

The background is a teal color with a light-colored grid pattern. A horizontal strip with a circuit board pattern is positioned near the top. Below this strip is a dark teal rounded rectangle containing the word "MEXICO" in yellow.

MEXICO

Nuclear Power Generation

Country Context

Area: 1,972,550 sq km

Population: 107,449,525

(July 2006 est.)

Country Context

Median age: 25.3 years

Population growth rate; 1.16%
per year



Country context

GDP: 693 bn USD/yr
Per caput: 10,000 USD/yr

The National Electrical System 2004

- ◆ Total installed generation capacity:
46,552 Mwe
- ◆ Nuclear capacity: 1,365 Mwe
3% of the total

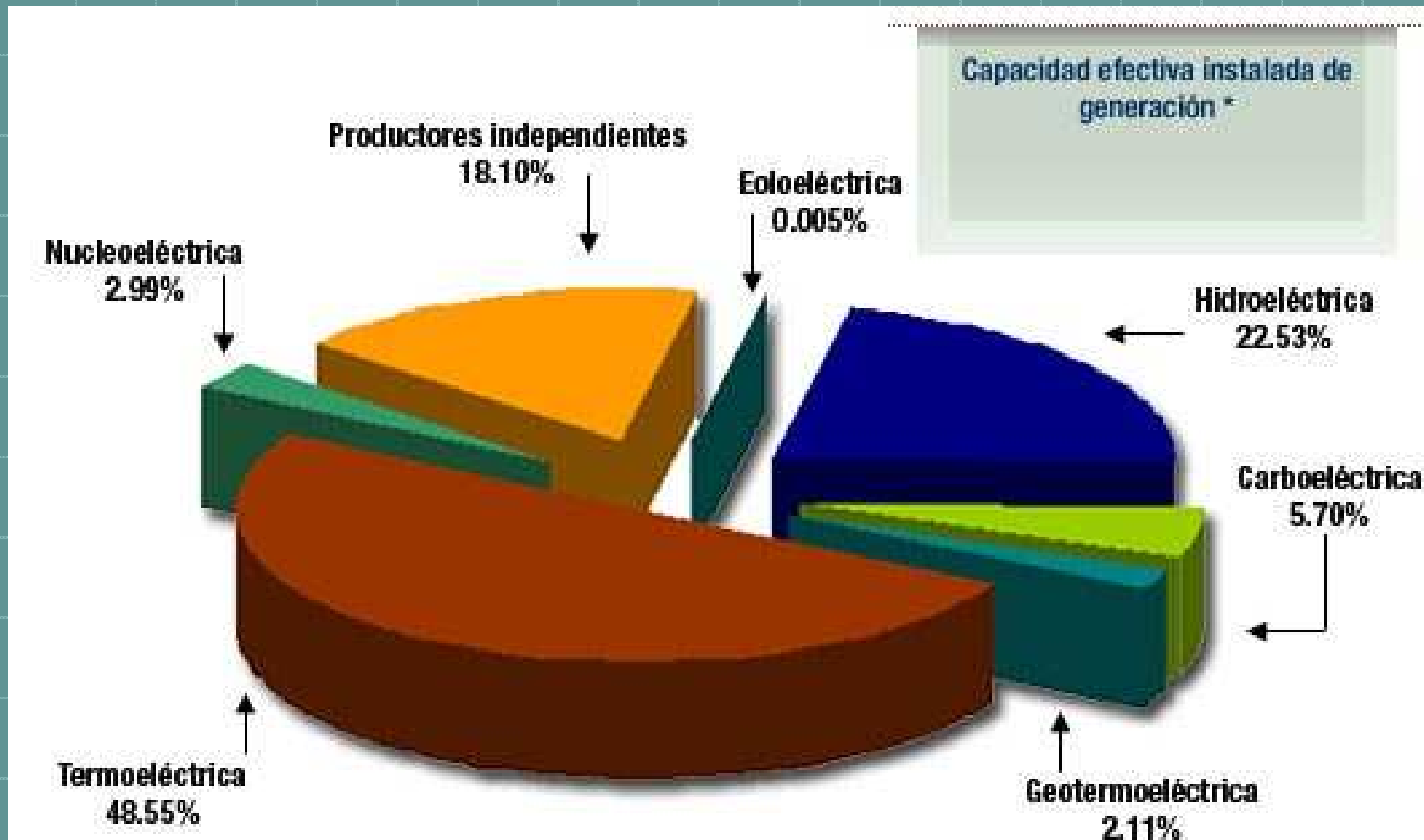
The National Electrical System 2004

- ◆ Total electrical generation:
217,793 Gwh
- ◆ Total nuclear generation
9194 GWh
(4.22% of the total)

The National Electrical System

- ◆ 172 plants
- ◆ 35,078 km of transmission lines
- ◆ Serves 19 million clients (76 million people)

Energy Sources



Operational Reactors

◆ Laguna Verde 1 (BWR)
655 Mwe Net

◆ Laguna Verde 2 (BWR)
655 Mwe Net

Operational reactors

- ◆ Laguna Verde I was connected to the grid in April 1989
- ◆ Laguna Verde II was connected to the grid in November 1994
- ◆ Both reactors have a design life of 40 years but are licensed for only 35 years

Operational reactors

- ◆ The Laguna Verde reactors are owned and operated by the *Comisión Federal de Electricidad* - CFE (Federal Electricity Commission)
- ◆ A state-owned utility, CFE generates 82% of the country's electricity and is the 7th largest utility in the world.
- ◆ The remaining 18% is generated by independent companies, mostly to supply their own needs.

Projections to 2014

- ◆ Total installed capacity: 64,649 Mwe
- ◆ New capacity: 22,574 Mwe
- ◆ Committed capacity: 6,184 Mwe
- ◆ Uncommitted capacity 15,942 MWe

Alternate energy sources

In order to:

- ◆ Diversify our energy portfolio
- ◆ Reduce dependency on oil
- ◆ Improve assurance of supply
- ◆ Reduce emissions of greenhouse gases

Alternate energy sources are being developed in Mexico

- ◆ Hydroelectric
- ◆ Wind energy
- ◆ Solar energy
- ◆ Geothermal energy

Nuclear generation expansion is also being considered

Because it is:

- ◆ Economically competitive
- ◆ Does not emit greenhouse gases
- ◆ There are ample uranium resources worldwide
- ◆ We have significant national expertise in the nuclear area

Possible nuclear expansion

- ◆ A power uprate of the Laguna Verde reactors is planned, from 655 to 700 Mwe each.
- ◆ A special committee has been created to consider the inclusion of new nuclear power reactors in the *Programme of Construction and Investment in the Electrical Sector (POISE)*, which is the basic planning document for the Federal Electricity Commission.

Possible nuclear expansion

- ◆ A target has been proposed to increase nuclear generation to 10% of the total generation by 2014, as compared to the current 4% in 2006.

Challenges

- ◆ **Public opinion**
- ◆ **Human resource development**
- ◆ **Economics**
- ◆ **Life extension and relicensing of existing reactors**