month of 2015. In the SING, the node energy price in **April** was **35.3 CLP/kWh**, **4.7%** down over the same month of 2015.

Evolution of node energy prices, SIC - SING



Variation in node energy prices, by system

System	CLP/kWh	Moi	nthly	Ar	nnual
PNESIC	49.5	_	0.0%	$\overline{}$	-3.5%
PNESING	35.3		0.0%	_	4.7%

Source: NEC

^{*} Real value at the publish date, according to the CPI (consumer price index) of second previous month at the indicated date and the observed dollar of the previous month of the publish report date.





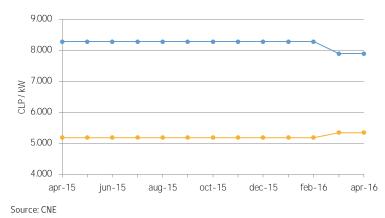




Node Power Price

The node power price is the annual marginal cost of increasing the installed capacity of the electricity system taking into consideration the most economic generation plants, required to supply additional capacity during the annual maximum hourly demand of the electricity system, increased by a percentage equal to the theoretical capacity reserve margin of the system. The node power price in the SIC in **April** was **7,902 CLP/kW**, **-4.6%** decrease over the same month of 2015. In the SING, the node power price was **5,346 CLP/kW**, **3.1%** increase over the same month of 2015.

Evolution of node power price, SIC - SING



Variation in node power price

System	CLP/kW	Monthly		Annual	
• PNP SIC	7,902		0.0%	$\overline{}$	-4.6%
PNP SING	5,346		0.0%		3.1%

Source: CNE

8 Node Price in Medium-size Systems

Below we present the node energy price and node power price in medium-size systems for April del 2016. These node prices are applied to energy supply at the withdrawal busbars indicated in the following tables:

Variation in node energy price, medium-size systems

Busbar	[USD/MWh]	Index		Annual	
Pta Arenas	65	_	1.5%	_	5.3%
Tres Puentes	65		1.5%		5.3%
Pto Natales	95		1.5%		6.4%
Porvenir	88		1.4%		6.0%
Pto Williams	272		-7.5%	$\overline{}$	-11.2%
Aysén 23	83		-8.6%	$\overline{}$	-10.5%
Chacab23	82		-8.6%	$\overline{}$	-10.5%
Mañi23	83		-8.5%	$\overline{}$	-10.4%
Ñire33	83		-8.5%	$\overline{}$	-10.4%
Tehuel23	83		-8.5%	$\overline{}$	-10.4%
Palena	89		0.8%	_	6.3%
G.Carrera	103		13.1%	$\overline{}$	-17.7%
Cochamó	161		15.1%	$\overline{}$	-21.0%
Hornopirén	150		-9.1%	$\overline{}$	-11.9%

Source: CNE

Variation in node power price, medium-size systems

Busbar	[USD/MW-mth]	Index		Annual	
Pta Arenas		_	8.5%	_	5.3%
Tres Puentes			8.5%		5.3%
Pto Natales			8.3%		6.4%
Porvenir			7.2%		6.0%
Pto Williams			5.6%		-11.2%
Aysén 23			7.3%		-10.5%
Chacab23			7.3%		-10.5%
Mañi23			7.3%		-10.4%
Ñire33			7.3%		-10.4%
Tehuel23			7.3%		-10.4%
Palena			6.8%		6.3%
G.Carrera			5.7%	_	-17.7%
Cochamó			5.6%	_	-21.0%
Hornopirén			7.2%	_	-11.9%

Source: CNE









9 Evolution of Variable Distribution Cost Indexes

The distribution added value (DAV)* is set every four years by the Energy Ministry, based on a technical report prepared by the NEC, and corresponds to the average cost of investment, administration, maintenance and operation of electricity distribution networks calculated for an efficient model company operating in Chile. The DAV has a fixed component and a variable component, both of which were established by Article 182 of the General Electrical Services Law and are indexed monthly. Below we provide the evoluation of the indexator of the variable component both for high and low voltage for April del 2016.

For more information about this, please go to the <u>Decreto N°1T/2012 Proceso de Fijación de Tarifas de Distribución 2012-2016</u>.

Evolution of Indexes



Variation in Indexes

System	Index	Monthly	Annual	
• CDAT	1.055	-0.5%	1.9%	
CDBT	1.050	-0.4%	1.6%	

Source: CNE

Source: CNE

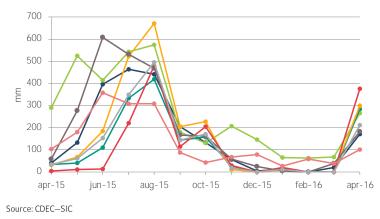
10 Hydrological Statistics

Because of the hydro-thermal nature of the Central Interconnected System, which features large hydroelectric (reservoir) plants with for regulation in different periods of time and thermal plants (as well as other technologies), the use of reservoir water must be optimized in order to minimize the total cost of supplying the system. For this reason, we provide information below from monitoring and recording the important variables associated with hydrology, such as rainfall, and the operational status of infrastructure of the hydroelectric plants in relation to the respective reservoir levels and volumes.

Rainfall Statistics

The monthly rainfall statistics published by CDEC-SIC and updated as of April del 2016 are shown below for the main measurement locations

Evolution of Annual Rainfall



Variation in Annual Rainfall

Rese	Reservoir		Monthly		Annual	
***	Abanico	170	_	>100%	_	>100%
***	Canutillar	266		>100%	$\overline{}$	-9%
***	Cipreses	285		n/d		>100%
***	Colbún	299		n/d		>100%
***	Otros (**)	377		n/d		>100%
***	Pangue	182		>100%		>100%
***	Pehuenche	211		n/d		>100%
***	Pilmaiquén	101		>100%	$\overline{}$	-1%
Ov	erall total	1.890	_	>100%	<u> </u>	>100%

^(*) The relative weight in a type BT1a account with a monthly consumption of 150kWh is 26.97% in the SIC and SING 22.95%.

^(**) Other: Sauzal, Cypress, Molles, Rapel.





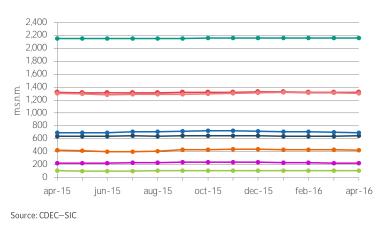




Reservoir, Lake and Lagoon Levels

According to information submitted by the CDEC-SIC, in April the final levels were found for the following reservoirs, lakes and lagoons:

Evolution of Reservoir Levels



Variation in Reservoir Levels

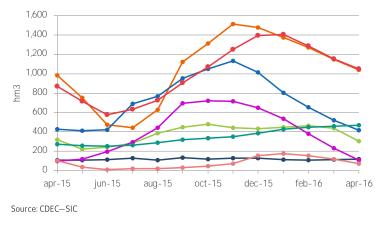
Rese	rvoir	[m.s.n.m.]	Monthly	Annual
	Embalse Colbún	425	-0.7%	0.4%
	Embalse El Melado	644	0.2%	0.4%
	Embalse Ralco	693	-0.9%	-0.1%
	Embalse Rapel	102	-1.9%	-0.3%
	Lago Chapo	222	→ -1.2%	0.1%
	Lago Laja	1,320	-0.1%	0.2%
	Laguna El Maule	2,163	0.0%	0.2%
	Laguna La Invernad	1,302	-0.6%	-0.4%

Source: CDEC-SIC

Reservoir, Lake and Lagoon Volumes

Based on levels reported by the CDEC-SIC for volumes of water stored in the largest reservoirs, lakes and lagoons, considering the characteristics of each one as of April 2016.

Evolution of Reservoir Volume



Variation in Reservoir Volume



Source: CDEC—SIC



1 International Fuel Market Prices

The following information details the moving year evolution of the West Texas Intermediate (WTI) crude oil price index, which is used as a reference in the U.S. market, along with the BRENT oil price index which reflects oil prices for European markets. In **April 2016** WTI oil prices was **41.0 USD/bbl.**, **8.4%** increase from the previous month and -**24.5%** decrease from the same month of 2015. Meanwhile, the average BRENT oil prices was **41.5 USD/bbl**, **7.7%** higher than previous month and -**30.0%** lower from the same month of 2015.

Evolution of BRENT and WTI Oil Prices



Crude Oil Variation (USD/bbl.)

Index	USD/bbl.	Monthly	Annual
BRENT DTD	41.5	7.7%	-30.0%
₩TI	41.0	8.4%	-24.5%

Source: NEC, based on data from Argus Media Inc.

Source: NEC, based on data from Argus Media Inc.

The following information details the evolution of the Henry Hub (Louisiana) price index, which serves as a reference for liquefied natural gas (LNG) imports to Chile. In **April 2016**, Henry Hub averaged **1.90 USD/MMBtu**, **11.7%** increase from previous month and -**26.3%** decrease from the same month of 2015.

Evolution of Natural Gas Price (Henry



Natural Gas Variation (Henry Hub)

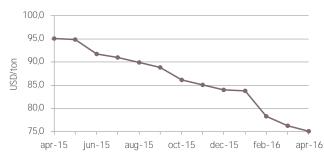
	Index	USD/MMBtu	Mo	onthly	Д	ınnual
0	HENRY HUB SPOT	1.90	_	11.7%	$\overline{}$	-26.3%

Source: NEC, based on data from the Daily Gas Price Index, NGI Intelligence

Source: NEC, based on data from the Daily Gas Price Index, NGI Intelligence

The following information details the evolution of the price of EQ 7000 steam coal kCal/kg which in **April 2016** averaged a price of **75.1 USD/ton**, representing **-1.6%** decrease over the previous month and **-21.1%** from the same month of 2015.

Evolution of EQ 7000 Steam Coal kCal/kg



Variation in EQ 7000 Steam Coal kCal/kg

	Index	USD/ton	Monthly	Annual
00	THERMAL COAL EQ. 7.000 KCAL/KG	75.1	▽ -1.6%	▽ -21.1%

Source: NEC, based on data from Platts Coal Trader International







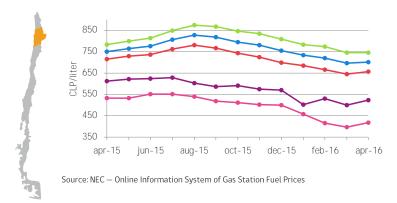


2 Domestic Liquid Fuel Prices

The following information details the evolution of different types of petroleum-derived liquid fuels sold or commercialized at gas stations (93-, 95-, and 97-octane unleaded gas, diesel, household kerosene and diesel oil) during the last 12 months, along with the average monthly price in last month for the cities of Antofagasta, Concepción, Puerto Montt and the Santiago Metropolitan Region.

The information presented is prepared by the National Energy Commission which, as part of its legal functions and powers, developed the Online Information System of Gas Station Fuel Prices, www.bencinaenlinea.cl

Evolution of Liquid Fuel Prices Antofagasta

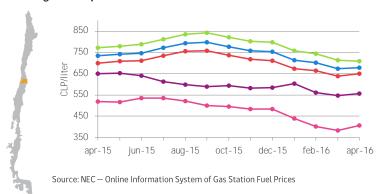


Variation of Liquid Fuel Prices

Fuel Type	CLP/liter	Monthly	Annual
Gasoline 93 SP	658	2.0%	-8.0%
Gasoline 95 SP	702	0.9%	-6.3%
Gasoline 97 SP	745	-0.1%	-4.9%
■ Kerosene	525	4.8%	-14.4%
■ Diesel	419	5.5%	-21.3%

Source: NEC — Online Information System of Gas Station Fuel Prices

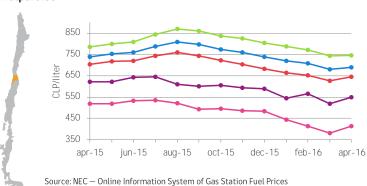
Santiago Metropolitan



Fuel Type	CLP/liter	Monthly		Annual	
Gasoline 93 SP	651	_	1.9%	-6.9%	
Gasoline 95 SP	677		0.6%	-7.8%	
Gasoline 97 SP	709	$\overline{}$	-0.6%	-8.3%	
Kerosene	556		1.7%	-14.6%	
■ Diesel	407		6.3%	-21.4%	

 ${\tt Source: NEC-Online\ Information\ System\ of\ Gas\ Station\ Fuel\ Prices}$

Valparaíso



Fuel Type	CLP/liter	Mon	thly	Annual
🖺 Gasoline 93 SP	645		3.0%	-8.2%
🖺 Gasoline 95 SP	691		1.6% 🤜	-6.6%
Gasoline 97 SP	746	<u> </u>	0.3%	-5.1%
Li Kerosene	550	_	5.9%	- 11.6%
■ Diesel	415	_	8.6%	- -20.0%

Source: NEC — Online Information System of Gas Station Fuel Prices



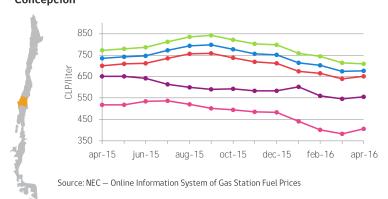






Evolution of Liquid Fuel Prices

Concepción

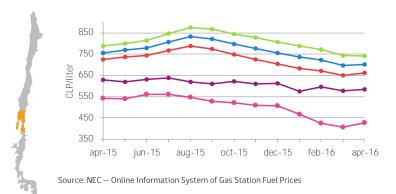


Variation of Liquid Fuel Prices

Fuel Type	CLP/liter	Mo	nthly	Annual
Gasoline 93 SP	653	_	1.7%	-7.7%
Gasoline 95 SP	695		0.7%	-6.9%
Gasoline 97 SP	738	$\overline{}$	-0.2%	-4.2%
■ Kerosene	519	$\overline{}$	-1.5%	-13.9%
□ Diesel	417		5.2%	-22.6%

Source: NEC — Online Information System of Gas Station Fuel Prices

Puerto Montt



Fuel Type	CLP/liter	Monthly		Annual
Gasoline 93 SP	663		2.0%	-8.7%
Gasoline 95 SP	703		0.9%	-7.1%
Gasoline 97 SP	743	$\overline{}$	-0.1%	-5.7%
Kerosene	584		1.0%	-7.4%
■ Diesel	428	_	5.4%	- -21.2%

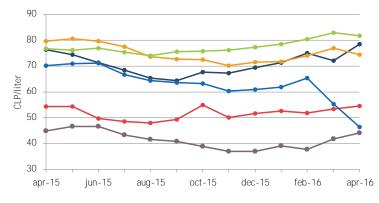
Source: NEC — Online Information System of Gas Station Fuel Prices

3 Fuel Gross Margins

The retail sales price of fuels is structured as follows: sales price at the refinery, sales margin and taxes (VAT and specific tax). The following information shows the evolution of the sales margin for 93-octane gas and diesel in the 5th, 6th, 7th, 8th, 12th and Santiago Metropolitan regions.

93-Octane Gasoline

Evolution of Gross Sales Margin



Source: CNE

Variation in Gross Sales Margin



Source: CNE



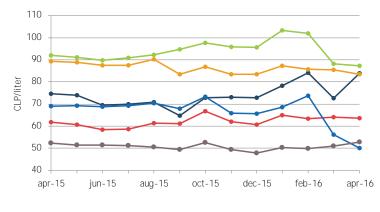






Diesel

Evolution of Gross Sales Margin



Variation in Gross Sales Margin

Diesel Oil	CLP/liter	Monthly	Annual
\$ ☐ 5th Region	84	1 5.6%	12.5%
\$ <u>□</u> 6th Region	83	-2.4%	-6.6%
\$ ■ 7th Region	50	- 10.6%	-27.4%
\$ <u>■</u> 8th Region	87	-1.1%	-5.2%
\$ Santiago Metropolitana	64	-0.4%	3.1%
\$ □ 12th Region	53	3.5%	0.8%

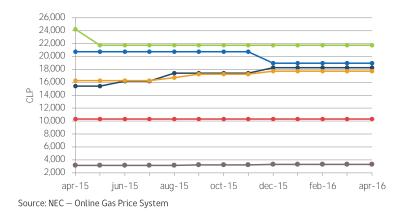
Source: CNE

Source: CNE

4 Domestic Prices of Network Gas Supplied through Concessions

The following information shows the price based on the energy equivalence of natural gas, city gas or propane air, whichever is applicable, distributed to the end consumer as network gas under concession equivalent to **15-kg cylinders of liquified petroleum gas.** This price also includes fixed costs and meter rental, charged by the network gas distribution companies when applicable.

Evolution of Network Gas Prices



Variation in Network Gas Prices

Company (Region)	CLP	Monthly	Annual
Lipigas (2th)	10.312	0.0%	0.0%
Gasvalpo (5th)	18.289	0.0%	18.3%
Metrogas (Metropolitana)	17.787	0.0%	9.3%
Gassur (8th)	18.979	0.0%	-8.7%
Intergas (8th)	21.792	0.0%	-10.0%
Gasco Magallanes (9th)	3.318	0.4%	6.6%

Source: NEC — Online Gas Price System







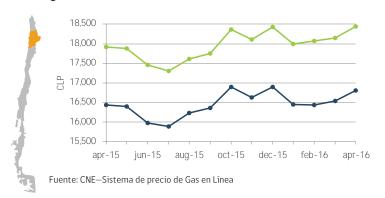


5 Domestic Prices of Bottled Liquefied Petroleum Gas

Bottled LPG is liquefied gas fuel, i.e., propane and butane and their blends (with a maximum 30% of butane). The fuel is compressed for bottling in cylinders of varying sizes that are sold to end users for use in heaters, stoves and water heaters/boilers. The cylinders on the local market have a capacity of 2 kg, 5 kg, 11 kg, 15 kg and 45 kg. They are also sold according to quality; one is sold as normal or regular and the other as catalytic, a category required by some heating appliances that only use a fuel with a low content of olefins, diolefins and sulfur. The information below shows the evolution of the average price of bottled LPG in 15-kg cylinders for the cities of Antofagasta, Concepción, Puerto Montt and the Santiago Metropolitan Region.

Evolution of Bottled LPG Prices

Antofagasta

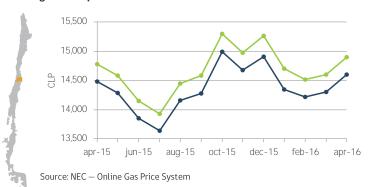


Variation in Bottled LPG Prices

	Туре	CLP	Monthly		Yearly	
1	Catalityc	18,440	_	1.6%	_	2.9%
1	Regular	16,810	_	1.7%		2.3%

Fuente: CNE—Sistema de precio de Gas en Línea

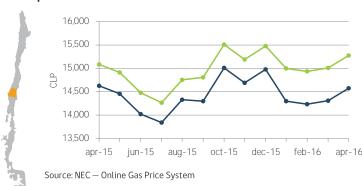
Santiago Metropolitan



	Туре	CLP	Мо	nthly	Υe	arly
1	Catalityc	14,900	_	2.1%	_	0.8%
1	Regular	14,605	_	2.1%		0.9%

 ${\tt Source: NEC-Online\ Gas\ Price\ System}$

Concepción





 ${\tt Source: NEC-Online\ Gas\ Price\ System}$









Evolution of Bottled LPG Prices

Puerto Montt



Variation in Bottled LPG Prices



Source: NEC — Online Gas Price System

6 Fuel imports and exports¹

Information on imports and exports of primary and secondary fuels corresponds to March 2016 given that the official information source has a two-month time lag. The information on imports mainly applies to coal, crude oil, diesel and natural gas, equivalent to more than 88,7% of total national imports (in tons).

The total variation of imports registered an increase of 69.5% over the previous month and 14.0% compared to March, 2016. Meanwhile, the total change in exports recorded a considerable increase over the previous month and to the same period of the previous year. While, the main fuels exported during the month of March was coal, which represents 83.8% of total exports measured in tons.

Imports of the main primary fuels during the month of March are coal from United States, Australia and Colombia; crude oil from Brazil y Ecuador; diesel from the United States and Japan; and liquefied natural gas bought from Trinidad and Tobago.

During January the exports of diesel and gasoline recorded as country of destination Bolivia, while the coal was exported to India.

Here are the details for each of the fuels with percentage changes and countries of origin / destination.

Variation in Imports During the Period

Fuel	[Thous- Tons]	Monthly	Annual
Coal	1,233	8 4.9%	3 1.4%
Crude Oil	921	>100%	9.6%
■ Diesel Oil	528	20.0%	-5.2%
Natural Gas	287	33.2%	17.8%
⇔ Gasoline	37	>100%	-12.4%
LPG	77	21.4%	-12.1%
Household Kerosene	46.3	5 4.0%	25.3%
Overall total	3,129	69.5%	14.0%

Variation in Exports During the Period

Fuel	[Thous- Tons]	Monthly	Annual	
👼 Coal	113	(*)	(*)	
Diesel Oil	4	_ 5	1% 🔻 -3	4%
Fuel Oil	0	(**)	(*)	
⇐ Gasoline	4		(*) -6	2%
GLP	0	(**)	(*)	
₩ IFO	13	(*)	~ -	3%
Overall total	135	>100	D% <u> </u>	0%

Source: Aduana by COMEX (www.comexplusccs.cl)

Source: Aduana by COMEX ($\underline{www.comexplusccs.cl}$)

^(*) No transactions recorded during the period under review

^{**)} Not recorded during the reference month transactions

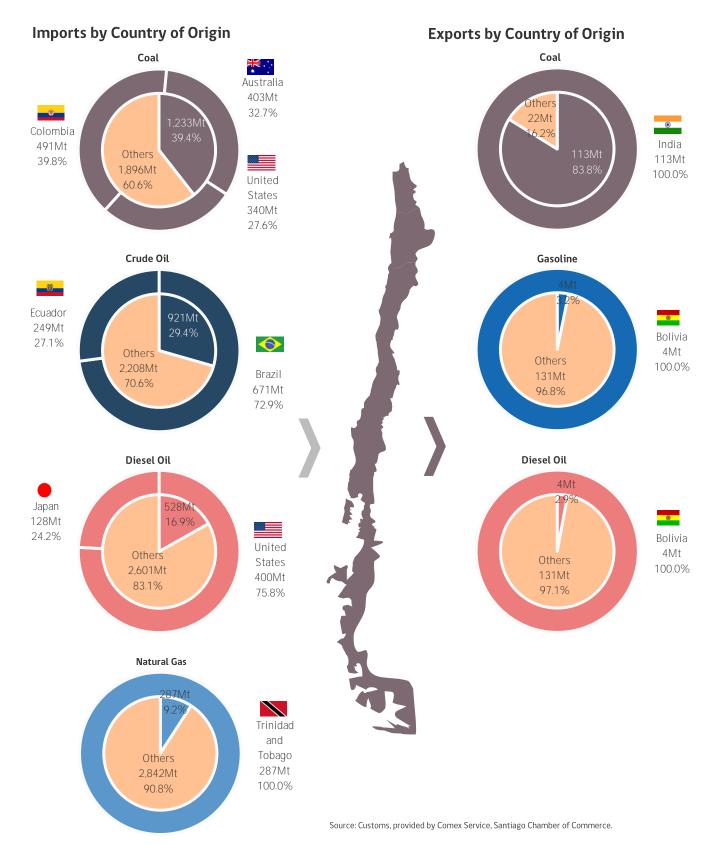
Imports and exports are the March report, due to a process of validation of the new data source.















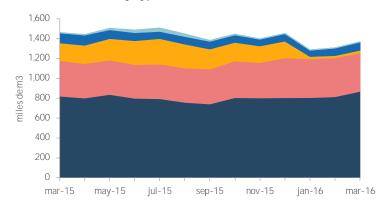




7 Fuel Sales

The following information details the evolution and the variation in the sales of the principal oil-based fuels. The information available is presented with a one-month time lag. The fuels analyzed are: domestic kerosene, fuel oils, liquefied gas, diesel oil and unleaded 93-, 95- and 97-octane gas.

Fuel Sales Evolution, by Type



Fuel Sales Variation, by Type

Туре	[Thous - m3]	Monthly	Annual
Household kerosene	871	6.7%	5.9%
Fuel Oils	387	-1.3%	8.0%
Liquefied Gas	27	16.0%	√ -85.0%
Gasoline	83	9.2%	√ -18.1%
Diesel Oil	2	1 90.2%	10.2%
Overall total	1,371	4.7%	√ -6.3%

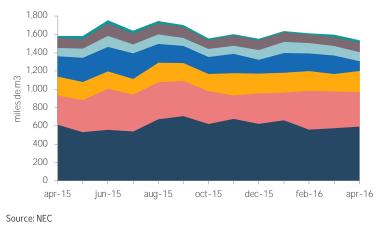
Source: NEC, based on ENAP data

8 Fuel Inventory

Source: NEC, based on ENAP data

The following information presents monthly fuel inventory levels (aviation fuel, household kerosene, fuel oils, aviation kerosene, automotive gas, liquefied gas, diesel oil and crude oil) in thousands of m3 for the entire country. This value corresponds to the last business day of the respective month.

Fuel Inventory Evolution, by Type



Fuel Inventory Evolution, by Type

Туре	[Thous - m3]	Monthly	Annual
× Aviation gas	1	3.0%	-3.3%
Household K	15	-5.9%	18.1%
Fuel Oils	105	20.1%	11.6%
🕂 Kerosene Av.	99	-46.9%	-51.9%
Automotive gas	231	-5.4%	9.9%
Liquefied gas	107	1 0.7%	-3.7%
Diesel oil	377	-16.7%	2 1.8%
Crudo oil	599	1 2.0%	72.3%
Overall total	1,534	-3.8%	-2.9%
Source: NEC			



ENERGY PROJECTS UNDERGOING ENVIRONMENTAL EVALUATION

1 Projects Submitted for Environmental Evaluation

In April 2016, **12** energy projects were submitted to the Environmental Impact Evaluation System (SEIA), representing an investment of **USD 1,854 million**. Of these, **9** projects are for electric power generation, **2** projects are for electrical transmission¹ and **1** project was for oil and/or gas energy.

Detail of energy projects submitted for environmental evaluation

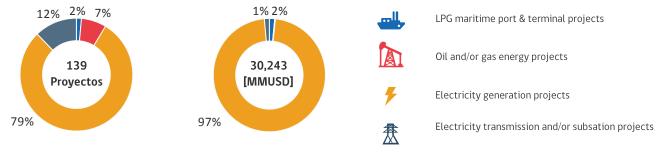
Project Type	Project Owner	Project Name	Presentation Date	Investment [MMUSD]	WEB
Generation	Eólica La Esperanza S.A.	Parque Eólico Buenaventura	22/abr/2016	35,0	<u>Link</u>
Generation	Hidroeléctrica Dos Valles SpA	Modificación Central de Pasada Dos Valles	21/abr/2016	0,8	<u>Link</u>
Generation	LAUREL SPA	Parque Solar Fotovoltaico El Laurel	20/abr/2016	12,8	Link
Generation	CHESTER SOLAR VII SPA	Planta Fotovoltaica El Paular - Comuna de Talca	20/abr/2016	20,0	Link
Generation	ENERGÍA LATINA S.A.	Central de Generación Eléctrica a Gas Teno	20/abr/2016	50,0	Link
Generation	Parque Eólico Victoria SPA	Parque Eólico Victoria	20/abr/2016	550,0	Link
Generation	Ibereólica Solar Elena SpA.	Proyecto Fotovoltaico Elena	18/abr/2016	535,0	Link
Generation	HIDROELÉCTRICA LUMEN SA	Central Hidroeléctrica del Río Chaica	14/abr/2016	0,0	Link
Generation	Sol de Vallenar SPA	Parque Fotovoltaico Sol de Vallenar	07/abr/2016	620,0	Link
High-voltage electricity transmission line	Eletrans S.A	Seccionamiento Circuito Nº1 LAT Cardones-Diego de Almagro en Subestación Carrera Pinto	20/abr/2016	5,5	Link
Oil and/or gas energy projects	Empresa Nacional del Petróleo - Magallanes	Fracturación Hidraúlica de 4 Multipozos en Bloque Arenal	29/abr/2016	20,0	<u>Link</u>
Subestation	Sistema de Transmisión del Sur S.A.	Subestación El Mocho	19/abr/2016	4,5	<u>Link</u>

Source: SEIA

2 Energy Projects Currently Being Evaluated

In April 2016, **139** energy projects awaiting approval of their environmental qualification resolutions (RCA). Of these, **79%** are projects related to electric power generation, and the remaining are mixed projects. Together they represent a total investment of **30,243 MMUSD**.

Distribution of Projects and their Investment [millions of USD]



Source: SEIA









3 Projects with Approved Environmental Qualification Resolution

In April2016, the environmental qualification resolutions (RCA) of **10** energy projects were approved. Of these, **5** projects are for electric power generation with total capacity of **462 MW**, **4** projects is electricity transmission¹ and **1** are Oil and/or gas energy project. Together they represent a total investment of **USD 1,241 million**.

Presentation Date	Project Type	Region	Project Owner	Investment [MMUSD]	Web
06/abr/2016	Generation	VIII	Inversiones BOSQUEMAR Ltda	298,0	<u>Link</u>
11/abr/2016	Generation	VIII	HBS Gas Natural Licuado S.A.	0,6	Link
25/abr/2016	Generation	Ш	Andes Mainstream SpA	634,0	Link
26/abr/2016	Generation	VIII	Atiaia Energía Chile SpA	240,0	Link
06/may/2016	Generation	Ш	Fotovoltaica Los Andes SpA.	50,00	Link
05/abr/2016	High-voltage electricity transmission line	VIII	Parque Eólico Renaico S.p.A	6,0	Link
08/abr/2016	High-voltage electricity transmission line	П	CENTRAL ILLAPA S.A.	4,5	Link
20/abr/2016	High-voltage electricity transmission line	RM	TRANSNET S.A.	5,1	Link
28/abr/2016	Oil and/or gas energy projects	XII	GeoPark Fell SpA	1,7	Link
29/abr/2016	Subestation	XIV	Sistema de Transmisión del Sur S.A.	1,4	Link

Source: SEIA

In line with the above table, the evolution is presented for the last mobile year of investment associated to energy projects have received a favorable RCA. The total investment to date totaled **USD 17,483 million**. In particular, energy power generation projects have a total investment of **USD 12,866 million** (73.6%), equivalent to **4,893 MW** approved.

Investment evolution-Approved projects with RCA in the last 12 months



Source: SEIA

23



SECTORIAL REGULATIONS

1 Proposed Legislations in Process

Bulletin Number	Subject of the Proposed Legisla- tion	Initiative and Ur- gency	Current Status	Bill Submittal Date	WEB
9890-08	Amends Decree-Law No. 323 of 1931 of the Ministry of Interior and other laws.	Simple Urgency	Second Constitutional Procedure (Senate). Discussed by the Mi- ning and Energy Committee.	29/01/2015	<u>Link</u>
10161-08	Modifies the General Electri- city Services Law to introduce mechanisms for fairness in electricity rates.	Urgent	Second Constitutional Procedure (Chamber of Deputies). Discussed by the Chamber of Mining and Energy Committee since 16th March of 2016.	01/07/2015	Link
10240-08	Establishes new systems of power transmission and make an independent controller organism for the national electricity system.	Suma Urgencia	Second Constitutional Procedure (Senate). Approved in general discussion. It sets the 28th April of 2016 as deadline to present the indications	07/08/2015	<u>Link</u>

2 Sectorial Regulations Published in the Official Bulletin

Exempt Resolution No. 12,397 from April 13th, 2016 published in the Official Bulletin, which clarifies the scope of the Exempt Resolution No. 1,234 from September 11th, 2006; which establishes the procedure for electronically paperwork of the regulatory electricity and fuels agency. Link

Decree No. 39, published in the Official Bulletin on April 26th, 2016; creates an Interministerial Committee of Wood and Derivatives. Link

Exempt Resolution No. 375, published in the Official Bulletin on April 29th, 2016; amending Technical Standard Safety and Quality of Service. <u>Link</u>









3 Sectorial Regulations Not Published in the Official Bulletin

Exempt Resolution No. 315, dated April 5th, 2016, which updates and reports generation and transmission works in construction. Link

Exempt Resolution No. 320, dated April 8th, 2016, which awards the tender ID 610-1-LR16 for preparation of "Study for calculating the components of the VAD, quadrennium November 2016 - November 2020" and "Cost Study Associate Services Electricity Supply Distribution". Link

Exempt Resolution No. 328, from April 13th, 2016, which approves the Preliminary Report of Tenders, to Article No. 131 of the General Electricity Services Law. Link

Exempt Resolution No. 330; April 15th, 2016, approves the "Fuel Price Projections Report 2016-2031", for March 2016 Link

Exempt Resolution No. 331; dated April 15th, 2016; approves the Final Technical Report for Short-Term Node Price from April 2016; the Norte Grande Interconnected System and the Central Interconnected System. Link

Exempt Resolution No. 390 from April 29th, 2016; approves modifications to the Final Short-term Node Price Technical Report from April 2016 of the Interconnected System (SIC) and the Norte Grande Interconnected System (SING), which was approved by Resolution No. 331, in 2016. Link

Exempt Resolution No. 343 from April 20th, 2016; which calls for public tender and approves Administrative Rules, Techniques and Annexes, for hiring the study "Analysis of profitability of the concessionaires of public distribution service corresponding gas in 2015". Link

Exempt Resolution No. 374 from April 22th, 2016, which communicates the value of the indexes contained in the fares equations for supplies subject to pricing. Link

Exempt Resolution No. 388, from April 29th, 2016, which provides publishing energy prices and power substations primary distribution Medium Cochamó, Hornopirén, Aysén, Palena, General Carrera, Punta Arenas, Puerto Natales Systems, Porvenir and Puerto Williams. Link

Exempt Resolution No. 389 from April 29th, 2016; which reports favorably Procedure DO: "Fuels costs in energy power generation plants in the Norte Grande Interconnected System (SING)". Link

4 Expert Panel Rulings

During the period the Panel of Experts did not issue any ruling.

Comisión Nacional de Energía

Avenida Libertador Bernardo O'Higgins , 1449 Edificio Santiago DownTown, Torre 4, Piso 13

> Tel. (2) 2797 2600 Fax. (2) 2797 2627

> > www.cne.cl

Santiago - Chile