

MARCH  
**2016**

ANNUAL PROGRESS REPORT  
**A good year for energy in Chile**



## Goals

**1** To reduce the electricity marginal cost, which is the spot price of electricity transactions in the market between companies, by 30% during this governmental period (4 years) in comparison to 2013.



In 2015, the average marginal cost will be USD 104 per MWh, which represents a reduction of 34% in comparison to 2013, maintaining similar hydrologic conditions and isolated from drops in the price of coal and oil.

**2** To reduce the prices in electricity supply tenders by 25% during this governmental period. This process will determinate the prices of electricity bills for Chilean homes and small businesses over the next decade, beginning in the year 2021.



In October 2015, as part of the electricity tender between generators and distributors, 31 offers for 1,200 GWh were received. 100% of what was tendered was adjudged and the average price was USD 79.3 per MWh, which represents a 40% decrease in comparison to December 2013.

**3** To promote investment in generation projects, lifting the existing barriers for renewable energy and so fulfilling the legal mandate that these clean sources represent 20% of our power generation capacity by 2025.



In December 2013, the installed capacity of Non-Conventional Renewable Energy (NCRE) was 6.3%. On the same date in 2015, our energy mix included 11.4% NCRE. In March 2014, when the current Government took office, there were a total of 28 projects under construction representing 1,949 MW and 34% corresponded to NCRE. At the end of 2015, 51 projects were under construction representing 4,031 MW, 45% of these will use non-conventional renewable sources and 18 are small-scale hydroelectric stations which are part of the Government's 100 Mini Hydro Plan.

Thereby, with a total of USD 13.2 billion, consisting of power generation and transmission, energy is the sector with most investment in Chilean economy.

## Goals

**4** To foster the efficient use of energy, in order to reduce energy consumption by 20%, as compared to the projections for the year 2025. Energy efficiency is key to the country's sustainable development.



## Results

Energy efficiency requires a cultural change and new habits, on both the domestic and institutional levels. Thus, in 2015 diverse communicational and capacity-building actions were carried out. The campaigns and activities promoting the adequate use of energy and firewood were continued, and gathered more than 300,000 people throughout the country.

In addition, we intervened in 14 high-complexity hospitals with energy efficiency measures, delivered 180,000 efficient lightbulbs and adjudicated 60 wood drying centers.

**5** To set up a fuel price stabilization system.



In 2015, this mechanism has contributed nearly USD 90 million to stabilize the price of fuels in the local market.

**6** To transform Chile's National Petroleum Company (ENAP, by its Spanish acronym) into a robust corporation.



ENAP had its best financial performance of the last 15 years. In September 2015, the EBITDA was USD 665 million, representing an increase of 42% as compared to the same period of the previous year. Profits increased by 140% to USD 240 million in this period. The assets of the firm rose to USD 788 million. We are keeping up the hard work to reduce the rate of work accidents, because we know the value of safety for workers and their families, as well as for the operation of the company itself. In December, ENAP reached an agreement with Mitsui for developing two power generation projects which will require a USD 1.3 billion investment. Thus, it will add the presence of an important new actor in April's 2016 power supply tender process.

**7** To design the Energy 2050 program as a platform to develop a long-term Energy Policy with social validation.



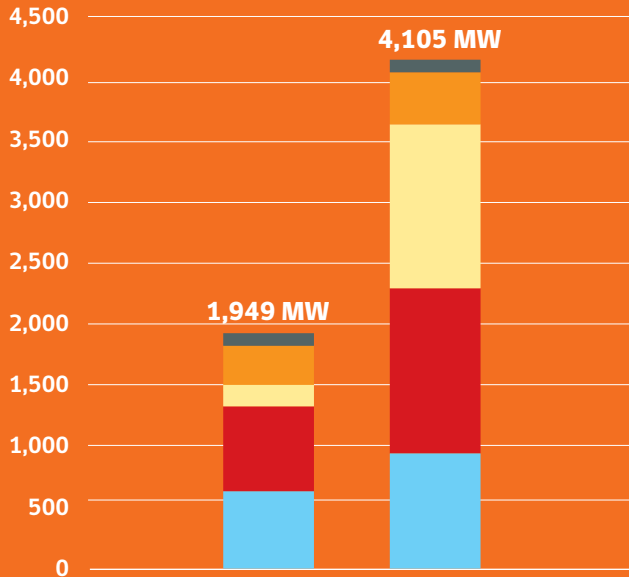
In 2015, nearly 3,000 people participated in workshops and discussion seminars related to this Policy. The Energy 2050 advisory committee – which gathered 27 representatives of the social, academic, industrial and political sectors – met weekly for 10 months in 2015 and developed a Roadmap that provided essential input for the Energy Policy presented to President Bachelet on December 30th, 2015.

Beyond the unprecedented nature of this participative process, it should also be noted that this is the first public policy submitted for Strategic Environmental Evaluation and afterwards to public consultation.

# Generation

## POWER PLANTS UNDER CONSTRUCTION (SIC + SING) MARCH 2016

● HYDRO 
 ● THERMAL 
 ● SOLAR 
 ● WIND 
 ● OTHER NCRE

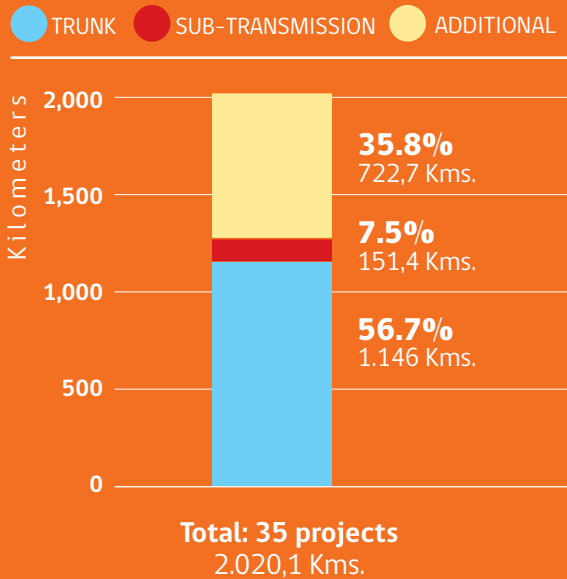


	<b>MARCH 2014</b> 28 Projects 68% Renewable 34% NCRE* USD 5.9 BN	<b>MARCH 2016</b> 59 Projects 65% Renewable 44% NCRE* USD 11.1 BN
Hydro	653	962
Thermal	632	1,441
Solar	223	1,151
Wind	350	508
Other NCRE	91	43
<b>TOTAL</b>	<b>1,949</b>	<b>4,105</b>
<b>Small Hydro (MW)</b>		84
<b>#Small Hydro Projects</b>		23

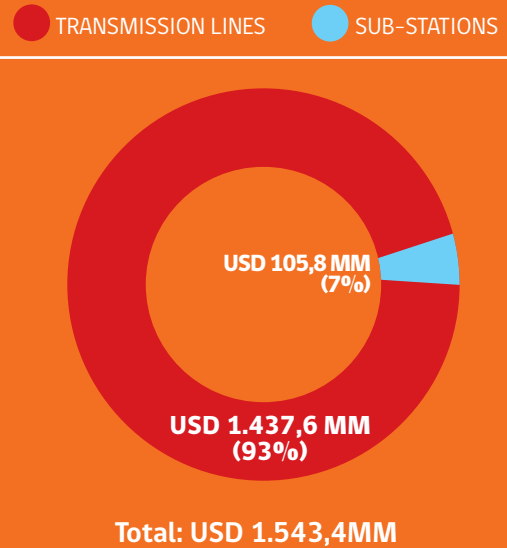
\*NCRE: Non Conventional Renewable Energy concept includes Small Hydro (less than 20 MW).

# Transmission

## TRANSMISSION LINES UNDER CONSTRUCTION (SIC+SING) MARCH 2016



## INVESTMENT OF TRANSMISSION PROJECTS UNDER CONSTRUCCION MARCH 2016



# Energy in Chile



## Main Figures

### 1. Installed power capacity by system, February 2016

SIC-SING: 19,606 MW  
Aysen: 52 MW  
Magallanes: 101.7 MW

### 2. Installed capacity by technology SIC-SING, February 2016

a. Coal: 21.8%  
b. Hydro: 33.2%  
c. LNG: 16.7%  
d. Non-Conventional Renewable Energy: 9.7%  
e. Diesel: 18.6%

### 3. Gross power generation 2015

SIC-SING: 71,632 GWh  
Aysen: 158 GWh  
Magallanes: 307 GWh

### 4. Percentage of power generated by Non-Conventional Renewable Energy (NCRE) sources in 2015

a. 8.55%

### 5. Energy potential:

a. Wind: 37.5 GW  
b. Hydroelectric: 12.5 GW  
c. Solar PV: 1,263.4 GW  
d. Solar CSP: 548.5 GW

### 6. Average marginal cost of electricity during 2015

a. SIC: 91 USD/MWh  
b. SING: 58 USD/MWh

### 7. Average contract price of electricity

a. 2014: 114 USD/MWh  
b. 2015: 79.3 USD/MWh

### 8. Number of projects under construction by February 2016

54 projects  
4,051 MW

### 9. Electric power consumption: 3,810 KWh per capita

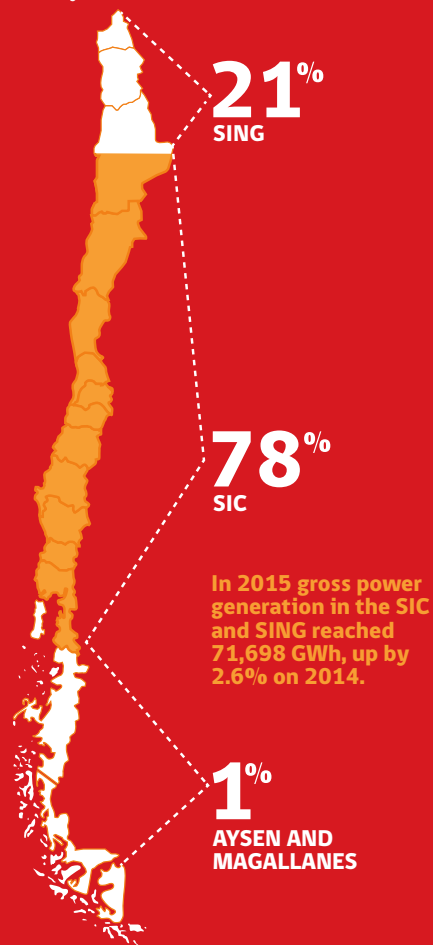
### 10. Households with individual or shared access to utility grid: 99.6%

### 11. Expected growth of electricity demand: 4.3% annually

### 12. Call for tenders for 20 years of supply in April 2016: 13,750 GWh/Year (12,500 GWh/Year + 10%)

### 13. 2015 total outage duration: 22.4 hours

There are four separate electricity grids in Chile: the Central Interconnected System (SIC, Sistema Interconectado Central), which serves the central part of the country; the Norte Grande Interconnected System (SING Sistema Interconectado del Norte Grande), which serves the desert mining regions in the North; and the Aysén and Magallanes systems, which serve small areas of the extreme southern part of the country.



Source: National Energy Commission

[www.energia.gob.cl](http://www.energia.gob.cl)  
[www.energiaabierta.cne.cl](http://www.energiaabierta.cne.cl)



Chile 

	<p>Ministerio de Energía</p> <p>Gobierno de Chile</p>
---	---