

Implementation Process of the Energy Reform.

Mexico.

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Objectives of the Energy Reform

- More efficient use of resources, and in a sustainable way.
- Cost reduction
- Diversify risks of the industry
- Energy reform highlights
 - Hydrocarbons will remain **property** of the nation
 - PEMEX → **income generating** company
 - Increase exploration and production of hydrocarbons
 - **Competition** in refining process, petrochemical industry, and hydrocarbons transportation.
- Hydrocarbons Law:
 1. Service contracts
 2. Profit sharing contracts
 3. Production sharing contracts
 4. License contracts



Comisión Nacional
de Hidrocarburos

Comisión Nacional de Hidrocarburos (CNH):

- Regulates, supervises y evaluates the exploration and extraction activities of hydrocarbons of the country.



Comisión Reguladora de Energía (CRE):

- Regulate in a transparent, impartial and efficient manner the activities of the energy industry within its competence, promoting healthy competition, encourage proper coverage and meet the reliability, quality and safety supply and delivery of services at competitive prices for the benefit of society.



SENER
SECRETARÍA DE ENERGÍA



CNH

Comisión Nacional
de Hidrocarburos

SHCP

SECRETARÍA DE HACIENDA
Y CRÉDITO PÚBLICO



Overview on the opportunities

Round Zero

- State assigns to Petróleos Mexicanos the areas to explore and continue to work in.

Round One

- Pemex and private companies enter a tender scheme with equal opportunities and fair competition.
- Bid 1 (Shallow waters- exploration)
- Bid 2 (Shallow waters- extraction)
- Bid 3 (Terrestrial- extraction)
- Bid 4 (Terrestrial- exploration)



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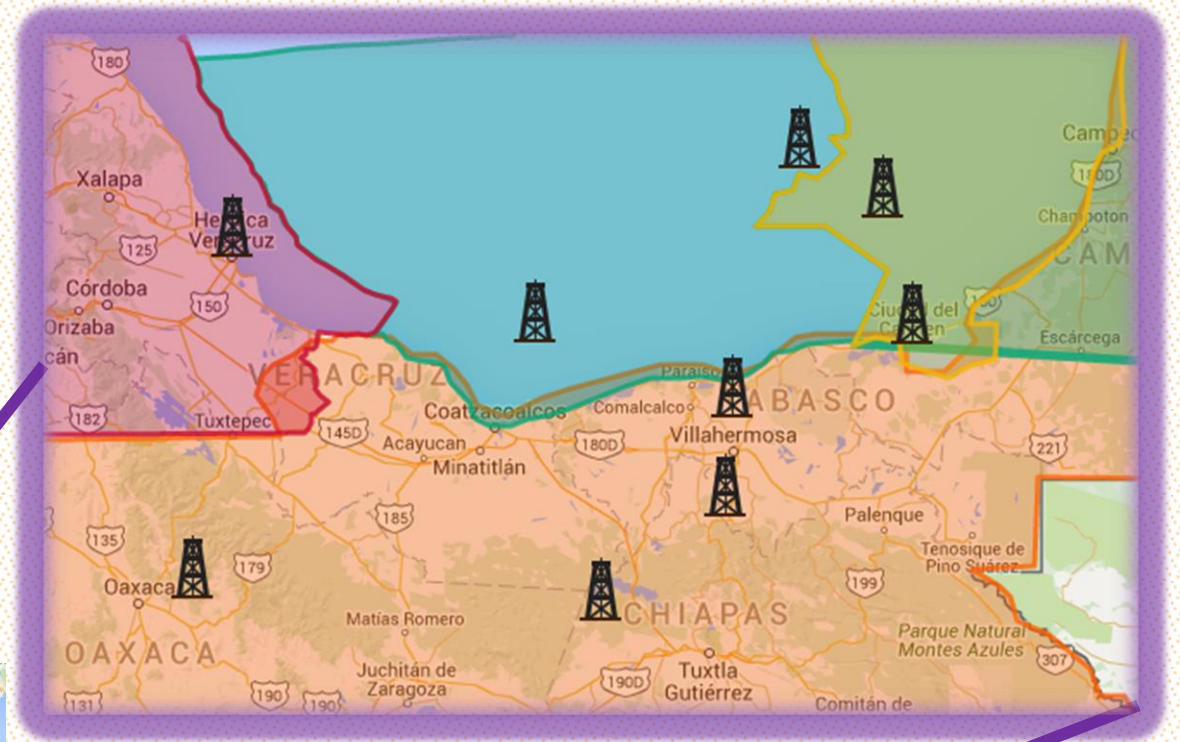
Other opportunities

- Upstream planning
 - Five Year E&P Plan
- Midstream
 - Natural Gas Transportation
- Downstream
 - Industrial Transformation and Retail

Mexico's productive basins



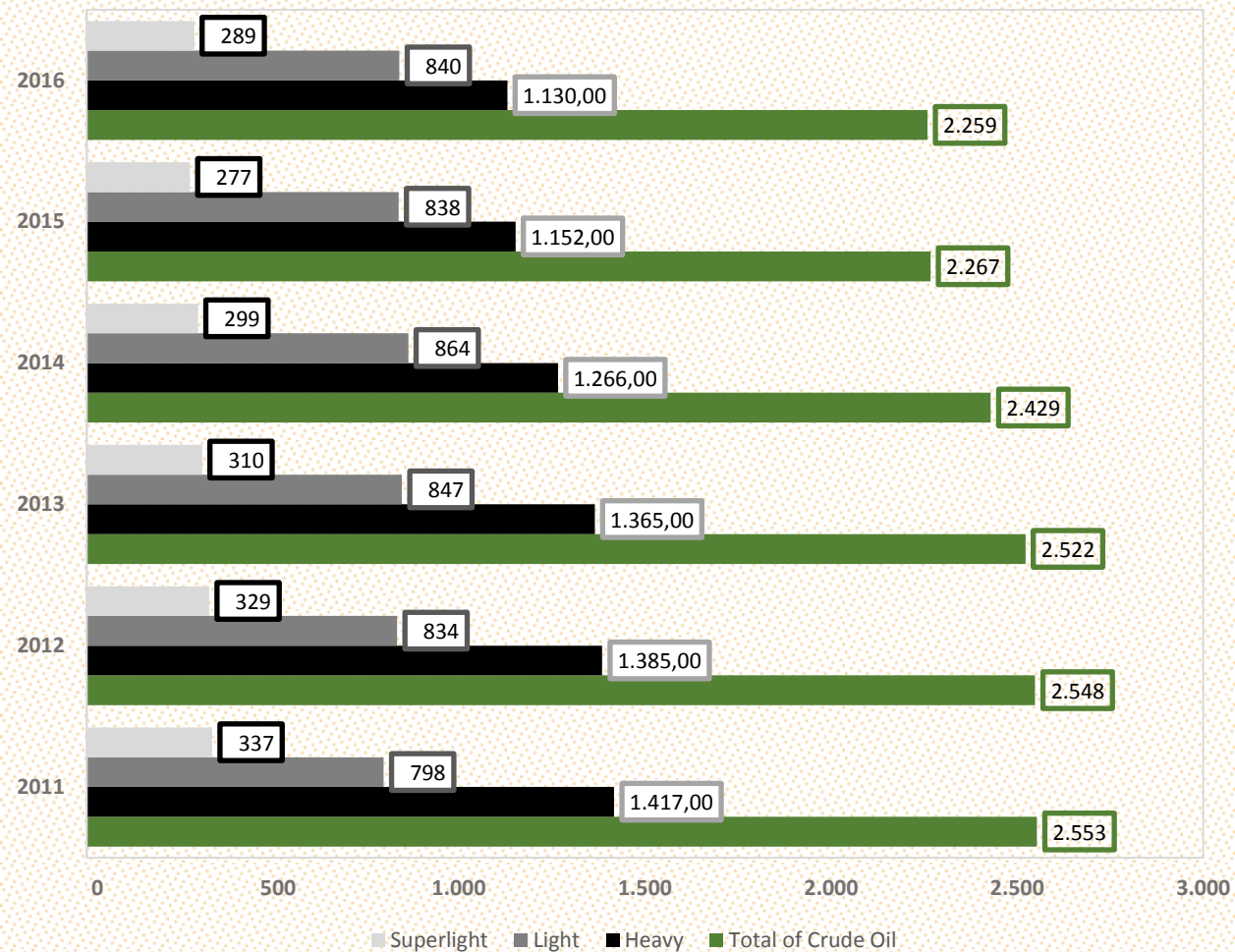
Source: PEMEX



Source: Análisis estadístico PEMEX 2014

PEMEX's production of crude oil

Thousand of barrels per day

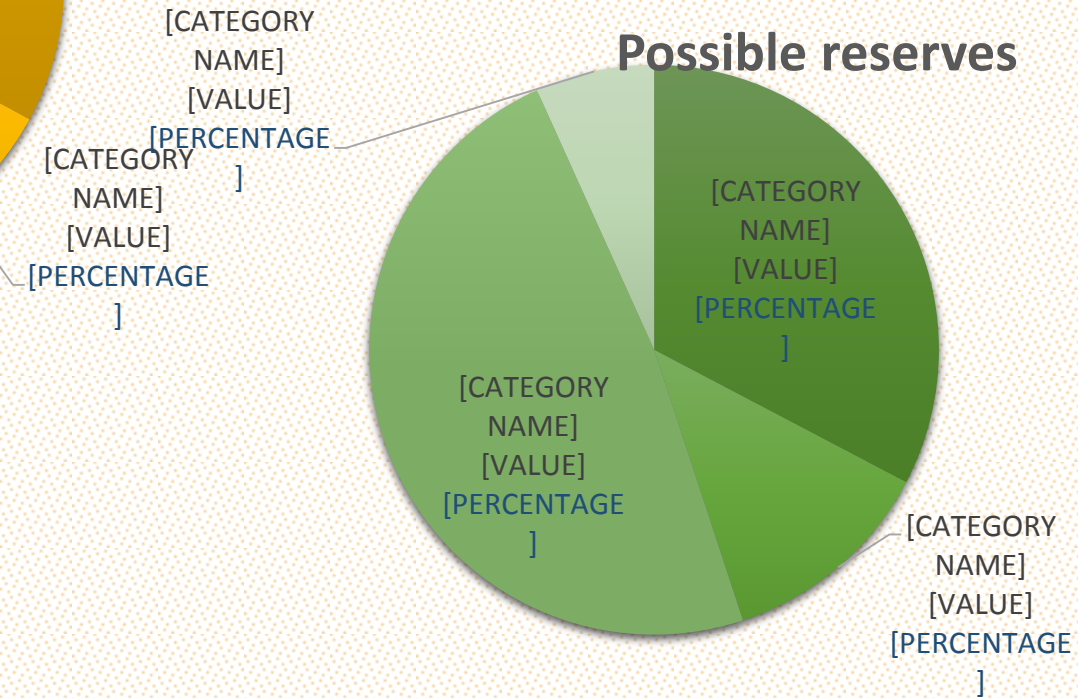
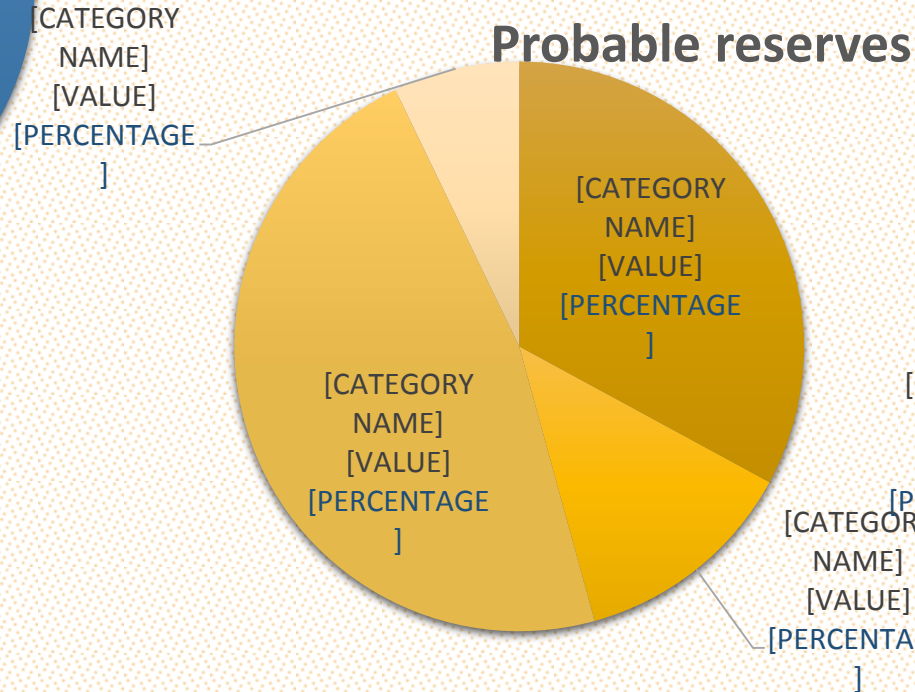
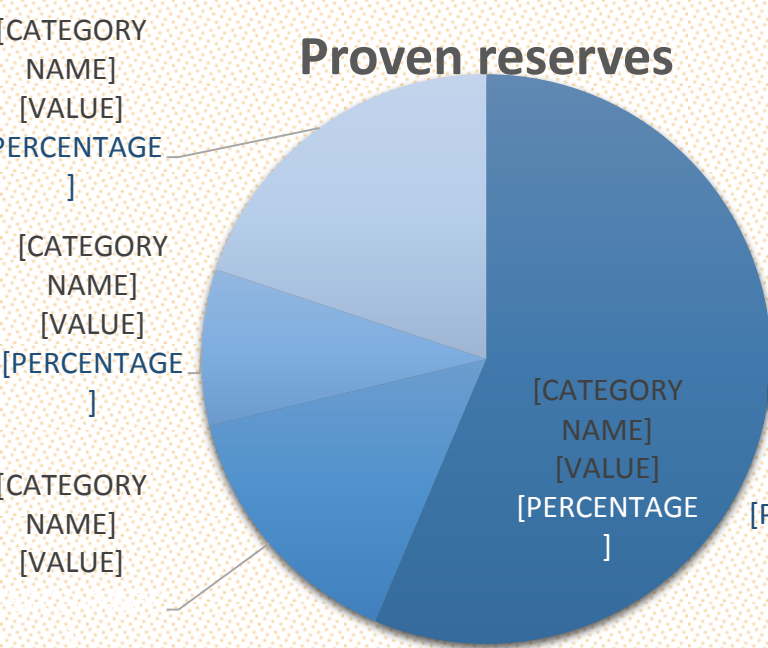


Hydrocarbons reserves.



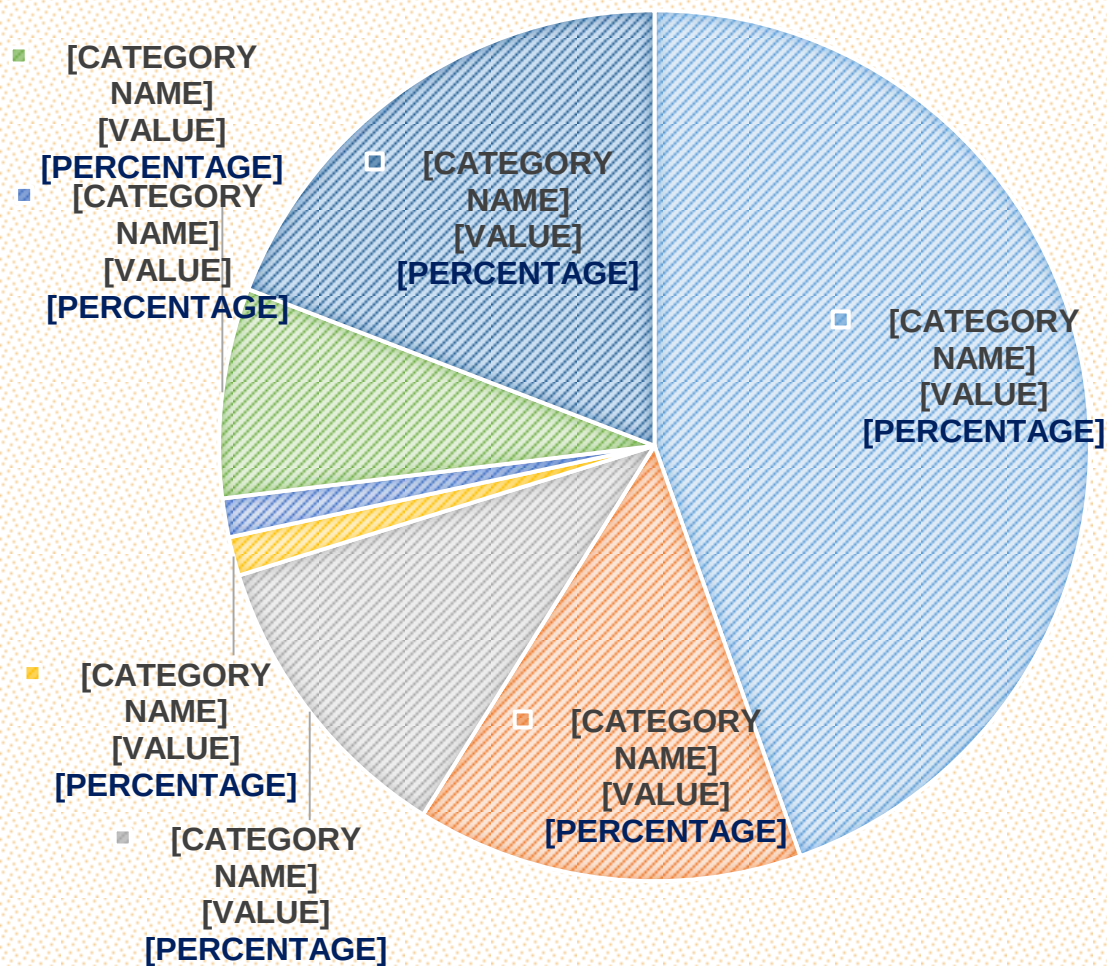
Reserves by region

(Million barrels of oil equivalent)

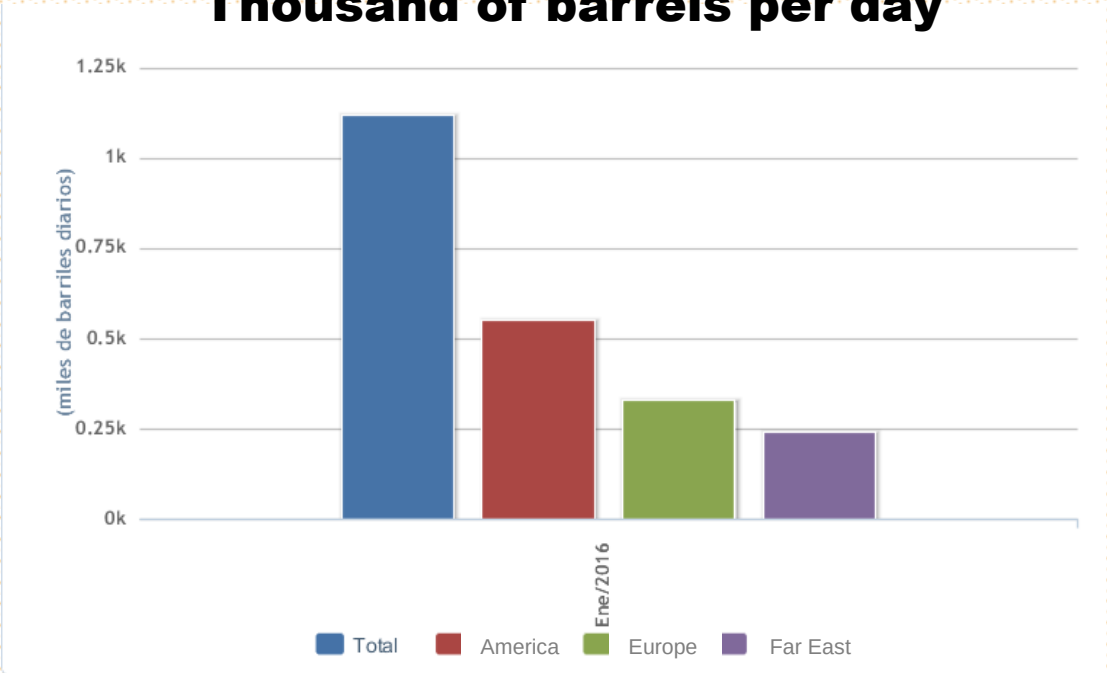


EXPORT VOLUME OF OIL BY COUNTRY OF DESTINATION

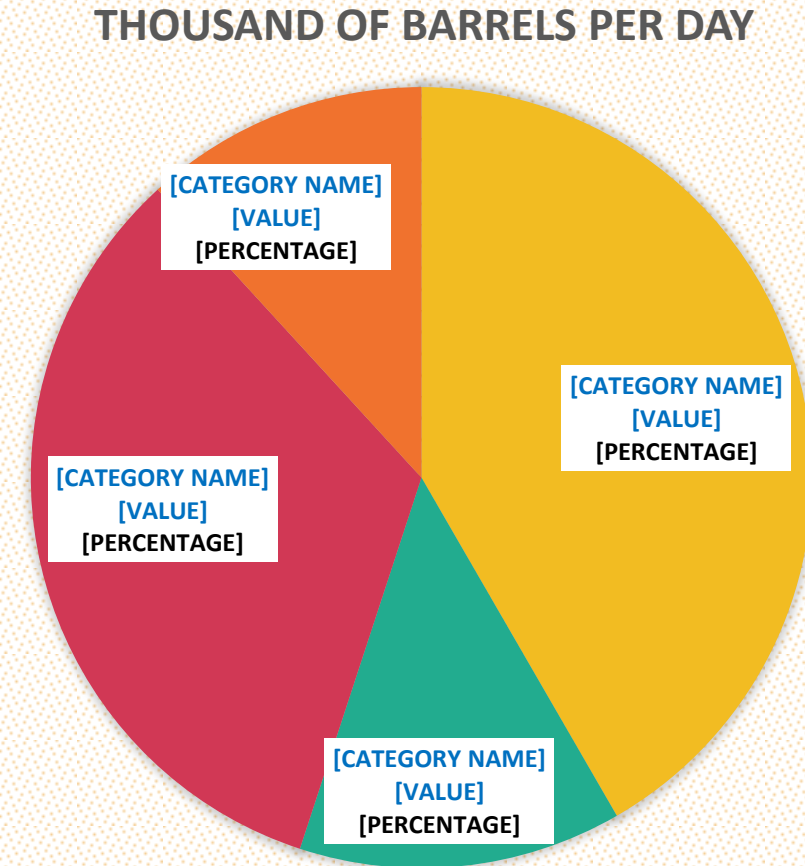
(THOUSAND OF BARRELS PER DAY- JAN 2016)



Thousand of barrels per day



Geographical distribution of crude oil reserves.



Energy facts

- Mexico is among the top 10 oil producers in the world (2014).
- Mexico's crude oil proven reserves amount to **9,711** million of barrels. (2015)
- PEMEX is in 8th place in the top crude oil producers in the world (2013).

■ Exploration and production



International Ranking 2014

MEXICO'S GLOBAL POSITION

Proven reserves of crude oil	17
Oil production	10

Round 1. First bid.

Exploration in Shallow Waters

Contract Model: Shared Production

2nd Block: Veracruz

7th Block: Tabasco

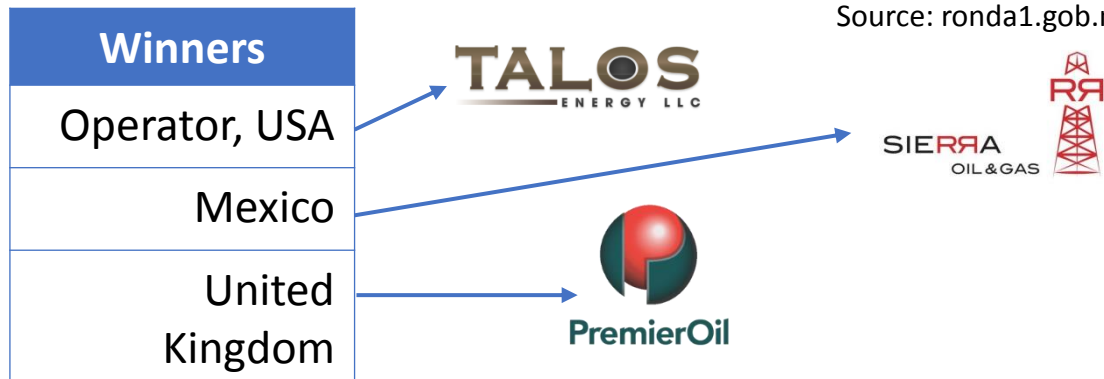
Milestones

- Launch: Dec. 11, 2014
- Award date: July 15, 2015
- Contract signature: Sept. 4, 2015

Estimated Investment*

2.7 billion USD

Source: ronda1.gob.mx



Round 1. Second bid.

Extraction in Shallow Waters.

Milestones

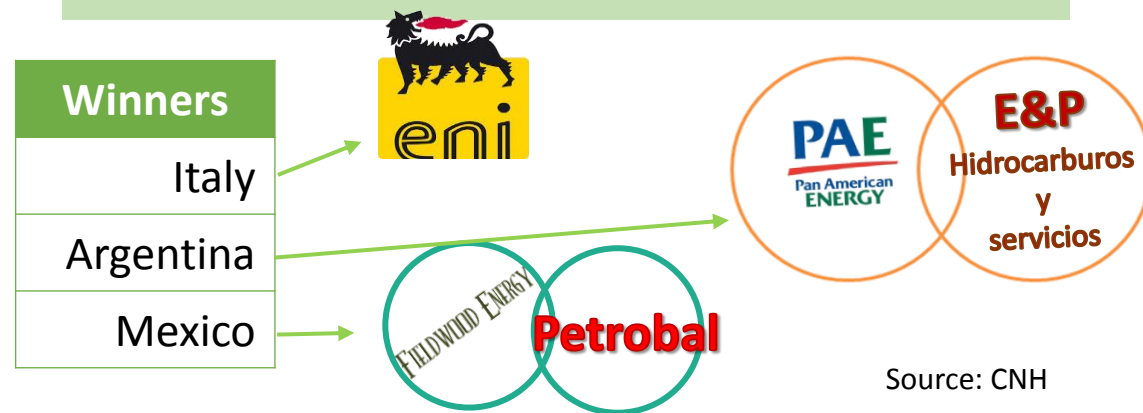
- Launch: Feb. 27, 2015
- Minimum values: Sep. 14, 2015
- Award: Sep. 30, 2015

Winners:

- ENI International (Italy)
- PanAmerican / E&P Hidrocarburos (Argentina)
- Fieldwood Energy (USA) /Petrobal (Mexico)

Estimated investment

3.1 billion USD



Source: CNH

Round 1. Third bid.

Extraction in Terrestrial fields.

Milestones

- Launch: May 12, 2015
- Final contract: Nov. 10, 2015
- Award: Dec. 15, 2015
100% of the areas awarded

Winners

- 9 individual companies
- 5 consortiums

Estimated Investment*
623 million USD

Round 1. Fourth bid.

• Exploration & extraction in deep waters

Perdido Area and Salina Basin
- 10 contract areas, 6 blocks

• Extraction of extra heavy oil

Salina Basin

Milestones

- Launch date: Dec 17, 2015
- Access to data room until April 15
- Prequalification Jan 6 – May 13
- 13 companies showed interest
- 3 companies have initiated prequalification process (Chevron, Shell & Total)

Estimated Investment*
623 million USD

Winners

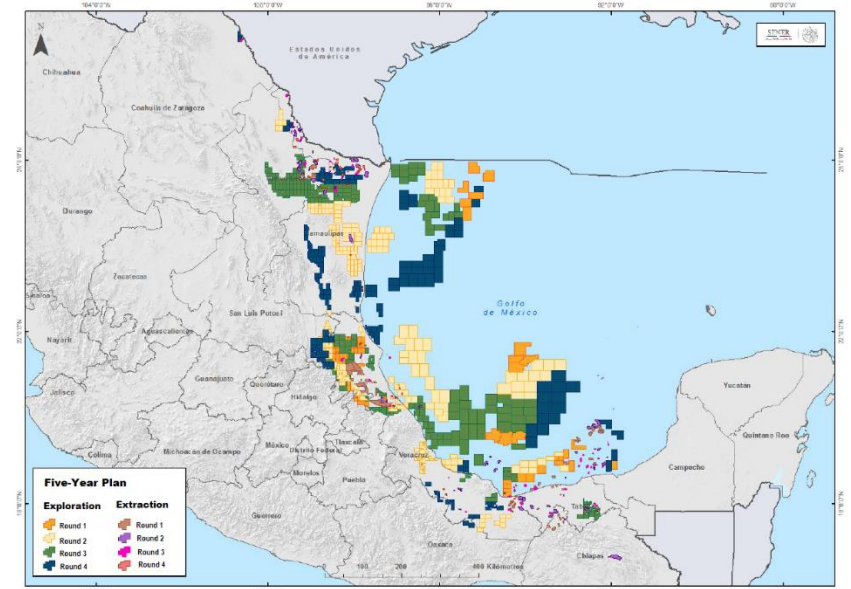
Will be announced Third
Quarter, 2016

Upstream planning

(Five-year plan for Exploration and Extraction of Hydrocarbons 2015 – 2019)

1. 244 oil fields **to tender**, in total (extraction)
 - a. 182 fields are **terrestrial**
 - b. 12 at Chicontepec (*Ver., Pue. & Hgo.*)
 - c. 13 considered as **extra-heavy** crude
 - d. 45 at **shallow water**
 - e. 4 at **deep sea**
2. Remaining volume by **68,205** millions of barrels of crude oil equivalent
3. Total **area covered: 7,966 km²**

- Exploration grouping:
 - Conventional resources
 - Non-conventional resources



Midstream planning

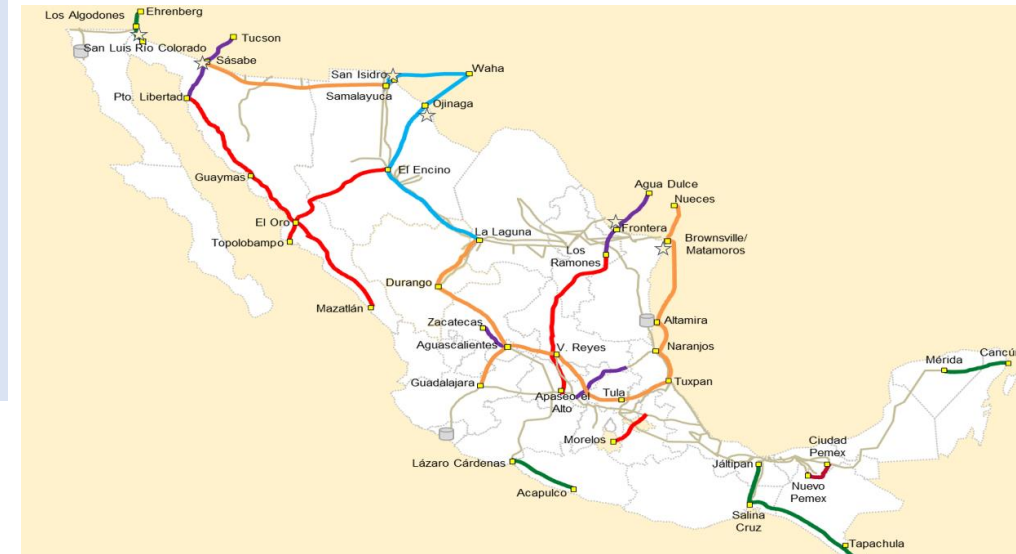
Natural Gas transportation.

New Permits (granted by CRE)

- Transport
- Storage
- Distribution
- Liquefaction, regasification, compression and expansion
- Retail
- Integrated natural gas systems management

- Natural gas transportation network is expected to expand by **82%** in length (2018).

**Estimated investment:
13 billion USD**



Downstream planning

Industrial Transformation and Retail

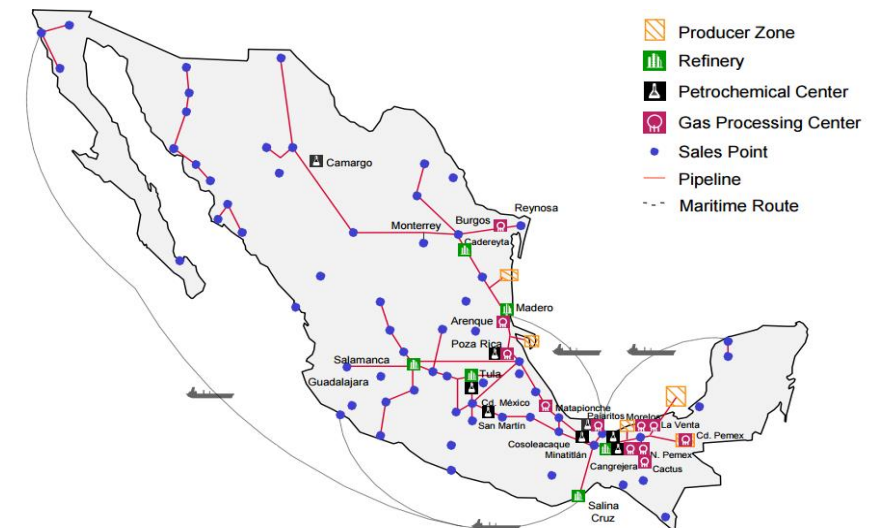
Energy Reform allows the investment in:

- Oil treatment and refining.*
- Natural gas processing.*
- Oil products imports and exports.*
- Transport, storage, distribution, and retail of gasolines, diesel and **LPG**.*

* Permits granted by SENER, including non-pipeline transportation of LPG.

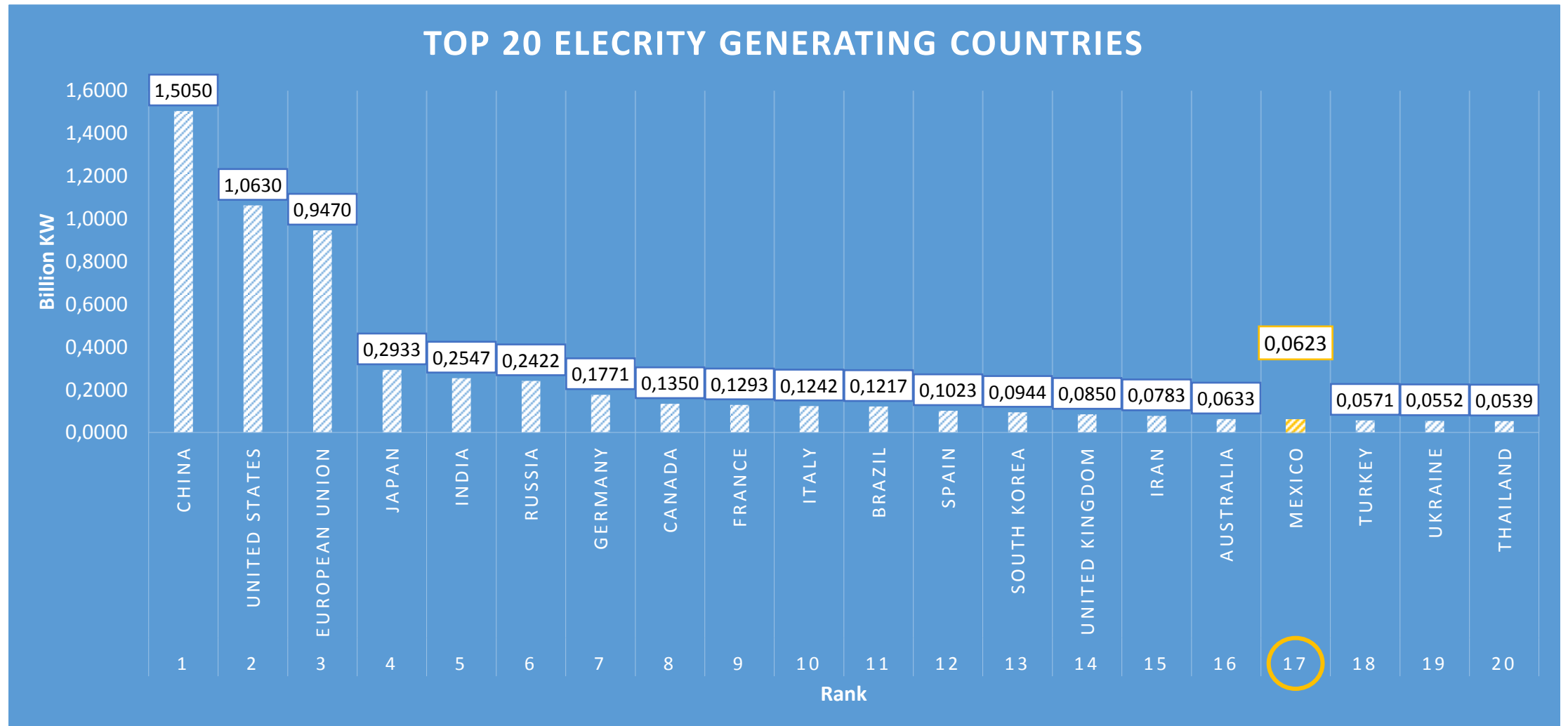
Mexico imports:

- Petrochemicals 75%
- Gasolines 51%
- Diesel 30%
- LPG 37%
- Natural gas 34%



Source: Pemex, IR, 2015

Electricity



Electrical Industry

The National Energy Strategy of Mexico 2014-2028 has two strategic objectives:

- 1) Enhance the economic growth
- 2) Ensure energy access to all nationals

Wholesale Electricity Market.

- **Where:**

- Generators can sell their production without barriers.
- Load Serving entities can purchase from the most competitive producers.
- Instruments are available to control risks and provide security for investments.

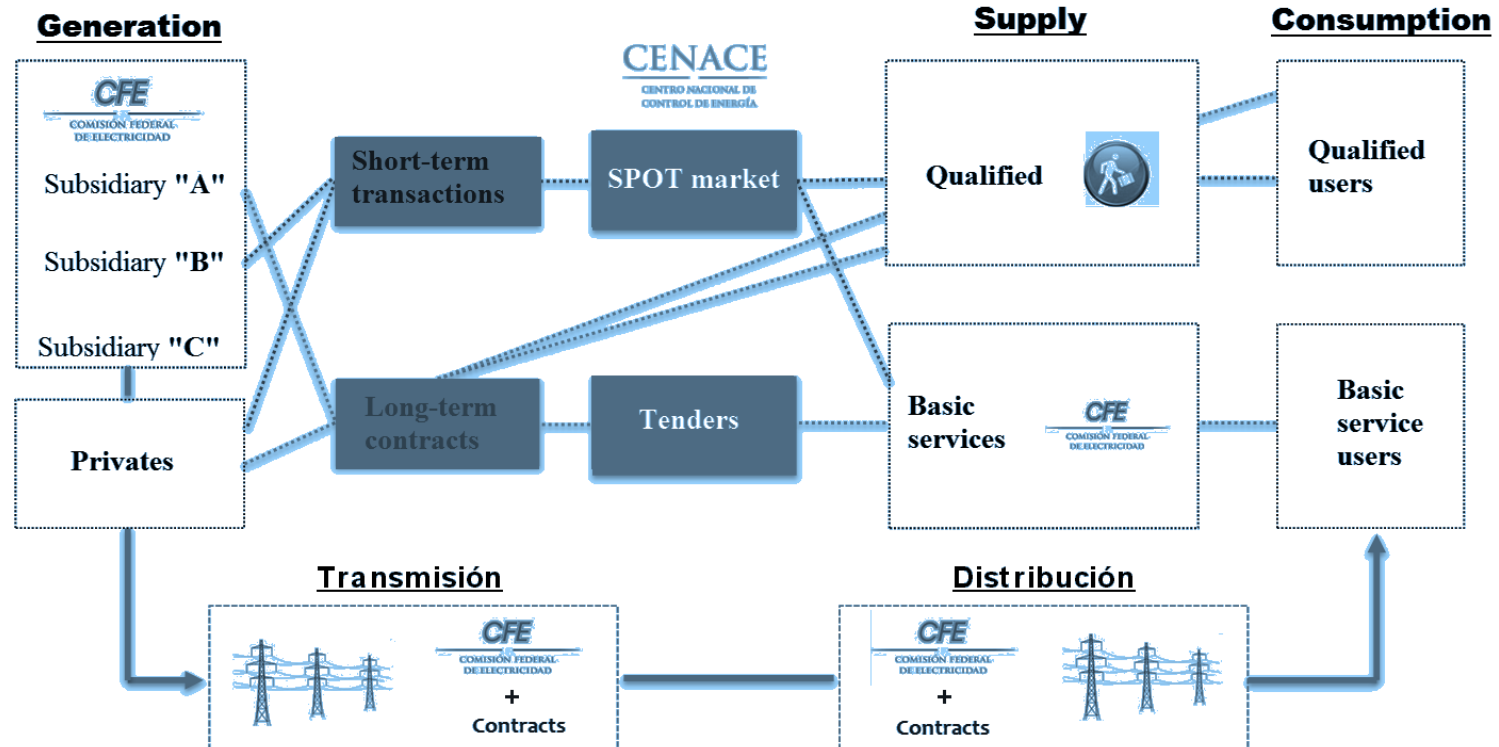
- **It includes:**

- Energy Auxiliary Services
- Capacity
- Clean Energy Certificates
- Financial Transmission Rights

ACTUAL GENERATING CAPACITY.



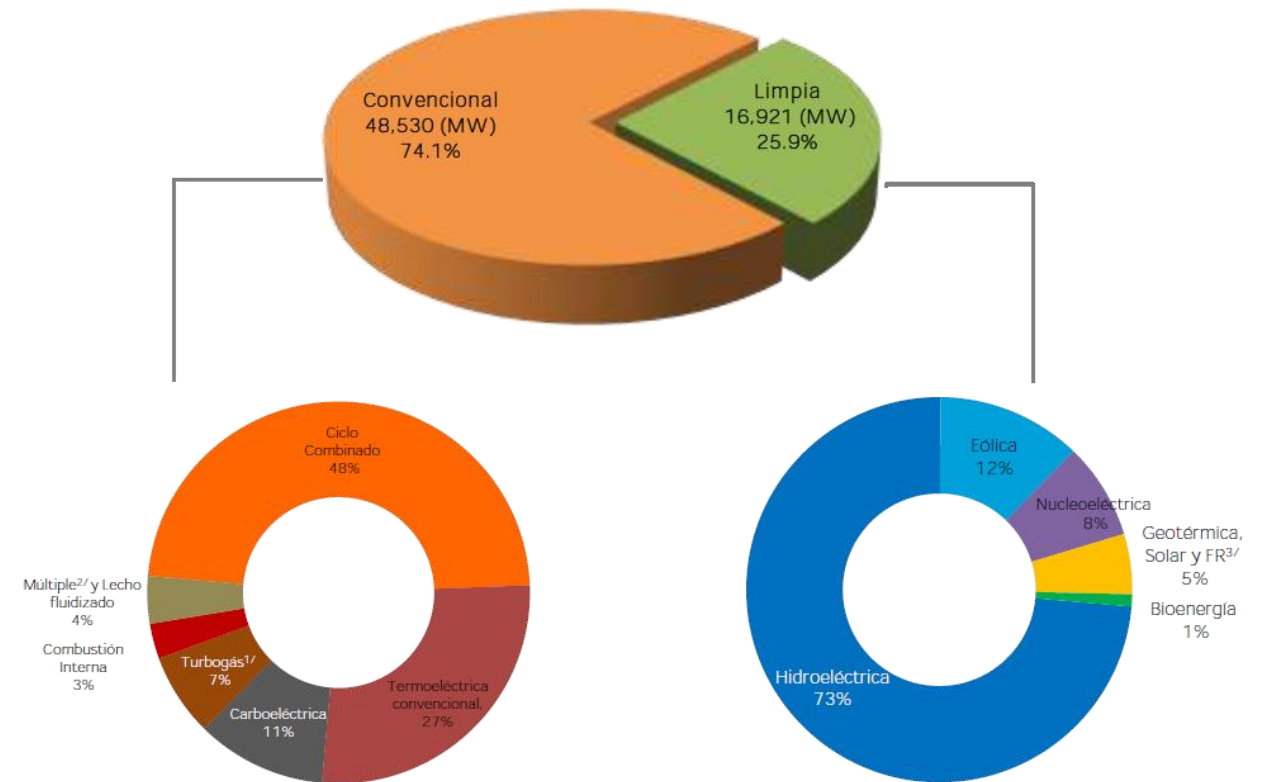
NEW MODEL OF ELECTRICITY MARKET



Capacity by type of technology (2014 graph)

Technology		Capacity 2013 (MW)	Capacity 2014 (MW)	Annual Growth Rate
Conventional		48,411	48,530	0.25
Combined cycle		22,830	23,309	2.10
Thermally based electricity		13,519	12,959	-4.14
Coal-fired power		5,378	5,378	0.00
Turbogás		3,418	3,419	0.03
Electrical combustion		1,146	1,312	14.49
Fluidized bed combustion		580	580	0.00
Multiple		1,540	1,573	2.14
Clean		15,720	16,921	7.64
Renewable	Hydroelectric	11,679	12,429	6.42
	Wind	1,611	2,036	26.38
	Geothermal	823	813	-1.22
	Solar	46	56	21.74
Others	Nuclear	1,400	1,400	0.00
	Bioenergy	154	180	16.88
	Regenerative breaks	7	7	0.00
TOTAL		64,131	65,451	2.06

(Megawatt, Porcentaje)



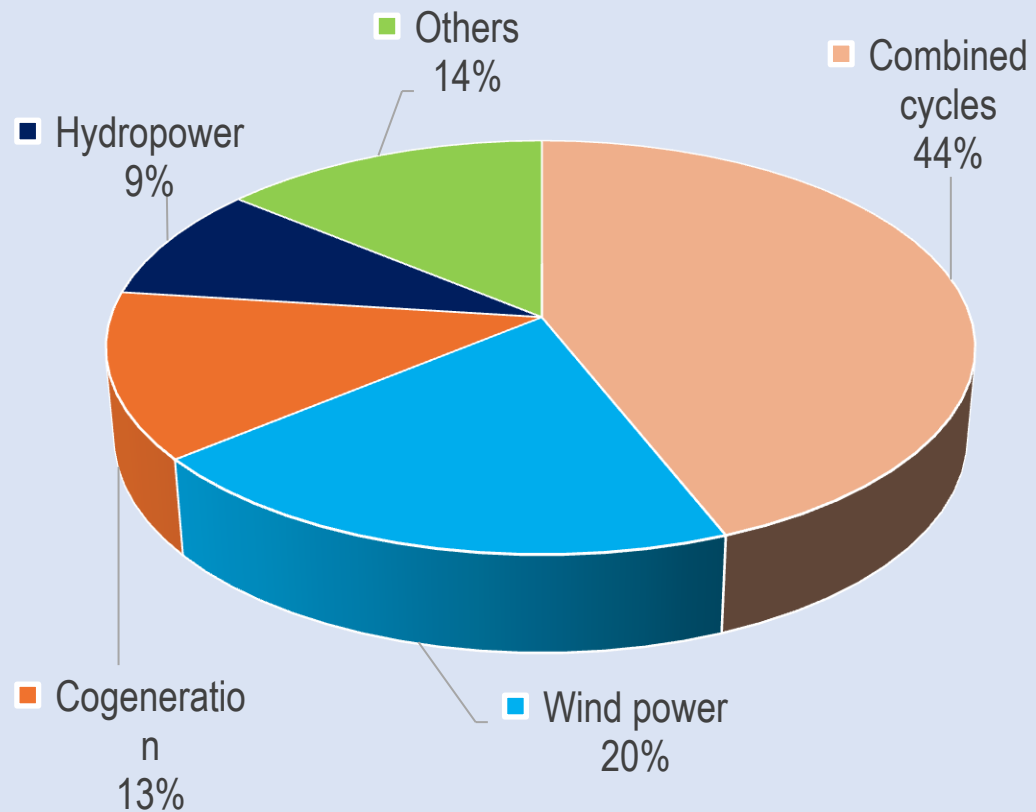
^{1/} Incluye plantas móviles. ^{2/} Combinación de Tecnologías ^{3/} Frenos Regenerativos.

Fuente: Elaborado por SENER con datos de CFE y CRE.

Investment opportunities

Generation.

60 GW of added capacity by 2029



Transmission.

- Expand 24,599 km national transmission lines in the coming 15 years.

Mexico's investment.

Around 1,600 million Mexican pesos in:

- Research
- Development
- Innovation

First Mexican innovation centres:

1. Wind
2. Solar
3. Geothermal energy

Conclusions

1. The Reform opens opportunities for investment
 - a) Despite market prices, these projects cannot be stopped. (Long-term investments [8-10 years])
2. There are already projects of investment and generation of electricity at the Istmo of Tehuantepec (financed by the [EBI] European Investment Bank)
3. Synergies and horizontal cooperation schemes can be used effectively for the transfer and creation of capacity building.
4. Development Bank's leverage of funds for infrastructure (Midstream).
5. Great potential in Upstream -Deep Waters- (more technology).



Thank
you.