MEXICO

1. GOALS FOR EFFICIENCY IMPROVEMENT

1.1. Overall Energy Efficiency Improvement Goals

a) Key indicator

Savings in electrical power consumption

b) Goals

To reduce electrical power consumption

c) Base year

2006: 21 685 GWh

d) Goal year

2012: 43 416 GWh

1.2. Sectoral Energy Efficiency Improvement Goals

a) Sector

The following goals cover several sectors—residential/commercial, public, industrial, transport—Daylight Saving Time, Energy Efficiency Standards Program, Energy Saving Program for the Federal Public Administration, CFL Massive Substitution Program, and The Electric Power Saving Trust Fund (FIDE) Programs.

b) Goals

There are different goals for each program for 2012

- Daylight Saving Time Program (1 363 GWh)
- Energy Efficiency Standards Program (17 850 GWh)
- Energy Saving Program for the Federal Public Administration (221 GWh)
- The Electric Power Saving Trust Fund (FIDE's) Program (4 414 GWh).

c) Base year

2007

d) Goal year

2012

1.3. Action Plans for Promoting Energy Efficiency

a) Name

Energy Efficiency, Renewable Energies and Biofuels

b) Objectives

To promote energy efficient use and production

c) Applicable sectors

Residential, municipal, industrial, commercial and services, government (entities and dependencies)

d) Outline

Strategy III.1.1—to propose financial policies and mechanisms to accelerate the adoption of energy efficient technologies in public and private sectors

Strategy III.1.2—to drive optimisation in the supply and use of energy from entities and organisations that make up the Federal Public Administration

Strategy III.1.3—to extend coordinated actions among public, social and private sectors, to encourage the efficient use of energy in the population

Strategy III.1.4—to promote the reduction of energy consumption in residential and commercial buildings

Strategy III.1.5—to promote the efficient generation of electricity through self supply and cogeneration

Strategy III.1.6—to integrate public policy proposals to boost the potential of efficient cogeneration

Strategy III.1.7—to promote a series of regulations that allows the Regulatory Energy Commission (CRE) to broaden and strengthen its regulatory powers in regulating and promoting efficient cogeneration

Strategy III.1.8—to support research activities related to increasing efficiency in generation activities, distribution and electrical energy consumption.

e) Financial resources and budget allocation

The National Commission for the Efficient Use of Energy (CONUEE) budget (formerly CONAE) is allocated by the Ministry of Finance and Public Credit (SHCP) and the Budget of PAESE (Programa de Ahorro de Energía en el Sector Eléctrico / Energy Savings Program for the Electric Sector), the Program of Integral Systematic Saving (ASI-Fipaterm) and The Electric Power Saving Trust Fund (FIDE) Programs with some contributions of the Federal Electricity Commission (CFE).

f) Method for monitoring and measuring the effects of action plans

The monitoring of results is conducted either every six months or annually and they are reported in the following documents: Activities Report of the Ministry of Energy, Government Report, Sectoral Prospectives, and National Energy Balance.

g) Expected results

43 416 GWh of electricity savings

h) Future tasks

Goals are expected to be achieved by 2012

1.4. Institutional Structure

1.4.1. Central Institutional Structure

a) Name of organisation

The organisation in Mexico in charge of energy efficiency programs is the National Commission for the Efficient Use of Energy—CONUEE (formerly CONAE) which is a decentralised administrative agency of the Ministry of Energy (Sener), with technical and operative autonomy. It aims to promote energy efficiency and establish itself as a technical body, in terms of sustainable energy use.

Within the current framework, energy efficiency means all actions leading to an economically viable reduction of the quantity of energy required to satisfy energy needs of the services and goods demanded by society, ensuring an equal or higher quality level, as well as a decrease in the negative environmental impacts resulting from the generation, distribution and consumption of energy. This includes the replacement of non-renewable sources for renewable sources.

Responsibilities of CONUEE are:

- Regulations
- Public policies for sustainable use of energy
- Promotion and dissemination
- Information and evaluation.

b) Status of organisation

Policymaker, regulator and implementation entity

c) Roles and responsibilities

Promote energy efficiency and conduct themselves like an organisation of technical character.

d) Covered sectors

Industry, transport, residential, commercial and services, power, government

e) Established date

CONUEE was created from the entry into force of the Law for Sustainable Use of Energy, published on 28 November 2008, which states that all human and material resources of the National Commission for Energy Saving (CONAE) shall be allocated to this new commission**.**

f) Number of staff members

86 employees

1.4.2. Activities for Energy Efficiency Improvement

a) Normalisation (standardisation)

Standards on energy efficiency have been the most effective mechanism to save energy in Mexico, given that annually more than eight million systems, equipment and products are traded and have to comply with the standard. The 18 energy efficiency standards (Official Mexican Standards – NOMs) in 2006 were estimated to generate energy savings of up to 16 065 GWh.

The activities for the standardisation are:

1) Elaborating on and updating Energy Efficiency Standards or Official Mexican Standards (NOMs)
2) Evaluating conformity, jointly with certification organisations, verification units and research laboratories.

b) Technical assistance

1) Elaborating on energy diagnoses and studies
2) Attention to specialised technical consultations of public, private and social sectors.

c) Promotion and dissemination

1) Organisation of regional, economy-wide and international events
2) Elaborating on and disseminating technical studies and documents: disseminating scientific publications, results of studies and projects that promote sustainable use of energy
3) Coordinating committees and working groups specialised in the development of projects of energy saving and renewable energy
4) Providing technical assistance on sustainable use of energy to the agencies of the Federal Public Administration, as well as to state governments and municipalities that request it, and the signing of agreements to that effect

5) Participating in the dissemination of information between government and social sectors.

d) Design and development of programs

Operation of the Commission's main programs:

1) Normalisation (standardisation)
2) Federal Public Administration
3) Efficient industry
4) Residential, commercial and services
5) Promotion and dissemination
6) Efficient transport.

1.4.3. Regional or Local Institutional Structure

a) Name of organisation

Mexico has established a National Network of Energy State Commissions (RENACE) to streamline state and federal efforts to achieve energy sustainability of the economy. RENACE contributes to building a sustainable energy policy at a federal and local level, through the development of projects and programs related to energy sustainability and conservation. RENACE also promotes the creation of information systems and an information network in most states.

b) Status of organisation

Policymaker, regulator and implementer

c) Roles and responsibilities

To achieve the combined efforts of the states with the federal government to ensure energy sustainability of the economy

d) Covered sectors

Industrial, commercial and services, residential, transport, government

e) Established date

2008

f) Number of staff

The personnel depends on each State Commission

1.5. Information Dissemination, Awareness-Raising and Capacity-Building

a) Information collection and dissemination

The monitoring of results is conducted every six months or annually and they are reported in the following documents:

- Activities Report of the Ministry of Energy
- Government Report
- Sectoral Perspectives
- National Energy Balance.

b) Awareness-raising

Electrical Energy Savings of 19 774 GWh by 2008 (Energy Efficiency Standards, Industrial, Commercial and Public Sector, Daylight Saving Time and Residential Sector)

c) Capacity-building

No information available

1.6. Research and Development in Energy Efficiency and Conservation

The main goals of the Hydrocarbon Sectoral Funds are scientific research and applied technology for the exploration, operation and refinement of hydrocarbons, like production of basic petrochemicals, as well as the adoption, innovation, assimilation, technological development and training of specialised human resources in the aforementioned issues.

The resources of the Sectoral Fund for Energy Sustainability will be allocated for the financing of projects whose main objectives are scientific research and applied technology for renewable energy sources, energy efficiency, use of clean technologies, diversification of primary sources of energy, as well as the adoption, innovation, assimilation and technological development in the indicated matters.

Both funds will receive resources from the annual payment of duty for scientific and technological research on energy to which Pemex Exploration and Production (PEP) is subject and which in 2012 will reach a rate of 0.65 percent of the annual crude oil and natural resources. For 2008, the Income Law considers an amount of MXN 1100 million, 55 percent of which will be allocated to the Sectoral Fund of Hydrocarbons; 10 percent to the Sectoral Fund for Sustainable Energy and 35 percent to the Scientific Research and Technological Development Fund of the Mexican Petroleum Institute (IMP).

The Sectoral Funds will contribute to the development and technological innovation of two main priorities: to ensure the energy supply and the care of the climate change.

a) Level of government (central/regional)

Central and regional

b) Name of policy

Sectoral Funds of Hydrocarbons and Energy Sustainability

c) Responsible department/agency

Ministry of Energy (Sener) – Science and Technology National Council (CONACYT)

d) Applicable sectors

Industry, transport, commercial and services, power, government

e) Financial resources

USD 100 million in 2008

2. MEASURES FOR ENERGY EFFICIENCY IMPROVEMENTS

2.1. Government Laws, Decrees, Acts

a) Name

LASE—Ley para el Aprovechamiento Sustentable de la Energía (Law for Sustainable Use of Energy)

b) Purpose

To promote sustainable use of energy through optimising its use in all processes and activities from holding to consumption

c) Applicable sectors

Industry, transport, residential, commercial, power, government

d) Outline

Created in November 2008

e) Financial resources and budget allocation

The financial resources are outlined in the Federal Expenditure Budget (Presupuesto de Egresos de la Federación—PEF) 2008

f) Expected results

The Mexican government expects to carry out the Sectoral Program and the National Program of Energy Sustainability.

2.2. Regulatory Measures

2.2.1. Minimum Energy Performance Standards (MEPS) and Labelling

a) Name

Energy Efficiency Standards

b) Purpose

Create standards to effectively contribute to the saving and efficient use of energy

c) Applicable sectors

Industry, residential, commercial and services, government

d) Outline

Mexico's mandate for Energy Efficiency Standards comes from a generic law, the Ley Federal sobre Metrología y Normalización (Federal Metric and Standardisation Law) of 16 July 1992, which defines the Normas Oficiales Mexicanas—NOM (Official Mexican Standards). The NOMs are enacted by the Federal Secretariats, according to their areas of competence. In the case of energy efficiency, it is the Ministry of Energy, through the National Commission for the Efficient Use of Energy—CONUEE (formerly CONAE), that enacts the mandatory standards.

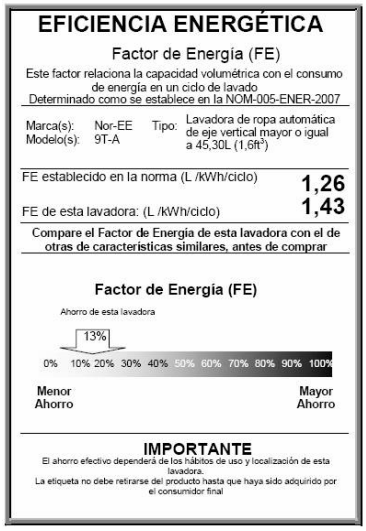
Mexico first adopted energy standards in 1995 and has since established standards for 18 products. Many of these standards are modelled on those of the United States, but have been adapted to local situations and experience from their own programs.

Table 1. Official Mexican Standards (NOMs) for energy efficiency

Norm Code	Product
NOM-011-ENER-2006	Central air conditioners (packaged terminal)
NOM-011-ENER-2006	Central air conditioners (split type)
NOM-017-ENER/SCFI-2008	CFLs
NOM-005-ENER-2000	Clothes washers
NOM-015-ENER-2002	Freezers
NOM-009-ENER-1995	Insulation (thermal)
NOM-013-ENER-2004	Lighting systems (external)
NOM-007-ENER-2004	Lighting systems (indoor)
NOM-014-ENER-2004	Motors (single-phase induction)
NOM-016-ENER-2002	Motors (three-phase induction)
NOM-004-ENER-2008	Pumps (centrifugal)
NOM-006-ENER-1995	Pumps (deep well)

NOM-010-ENER-2004	Pumps (submersible)
NOM-001-ENER-2000	Pumps (vertical)
NOM-021-ENER/SCFI-2008	Room air conditioners (packaged terminal)
NOM-021-ENER/SCFI-2008	Room air conditioners (window)
NOM-015-ENER-2002	Refrigerators
NOM-015-ENER-2002	Refrigerator-freezers
NOM-022-ENER/SCFI/ECOL-2000	Refrigerators (commercial)
NOM-003-ENER-2000	Water heaters (gas)

Source: Ministry of Economy, Mexico. (www.economia-noms.gob.mx)



Under Mexican law and as an element of the standards, CONUEE also implements a mandatory comparative labelling program for room and central air conditioners, refrigerators and/or refrigerator-freezers, clothes washers, centrifugal residential pumps, gas water heaters, commercial refrigeration, and non-residential building envelopes.

Labelling is mandatory for the following electrical products offered for sale in Mexico:

- Central air conditioners (packaged terminal)
- Central air conditioners (split type)
- Clothes washers
- Freezers
- Pumps (centrifugal)
- Room air conditioners (packaged terminal)
- Room air conditioners (window)
- Refrigerators
- Refrigerator-freezers
- Refrigerators (commercial)
- Water heaters (gas).

e) Financial resources and budget allocation

For 2009, the budget considered was MXN 10 million (USD 0.76 million).[1]

f) Expected results

From 17 850 GWh (2007) to 28 414 GWh (2012)

2.3. Voluntary Measures

2.3.1 Mexican Standards (NMX)

The Ley Federal sobre Metrología y Normalización (Federal Metric and Standardisation Law) of 16 July 1992, defines the voluntary standards called Normas Mexicanas—NMX (Mexican Standards). In Mexico, the Asociación de Normalización y Certificación—ANCE (Standardization and Certification Association) is in charge of elaborating the NMX related to the electric sector. It can also certify other sectors and has its own laboratory for conducting various standardised test procedures.

Mexican Standards are voluntary; however, if an Official Mexican Standard (NOM) makes reference to one or more Mexican Standards (NMX), the product must comply with the

[1] At average currency of 2009: USD1= MXN13.

requirements on those Standards, as well.

2.3.2 The Electrical Power Saving Trust Fund (FIDE) Label

Mexico has the Sello FIDE, a voluntary energy efficiency endorsement seal given by the Electric Power Saving Trust Fund (FIDE) since mid-1995. Manufacturers have to submit certified test results on their products to confirm that they cover the Sello FIDE requirements. The product is selected and tested by a certified laboratory to verify manufacturer claims. If approved, manufacturers pay for certification and sign an agreement stipulating length of validity of the Sello FIDE endorsement, how it can be displayed, renovation and cancellation of certification, etc. Manufacturers can then display the Sello FIDE on their products. FIDE advertises the Sello FIDE in order to entice consumers to look for it when purchasing electrical equipment.

a) Name

Responsible Energy Users Registry (Registro de Usuarios Energéticamente Responsables)

b) Level

Central, regional and local

c) Purpose

To develop a registry

d) Applicable sectors

Industry, transport, commercial and services

2.4. Financial Measures Taken by the Government

2.4.1. Tax Scheme

Information not available

2.4.2. Low-Interest Loans

a) Name

Electric Sectoral Energy Saving Program (PAESE), Integral Systematic Saving Program (ASI-Fipaterm), The Electrical Power Saving Trust Fund (FIDE) and Shared Risk Trust Fund (FIRCO).

b) Purpose

To promote energy-efficiency improvement programs in Mexico.

c) Applicable sectors

Industry (including agriculture), transport, residential, commercial and services, power, government

d) Outline

According to PROSENER (Sectoral Energy Program 2007-2012)

e) Financial resources and budget allocation

The budget provides its own resources, having CFE as sponsor (only for FIDE, PAESE and ASI-Fipaterm).

f) Expected results

Differs according to each entity and trust

2.5. Energy Pricing

The prices and tariffs of electricity, natural gas and liquefied natural gas are regulated by the Energy Regulation Commission (CRE).

2.6. Other Efforts for Energy Efficiency Improvements

2.6.1. Cooperation with Non-Government Organisations

The Mexican Government cooperates with non-government organisations (NGOs) to stimulate energy efficiency; some of these organisms are listed below:

- Asociación de Empresas para el Ahorro de Energía en la Edificación
- Asociación de Técnicos y Profesionistas en Aplicación Energética, A.C.
- Asociación Nacional de Energía Solar
- Centro Mexicano de Derecho Ambiental
- Centro Mexicano para la Producción más Limpia
- Comisión de Estudios del Sector Privado para el Desarrollo Sustentable (CESPEDES)
- Foro para el Desarrollo Sustentable, A.C.
- Fundación México – Estados Unidos para la Ciencia (FUMEC)
- Fundación para el Desarrollo Sustentable, A.C.
- Greenpeace – México
- Grupo de Estudios Ambientales
- Presencia Ciudadana
- Transición Energética
- Fundación Mario Molina.

2.6.2. Cooperation through Bilateral, Regional and Multilateral Schemes

The Mexican Government cooperates through bilateral schemes with European economies. In Europe, Mexico has bilateral cooperation with Germany through the German Technical Cooperation (GTZ) for the promotion of renewable energies and energy efficiency, and recently with the Netherlands though the 'Understanding Memorandum' for bilateral cooperation in energy matters.

The Mexican Government is also involved in multilateral schemes such as the North American Energy Working Group (NAEWG) consisting of Canada, United States and Mexico, for fostering communication and cooperation among the governments and energy sectors of the three economies; enhancing North American energy trade, development, and interconnections; and promoting regional integration and increase energy security for the people of North America.

In the Asia-Pacific region, Mexico has multilateral schemes with member economies of the Asia-Pacific Economic Cooperation (APEC) region, and participates actively in the Energy Working Group (EWG) of APEC.

2.6.3. Other Cooperation/Efforts for Energy Efficiency Improvements

Mexico is a non-member of the International Energy Agency (IEA); however, the economy has active participation to pool resources and to foster the research, development and deployment of particular technologies through the IEA's legal contract—Implementing Agreements—(or Energy Technology Agreements) and a system of standard rules and regulations. Mexico participates in nine IEA Implementing Agreements (IA): Clean Coal Sciences; Energy Technology Data Exchange (ETDE); Geothermal Energy; Multiphase Flow Science; Ocean Energy Systems; Photovoltaic Power Systems; Solar Heating and Cooling; SolarPACES; and Wind Energy Systems.

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