INDUSTRIAL
ENERGY EFFICIENCY

BUILDING
ENERGY EFFICIENCY

Taking Initiative on Energy Efficiency

CHILE

EFFECTIVE LEADERSHIP

Chile accelerates its energy efficiency efforts

As a nation with only modest fossil fuel resources, Chile has carved out a reputation as one of Latin America's strongest actors on energy efficiency. In 2005, in response to earlier shortages of natural gas imports and droughts which limited hydropower generation, Chile redefined its energy strategy, stressing energy efficiency as a core national priority and establishing a National Energy Efficiency Program.[1] Since then, the importance of energy efficiency in Chile has grown substantially, which has been reflected in the federal budget. From 2006 to 2009, the annual budget of the National Energy Efficiency Program increased from USD 1 million to more than USD 34 million.[2]

Chile reformed its institutional framework for energy efficiency over the last decade and in November 2010 it established the Chilean Energy Efficiency Agency to take over the implementation of energy efficiency policies and initiatives. The Chilean Energy Efficiency Agency is structured as an independent, nonprofit organization which draws on resources from the public as well as private sectors to support the competitiveness and sustainable development of Chile.[3] In its role as a public-private institution, it also coordinates and informs the actions of relevant stakeholders at the local, national, and global levels. In 2012, Chile featured energy efficiency as the first component of its National Energy Strategy for 2012 to 2020, which has set an ambitious goal to reduce 2020 projected energy demand by 12 percent through improved energy efficiency.[4]

A RANGE OF ENERGY EFFICIENCY MEASURES

Since the outset of its energy efficiency efforts in 2005, Chile has initiated a number of significant programs, including:

Chilean Energy Efficiency Standards and Labeling Program: This program established a regulatory and labeling framework for electrical products sold in the country. The aim is to provide consumers with clear information about the efficiency of a range of appliances and equipment, and to offer a metric for product comparison. Following the lead of other Latin American countries which have implemented labeling practices, the program requires International Organization for Standardization test procedures to be used. Labeling is mandatory for incandescent and compact fluorescent light bulbs, as well as certain appliances such as refrigerators, microwaves, air conditioning units, and televisions.[5]

Light Up Good Energy: Through this initiative, Chile purchased and distributed compact fluorescent light bulbs (CFLs) to residents within the most vulnerable 40 percent of the population. Purchases were made through the state procurement agency, ChileCompra.[6] The CFLs, which are up to five times more efficient than traditional incandescent bulbs, allow families to save up to 25 percent on their monthly electricity bills.[7] The program commenced in 2008 with the distribution of 1.5 million CFLs, and was extended in 2009 through early 2010 with the distribution of an additional 1.4 million CFLs. Over its duration, Light up Good Energy resulted in the distribution of 2.9 million CFLs at a total cost of USD 8.8 million.[8]

Subsidy on Electric Motors: Chile's industrial and mining sectors account for about 38 percent of primary energy consumption in the country.[9] These sectors, particularly the mining industry, are heavily dependent on small motors to generate on-site power for various tasks. In 2009, Chile initiated a program to encourage the replacement of traditional motors with higher-efficiency motors, which are up to 12 percent more energy efficient.[10] The program, which ran through 2010 and had a total budget of USD 2.5 million, subsidized the purchase of efficient electric motors at a rate which attempted to match their cost with the cost of purchasing a standard motor.[11,12] The subsidy, which was available to efficient motors ranging from 1 to 10 horsepower, resulted in the replacement of over 5,000 motors in 2009 and 2010.[13,14]

Pre-Investment in Energy Efficiency: In 2006, Chile launched a program to facilitate the implementation of energy efficiency measures in the private sector, particularly small and medium sized enterprises. It works towards this goal by providing technical and financial assistance to these firms to help them minimize their energy consumption. Financial assistance is provided through a direct subsidy for consulting services, which are used to assess potential energy savings, create implementation plans, and conduct financial analyses for energy efficiency measures. Companies with annual net sales up to USD 33 million are eligible for support, with the condition that services are carried out by an accredited consultant. The program covers up to 70 percent of the total consultation costs, up to a maximum of USD 10,000.[15] From the launch of this program through December 2009, 154 contracts were approved, of which 110 had completed their final report.[16]

Energy Efficiency Credit Line: In 2008, a new credit line was introduced with resources provided by the Chilean Economic Development Agency and the German development bank KfW, with a goal to finance energy efficiency measures in businesses. The credit line is available to a variety of sectors and can be used to finance a range of projects, including procurement of machinery and equipment, construction, and engineering and assembly services.[17] Credit is disbursed through commercial banks with a maximum of USD 1 million, provided at a preferential fixed interest rate with payment terms of two to 12 years and grace periods of up to 18 months.[18] Chile's energy efficiency credit line supports companies, production cooperatives, and associations with annual net sales up to USD 33 million.[19]

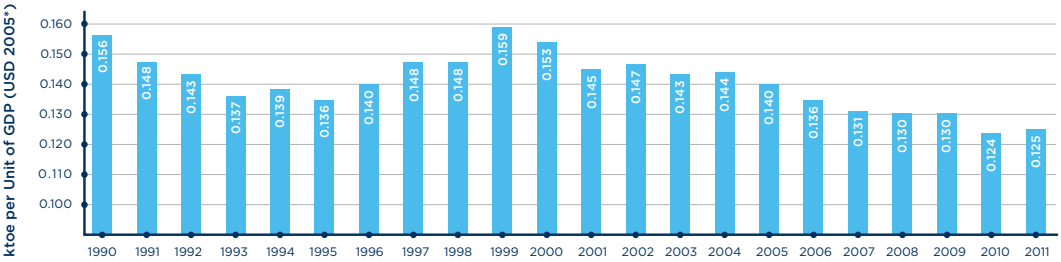
ENERGY EFFICIENCY GAINS

Chile has received international praise for its efforts to improve energy efficiency. In 2010, the Alliance to Save Energy, a leading nonprofit organization that promotes energy efficiency worldwide, honored Chile with its EE Visionary Award, which showcases the world's best practices in energy efficiency policy and implementation.[20]

From 2005 to 2011, Chile consistently reduced its energy intensity, achieving a reduction of over 10 percent, as shown in Figure 1.[21] Chile's achievements were possible because of the high level of support for energy efficiency from the public as well as political leaders. Several public education and awareness campaigns by the Chilean government highlighted the importance of energy efficiency and

conservation. This outreach complemented Chile's other efforts and helped to reduce the nation's energy intensity while sustaining economic growth. In 2008, net energy demand in the grid serving 93 percent of the population declined by 1.2 percent despite economic growth of 3.2 percent.[22]

Figure 1: Chile Energy Intensity 1990–2011



*US dollars at constant exchange rate, price and purchasing power parities of the year 2005

Source: Enerdata. "Global Energy Statistical Yearbook 2012."

Over the next decade, Chile plans to continue pursuing energy efficiency successes by introducing stronger regulations and new financial mechanisms to expand credit access. The country is developing regulations on minimum energy performance standards for appliances. Chile is also looking to expand credit access for energy efficiency measures by partnering with the Global Environment Facility to implement a partial credit guarantee program. This program will overcome financial barriers by reducing the risk of lending to energy service companies through guaranteeing payments in the event of a loan default.

REFERENCES

Chilean Energy Efficiency Agency. "About Program." Web. September 2012. <http://www.acee.cl/576/propertyvalue-13094.html>

International Energy Agency. 2009. "Chile Energy Policy Review: 2009." Web. September 2012. <http://www.iea.org/textbase/nppdf/free/2009/chile2009.pdf>

Lutz, Wolfgang et al. July 2011. "The National Energy Efficiency Standards and Labeling Program of Chile." CLASP and LBNL. Web. September 2012. <http://www.scribd.com/doc/92222448/National-EE-S-L-Program-of-Chile-Review>

ENDNOTES

1 Chilean Energy Efficiency Agency. "About Program." Web. September 2012. <http://www.acee.cl/576/propertyvalue-13094.html>

2 International Energy Agency. 2009. "Chile Energy Policy Review: 2009." Web. September 2012. <http://www.iea.org/textbase/nppdf/free/2009/chile2009.pdf>

3 Mellado, Pamela M. "Public Buildings Energy Efficiency Program (PEEEP) National Agency for Energy Efficicency." Chilean Energy Efficiency Agency. Web. September 2012. <http://www.jiko-bmu.de/files/basisinformationen/application/pdf/11-pamela_mellado,_chile.pdf>

4 Ministry of Energy, Chile. February 2012. "National Energy Strategy 2012-2020." Web. September 2012. <http://pds.kallman.com/shows/iftenergy_2012/pdfs/Energy-for-the-Future-Chile's-National-Energy-Strategy-2012-2030-English.pdf>

5 Lutz, Wolfgang et al. July 2011. "The National Energy Efficiency Standards and Labeling Program of Chile." CLASP and LBNL. Web. September 2012. <http://www.scribd.com/doc/92222448/National-EE-S-L-Program-of-Chile-Review>

6 *Ibid*.

7 *Ibid*.

8 Institute of Energy Economics, Japan. "Compendium of Energy Efficiency Policies of APEC Economies." Web. September 2012. <http://www.ieej.or.jp/aperc/CEEP/Chile.pdf>

9 Asia-Pacific Economic Cooperation. April 14, 2009. "Peer Review on Energy Efficiency in Chile – Final Report." Web. September 2012. <http://www.ieej.or.jp/aperc/PREE/PREE_Chile.pdf>

10 Institute of Energy Economics, Japan, *op cit.*

11 Lutz, Wolfgang et al, 2005, *op cit.*

12 Cancino, Paola Andrea Martínez. April 2010. "Análisis del Recambio de Refrigeradores Energéticamente Eficientes como Medida de Eficiencia Energética y Propuestas de Implementación." Universidad de Chile. Web. September 2012. <http://www.tesis.uchile.cl/tesis/uchile/2010/cf-martinez_pc/pdfAmont/cf-martinez_pc.pdf>

13 Chilean Energy Efficiency Agency. "Incentivo a la introducción de motores eléctricos eficientes en la industria: 'Usa motores eficientes'." Web. September 2012. <http://www.acee.cl/576/article-58878.html>

14 Institute of Energy Economics, Japan, *op cit.*

15 Chilean Energy Efficiency Agency. "Programa de Preinversión en Eficiencia Energética." Web. September 2012. <http://www.acee.cl/576/article-59194.html>

16 Global Environment Fund. October 2010. "Request for CEO endorsement/approval. GEFSEC Project ID: 4176." Web. October 2012. <http://www.thegef.org/gef/sites/thegef.org/files/documents/document/11-04-2010-ID4176%20Council%20doument.pdf>

17 Chilean Energy Efficiency Agency. "Crédito CORFO Eficiencia Energética." Web. October 2012. <http://www.acee.cl/576/article-59200.html>

18 Global Environment Fund, 2010, *op cit.*

19 *Ibid*.

20 Alliance to Save Energy. May 6, 2010. "International Energy Efficiency 'Visionaries' from Four Continents to Be Honored May 11 at EE Global Forum." Alliance to Save Energy. Web. October 2012. <http://ase.org/news/international-energy-efficiency-%E2%80%98visionaries%E2%80%99-four-continents-be-honored-may-11-ee-global-forum>

21 Enerdata. "Global Energy Statistical Yearbook 2012." Web. October 2012. <http://yearbook.enerdata.net/#/energy-intensity-GDP-by-region.html>

22 Maxwell, Amanda. 2010. "At the EE Global Forum, ASE Prize Highlights Chile's Efficiency Achievements." Switchboard, May 13, 2010. Web. October 2012. <http://switchboard.nrdc.org/blogs/amaxwell/at_the_ee_global_forum_ase_pri.html>

Figure References

Figure 1: Chile Energy Intensity 1990–2011
Enerdata. "Global Energy Statistical Yearbook 2012." Web. October 2012. <http://yearbook.enerdata.net/#/energy-intensity-GDP-by-region.html>