NATIONAL AUTONOMOUS UNIVERSITY OF MEXICO

Economic Research Institute

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Climate Policy Strategies and Energy Transition Agenda

Perspectives for Nuclear Energy in Mexico after Fukushima

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SCRIPT FOR THE PRESENTATION

1. **NUCLEAR ENERGY AND THE TECHNOLOGICAL TRAJECTORY OF THE MEXICAN ELECTRICITY SYSTEM**

2. **CAUSES OF CHANGE IN THE FORM OF ORGANIZATION OF THE NATIONAL ELECTRICITY SYSTEM**

3. **REASONS FOR THE CHANGE**

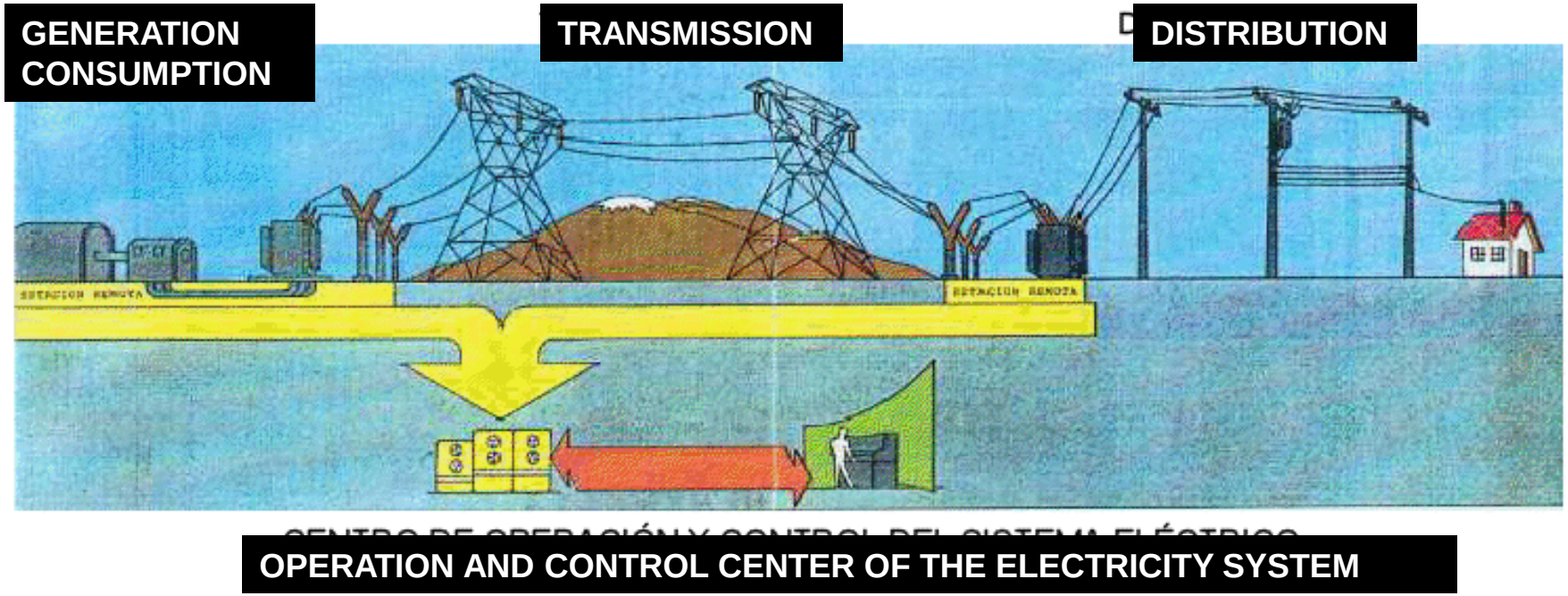
4. **PROPOSAL FOR THE CHANGE**

5. **FACTS**

6. **CONCLUSIONS**

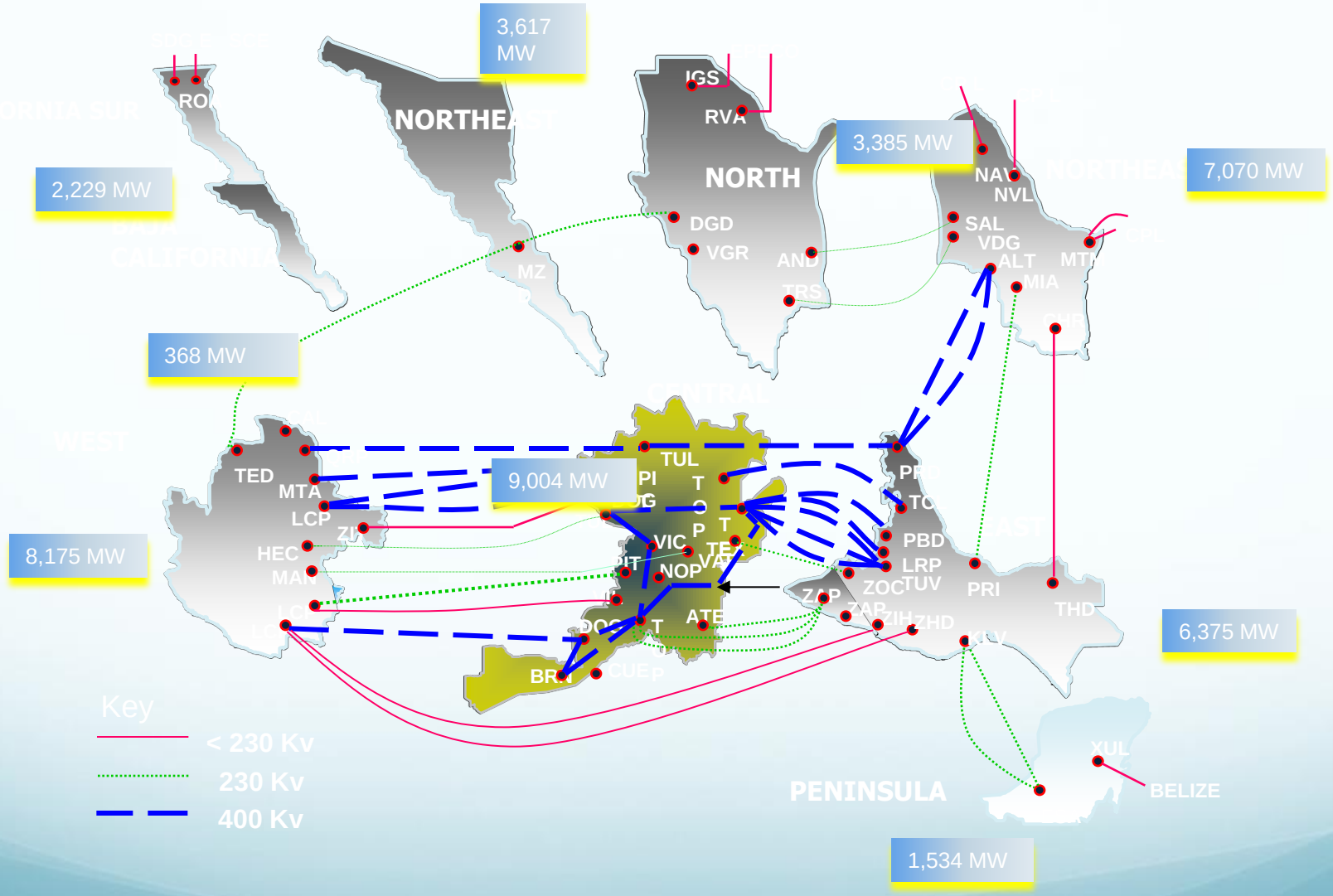
1. NUCLEAR ENERGY AND TECHNOLOGICAL TRAJECTORY OF THE MEXICAN ELECTRICITY SYSTEM

TECHNOLOGICAL TRAJECTORY OF THE MEXICAN ELECTRICITY SYSTEM



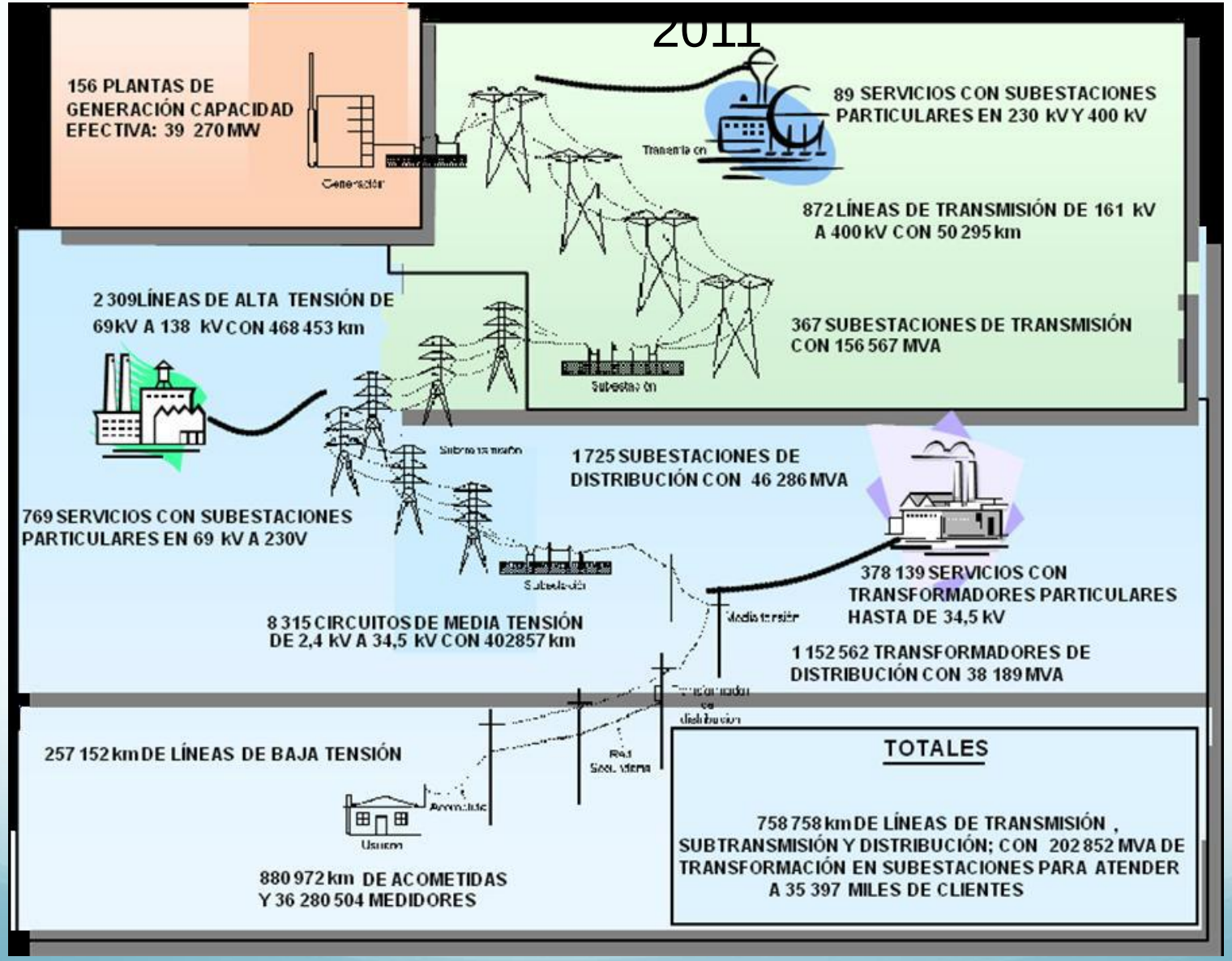
Source: Image taken from Campos Aragón, Leticia [2005]. ***La electricidad en la Ciudad de México y área conurbada***, Mexico, siglo veintiuno, 2004.

Mexican Electricity System
National Network of High Voltage Lines and Maximum Demand per Control Area (MW)
2010

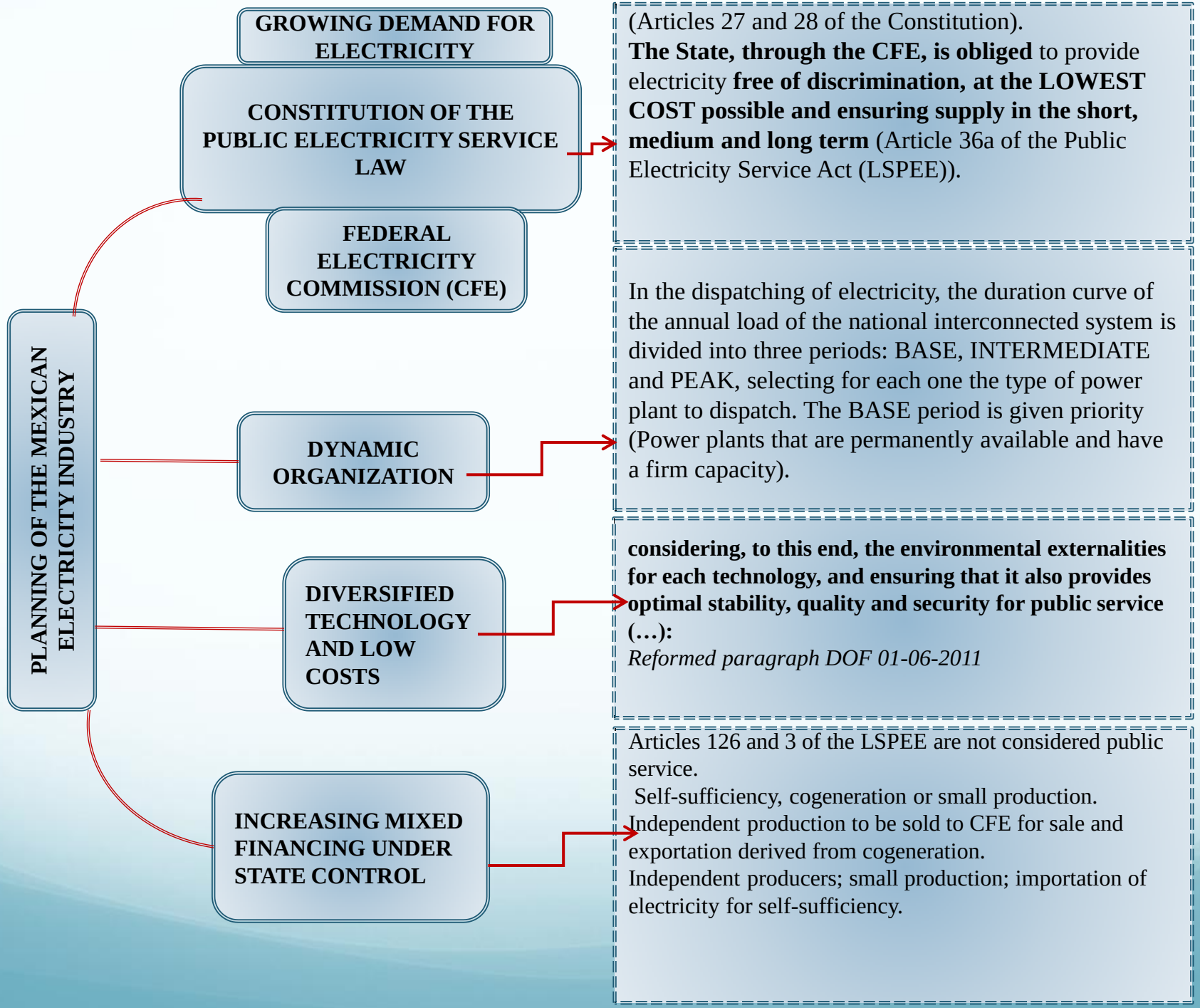


Source: Image taken from Campos Aragón, Leticia [2005]. ***Electricity in Mexico and its greater urban area***, Mexico, siglo veintiuno, 2005.
CFE [2012]. Informe Annual, 2011, Mexico. Information consulted on the Internet at <www.cfe.gob.mx>

México
Infraestructura del Sistema Eléctrico Nacional
2011

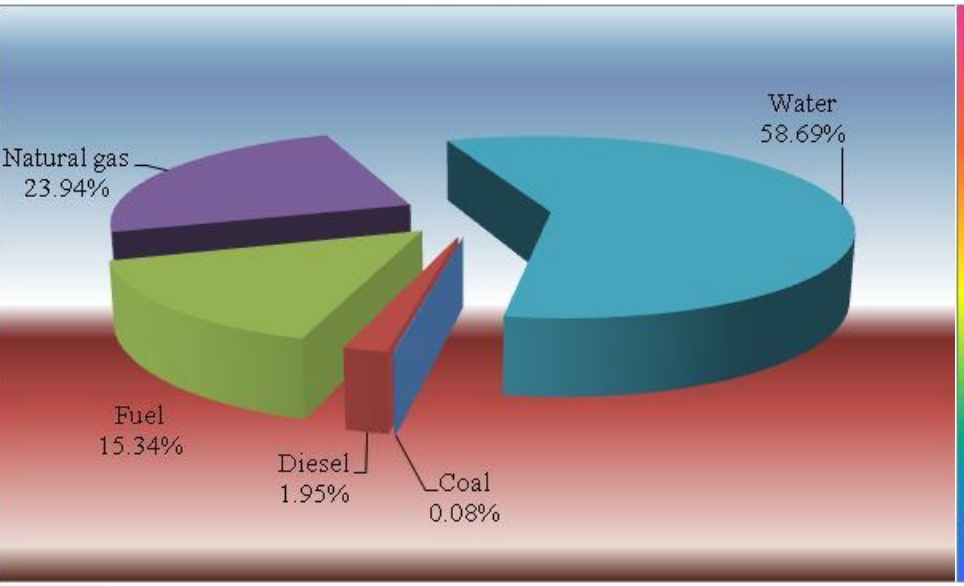


Fuente: CFE. Informe anual 2011. Información consultada en Internet <www.cfe.gob.mx/ConoceCFE/1_AcercadeCFE/SiteAssets/Paginas/Publicaciones/Informel2011.pdf>

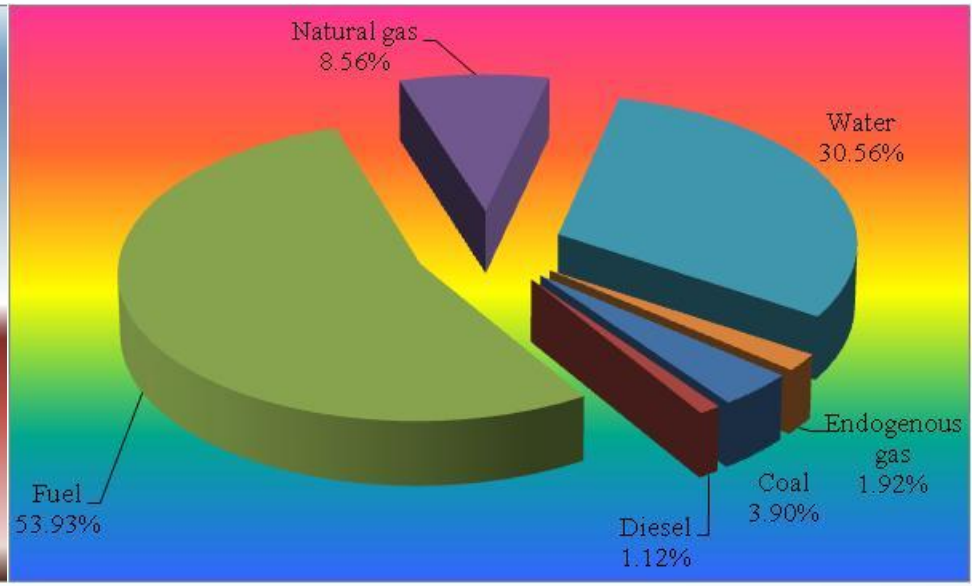

PLANNING OF THE MEXICAN ELECTRICITY INDUSTRY
GROWING DEMAND FOR ELECTRICITY
CONSTITUTION OF THE PUBLIC ELECTRICITY SERVICE LAW
FEDERAL ELECTRICITY COMMISSION (CFE)
DYNAMIC ORGANIZATION
DIVERSIFIED TECHNOLOGY AND LOW COSTS
INCREASING MIXED FINANCING UNDER STATE CONTROL
(Articles 27 and 28 of the Constitution).
The State, through the CFE, is obliged to provide electricity free of discrimination, at the LOWEST COST possible and ensuring supply in the short, medium and long term (Article 36a of the Public Electricity Service Act (LSPEE)).
In the dispatching of electricity, the duration curve of the annual load of the national interconnected system is divided into three periods: BASE, INTERMEDIATE and PEAK, selecting for each one the type of power plant to dispatch. The BASE period is given priority (Power plants that are permanently available and have a firm capacity).
considering, to this end, the environmental externalities for each technology, and ensuring that it also provides optimal stability, quality and security for public service (…):
Reformed paragraph DOF 01-06-2011
Articles 126 and 3 of the LSPEE are not considered public service.
Self-sufficiency, cogeneration or small production.
Independent production to be sold to CFE for sale and exportation derived from cogeneration.
Independent producers; small production; importation of electricity for self-sufficiency.

Primary energy used to generate electricity (Percentages)

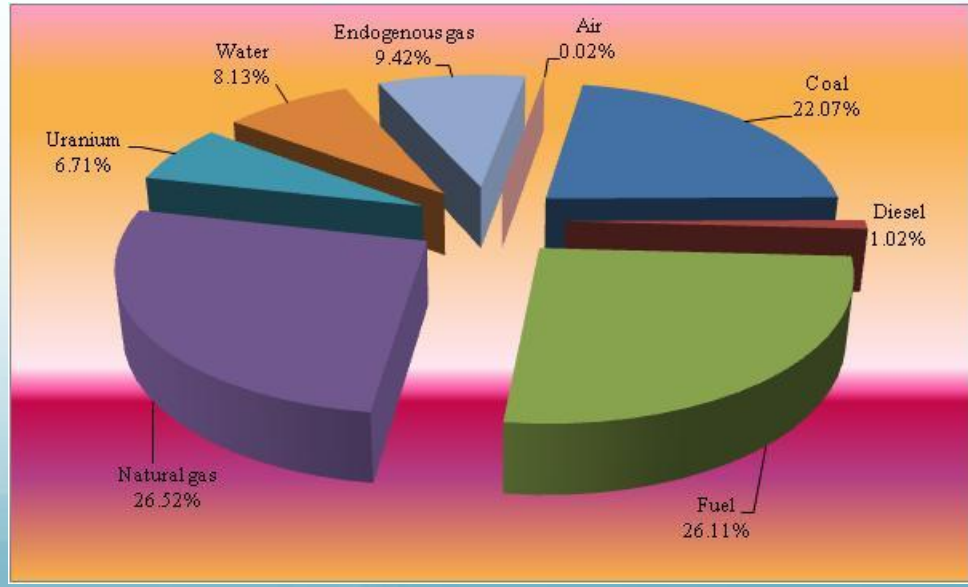
1965



1985



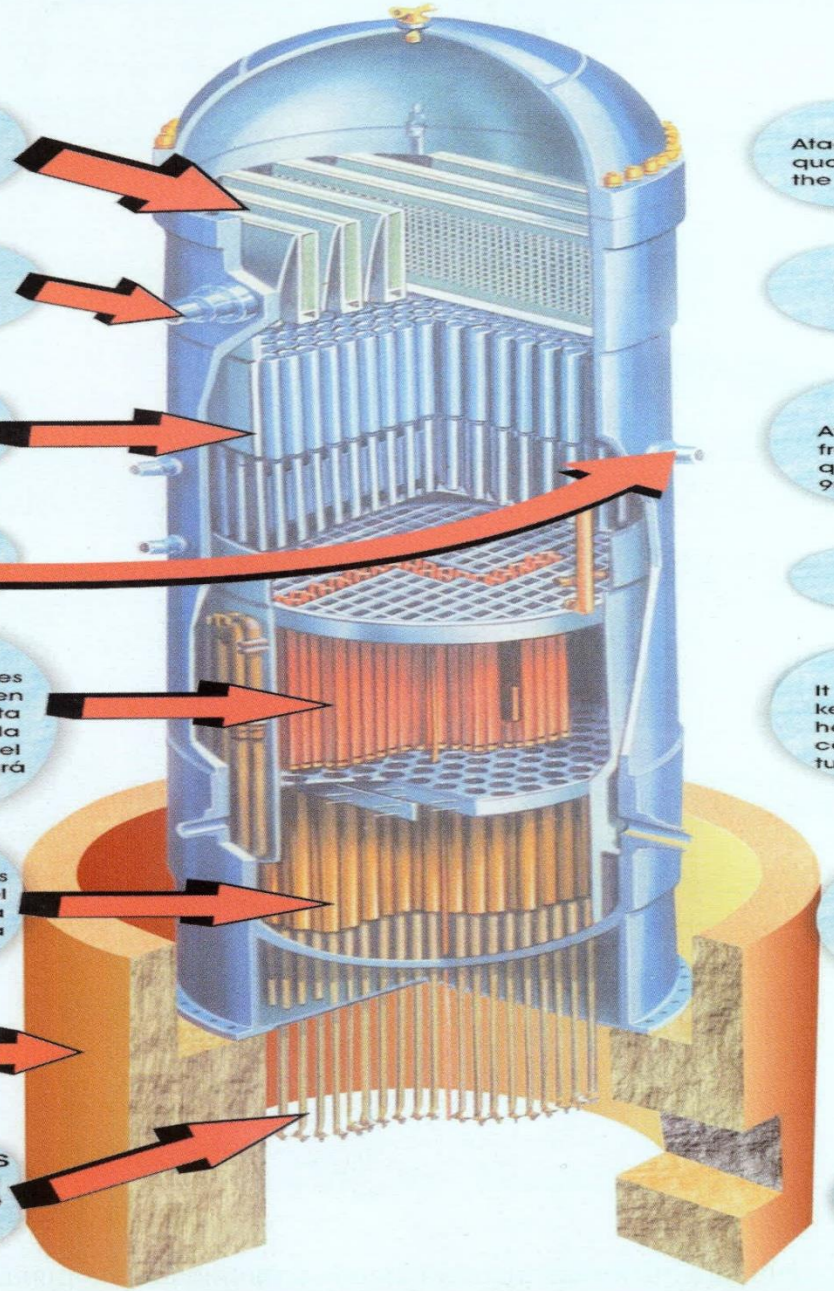
2011



Sener [2000], National Energy Balance, Directorate General of Energy Planning, Mexico.

Sener [2010], National Energy Balance, Directorate General of Energy Planning, Mexico.

CORTE DEL REACTOR BWR-5
BWR-5 REACTOR CUTAWAY



SECADOR DE VAPOR
Accesorio que aumenta la calidad del vapor que sale del separador hasta un 99%.

SALIDA DE VAPOR
El vapor sale del reactor y se dirige a la s turbinas

SEPARADOR DE VAPOR
Accesorio que realiza la separación casi total de líquido y vapor aumentando la calidad del vapor aprox. de 13% a 90%.

ENTRADA DE AGUA DE ALIMENTACIÓN
Entrada de agua de alta pureza

NÚCLEO DEL REACTOR
Está compuesto por 444 ensambles de combustible que se mantienen siempre inundados en agua de alta pureza. Aquí se lleva a cabo la reacción en cadena y se genera el vapor que posteriormente impulsará las turbinas.

BARRAS DE CONTROL
Conjunto de 109 barras cruciformes de acero inoxidable que contienen el carburo de boro el cual funciona como material de control de la reacción en cadena.

PEDESTAL
Soporte de la vasija

MECANISMOS IMPULSORES
Tubería de accionamiento hidráulico de las barras de control

STEAM DRYER
Atachment increasing the quality of steam coming out of the separator up to a 99 percent.

STEAM OUTLET
Steam coming out the reactor and into the turbine.

STEAM SEPARATOR
Atachment that separaters liquid from steam thus increasing the quality from about 13 percent to 90 percent.

FEED WATER INLET
High purity water inlet.

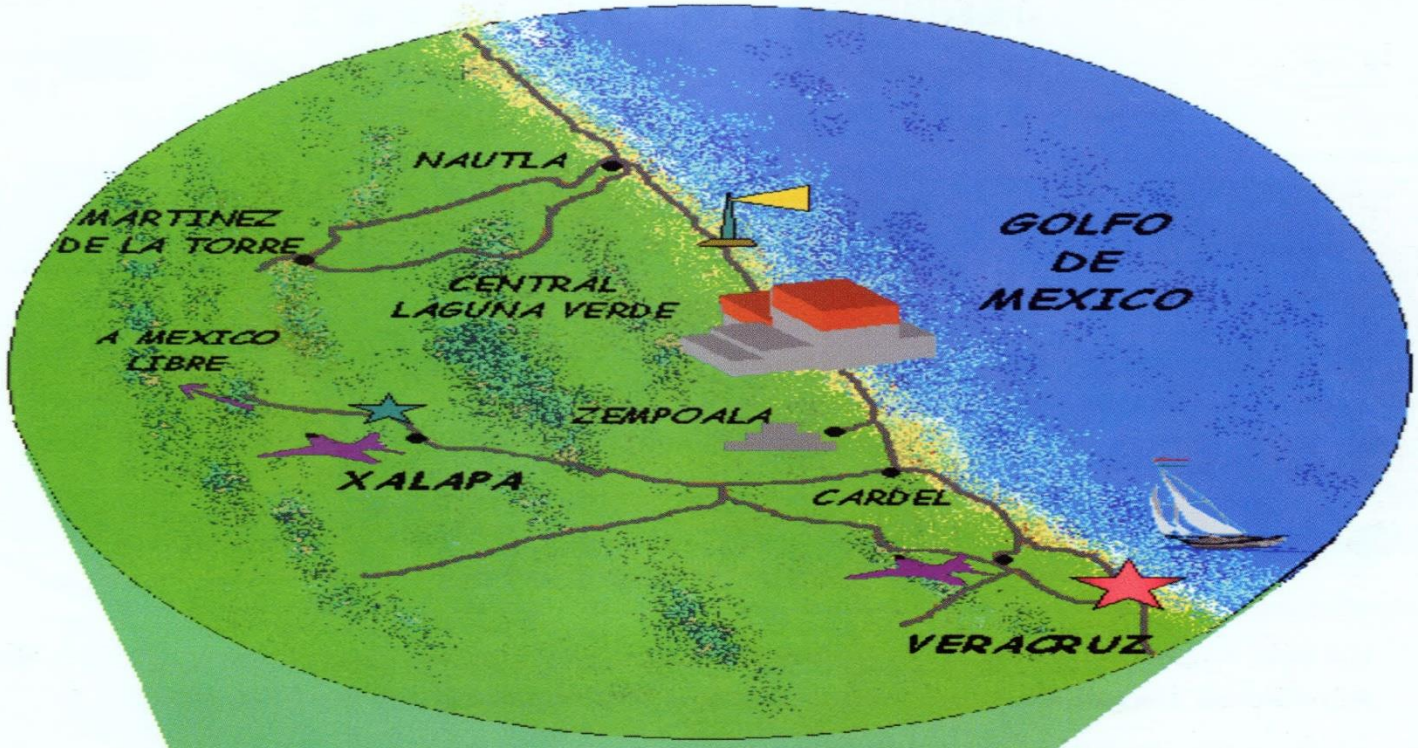
REACTOR CORE
It is made of 444 fuel assemblies kept flooded in high purity water. It is here where a chain reaction is conducted and steam to move turbine is generated

CONTROL RODS
Set of 109 cruciform stainless steel rods containing boron carbide functioning as control material for the chain reaction.

PEDESTAL
Vessel support

DRIVING MACHANISMS
Control rod hydraulic drive piping

Localización y Descripción / Location and Description



Localización

La CENTRAL LAGUNA VERDE está localizada en la costa del Golfo de México en el Km 42.5 de la carretera federal Cardel – Nautla en el municipio de Alto Lucero, en el Estado de Veracruz. Geográficamente a 60 Km al Noreste de la ciudad de Xalapa, 70 Km al Noroeste del Puerto de Veracruz y 290 Km al Noreste de la ciudad de México.

La Central está integrada por 2 unidades, cada una con capacidad de 682.44 Mwe; los reactores son tipo Agua Hirviente (BWR-5) y la contención tipo MARK II de ciclo directo. El sistema nuclear de suministro de vapor (NSSS) fué provisto por General Electric Co. y el Turbogenerador por Mitsubishi Heavy Industries.

Con la certificación del organismo regulador mexicano la Comisión Nacional de Seguridad Nuclear y Salvaguardas (CNSNS), la Secretaría de Energía otorgó las licencias para Operación Comercial a la unidad 1 el 29 de Julio de 1990 y a la unidad 2 el 10 de Abril de 1995. Ambas unidades aportan aproximadamente el 5 % de la ene

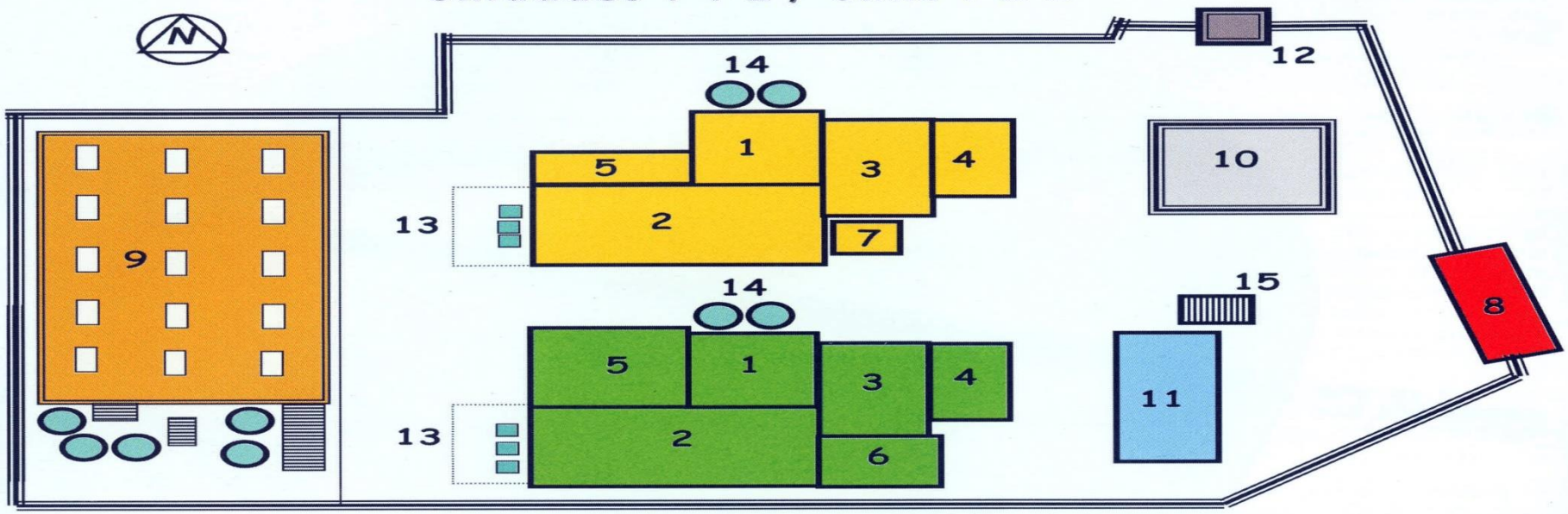
Location

Laguna Verde Nuclear Power Plant is on the coast of the Gulf of Mexico in the Municipality of Alto Lucero in the state of Veracruz. It is located 70 km NNW of the city of Veracruz, 60 WNW of the city of Jalapa, the state capital, and 290 km ENE of Mexico City.

The Laguna Verde plant is two-unit plant, each with a capacity of 682.44 Mwe; the reactors are of the boiling water type (BWR-5) with a MARK II containment for direct cycle. The nuclear steam supply system was provided by General Electric and the turbine Generator by Mitsubishi Heavy Industries.

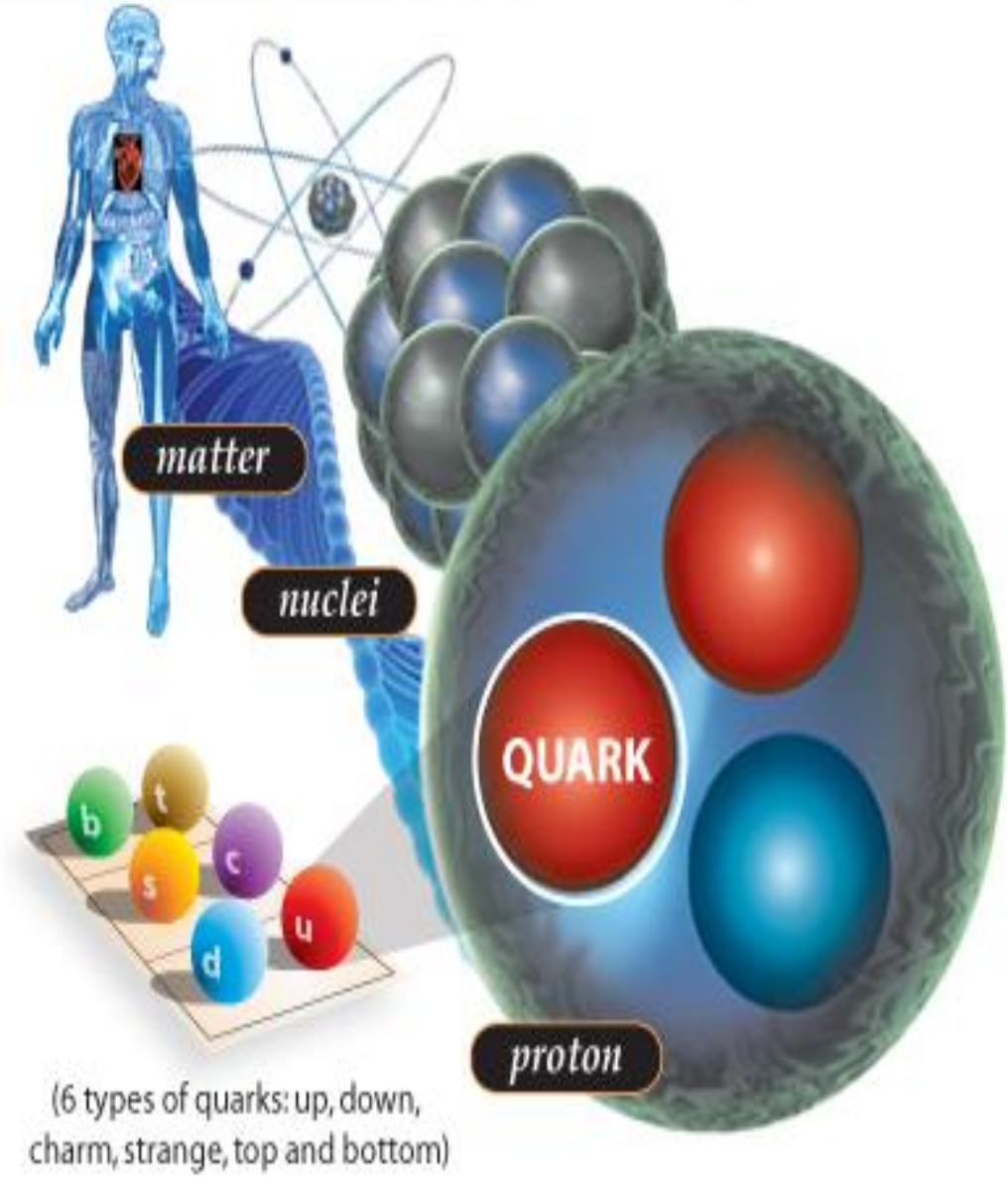
With a certification provided by the Mexican regulatory body, the National Commission for Nuclear Safety and Safeguards (CNSNS), the Secretaría de Energía (Energy Secretariat) granted CFE with a license for the commercial operation of Unit 1 (July 29th 1990) and Unit 2 (April 10th 1995). Both units provide

Distribución de Planta / Plant Layout
Unidades 1 Y 2 / Units 1 & 2



1. Edificio del Reactor / Reactor building
2. Edificio de Turbogenerador / Turbine Generator building
3. Edificio de Control / Control building
4. Edificio de Generadores Diesel / Diesel Generator building
5. Edificio de Tratamiento de Residuos / Radwaste building
6. Edificio de Tratamiento de Agua / Water treatment building & Workshops
7. Edificio del Sistema Integral de Información de Proceso / SIIP building
8. Edificio de Obra de Toma / Water Intake building
9. Subestación eléctrica / Switchyard
10. Edificio Técnico - Administrativo / Technical - Administrative building
11. Almacén de partes de repuesto / Spare parts warehouse
12. Casa de Guardias / Guard house
13. Patio de transformadores principales / Main transformers yard
14. Tanques de almacenamiento de condensado / Condensate storage tanks
15. Estación Central de Alarmas / Central Alarm Station

2. CAUSES OF CHANGE IN THE FORM OF ORGANIZATION OF THE MEXICAN ELECTRICITY SYSTEM



FIRST: Scientific and technical development which, from the 20th century onwards, allowed the diversification of public service activities parallel to electricity, such as voice, image and information transmission through distribution lines and electrical transmission.

SECOND. the needs of US electricity companies, which, before its industries matured (1990), sought to raise the rates of return of its investments outside its national borders.

THIRD: Business opportunities involving the implementation of clean, green or renewable technologies, such as wind and solar energy, and others that capture and store carbon produced by the emission of CO2 and NOX particles into the atmosphere, through the burning of fossil fuels to generate electricity.

3. REASONS FOR THE CHANGE

FINANCIAL REASONS:

The Federal Electricity Commission’s level of indebtedness to the International Development Bank and the World Bank, resulting from the lack of financial and managing autonomy, aggravated by the debt crisis of the developing world in 1982.

We were told that attracting foreign investment would significantly reduce the need for new loans in the electricity industry and enable it to meet its financial obligations to these international organizations.

It was also said that incorporating private resources to finance the expansion of the Mexican electricity system would make tax revenue available to be spent on SOCIAL projects.

ECONOMIC REASONS:

It was said that the creation of a wholesale market would increase efficiency, as the competition resulting from this market would reduce the cost of generation - the majority of the total cost of a kWh.

IDEOLOGICAL REASONS:

- Both the state and the market are inefficient

POLITICAL REASONS:

- Suppress the trade unions of the Mexican Electricity System and SUTERM (Mexican Electricity Workers' Union).

4. THE PROPOSED CHANGE

In 1985, the World Bank set the following objectives for granting loans to indebted electricity industries:

1/ Source:: World Bank [1995]. **Assistance of the World Bank for infrastructure projects, Responding to the challenge of infrastructure in Latin America and the Caribbean**, Washington D.C. Development Trends Series, 65 pages.

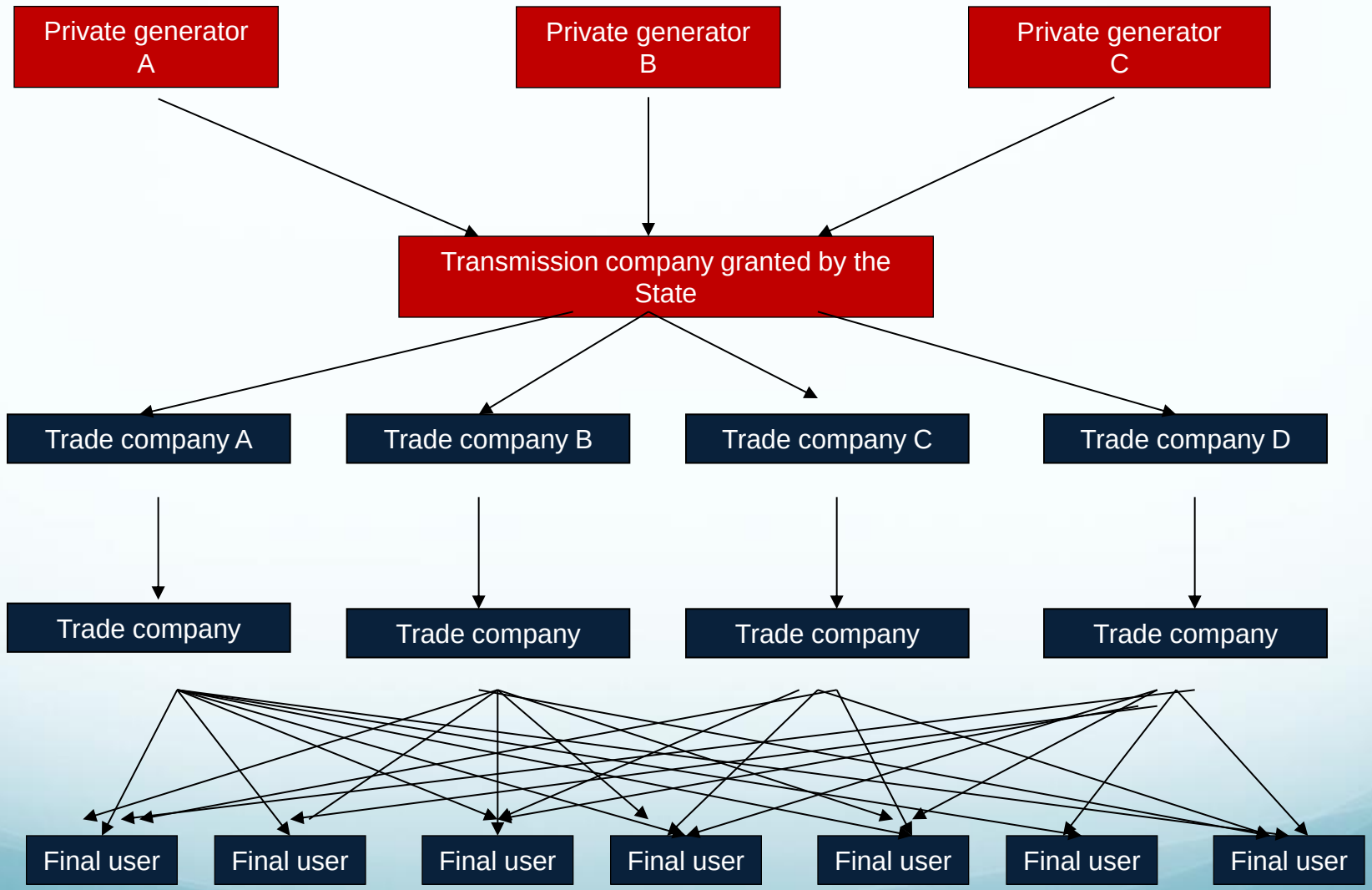
a) Ensure a different investor and electricity service provider within each territory;

b) ensure that the expansion of service coverage and infrastructure quality are not the responsibility of the State;

c) ensure that natural monopolies open up to competition through vertical disintegration, to enable the private sector to participate in the entire technological trajectory of the electricity sectors;

d) require governments to obtain tax revenue through the sale or concession of decentralized companies and organisms with state participation.

New structure



Later, as from 1990 and following the British experiment and the CHANGES in the US Public Utility Holding Company Act (PUHCA), conditions were created for US electricity companies to invest outside their borders through Independent Power Producers (IPPs).

When IPPs were introduced in Mexico in 1992, the population SRTONGLY OPPOSED President Zedillo's attempt to sell the fixed assets of CFE and LFC.

The resistance came from the left, electricity workers (SME and SUTERM) and CANACINTRA entrepreneurs; the Institutional Revolutionary Party (PRI) subsequently opposed it by a majority in the Senate.

Article 25 of the Constitution.- The public sector will be exclusively responsible for strategic areas. The private sector will be subject to the requirements of public interest, and its use of productive resources – in the general interest – must seek to preserve them and the environment.

Article 26 of the Constitution.- Planning must not be unilateral; it must be democratic.

Article 27 of the Constitution.- The Nation has direct dominion of all natural resources. This dominion is unalienable and imprescriptible.
These resources may only be used by concessions from the Federal Executive Branch.
Paragraph Six grants exclusivity to the nation for the entire technological trajectory of the electricity industry (generation, transmission, distribution and commercialization).

Article 28 of the Constitution provides that the functions that the state carries out exclusively in electricity and hydrocarbons, among other strategic areas, will not constitute a monopoly.

Article 36a of the Public Electricity Service Law.
To provide Public Electricity Services, electricity must be produced at the lowest possible cost to CFE both on the short and long term, considering the power generated by individuals using any of the methods recognized in Article 36.

Mexican Constitution
(Paragraph Six of Article 27 and Paragraph Four of Article 28)

Current	Proposal by President Zedillo (1999)	Fox (2000-2006)	Calderón (2006-2012)
Article 27. Paragraph Six “ (...) It is the responsibility of the Nation to generate, conduct, transform, distribute and provide electricity destined for public service. In this area no concessions will be made to individuals, and the Nation will use the goods and natural resources required for this purpose.”	Reform proposal rejected.	No changes.	No changes.

Current	Proposal by President Zedillo (1999)	Fox (2000-2006)	Calderón (2006-2012)
Article 28 **Paragraph Four** "The functions carried out exclusively by the state in the following strategic areas will not constitute monopolies: post, telegraph and radiotelegraph; petrol and other hydrocarbons; basic petrochemicals; radioactive minerals and the generation of nuclear energy; electricity and all activities specifically indicated by the laws issued by Congress. Satellite communication and railroads are high-priority areas for national development under the terms of Article 25 of this Constitution. When the state is responsible for them, it will protect the security and the sovereignty of the Nation, and when granting concessions or permissions, it will maintain or establish the dominion of the respective means of communication, in accordance with the laws on the subject.	Reform proposal rejected.	No changes.	No changes.

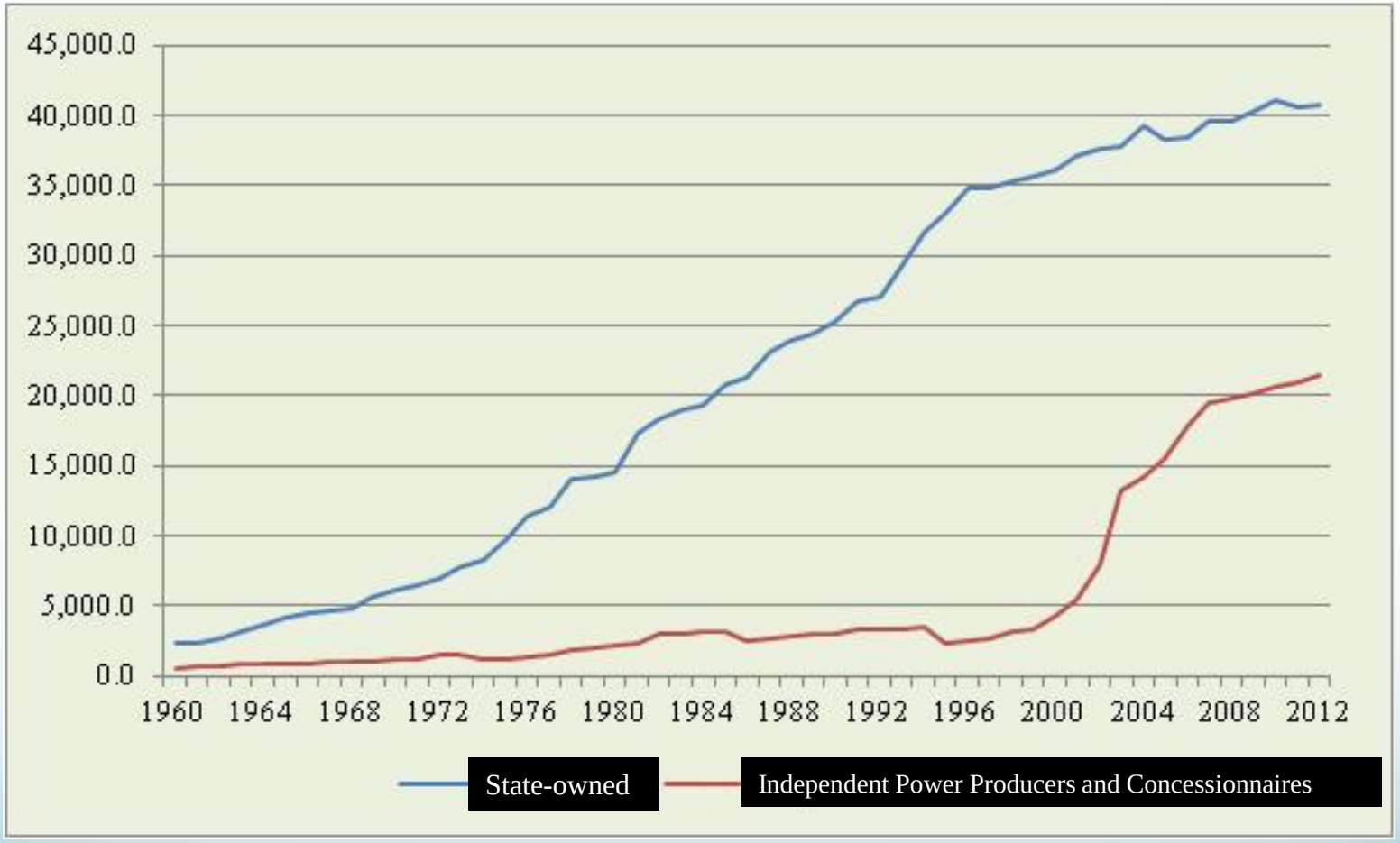
Source [online]:Diario Oficial de la Federación, *Ley del servicio público de energía eléctrica*, Mexico, December 22, 1975, in: Cámara de Diputados del H. Congreso de la Unión, 2003, [Consulted: May 22].
Zedillo Ponce de León, Ernesto, *Propuesta de reestructuración del sector eléctrico*, Mexico, National Palace, February 2, 1999.

	Article issued by Salinas.	Proposal by Fox	Calderón (2006-2012)
Article 135, section II	Article 135, section II: "II. In the event of concessionaires with a power surplus of 20 MW or less, in suitable cases, the Commission may sign agreements that include energy capacity and acquisition commitments, subject to dispatch rules;"	REJECTED	No changes.

Source: [Online], [Online], "Diario Oficial de la Federación, Reglamento de la Ley del Servicio Público de Energía Eléctrica, Mexico, May 31, 1993, in: Luz y Fuerza del Centro, [Consulted May 22, 2003].

5. The facts, in response to the expectations of global electricity companies.

MEXICO
Evolution of the Installed Capacity of the National Electricity Sector
(MW)
1960-2012



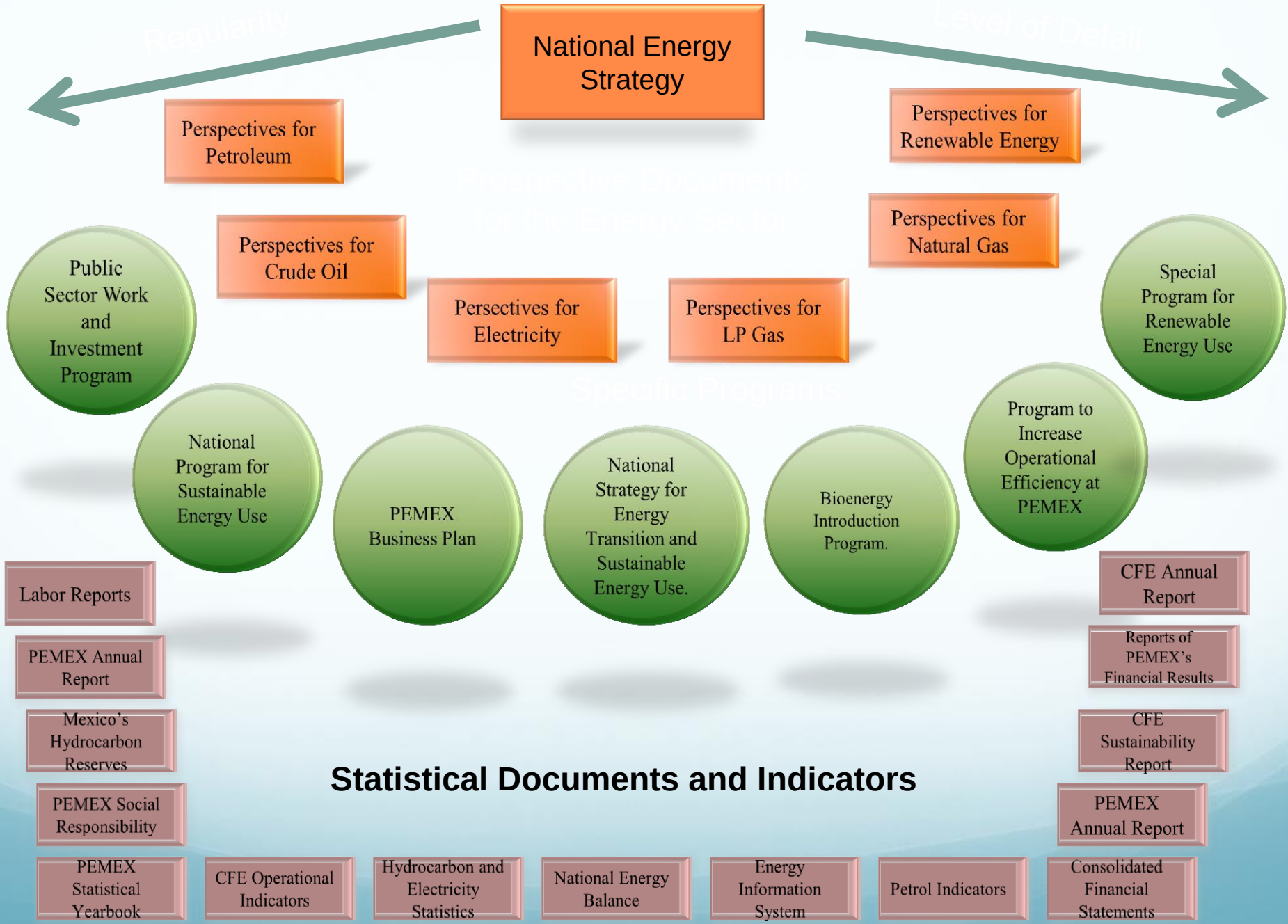
SOURCE: CFE. Statistics from the National Electricity Sector, for several years.
SENER Sistema de Información Energética, Dirección General de Planeación Energética. Información consultada en Internet <www.sener.gob.mx>

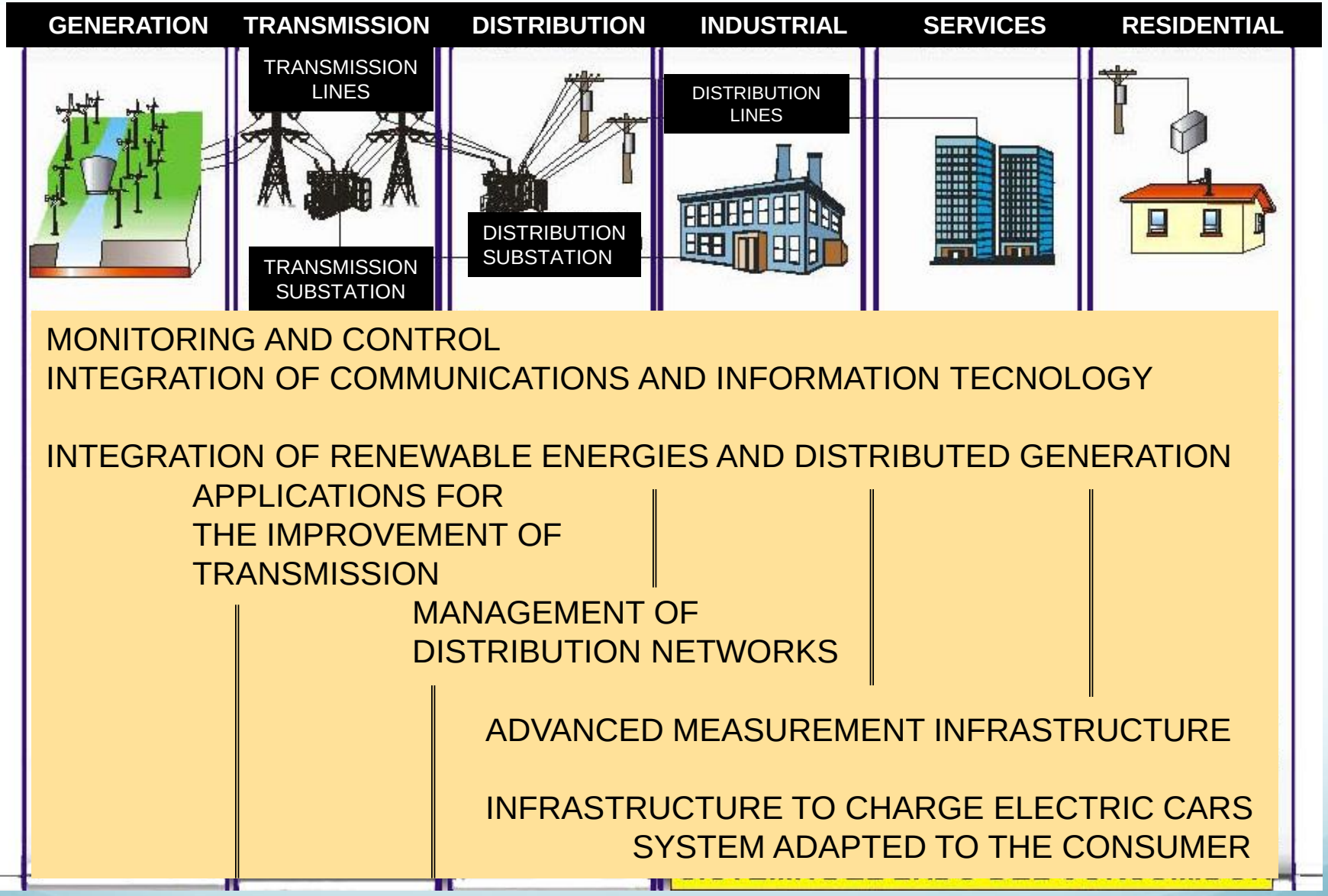
México
Sector Eléctrico Nacional
Generación Bruta de electricidad de Comisión Federal de Electricidad (CFE) y el Productor Independiente de Energía (PIE)
(GWh)

	Total	CFE	%	PIE	%
2000	192,720.9	191,426.0	99.3	1,294.9	0.7
2001	197,106.5	192,517.0	97.7	4,589.5	2.3
2002	200,362.0	178,510.0	89.1	21,852.0	10.9
2003	201,788.5	170,144.0	84.3	31,644.5	15.7
2004	207,018.8	161,164.0	77.8	45,854.8	22.2
2005	217,159.8	171,601.0	79.0	45,558.8	21.0
2006	223,563.8	164,136.0	73.4	59,427.8	26.6
2007	230,926.9	159,945.0	69.3	70,981.9	30.7
2008	234,097.0	159,864.9	68.3	74,232.0	31.7
2009	233,471.6	156,975.3	67.2	76,496.3	32.8
2010	241,506.3	163,048.9	67.5	78,457.4	32.5
2011	257,883.6	173,626.2	67.3	84,257.4	32.7
2012	260,498.0	178,766.8	68.6	81,731.2	31.4

Fuente: Elaboración propia con datos de Sener. Estadísticas del sector eléctrico. Información consultada en Internet <www.energia.gob.mx>

- **In the face of the ferocious attempt to privatize the Mexican electric industry, the CFE defeated its competitors through good service and low costs.**
- **In Mexico private investment in electricity generation capacity is permitted BUT only through long-term contracts, as the Wholesale Market does not exist in the country. The Mexican Electricity System now uses investment as an additional resource to build new capacity, but this private investment is limited. Independent energy producers, self-consumption, cogeneration and the self-sufficiency society in rural and isolated communities are COMPLEMENTARY AND DO NOT SUBSTITUTE the public electricity service.**
- **Today, CFE gives freedom to users and generators, enabling them to contract generation capacity for their own benefit, by selecting the strategies best suited to them.**
- **Electricity supply is not CFE's only activity: by constructing optic fiber cables in its high voltage distribution network, it has created technical synergies between electricity distribution and the telephone service.**


Guiding Document
Regularity
Level of Detail
National Energy Strategy
Perspectives for Petroleum
Perspectives for Renewable Energy
Prospective Documents for the Energy Sector
Perspectives for Crude Oil
Perspectives for Natural Gas
Public Sector Work and Investment Program
Persectives for Electricity
Perspectives for LP Gas
Special Program for Renewable Energy Use
Specific Programs
National Program for Sustainable Energy Use
PEMEX Business Plan
National Strategy for Energy Transition and Sustainable Energy Use.
Bioenergy Introduction Program.
Program to Increase Operational Efficiency at PEMEX
Labor Reports
CFE Annual Report
PEMEX Annual Report
Reports of PEMEX's Financial Results
Mexico's Hydrocarbon Reserves
CFE Sustainability Report
PEMEX Social Responsibility
PEMEX Annual Report
Statistical Documents and Indicators
PEMEX Statistical Yearbook
CFE Operational Indicators
Hydrocarbon and Electricity Statistics
National Energy Balance
Energy Information System
Petrol Indicators
Consolidated Financial Statements

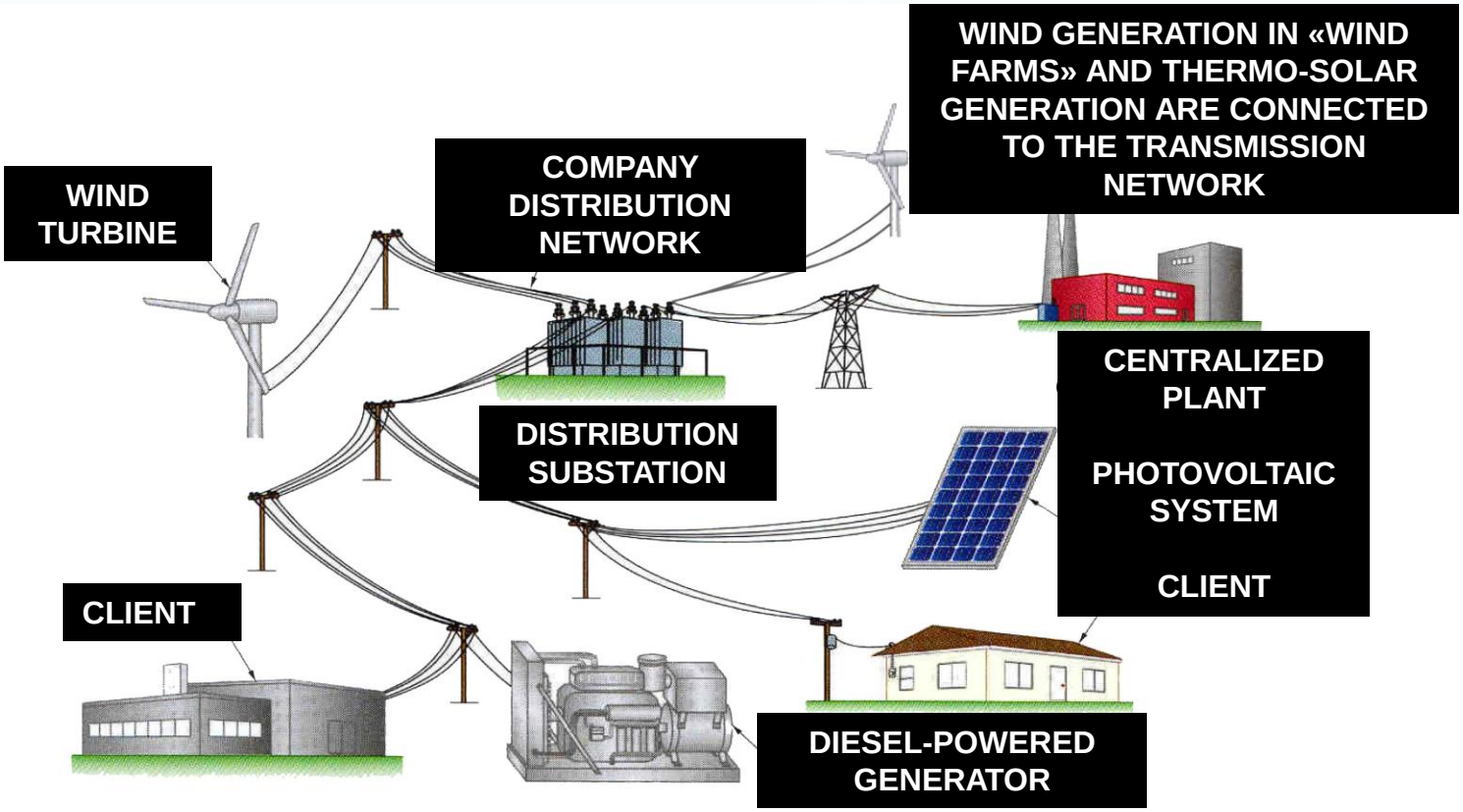


Source: Enriquez Harper, Gilberto [2012]. : Enriquez Harper, Gilberto [2012]. Acciones para apoyar la eficiencia energética en el sector eléctrico, paper delivered at the Latin American Energy Symposium 2012, Mexico City. Consulted on the Internet <www.simposiumenergia.org.mx/Eventos/1/PonenciasDocs/56/AccionesparaApoyarlaEficienciaEnerg%C3%A9ticaenelSectorElectrico-CFE.pdf >

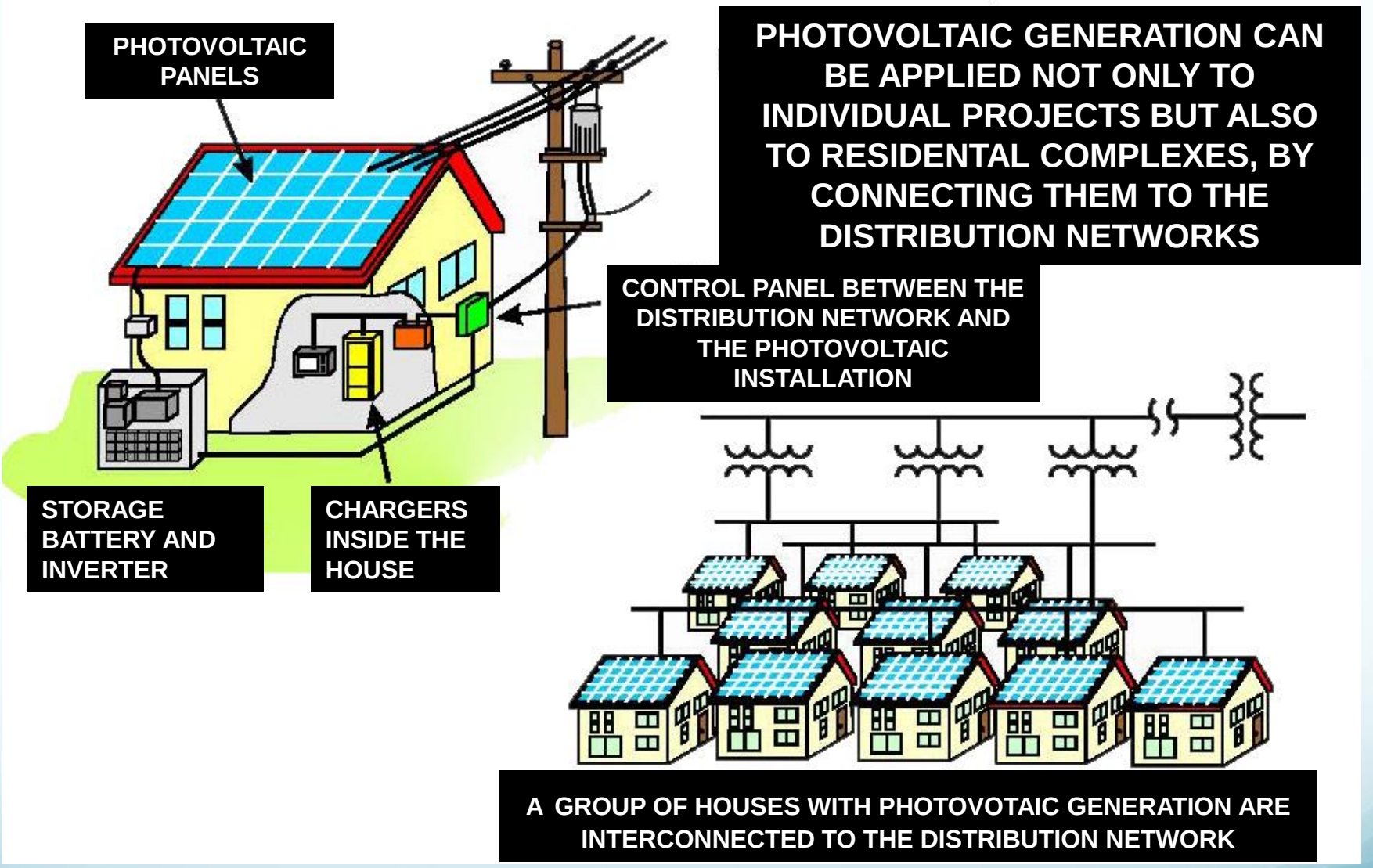
Investment requirements 2012-2026
(*Millions of 2011 Mexican pesos*).

Concept	Total	%
Generation	**796,123**	**51.9**
Independent Electricity Production	83,477	5.4
Financed Public Work	693,113	45.2
Budgetary Work	19,533	1.3
Transmission	**216,862**	**14.1**
Financed Public Work	68,951	4.5
Budgetary Work	147,911	9.6
Distribution	**307,259**	**20.0**
Financed Public Work	27,838	1.8
Budgetary Work	279,421	18.2
Maintenance	**204,512**	**13.3**
Subtotal	**1,524,756**	**99.4**
Other budgetary investments	**8,603**	**0.6**
TOTAL	**1,533,359**	**100**

Source: CFE [2012]. CFE [2012]. Programa de Obras e Inversiones del Sector Eléctrico 2012-2026. Subdirección de Programación, México.



Source: : Enriquez Harper, Gilberto [2012]. Acciones para apoyar la eficiencia energética en el sector eléctrico, paper delivered at the Latin American Energy Symposium 2012, Mexico City. Consulted on the Internet <www.simposiumenergia.org.mx/Eventos/1/PonenciasDocs/56/AccionesparaApoyarlaEficienciaEnerg%C3%A9ticaenelSectorElectrico-CFE.pdf >



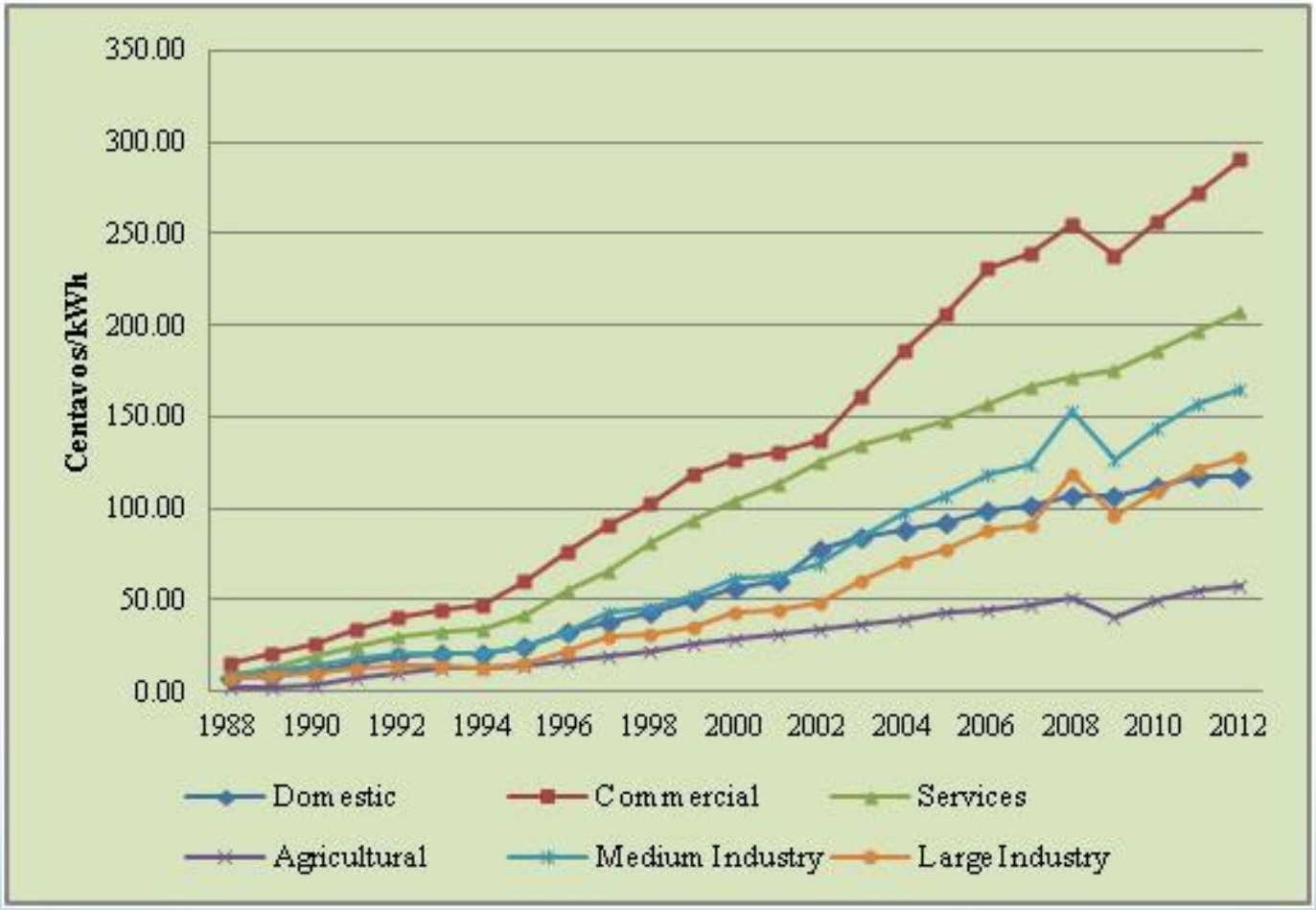
Source Enriquez Harper, Gilberto [2012]. Acciones para apoyar la eficiencia energética en el sector eléctrico, paper delivered at the Latin American Energy Symposiusm, 2012, Mexico City. Consulted on the Internet <www.simposiumenergia.org.mx/Eventos/1/PonenciasDocs/56/AccionesparaApoyarlaEficienciaEnerg%C3%A9ticaenelSectorElectrico-CFE.pdf > >

APPLICATION OF SMALL SOLAR PANELS FOR PUBLIC LIGHTING, USING ENERGY SAVING LAMPS WITH AUTONOMOUS SYTEMS

Source: : Enriquez Harper, Gilberto [2012]. Acciones para apoyar la eficiencia energética en el sector eléctrico, paper delivered at the Latin American Energy Symposium, 2012, Ciudad de México. Consultada en Internet <www.simposiumenergia.org.mx/Eventos/1/PonenciasDocs/56/AccionesparaApoyarlaEficienciaEnerg%C3%A9ticaenelSectorElectrico-CFE.pdf > >

Incandescent lighting	LED	CFL
65 cents per lightbulb, and 15 years of electricity costs $72.55 USD 1,000 to 2000 hours of life.	$120 USD per lightbulb 15 years of electricity costs $9.57 USD, and 20,000 to 50,000 hours of life.	$4 USD per lightbulb 15 years of electricity costs $18.14 USD, and 6,000 to 12,000 hours of life.

National Electricity Sector
Electricity Tariffs
Centavos per kWh



Source: Compiled using information provided by CFE. Sales statistics. Information consulted on the Internet <www.cfe.gob.mx>
INEGI. Banco de Información Económica. Information consulted on the Internet <www.inegi.org.mx

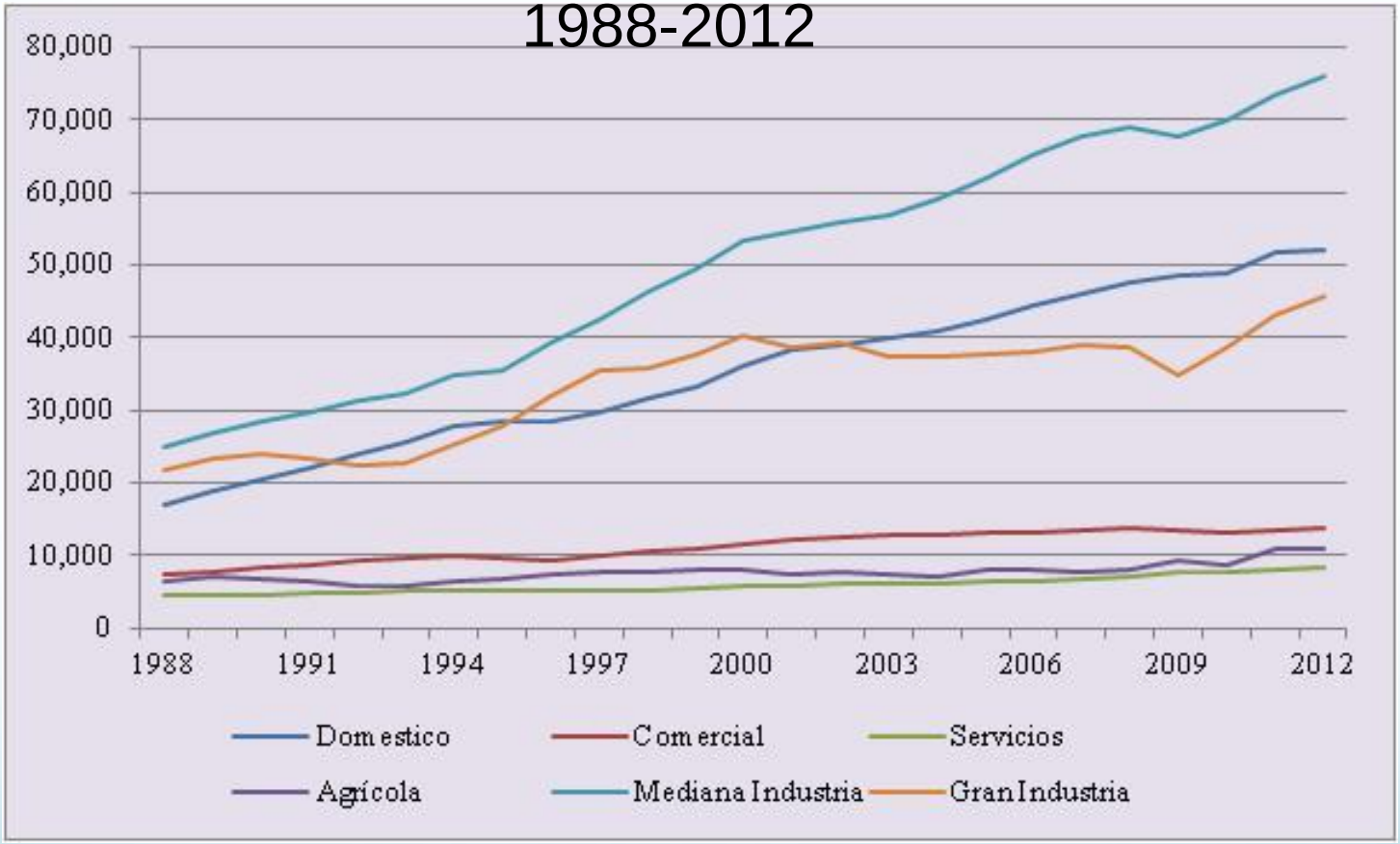
Electricity Rates for Industrial and Residential Use 2011

2010 Dollars /kWh

Industrial		Residential	
United States	0.0679	South Korea	0.0834
Canada	0.0699	Mexico	0.0888
Norway	0.0737	Taiwan	0.0932
Taiwan	0.0776	Canada	0.0945
Finland	0.0948	United States	0.1158
Sweden	0.0964	France	0.1568
Switerland	0.1023	Greece	0.1584
Mexico	0.1042	Finland	0.1754
France	0.1056	Norway	0.1758
Greece	0.1139	Poland	0.1791
Denmark	0.1144	Switzerland	0.1800
Portugal	0.1203	New Zealand	0.1815
Poland	0.1204	Turkey	0.1841
United King	0.1211	Czech Republic	0.1855
Luxemburg	0.1219	United King	0.1990
Holland	0.1230	Slovakia	0.2130
Belgium	0.1245	Portugal	0.2152
Ireland	0.1372	Luxemburg	0.2155
Czech Republic	0.1439	Sweden	0.2180
Turket	0.1509	Holland	0.2212
Japan	0.1544	Belgium	0.2317
Slovakia	0.1691	Japan	0.2322
Italy	0.2581	Ireland	0.2326
		Austria	0.2576
		Italy	0.2632
		Germany	0.3248
		Denmark	0.3563

Source: IEA [2011]. *Key World Energy Statistics*.

México
Ventas del Sector Eléctrico Nacional
(GWh)
1988-2012



Fuente: CFE. Estadísticas. Información consultada en Internet <www.cfe.gob.mx>

Mexico
Additional Capacity per Technology in 2011-2026 1/
(MW)

Technology	Finished product, construction or tender	Future tender	Total
Combined Cycle	3,750	23,723	27,473
Hydroelectric	750	3,881	4,631
Geothermoelectric	104	254	358
Turbogas	596	221	817
Internal Combustion	130	43	173
Wind-electric	1,115	2,408	3,523
Solar	20	0	20
New Generation Clean 2/	0	7,000	7,000
Subtotal	6,464	37,529	43,992
Increase in Rm 3/	539	0	539
Total	**7,003**	**37,529**	**44,532**

1/ Results of planning studies, not including local or remote self-sufficiency.
2/ New clean generation: Combined and carbo-electric cycles with CO2 capture and sequestration, nucleo-electric, wind-electric, solar or import capacity.
3/ Includes increase in Rehabilitation and Modernization of Laguna Verde, Altamira and Río Escondido, change in capacity in Sauz US, and several hydroelectric plants (538.2MW).

SOURCE: CFE [2011]. Programa de Obras e Inversiones del Sector Eléctrico 2012-2026, Subdirección de Programación, México.

5.CONCLUSIONS.

MEXICO'S COMMITMENTS TO CLIMATE CHANGE

- **By 2025, and using emissions in 2000 as a base.- Reduce its Greenhouse Gas emissions by 50%** (Programa Especial de Cambio Climático 2009-2012. Mexico. SEMARNAT)

- **By 2024,** 35% of the electricity generation capacity will be from "clean" energies, in other words, that do not generate greenhouse gases (Estrategia Nacional de Energía, febrero 2010 y 2011. México SENER).

- **Emissions are related to electricity generation rather than** installed capacity; therefore the generation projected for 2024 is: 72% fossil energy; 17% clean energy and 11% is yet to be determined. In other words, even taking into account this still undetermined 11%, clean energies only represent 28% of the total kWh generated using clean energy. This is where the Mexican Nuclear Society sees possibilities for nuclear energy.

NUCLEAR IN MEXICO AFTER FUKUSHIMA

Fukushima nuclear accident that occurred in the BWR Reactor, which is similar to those in Laguna Verde, which operates in Mexico, has been a tragedy as a result of two serious accidents: the earthquake and the tsunami that took place in Japan in March 2011 is very difficult to happen in México so PLANS TO BUILD NEW NUCLEAR PLANTS continue in México. Some years ago with the proposal to install 10 units (~12,000 MWe) by 2030, which accounts for approximately 10% of installed capacity and 15% of the electricity generation for that year and now at least another plant with two two units.

ENERGY REFORM PROPOSAL 2013

Nuclear energy industry and uranium natural resources are considered strategic areas of the state. IS NOT THE CASE OF OIL AND ELECTRICITY.

Article 135 of the Constitution provides that in order to carry out a constitutional amendment, a special process is required, consisting of a vote by two thirds of the members of Congress. The amendment must also be approved by a majority of the legislatures of the Mexican states.

Although the PAN (National Action Party) and PRI (Institutional Revolutionary Party) hold two thirds of the votes in Congress, approval by the legislatures of the states will prove problematic, due to the authority vacuum in the rest of the country. For the sake of security, many communities have formed their own police force and consider themselves autonomous. It is not clear who is in charge in these areas.

THANK YOU FOR YOUR ATTENTION