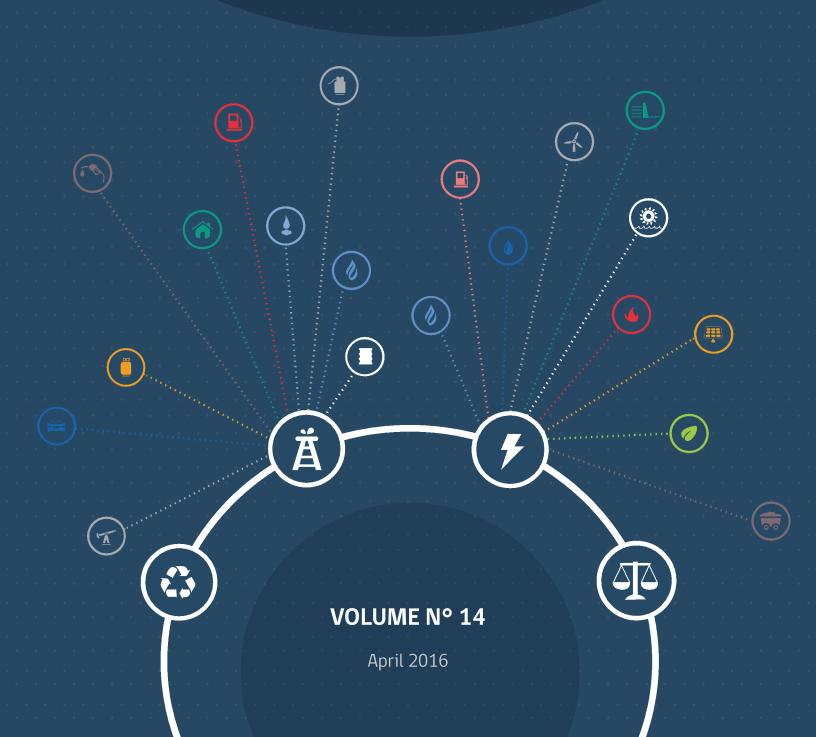
MONTHLY ENERGY SECTOR REPORT NATIONAL ENERGY COMMISSION



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:

President of the Republic announces a policy about use of firewood heating and its derivatives.

The President of the Republic, Michelle Bachelet, together with the Minister of Energy, Maximo Pacheco, announced on March 18, the Policy for the Use of Wood and Derivatives for heating and signed the decree creating the Interministerial Committee Wood and Derivatives.

The President explained that "this policy is not against the use of firewood, however, it is the proper use of firewood, the use of dry wood. We are not prohibiting the cutting of firewood, but we want to do it with management plans. We do not want to stop using wood for heating, but we want to keep improving the efficiency of heating equipment and thermal insulation in homes."

As it was explained by the Ministry of Energy, the Policy for using firewood and its derivatives for heating, is the first government policy on this subject in our country, considering the necessity to address an issue of local, with a multisector approach and perspective of State.

Ministries of Energy, Housing, Environment, Agriculture, Education, Public Works and CORFO were involved in its construction.

National Energy Commission reported new date to Present Proposals of Tender on Electricity Supply for regulated customers.

The National Energy Commission (CNE) informed on Wednesday July 27 this year, between 9:00 and 13:00, the presentation of proposals will be made by the generating companies interested in participating in the process of National and International Public Tender for the Power Supply and Electric Energy to supply the consumption subject to price regulation (process 2015/01).

The next tender process - which is designed, coordinated and managed- by the National Energy Commission, in the framework of the new tender law (No. 20,805) - represents the auctioning of higher energy (13,750 GWh / year, equivalent to one third of the consumption of regulated customers) that has been made in the country since this regulatory scheme was implemented and the first tenders were made in 2006.

This tender will allow to obtain long-term contracts for 20 years to the generating companies that are awarded, and it will supply the energy needs of SIC and SING regulated customers since the year 2021.

Senate unanimously approves project of Pricing Policy Equity and Recognition of Local Generation.

On Tuesday March 15, the Senate unanimously approved -first legislative-process the bill for the pricing policy Equity and Recognition of Local Generation, being able to be studied by the Deputies.

The initiative, promoted by the Ministry of Energy, was sent in June 2015 by the government to start its processing in Congress.

The Executive Secretary of the National Energy Commission (CNE), Andres Romero, said that this initiative "more than 2.7 million customers, that is to say, about 10 million Chileans, will reduce their rates. in some cases more than 40%."

Nowadays, there is a very uneven collection 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 electricity bills of the final clients of the different areas of the country, with a clear objective of territorial equity clients. On the same line, this initiative also contemplates the recognition of power generation in the producing zones of it.

SUMMARY

This report was prepared in **April 2016** in order to provide energy information and statistics **March 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 **682.07 CLP per USD** observed in **March 2016**.

According to Exempt Resolution No. 315, there were **63** electricity generation projects under construction in the SIC and SING, equivalent to a capacity of **5,167 MW**.

The installed capacity of the SIC in **March** was **16,295** 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 **20,522** MW.

Meanwhile, total electric power generation in the SIC in March was 4,739 GWh, and in the SING it reached 1,670 GWh. Therefore, the total generated was 6,409 GWh, 7.3% lower than in February 2016.

The maximum hourly demand recorded in the SIC and the SING in **March** were **7,741** MW and **2,514** MW, respectively. The maximum in the SIC was recorded on March 15th while the measurement in the SING corresponds to March 17th,2016.

Regarding electricity tariffs, it is important to note that the average marginal cost in **March** in the SIC was **74.0** USD/MWh, **29.9%** higher than **February 2016**. In the SING meanwhile, the average marginal cost was **49.6** USD/MWh, **2.3%** higher than the previous month.

It is worth noting the average market prices recorded in March in the SIC and SING which were **89.8 USD/MWh** and **82.6 USD/MWh**, respectively.

In terms of international fuel prices, the Brent crude price was **38.5 USD/bbl**, **18.6%** higher than the previous month. Meanwhile, the average price of WTI crude was **37.8 USD/bbl**, and **24.3%** higher than the previous month.

The Henry Hub price (international natural gas price reference) decreased -13.3% compared to February, with an average value of 1.70 USD/MMBtu.

The average price of coal was **76.3 USD/ton**, down -**2.5%** over the previous month.

In terms of gasoline prices, those of 93-octane gasoline (unleaded) and diesel should be noted. In March the average domestic price of the former was **CLP 643** /liter, while the average price of the latter was **CLP 398** /liter. In terms of percentages, these represent a fall of -3.6% and falls of -5.5% respectively in comparison to February 2016.

A total of **8** energy sector projects were submitted to the Environmental Impact Evaluation System (Sistema de Evaluación de Impacto Ambiental, SEIA): 6 in electricity generation and 2 for electricity transmission energy project. Meanwhile, those already being evaluated represent a total investment of **USD 28,894 million**. In addition, **9** projects related to the energy sector obtained favorable environmental qualification resolutions (Resolución de Calificación Ambiental, or RCA) in March, and of those, 5 were for electricity generation , 1 was for high-voltage electricity transmission line projects and 3 were oil and/or gas energy projects.

In conclusion, it should be highlighted among all the important policy issues that occurred in March, the exempt resolution No. 286 that modifies exempt resolution No. 268, 2015, which approves the bases of national and international public tender for the power and energy supply to stock the consumption of clients submitted to a price regulation. By this resolution, it was expanded and adjusted the timing and schedule that would regulate the process, adapting to the innovations and changes that will be introduced it in the project law that establishes "transmission new systems for electric energy and creates a new independent institution for the management of the national electrical system " (Bulletin No. 10240-08), in second constitutional procedure (senate). Likewise, it should be highlighted the dictum No. 2, 2016 from the expert panel rulings, over the expansion plan of the trunk transmission system, period 2015-2016.



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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. 315, "Works under Construction Update and Report," as of April 05 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 April 2016 and June 2018.

Projects under Construction in the SING

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

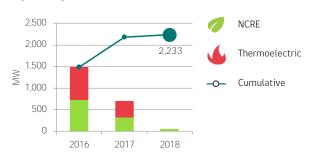
Source: NEC

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 Source: NEC

Projected operation start date, SING











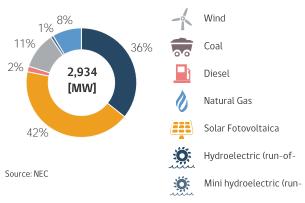
According to Exempt Resolution No. 315, "Works under Construction Update and Report," as of April 05 there were **36** power generation projects under construction in the SIC. Together they represent capacity of **2,934 MW** and are projected to begin operation between April 2016 and October 2020.

Projects under Construction in the SIC

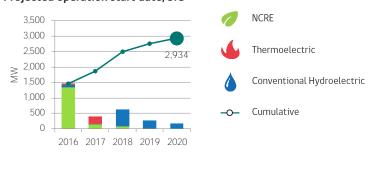
Category	Date Proyect Name	Region	Technology	Capac. [MW]
	abr-16 La Montaña I	III Region	Mini hydroelectric (run-of-river)	3
	abr-16 Los Buenos Aires	III Region	Wind	24
	abr-16 PFV Olmué	III Region	Solar Photovoltaic	144
	abr-16 Renaico	III Region	Wind	88
	abr-16 Pampa Solar	III Region	Solar Photovoltaic	69
	abr-16 Conejo Etapa I	III Region	Solar Photovoltaic	105
	abr-16 La Silla	III Region	Solar Photovoltaic	2
	abr-16 Eólico La Esperanza	III Region	Wind	11
	may-16 Quilapilún	III Region	Solar Photovoltaic	103
	may-16 Eólico Las Peñas	III Region	Wind	8
	may-16 Chuchiñí	III Region	Solar Photovoltaic	3
	may-16 Santa Julia	III Region	Solar Photovoltaic	3
	jun-16 Río Colorado	III Region	Mini hydroelectric (run-of-river)	15
NCRE	jun-16 Carrera Pinto Etapa II	III Region	Solar Photovoltaic	77
	jun-16 Los Loros	III Region	Solar Photovoltaic	50
	jul-16 San Juan	III Region	Wind	185
	ago-16 Abasol	III Region	Solar Photovoltaic	62
	sep-16 El Romero	III Region	Solar Photovoltaic	196
	sep-16 Divisadero	III Region	Solar Photovoltaic	65
	oct-16 Chaka Etapa I	III Region	Solar Photovoltaic	23
	oct-16 Chaka Etapa II	III Region	Solar Photovoltaic	27
	oct-16 El Pelícano	III Region	Solar Photovoltaic	100
	ene-17 Guanaco Solar	III Region	Solar Photovoltaic	50
	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
	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
Conventional	oct-18 Ñuble	III Region	Hydroelectric (run-of-river)	136
Hydroelectric	dic-18 Los Cóndores	III Region	Hydroelectric (run-of-river)	150
riyarocteetric	dic-18 Alto Maipo - Las Lajas	III Region	Hydroelectric (run-of-river)	267
	may-19 Alto Maipo - Alfalfal II	III Region	Hydroelectric (run-of-river)	264
	oct-20 San Pedro	III Region	Hydroelectric (run-of-river)	170
Thermoelectric	oct-16 Doña Carmen	III Region	Diesel	48
membetectifc	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





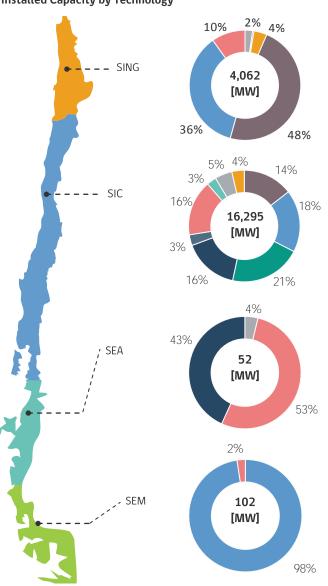




2 Installed Electricity Generation Capacity

The installed electricity generation capacity as of March 2016 was **(*)20,522 MW**. Of that, **16,295 MW** (**79.4%**) corresponded to the SIC and **4,062 MW** (**19.8%**) to the SING. The remaining 0,8% was distributed among the Aysén and Magallanes electricity systems. As of March, 57.8% the country's total installed capacity is represented by thermoelectric generation, while 12.9% is NCRE. For more information about NCRE projects, please go to the <u>CIFES Monthly Energy Report</u>

Installed Capacity by Technology



Installed capacity by system

System	Capacity [MW]	Capacity [%]
• SING	4,062	19.8%
• SIC	16,295	79.4%
• SEA	52	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 28 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, 22 plants are in the SIC (with a total capacity of 314.2 MW) and 6 are in the SING (with a total capacity of 657.7 MW). Thus, there is a total of 971.9 MW in the testing phase.

Source: CDEC-SIC / CDEC-SING and NEC

^{*} 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)





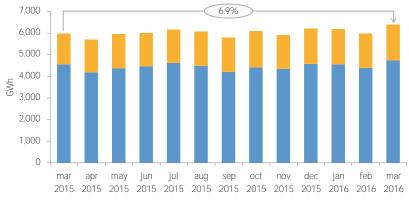




3 Electricity Generation

Power generation in the SIC during March 2016 reached a total of **4,739 GWh**, which were classified as 62% thermoelectric, 27% conventional hydroelectric and 11% NCRE. In the SING, **1,670 GWh** of electric power were generated, 6% from thermoelectric plants and 94% from NCRE. Together the systems reached a total of **6,409 GWh**, a increase of **7.3%** over the previous month and **6.9%** in comparison to March 2016. In resume, if we sort by generation category, we distinguish: 32.6% NCRE, 20.2% hydroelectric and 47.2% thermoelectric generation.

Evolution of gross electric power generation, SIC-SING



Generation variation, by system

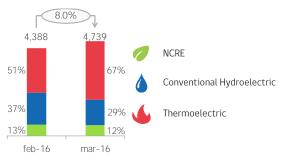
Energy Generation [GWh]		Mo	nthly	Annual	
Total	6,409		7.3%	_	6.9%
SING	4,739		8.0%	_	4.2%
• SIC	1,670		5.4%	_	15.3%

Source: CDEC-SIC / CDEC-SING

Source: CDEC-SIC / CDEC-SING

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

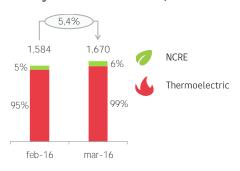
Monthly Variation in Generation, SIC



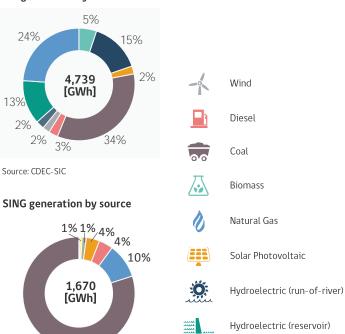
Source: CDEC-SIC

Source: CDEC-SIC

Monthly Variation in Generation, SING



SIC generation by source



Source: CDEC-SIC

80%

Mini hydroelectric (run-of-ririver)







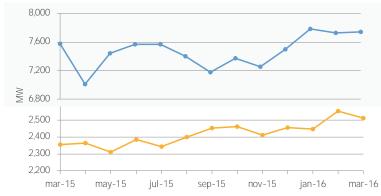


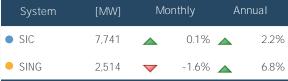
4 Maximum Hourly Demand

In March 2016, The maximum hourly demand recorded in the SIC was **7,741 MW** on 15th, **0.1%** higher than the previous month and **2.2%** higher over the same month of 2015. In the SING, the maximum hourly demand recorded on 17th was **2,514 MW**, which represented a **-1.6%** lower over the maximum hourly demand recorded in the previous month and **6.8%** 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

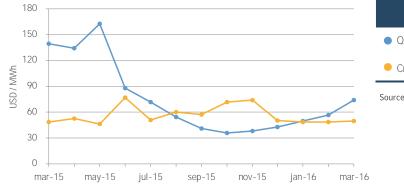
Source: CDEC - SIC / CDEC - SING

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 March , the average marginal cost in the SIC was 74.0 USD/MWh, 29.9% higher than the previous month and -47.0% lower than March 2015. In the SING, the average marginal cost was 49.6 USD/MWh, 2.3% more than he previous month and 2.7% over 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 **March** for the SIC was **89.8 USD/MWh**, **3.4%** higher than the previous month and -**3.1%** lower than March 2015. The AMP in the SING was **82.6 USD/MWh**, **1.1%** less than the previous month and -**10.4%** down than the same month in 2015.

Evolution of market prices, SIC - SING



Variation in average market prices, by system

System	[USD/MWh]*	Monthly	, Annual
• SIC	89.8	3 .4	1% 🔻 -3.1%
SING	82.6	<u> </u>	1% 🔻 -10.4%

Source: CDEC - SIC / CDEC - SING

Source: CDEC - SIC / CDEC - SING

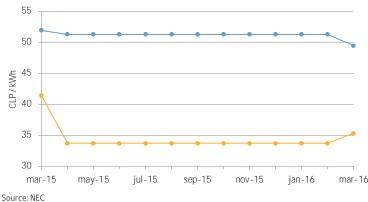
7 Short-term Node Prices

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 **March** was **49.5 CLP/kWh**, -**4.6%** lower than the previous month and-**4.8%** decrease over the same month of 2015. In the SING, the node energy price in **March** was **35.3 CLP/kWh**, -**14.7%** down over the same month of 2015.

Evolution of node energy prices, SIC - SING



Variation in node energy prices, by system

System	CLP/kWh	Mc	onthly	А	nnual
PNESIC	49.5	$\overline{}$	-3.5%	$\overline{}$	-4.8%
PNESING	35.3		4.7%	$\overline{}$	-14.7%

Source: NEC

¹⁰

^{*} 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 **March** was **7,902 CLP/kW**, **30.4%** increase over the same month of 2015. In the SING, the node power price was **5,346 CLP/kW**, **14.5%** increase over the same month of 2015.

Evolution of node power price, SIC - SING



Variation in node power price

System	CLP/kW	Mo	nthly	A۱	nnual
• PNP SIC	7,902	$\overline{}$	-4.6%		30.4%
PNP SING	5,346		3.1%		14.5%

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 March 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		D/MWh] Index		Annual	
Pta Arenas	63		1.6%	_	5.4%		
Tres Puentes	63		1.6%	_	5.4%		
Pto Natales	94		1.8%	_	7.0%		
Porvenir	87		1.7%		6.5%		
Pto Williams	274		-5.3%	$\overline{}$	-11.7%		
Aysén 23	83		-6.1%	$\overline{}$	-10.4%		
Chacab23	83		-6.2%	$\overline{}$	-10.4%		
Mañi23	83		-6.1%	$\overline{}$	-10.3%		
Ñire33	83		-6.1%	$\overline{}$	-10.3%		
Tehuel23	83		-6.1%	$\overline{}$	-10.3%		
Palena	88		1.5%		7.4%		
G.Carrera	105		-9.9%	$\overline{}$	-17.7%		
Cochamó	164		-11.8%	$\overline{}$	-21.2%		
Hornopirén	151		-7.0%	$\overline{}$	-12.1%		

Source: CNE

Variation in node power price, medium-size systems

Busbar	[USD/MW-mth]	Index		dex An	
Pta Arenas		_	10.1%	_	5.4%
Tres Puentes			10.1%		5.4%
Pto Natales			9.8%		7.0%
Porvenir			8.3%		6.5%
Pto Williams			6.3%	_	-11.7%
Aysén 23			8.7%		-10.4%
Chacab23			8.7%		-10.4%
Mañi23			8.7%		-10.3%
Ñire33			8.7%		-10.3%
Tehuel23			8.7%		-10.3%
Palena			7.9%		7.4%
G.Carrera			6.3%		-17.7%
Cochamó			6.3%	_	-21.2%
Hornopirén		_	8.5%		-12.1%

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 March 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		Ar	ınual
• CDAT	1.060	_	0.3%	_	2.5%
CDBT	1.055	_	0.4%	_	2.0%

Source: CNE

Source: CNE

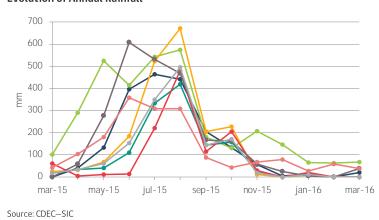
10 Hydrological Statistics

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 March del 2016 are shown below for the main measurement locations.

Evolution of Annual Rainfall



Variation in Annual Rainfall

Reservoir		[mm]	Monthly		Annual	
***	Abanico	20		n/d		n/d
***	Canutillar	68		7%		-33%
***	Others (**)	0		n/d	—	100%
***	Colbún	0		n/d	-	100%
***	Otros (*)	0		n/d	-	100%
***	Pangue	38		>100%		n/d
***	Pehuenche	0		n/d	-	100%
***	Pilmaiquén	38	$\overline{}$	-35%	~	-12%
Overall total		163	_	34%	~	-38%

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

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

n/a : Not available





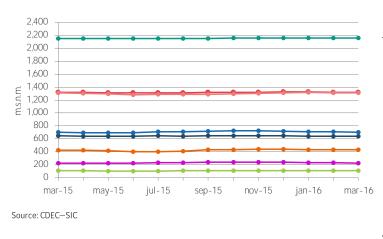




Reservoir, Lake and Lagoon Levels

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

Evolution of Reservoir Levels



Variation in Reservoir Levels

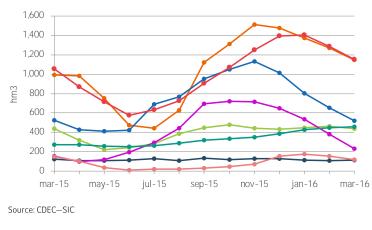
Rese	rvoir	[m.s.n.m.]	Monthly	Annual
	Embalse Colbún	428	-0.7%	1.0%
	Embalse El Melado	643	0.2%	-0.3%
	Embalse Ralco	699	-1.0%	0.0%
	Embalse Rapel	104	-0.3%	0.0%
	Lago Chapo	225	-1.5%	0.8%
	Lago Laja	1,322	-0.1%	0.1%
	Laguna El Maule	2,162	0.0%	0.2%
	Laguna La Invernad	1,310	-0.4%	-0.4%

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 March 2016.

Evolution of Reservoir Volume



Variation in Reservoir Volume

Rese	rvoir	[hm3]	M	onthly	А	nnual
*****	Embalse Colbún	1,272	$\overline{}$	-9.8%	_	15.5%
*****	Embalse El Melado	108		4.1%	$\overline{}$	-6.5%
*****	Embalse Ralco	656	$\overline{}$	-20.9%	$\overline{}$	-1.1%
	Embalse Rapel	462	$\overline{}$	-5.2%	$\overline{}$	-0.3%
*****	Lago Chapo	379	$\overline{}$	-39.7%	_	51.2%
	Lago Laja	1,288	$\overline{}$	-10.4%	_	9.6%
*****	Laguna El Maule	448	_	2.7%	_	68.9%
	Laguna La Invernada	152	$\overline{}$	-22.9%	$\overline{}$	-22.0%

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 **March 2016** WTI oil prices was **37.8 USD/bbl., 24.3%** increase from the previous month and **-21.0%** from the same month of 2015. Meanwhile, the average BRENT oil prices was **38.5 USD/bbl, 18.6%** higher than previous month and **-31.3%** 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	38.5	1 8.6%	-31.3%
WTI	37.8	2 4.3%	▼ -21.0%

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 **March 2016**, Henry Hub averaged **1.70 USD/MMBtu**, -**13.3%** decrease from previous month and -**39.2%** from the same month of 2015.

Evolution of Natural Gas Price (Henry



Natural Gas Variation (Henry Hub)

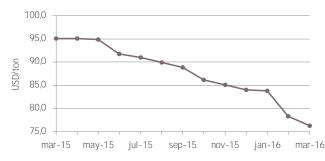
	Index	USD/MMBtu	Monthly	Annual
0	HENRY HUB SPOT	1.70	▼ -13.3%	▽ -39.2%

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 **March 2016** averaged a price of **76.3 USD/ton**, representing -**2.5%** decrease over the previous month and -**19.8%** 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	76.3	-2.5%	▼ -19.8%

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







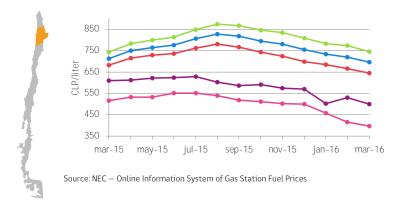


2 Domestic Liquid Fuel Prices

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

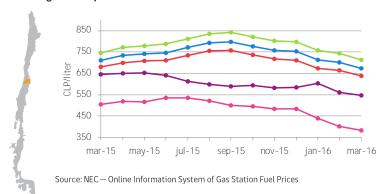


Variation of Liquid Fuel Prices

Fuel Type	CLP/liter	Monthly	Annual
Gasoline 93 SP	645	-3.3%	-5.6%
Gasoline 95 SP	696	-3.5%	-2.4%
Gasoline 97 SP	746	-3.6%	0.4%
Kerosene	501	-5.5%	-18.1%
■ Diesel	397	-4.8%	-23.2%

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

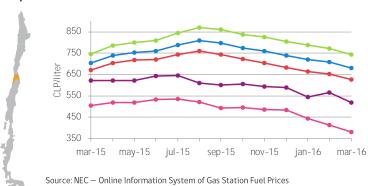
Santiago Metropolitan



Fuel Type	CLP/liter	Mo	onthly	Annual
Gasoline 93 SP	639	$\overline{}$	-3.9% 🔻	-6.0%
Gasoline 95 SP	673	$\overline{}$	-4.0% 🔽	-5.4%
Gasoline 97 SP	713	$\overline{}$	-4.1% 🔻	-4.5%
Kerosene	547	$\overline{}$	-2.5% 🔻	- 15.3%
■ Diesel	383	abla	-4.7%	- -24.0%

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

Valparaíso



Fuel Type	CLP/liter	Monthly	Annual
Gasoline 93 SP	626	-4.1%	-6.6%
🖺 Gasoline 95 SP	680	-4.0%	-3.5%
Gasoline 97 SP	743	-3.8%	-0.4%
L Kerosene	520	-8.0%	- 16.6%
■ Diesel	382	-7.5%	-24.4%

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



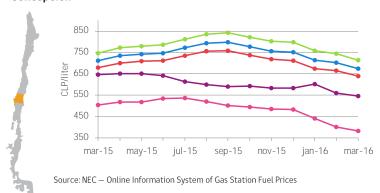






Evolution of Liquid Fuel Prices

Concepción

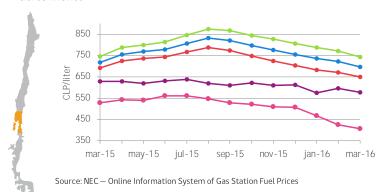


Variation of Liquid Fuel Prices

FuelType	CLP/liter	Mc	onthly	Annual
Gasoline 93 SP	642	$\overline{}$	-3.3%	-5.4%
Gasoline 95 SP	690	~	-4.2%	-3.4%
Gasoline 97 SP	739	$\overline{}$	-3.4% _	0.2%
■ Kerosene	527	$\overline{}$	-0.5%	-12.1%
□ Diesel	397	$\overline{}$	-7.7%	-25.1%

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

Puerto Montt



Fuel Type	CLP/liter	- Mo	onthly	Annual
Gasoline 93 SP	650	$\overline{}$	-3.3%	-6.1%
Gasoline 95 SP	697	$\overline{}$	-3.5%	-3.1%
Gasoline 97 SP	744	$\overline{}$	-3.6%	-0.2%
Kerosene	578	$\overline{}$	-2.9%	-8.2%
■ Diesel	406	$\overline{}$	-4.6%	-23.1%

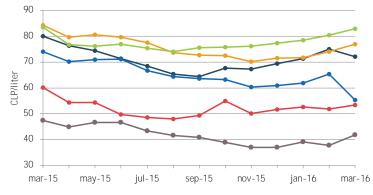
Source: NEC — Online Information System of Gas Station Fuel Prices

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.

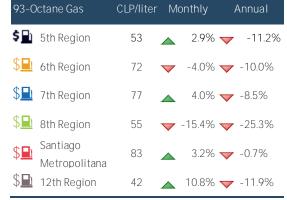
93-Octane Gasoline

Evolution of Gross Sales Margin



Source: CNE

Variation in Gross Sales Margin



Source: CNE



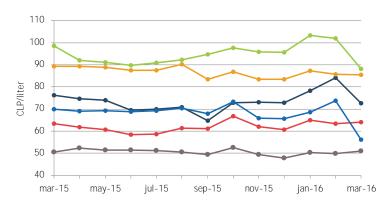






Diesel

Evolution of Gross Sales Margin



Variation in Gross Sales Margin

Diesel Oil	CLP/liter	Monthly	Annual
\$ ☐ 5th Region	64	1.0%	0.8%
\$ <u>□</u> 6th Region	73	- 13.8% ·	-4.9%
\$1 7th Region	86	-0.3%	-4.3%
\$ <u>■</u> 8th Region	56	-23.9%	-19.7%
\$ Santiago Metropolitana	88	- 13.5%	-10.5%
\$ <u>■</u> 12th Region	51	2.3%	1.1%

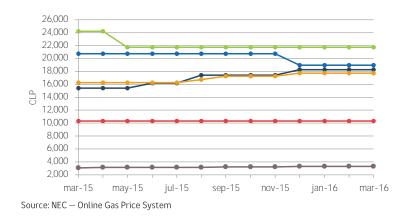
Source: CNE

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%	1 8.3%
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)	3.304	0.6%	6.9%

Source: NEC — Online Gas Price System







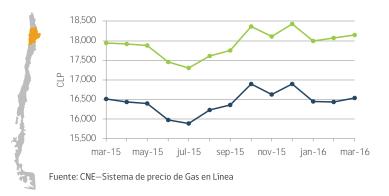


5 Domestic Prices of Bottled Liquefied Petroleum Gas

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

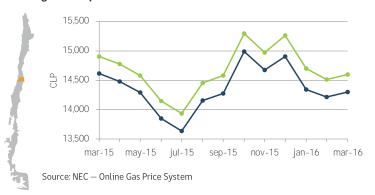


Variation in Bottled LPG Prices

	Туре	CLP	Мо	nthly	Ye	arly
1	Catalityc	18,150	_	0.4%	_	1.2%
1	Regular	16,533	_	0.6%		0.1%

Fuente: CNE—Sistema de precio de Gas en Línea

Santiago Metropolitan

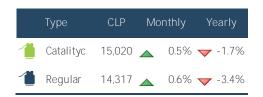


	Туре	CLP	Monthly		Yearly	
1	Catalityc	14,598	_	0.6%	▼ -2.1%	
1	Regular	14,303	_	0.6%	- 2.1%	

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

Concepción





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



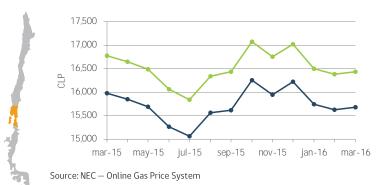






Evolution of Bottled LPG Prices

Puerto Montt



Variation in Bottled LPG Prices



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

6 Fuel imports and exports¹

Information on imports and exports of primary and secondary fuels corresponds to January 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 8.1% over the previous month and 18.9% compared to January, 2016. Meanwhile, the total change in exports recorded a considerable increase over the previous month, but represent a lower that - 47.4%. While, the main fuels exported during the month of January was IFO, which represents 55,1% of total exports measured in tons.

Imports of the main primary fuels during the month of January are coal from United States, Australia, Colombia and Canada; crude oil from Brazil y Ecuador; diesel from the United States 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	984	6.8%	31.8%
Crude Oil	867	17.0%	26.2%
■ Diesel Oil	362	→ -17.0%	-7.2%
Natural Gas	211	>100%	59.5%
⇔ Gasoline	4	-92.1%	-95.4%
LPG	61	-17.7%	-26.8%
Household Kerosene	67.2	-1.7%	>100%
Overall total	2,556	8.1%	1 8.9%

Variation in Exports During the Period

Fuel	[Thous- Tons]	Monthly	Annual
👼 Coal	286	(*)	-47.2%
Diesel Oil	7	89.5%	-5.8%
Fuel Oil	0	(**)	(*)
⇐ Gasoline	6	(*)	1 50.4%
GLP	0	(*)	(**)
₩ IFO	0	(**)	(**)
Overall total	299	283%	-47%

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

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

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

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

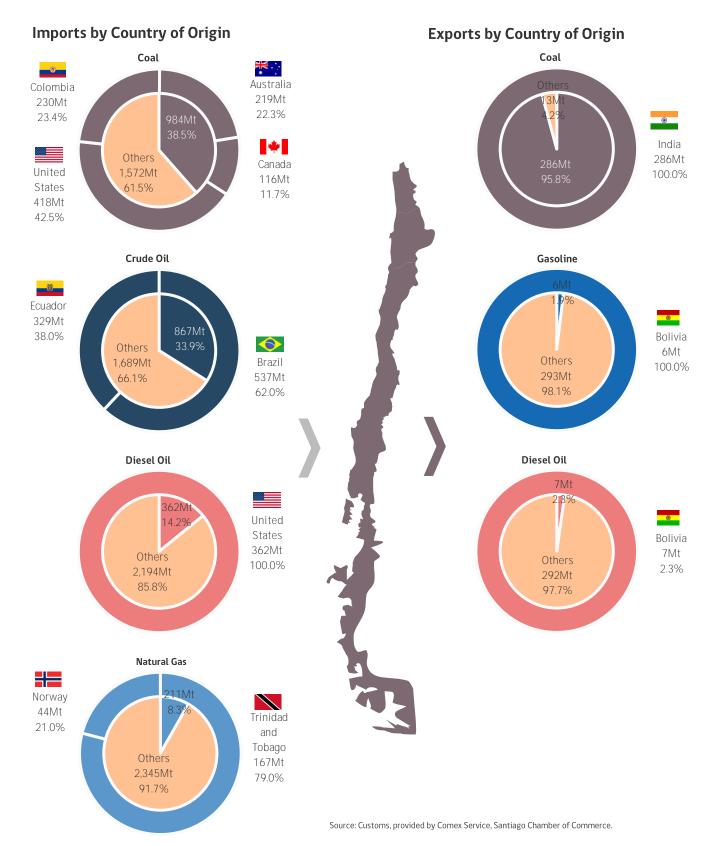
Imports and exports are the March report, due to a process of validation of the new data source.















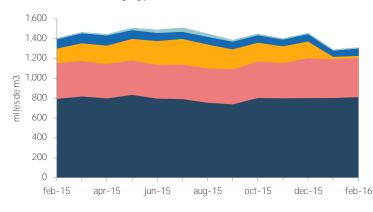




7 Fuel Sales

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	817	_	1.1%	_	2.3%
Fuel Oils	393	_	0.3%		8.3%
Liquefied Gas	23	$\overline{}$	-5.7%	$\overline{}$	-84.1%
Gasoline	76		20.4%	∇	-19.5%
Diesel Oil	1		0.1%	$\overline{}$	-8.5%
Overall total	1,309	_	1.7%	$\overline{}$	-6.6%

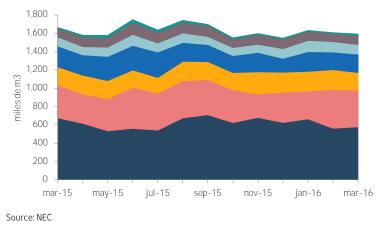
Source: NEC, based on ENAP data

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	2.8%	-14.5%
★ Household K	18	-5.3%	10.0%
Fuel Oils	95	-11.3%	-0.8%
🕂 Kerosene Av.	105	4.6%	-11.6%
Automotive gas	192	-7.8%	7.0%
Liquefied gas	202	4.4%	△ 0.6%
Diesel oil	401	2 92.3%	>100%
Crudo oil	581	6.9%	34.7%
Overall total	1,594	-0.9%	-4.3%
Source: NEC			



ENERGY PROJECTS UNDERGOING ENVIRONMENTAL EVALUATION

1 Projects Submitted for Environmental Evaluation

In March 2016, **8** energy projects were submitted to the Environmental Impact Evaluation System (SEIA), representing an investment of **USD 2,970 million**. Of these, **6** projects are for electric power generation and **2** projects are for electrical transmission¹.

Detail of energy projects submitted for environmental evaluation

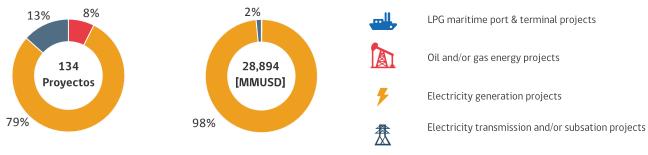
Project Type	Project Owner	Project Name	Presentation	Investment	WEB
High-voltage electricity transmission line	Cooperativa de consumo de energía eléctrica Chillan	Subestación Eléctrica Quilmo II	23/mar/2016	0,9	Link
High-voltage electricity transmission line	ACCIONA ENERGÍA CHILE SpA	Línea de Interconexión 220 kV, entre los Proyectos Foto- voltaicos El Pelícano y El Romero Solar	18/mar/2016	1,0	Link
Generation	ACCIONA ENERGÍA CHILE SpA	Planta Fotovoltaica Almeyda	22/mar/2016	101,0	<u>Link</u>
Generation	Chester Solar I SpA	Planta Fotovoltaica Jahuel 9 MW	23/mar/2016	16,2	<u>Link</u>
Generation	EL CASTAÑO SPA	Parque Solar Fotovoltaico El Castaño	21/mar/2016	11,6	<u>Link</u>
Generation	Qanqiña SpA	Parque Solar Qanqiña	18/mar/2016	107,0	Link
Generation	SolarReserve Chile Ltda	Planta de Concentración Solar de Potencia Tamarugal	18/mar/2016	2.700,0	Link
Generation	GR PEUMO SpA	Planta Fotovoltaica Alhué	14/mar/2016	32,0	Link

Source: SEIA

2 Energy Projects Currently Being Evaluated

In March 2016, **134** 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 **28,894 MMUSD**.

Distribution of Projects and their Investment [millions of USD]



Source: SEIA









3 Projects with Approved Environmental Qualification Resolution

In March2016, the environmental qualification resolutions (RCA) of **9** energy projects were approved. Of these, **5** projects are for electric power generation with total capacity of **462 MW**, **1** projects is electricity transmission¹ and **3** are Oil and/or gas energy project. Together they represent a total investment of **USD 460 million**.

Presentation Date	Project Type	Region	Project Owner	Investment [MMUSD]	Web
10/feb/2016	Generation	VII	Consulting & Energy Limitada	8,5	<u>Link</u>
01/mar/2016	Oil and/or gas energy projects	XII	Empresa Nacional del Petróleo -	1,2	<u>Link</u>
01/mar/2016	Generation	XII	GeoPark Fell SpA	0,0	<u>Link</u>
03/mar/2016	Generation	RM	TRANSELEC	44,7	<u>Link</u>
07/mar/2016	Generation	Interregional	Interchile S.A	100,9	<u>Link</u>
11/mar/2016	High-voltage electricity transmission line	II	Parque Solar Fotovoltaico Sol del	1,0	<u>Link</u>
15/mar/2016	Generation	IX	Parque Eólico Los Trigales SpA.	300,0	<u>Link</u>
22/mar/2016	Oil and/or gas energy projects	XII	Empresa Nacional del Petróleo -	0,3	<u>Link</u>
22/mar/2016	Oil and/or gas energy projects	XII	Empresa Nacional del Petróleo -	3,60	<u>Link</u>

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 17,433 million**. In particular, energy power generation projects have a total investment of **USD 13,266 million** (76.1%), equivalent to **5,041 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 Electricity 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 18th April of 2016 as deadline to present the indications	07/08/2015	Link

2 Sectorial Regulations Published in the Official Bulletin

Decree No. 1T, dated February 5, 2016, which sets the average node prices for the central interconnected system and norte grande interconnected system , in the framework of pricing indicated it in the article No. 158 of the general law on electrical services. Published in the official bulletin on March 4, 2016. $\underline{\text{Link}}$









3 Sectorial Regulations Not Published in the Official Bulletin

Exempt resolution No. 385, dated March 4, 2016, that informs and communicates new values of node price and the indexes of the indexation formulas. According to the indicated in the ministry of energy decree No. 5T, 2015. Link

Exempt resolution No. 275, dated March 4, 2016, that approves the clarifications and responses of the bases denominated: "Study for calculate the components of the aggregated value in distribution; Quadrennial: November 2016 to November 2020" and "Study for the costs of associated services to electrical supply in distribution". Link

Exempt resolution No. 277, dated March 4, 2016, that publishes the energy and power prices list in the primary distribution sub stations of the central interconnected system and norte grande interconnected system. Link

Exempt resolution No. 279, 10 March 2016, which modifies exempt resolution No. 273, 4 March 2016, which informs and communicates new node prices for the Cochamó's mediumsized system. Link

Exempt resolution No. 293, 24 March 2016, which communicates the values of indexes of the applicable rate formulas in the supplies subjects of pricing. Link

Exempt resolution No. 286, 17 March 2016, which modifies exempt resolution No. 268, 2015, which approves the bases of national and international public tender for the power and energy supply to stock the consumption of clients submitted to a price regulation, supply tender 1/2015, that was modified by exempt resolution No. 652, 2015. Link

Exempt resolution No. 289, 21 March 2016, that assigns the members of the evaluation commission of tender 610-2-LP16, "Analysis and proposal of pricing structure and flexible rates". Link

Exempt resolution No. 295, 28 March 2016, that assigns the members of the evaluation commission of tender 610-1-LR16, "Study for calculate the components of the aggregated value in distribution; Quadrennial: November 2016 to November 2020" and "Study for the costs of associated services to electrical supply in distribution". Link

4 Expert Panel Rulings

Dictum No. 1, 22 March 2016, over the difference in the annual report 2016 of toll payment calculation, unique charges and revenue rates expected by segment of the trunk system of SING, CEDEC-SING toll department.

Dictum No. 2, 22 March 2016, over the expansion plan of the transmission trunk system, period 2015-2016, with erratum approved in an extraordinary session on 8 April 2016.

Dictum No. 3, 22 March 2016, over the difference in the annual report 2016 of toll payment calculation for the trunk system of SIC, CEDEC-SIC toll department.

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