CHILE

1. GOALS FOR EFFICIENCY IMPROVEMENT

1.1. Overall Energy Efficiency Improvement Goals

Chile aims to foster the efficient use of energy and achieve a 20% savings goal by the year 2025 compared to business-as-usual (BAU).

1.2. Sectorial Energy Efficiency Improvement Goals

No sector targets are specified.

1.3. Action Plans for Promoting Energy Efficiency

In 2014, the Chilean Government, through its Ministry of Energy, released its National Energy Agenda to guide the economyôs long-term energy policy. The key goals of the agenda include the following:

- Reduce the electricity marginal cost by 30% in the Central Interconnected Grid (SIC).
- Reduce the prices of the electricity supply bids by 25%.
- Lift existing barriers for nonconventional renewable energy sources to increase the participation of renewable energy to 45% of the new electricity generation capacity by 2025.
- Set up a fuel price stabilization system to reduce the volatility of internal fuel prices.
- Turn ENAP (National Oil Company) into a main actor in the energy challenges of the member economy government.
- Develop, by 2015, a long-term energy policy that will be validated by the Chilean citizens.

1.3.1 Energy Efficiency Monitoring and Reporting

The Division of Energy Efficiency and the Agencia Chilena de Eficiencia Energética (AChEE) have established a division specializing in measurement and verification. It seeks to implement methodologies in order to produce reports at both the macro and project levels.

At the macro level, energy statistics are prepared by the Prospective and Energy Policy Division of the Ministry of Energy, while economic data (e.g., national accounts and production) are reported by both the Central Bank of Chile and by the National Institute of Statistics. In addition, Chile is participating in a project to build a database of energy efficiency indicators in the Mercosur countries and partners, with the assistance of the Economic Commission for Latin America and the Caribbean (ECLAC).

At the project level, the results will be measured on the basis of international methodologies (e.g., Protocol CMVP) or by third parties (e.g., universities and consultants) to support the savings achieved by each project.

1.4. Institutional Structure

The Ministry of Energy is the institution responsible for developing public policies in energy efficiency. It centralizes the functions to develop, propose, and evaluate actions in this area. The Energy Efficiency Division of the Ministry is responsible for defining and promoting the following: objectives and goals in energy efficiency, the regulatory framework that promotes energy efficiency, and long-term strategies.

In Chile, a number of government institutions are involved in working toward increasing energy efficiency, one of the most important of which is AChEE. The goal of this institution is to promote, strengthen, and consolidate the efficient use of energy by bringing together relevant stakeholders (domestic and international) and implementing public-private initiatives

in energy sectors. AChEE is also in charge of implementing energy efficiency programs according to the policies developed by the ministry.

Other important actors include Superintendencia de Electricidad y Combustibles (Superintendency of Electricity and Fuels (SEC), the Ministry of Housing, and the Ministry of Transport and Communications.

1.4.1 Central Institutional Structure

a) Name of organization

Ministry of Energy - Energy Efficiency Division

b) Status of organization

Design, proposal, implementation, and evaluation of public policies and projects in energy efficiency

c) Roles and responsibilities

Development of energy efficiency policies, plans, lines of action, and standards.

d) Covered sectors

Industrial and mining, transport, building, firewood, appliances, and education.

e) Date of establishment

2010.

f) Number of staff members

The Ministry of Energy includes approximately 150 staff members, while The Energy Efficiency Division has 20 professionals, not including those working in regional offices.

g) Description of the Ministry of Energy

The Ministry of Energy is the highest-level government body through which the President of the Republic collaborates in the government and administrative functions of the energy sector.

The overall objective of the Ministry of Energy is to develop and coordinate plans, policies, and standards for the proper functioning and development of the sector. In addition, it ensures compliance and advises the government on all matters related to energy.

The energy sector includes all activities of study, exploration, generation, transmission, transport, storage, distribution, consumption, efficient use, imports and exports, and other aspects related to electricity, such as coal, gas, oil and oil products, nuclear energy, and geothermal, solar, and other energy sources.

1.4.2 Implementing Institution Structure

a) Name of organization

Chilean Energy Efficiency Agency (Agencia Chilena de Eficiencia Energética (AChEE))

b) Status of organization

Implementation of specific programs and projects that drive efficiency in energy consumption.

c) Roles and responsibilities

AChEEôs role is to study, evaluate, promote, implement, and disseminate information on diverse initiatives related to energy diversification, conservation, and efficiency.

d) Covered sectors

Building, industrial and mining, transport, education and training, measurement and verification, and business development.

e) Date of establishment

2010.

f) Number of staff members

AChEE includes approximately 30 staff members, with more involved through various projects.

g) Description of AChEE

AChEE is a public-private, non-profit foundation whose mission is to promote, strengthen, and consolidate the efficient use of energy by bringing together public and private stakeholders (domestic and international) and implementing initiatives in various sectors of energy, thus contributing to the economyôs sustainable development. AChEE includes a board comprising representatives of the Ministry of Energy, the Ministry of Finance, and the Confederation of Production and Trade

1.4.3 Regional or Local Institutional Structure

a) Name of organization

Ministerial Regional Secretaries of Energy (SEREMIS)

b) Status of organization

SEREMIS leads the implementation of energy efficiency strategies in different regions of the economy.

c) Roles and responsibilities

Disseminate and promote the efficient use of energy at the local level.

d) Covered sectors

Industrial and mining, transport, building, firewood, appliances, and education.

e) Starting date

2010.

f) Number of staff members

There are six regional ministry representatives (SEREMI) covering the entire economy.

1.4.4 Information Dissemination, Awareness Raising, and Capacity Building

a) Information collection and dissemination

Chile includes a product labeling program that leverages the comparative European labeling scheme, which breaks down all similar models of a product into one of seven efficiency categories: A (most efficient) through G (least efficient). This labeling is currently applied to the following: incandescent bulbs (2007), compact fluorescent lamps (2007), refrigerators (2008), refrigerator-freezers (2008), freezers (2008), microwaves (2010), TVs (2012), TV set-top boxes (2012), stereos (2012), DVD players (2012), Blu-ray players (2012), electric motors up to 10 hp (2011), air conditioners (2011), and fluorescent tubes (2011).

Appliances that are in the process of label measurement and verification include washing machines (public consultation on November 2015), dishwashers, and clothes dryers. Appliances that have a label standard include gas water heaters, gas stoves, halogen lamps, standby power consumption home theaters, and standby consumption printers and TV sets.

Other products that are covered with energy efficiency protocols but are without labels include sodium lamps, high- and low-pressure products (2012), ballasts for sodium lamps (high- and low-pressure), ballasts for high-pressure mercury lamps and/or metal halides (2012), and LED technology devices for lighting fixtures (2013).

The Ministry of Energy is working with the Ministry of Housing and Urbanism in volunteer housing labeling.

Another initiative is the compulsory new car labeling scheme, which began in February 2013, and only applies to the first sale of light passenger vehicles (up to 2,700 kg) homologated from 2008, except for those primarily used for freight, such as large trucks and vans.

b) Awareness Raising

During 2014 and 2015, the economy wide campaign titled, ñWhen you use energy well, you win and we all winò (*Cuando usas bien la energía ganas tú y ganamos todos*), focused on energy efficiency and was aimed at residential users through television, billboards, and newspapers.

In 2013, the ñ3rd Energy Efficiency Expoò was held to exchange experiences and learn more about this topic. It featured five international speakers and included approximately 80 stands from 60 participating companies. More than 9,000 visitors attended the event.

c) Capacity Building

There are numerous opportunities for energy efficiency training for professionals, including courses offered at approximately 20 universities along with two engineering associations that offer subgroups focused on energy.

AChEE continues to offer three professional certifications: 1) Certified Retscreen User (CRU), 2) Certified Measurement and Verification Professional (CMVP), and 3) Certified Energy Manager (CEM). The first certified ñEuropean Energy Managerò was also established by the German-Chilean Chamber of Commerce and Industry. Moreover, to complement the study of energy efficiency, AChEE has incorporated introductory courses on measurement and verification as well as a course for the certification of energy managers.

1.5. Research and Development in Energy Efficiency and Conservation

The Energy Efficiency Division has conducted a series of studies to evaluate the potential savings and benefits of energy efficiency. Research highlights include the following:

- Study regarding the basis of an Action Plan for Energy Efficiency.
- Study of energy end-uses in the residential sector.
- Study of energy end-uses in hospitals.
- Study of energy end-uses in the industrial and mining sectors.
- Study of energy end-uses in schools.

The government is currently developing policies on energy efficiency research, development, and demonstration.

Although research is mostly performed in universities, there are energy efficiency research projects and programs in the government.

2. MEASURES FOR ENERGY EFFICIENCY IMPROVEMENTS

2.1. Government Laws, Decrees, and Acts

In 2014, the Chilean Government published its Energy Agenda 2014. According to the agenda, the action lines and goals can be summarized as follows:

- Energy Efficiency as a State Policy: Energy Efficiency Law.
- Introduce measures to spread the development of energy-efficient projects .
    a. Implement the Energy Efficiency Action Plan until year 2020.

b. Include, in the 12 months following the launch of the agenda, the definition of ñefficient cogenerationò to the relevant regulations.
c. Develop a new Energy Efficiency labeling scheme during 2014 and 2015.

- Housing and construction
  a. Subsidize the thermal conditioning of existing dwellings.
  b. Promote energy-efficient public buildings and dwellings.
- Support energy management in municipalities with an emphasis on street lighting.
  a. Replace 200,000 street lights by 2018, while placing special emphasis on those using more inefficient technologies.
  b. Develop a new street lighting regulation.
  c. Support municipalities in energy management plans and provide advice on the most convenient tariff options.
- Mass campaigns and educational programs in energy efficiency (EE)
  a. Conduct an EE campaign that emphasizes the benefits of EE both for families and society as a whole by June 2014.
  b. Continue mass awareness and education campaigns about the good use of energy in subsequent years.
  c. The Ministry of Energy will increase the coverage regarding the implementation of an educational energy efficiency program.
  d. Action plan.

a) Name

Energy Agenda 2014

b) Purpose

Reduce the economyôs energy consumption by 20% by the year 2025 (in terms of the expected consumption without the energy efficiency measures included in the agenda).

c) Applicable sectors

Industrial and mining, transport, building, firewood, appliances, and education.

d) Outline

Industrial and Mining

- Promotion of the implementation of energy management systems.
- Promotion of cogeneration (CHP).
- Promotion of technical assistance to projects.
- Incorporation of efficient technologies.

Transport

- Improve energy efficiency of light and medium vehicles.
- Improve operating efficiency of fleet passenger vehicles.
- Promote the introduction of more efficient technologies in heavy vehicles.
- Improve the efficiency of the existing fleet of heavy vehicles.
- Promote energy efficiency throughout the supply chain of heavy vehicles.
- Promote the shift to more efficient transport.
- Initiate electric mobility.

Buildings

- Improve the quality of building envelopes and equipment.
- Promote efficient energy management of buildings.
- Promote the design of buildings with high energy efficiency standards.
- Promote the supply of construction products and services with efficiency standards.

- Promote energy efficiency in street lighting for vehicular and pedestrian areas, especially in urban locations.

Firewood

- Improve the knowledge regarding firewood and its processes.
- Improve and update firewood burning appliances.
- Improve the quality standard of firewood.
- Increase the efficiency of residential firewood consumption.
- Develop a firewood energy market.

Appliances

- Expand energy efficiency labeling.
- Set minimum energy performance standards (MEPS).
- Develop a program of efficient residential lighting.

Cross Sector

- Develop an Energy Efficiency Seal.
- Creation of the Interministerial Committee on Energy Efficiency (CIEE).
- Raise awareness and promote energy efficiency.
- Recognition of job skills related to energy efficiency.
- Promote the integration of energy efficiency in education.
- Promote I + D in energy efficiency.
- Incorporation and promotion of smart grids.
- Promote measurement and verification (M&V) in the implementation of energy efficiency programs.

e) Financial resources and budget allocation

Budget for 2015: USD 24 million.

f) Expected results

By 2025, reduce projected energy consumption by 20% (in terms of the expected consumption without the energy efficiency measures included in the Energy Agenda 2014).

2.2. Regulatory Measures

2.2.1. Interministerial Committee on Energy Efficiency (CIEE)

The government believes that the state must be one of the main drivers of energy efficiency and it must set an example for the rest of society. For this reason, it established the CIEE to coordinate energy efficiency policies within the government, thus integrating this element into sectorial policies. The committee reports directly to the President and it was created by Supreme Decree No. 74.

2.2.2. Mandatory Labeling

See Section 1.4.4 (a)

2.2.3. Minimum Energy Performance Standards

The first MEPS regulation was established in 2012 and the first product class targeted was ñNon-Directional Lamps for General Lightingò in 2013. In 2014, MEPS for residential use refrigerators were released.

2.2.4. Minimum Thermal Standards

a) Name

Minimum Thermal Standard for Residential Buildings

b) Purpose

To improve the thermal efficiency of residential building envelopes.

c) Applicable sectors

Construction.

d) Outline

In 2000, the Ministry of Housing and Urbanism introduced a Minimum Thermal Standard for Residential Buildings, thus establishing minimum transmittance and thermal resistance requirements. In January 2007, this was superseded by the Building Envelope Regulation, which included requirements for the entire building envelope including the roof, walls, ventilated floors, and windows.

e) Financial resources and budget allocation

No information is available.

f) Expected results

No information is available.

g) Other regulatory measures

No information is available.

2.3. Voluntary Measures

a) Name

Ministry of Energy, Codelco, and Mining Council Agreement on Energy Efficiency

b) Level

Large mining industry.

c) Purpose

Promoting energy efficiency in the industry through the following initiatives: promotion of energy efficiency research; dissemination of results resulting from energy efficiency projects in the mining sector; evaluation of energy efficiency pilot projects; technology development and innovation in the mining sector; and fostering an energy efficiency culture within mining companies that are members of the roundtable.

d) Applicable Sectors

Mining.

e) Outline

Started in 2014.

f) Financial resources and budget allocation

No information is available.

g) Expected results

Energy efficiency audits on large mining companies related to operational and maintenance improvements as well as equipment replacement and instruction of new technologies. The results of the audits are expected for October 2015.

h) Description

The mining industry will subject itself to independent energy audits that will allow for the identification of greater energy efficiency related to operational and maintenance improvements as well as equipment replacement and instruction of new technologies.

i) Other voluntary measures

Based on the results of these audits, energy efficiency plans will be prepared and implemented in the short, medium and long term after which the progress will be publically reported.

2.4. Other Measures

a) Name

Thermal Retrofitting Subsidy under the Ministry of Housing and Urban Development

b) Level

For regions from the center to the south (Region of Oô Higgins to the Region of Magallanes).

c) Purpose

Fund projects to improve the building envelopes of residences built before the thermal regulation came to effect. The improvements should at least meet the minimum standards required by the current Minimum Thermal Standards regulation.

d) Applicable Sectors

Residences constructed before the date when the second phase of the thermal regulations came into force in 2007, and those that meet the requirements for the Ministry of Housing and Urban Planningôs Family Property Protection Program.

e) Outline

Started in 2009.

f) Financial resources and budget allocation

Since 2009, the Ministry of Energy has allocated funds totaling USD 73 million for 15,500 beneficiaries. Since 2011, the Ministry of Housing and Urban Planning has incorporated this program in its budget, thus allocating USD 40 million per year.

g) Expected results

Grant 8,000 subsidies per year.

2.5. Financial Measures Taken by the Government

2.5.1. Tax Scheme

Chile does not provide any tax scheme for energy efficiency improvements.

2.5.2. Other Incentives

Information is not available.

2.6. Energy Pricing

The government has a regulated a pricing mechanism for small clients. The price of electricity for regulated consumers is set by the regulator (National Energy Commission/Comisión Nacional de Energía), calculated based on the long-term nodal price, and based on the prices of distributorôs energy auctions.

2.7. Other Efforts for Energy Efficiency Improvements

2.7.1. Cooperation with Non-Government Organizations

The Ministry of Energy works with several non-government organizations and international organizations in energy efficiency projects including the following: the United Nations Development Programme (UNDP) with the public lighting replacement program; and the United Nations Environment Programme (UNEP) with the ñEnlightenò initiative to develop a strategy for transitioning to efficient lighting.

2.7.2. Cooperation through Bilateral, Regional, and Multilateral Schemes

Chile participates in COPANT[1] for the harmonization of energy efficiency standards. It is also involved in the design discussions of the ISO 50 001 standard.

Chile is actively participating in the Energy Working Group (EWG) of the Asia Pacific Economic Cooperation (APEC). On the regional level, Chile participates in MERCOSURôs efforts to promote energy efficiency in the region, and collaborates with ECLAC in this area.

2.7.3. Other Cooperation/Efforts for Energy Efficiency Improvements

2.7.3.1. Cooperation Agreements

Chile has several non-binding cooperation agreements that involve energy efficiency with institutions from different economies, including New Zealand, Korea and the U.S. state of Massachusetts, among others.

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[1] Pan American Standards Commission ï COPANT.