



The Rise of North America: A Global Energy Powerhouse

Energy Reform in Mexico

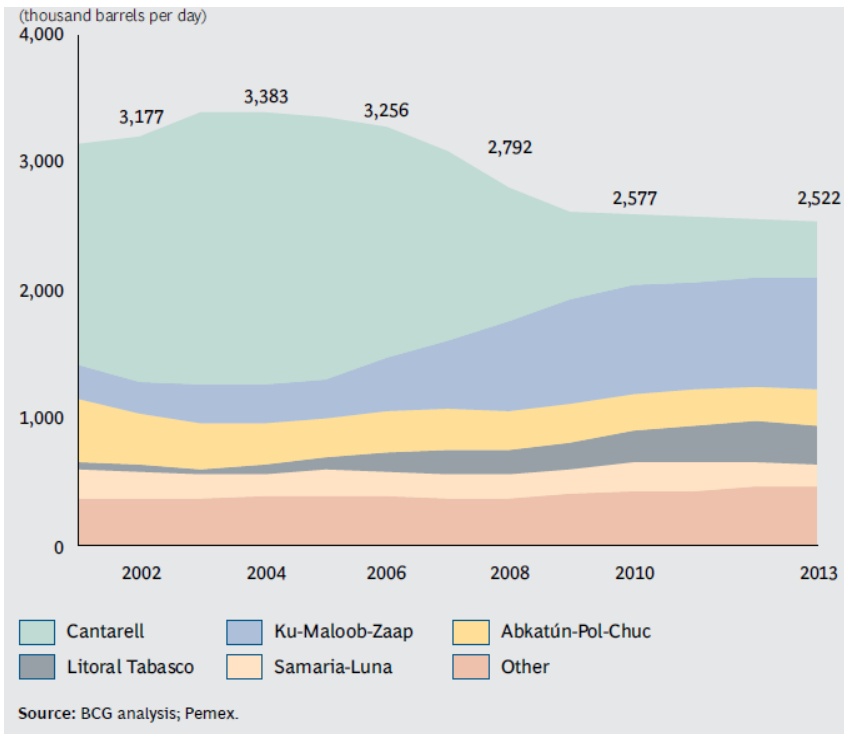
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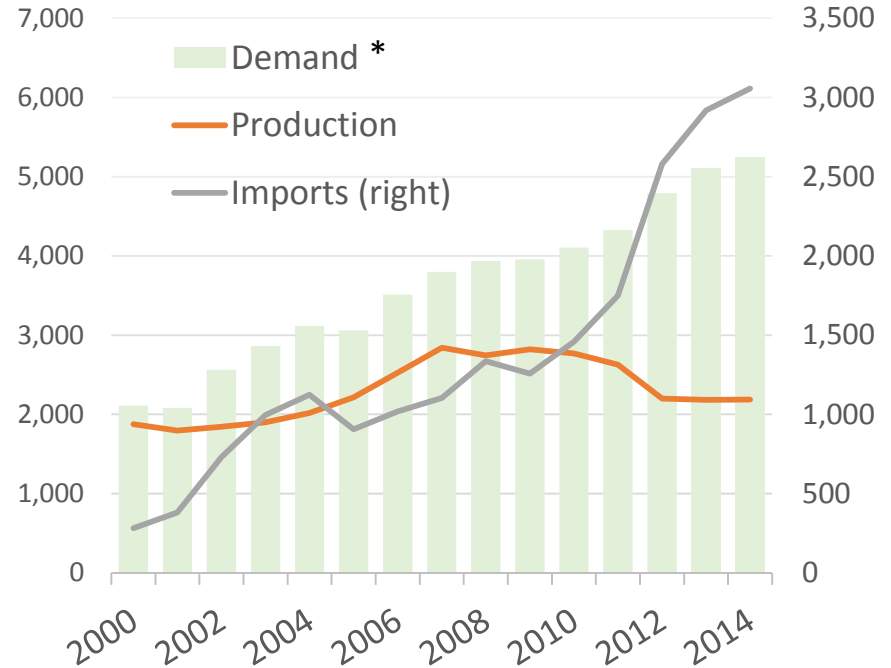
- ▶ At the end of 2013, Mexican Constitution was amended allowing private participation throughout the entire energy sector.
- ▶ The motivation and objectives of the reform are economic. It opens to the private sector investments estimated, for the next three years, in:
 - 34.3 billion USD for oil and gas (upstream and transport)
 - 31.6 billion USD for electricity.
- ▶ In July the first oil and gas production sharing contract will be awarded.
- ▶ In January 2016 wholesale electricity market will start.

- No more cheap and easy oil for Mexico.
- Natural gas self sufficiency lost after 2000.

Oil Production 2002 - 2013



Natural Gas Demand (million cubic feet per day) 2000- 2014

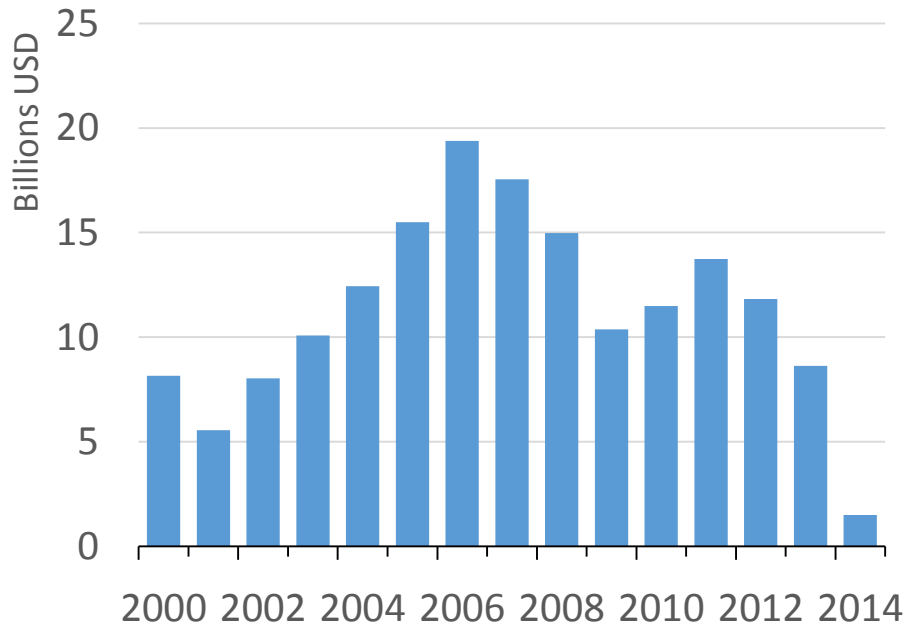


*Without oil industry consumption

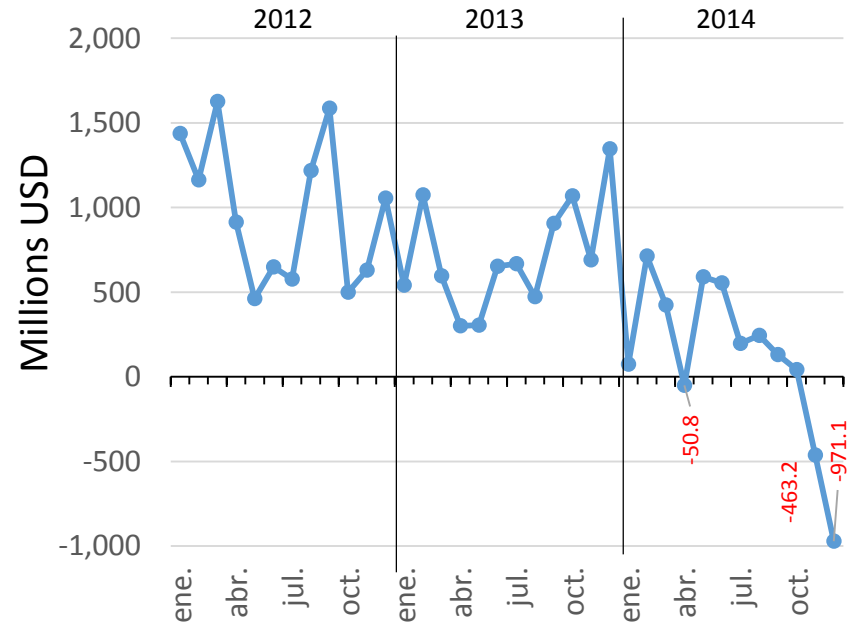
Source: SIE

THE TREND WAS TO BECOME A NET IMPORTER

**Petroleum products balance
2000 - 2014**



**Petroleum products monthly balance
2012 - 2014**



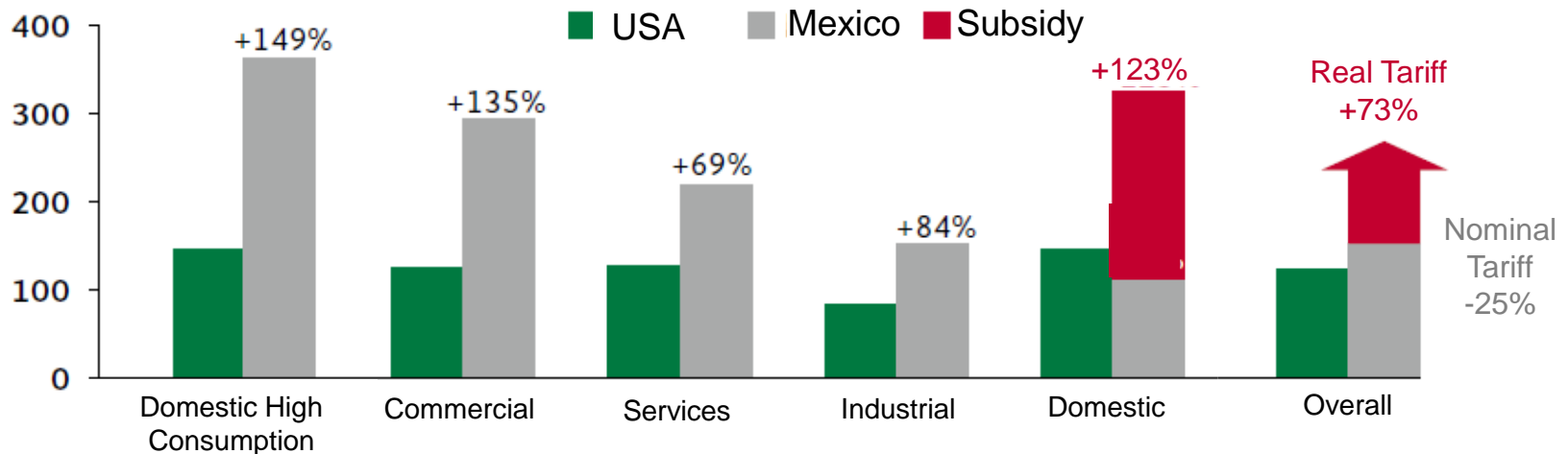
ELECTRICITY PRICES WERE HAMPERING COMPETITIVENESS AND PUBLIC FINANCES

Getting Electricity Ranking

Country	Ranking	Country	Ranking
Korea, Rep.	1°	United States	61°
Guatemala	18°	Argentina	104°
Brazil *	19°	Mexico	116°
Turkey	34°	China	124°
Chile	49°	Russian Federation	143°

Source: World Bank, <http://www.doingbusiness.org/rankings>

Average Tariff, 2013 1st Quarter (MX\$/KWh)



Source: Sener, SIE, DOE, EIA.

Rates converted to Mexican pesos with an exchange rate of 12.64 pesos/dollar, 1Q2013



Oil and Gas

- Materializing the maximum possible wealth from natural resources
- Price reduction
- Improving supply



Electricity

- Price reduction
- Improving supply

- ▶ Don not reinvent the wheel.



- ▶ Legal certainty for new and previous participants.

- ▶ Reduce costs through efficiency and competition.



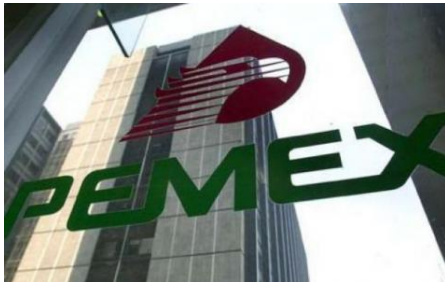
▶ Working along with markets rather than against them.



- Potential competition → Free entry
- Natural monopoly → Regulated tariffs

▶ Investments promotion and not stopping ongoing projects

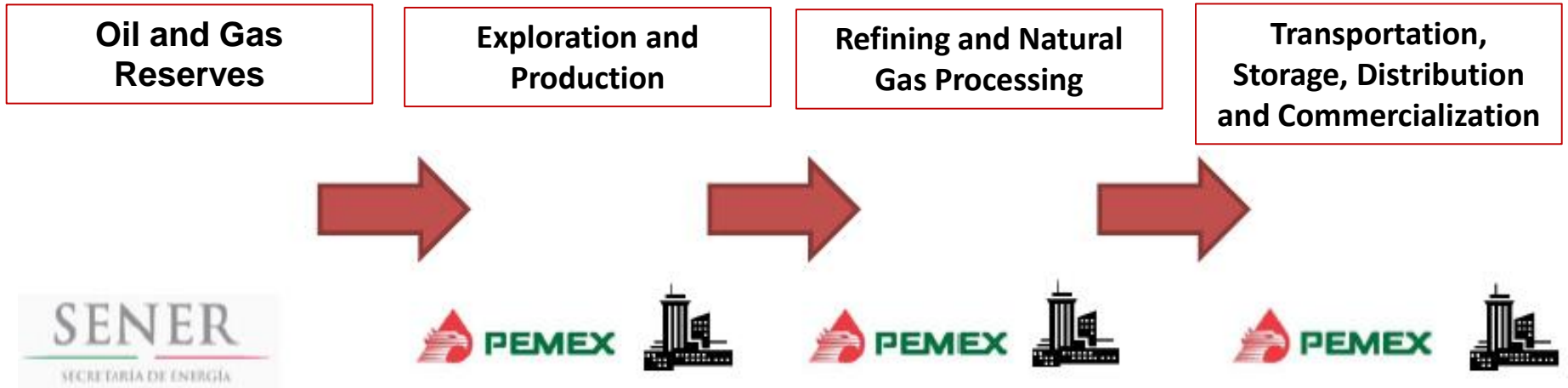
- ▶ **Private investment** across oil, gas and power sector.
- ▶ Previous to the reform Mexico and North Korea were the only countries in the world whose energy industries were state monopolies.



- ▶ PEMEX and CFE migrate from public entities to **State Productive Enterprises**, with
 - ✓ modern corporate government
 - ✓ mandate of value creation

It's a matter of incentives.

OIL AND GAS: NEW INSTITUTIONAL SET UP



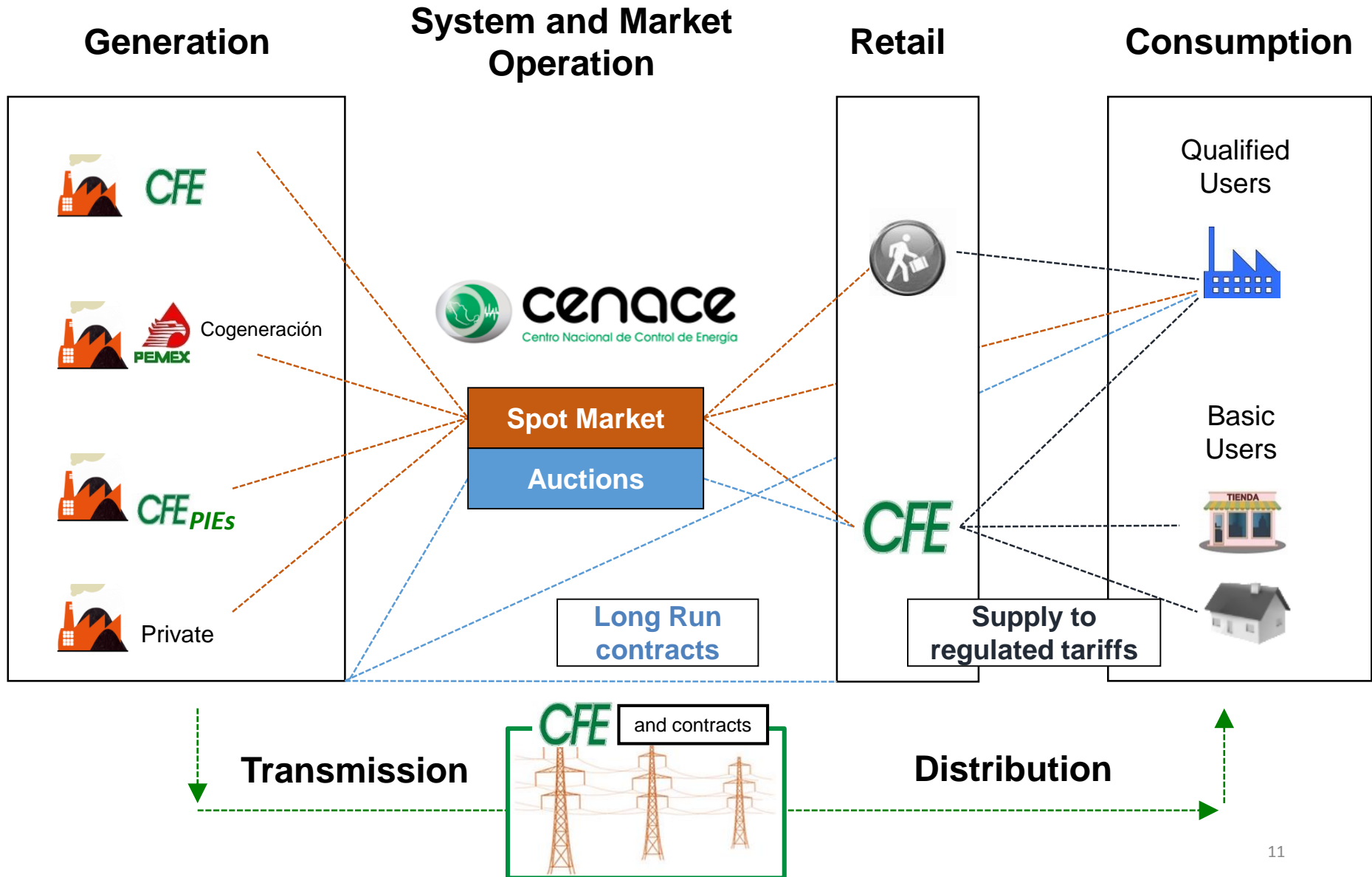
The Mexican State, through SENER, manages the country's oil and gas reserves (selection of bidding areas)

Entitlements granted by SENER to Pemex (Round Zero)

Service, profit/production sharing and license contracts, awarded by the National Hydrocarbons Commission (CNH) to Pemex and/or the private sector

Permits for refining and natural gas processing (including petrochemicals), granted by SENER to Pemex and/or the private sector

Permits for all transportation, storage, distribution and commercialization activities through pipelines, granted by the Energy Regulatory Commission (CRE) to Pemex and/or the private sector

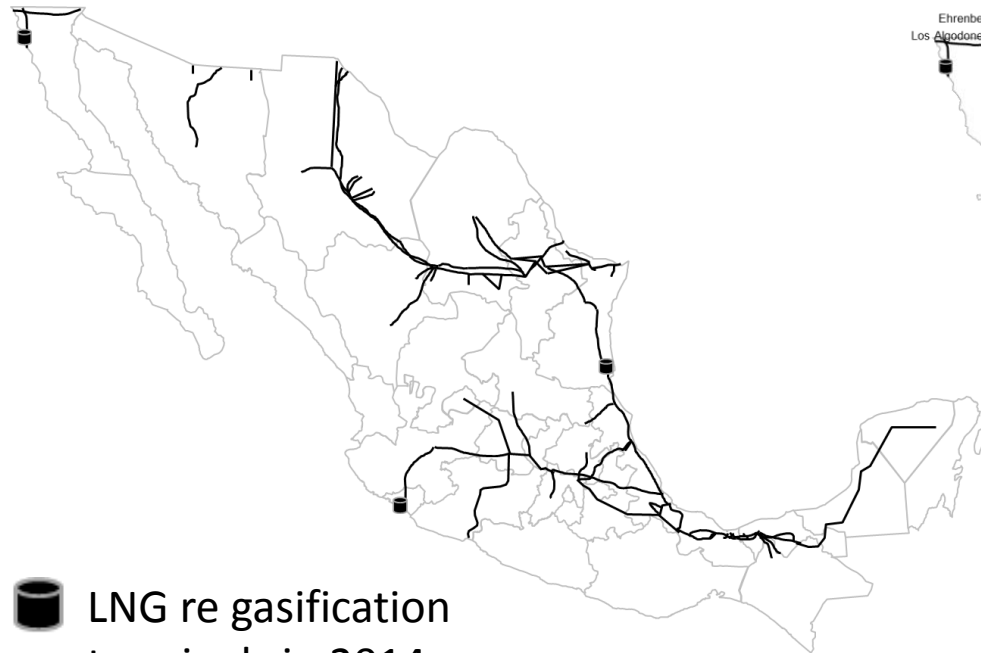




- Independent Operator for the system and the market
- Network open access
- Especializad bodies
- Clear rules
- Market surveillance
- Impartial planning
- Transparency









Now



2018



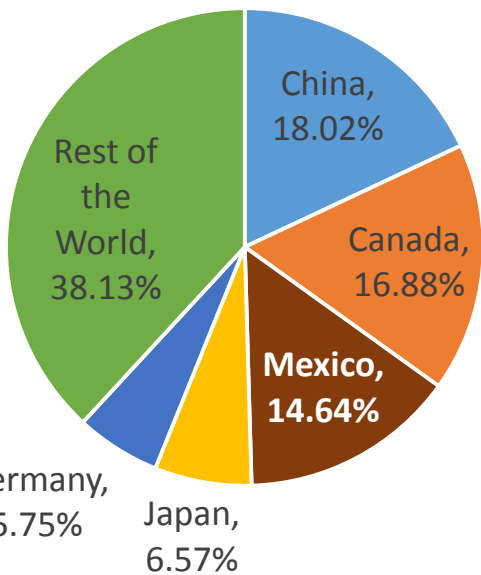
-  LNG re gasification terminals in 2014
-  Pipelines 2014  Pipelines 2018
-  proposal for natural gas liquefaction / compression plant
-  proposal for natural gas re gasification / decompression plant
-  Sea route for natural gas supply

New

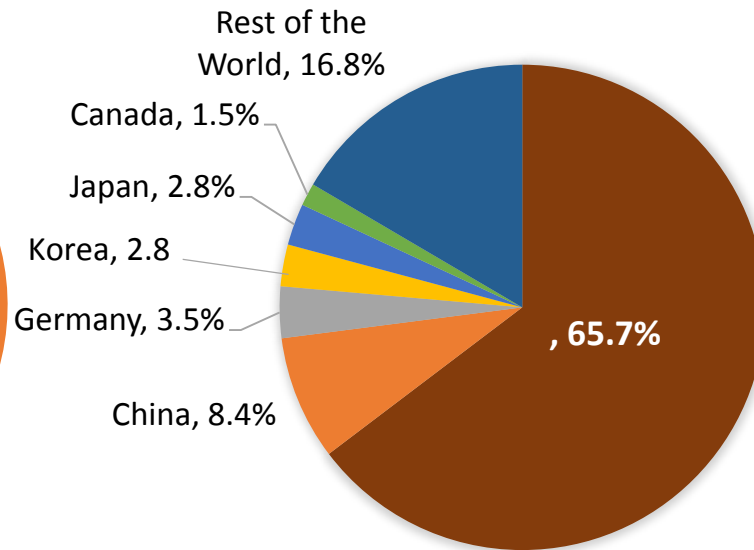
- 18 natural gas transportation projects
- 10,000 kilometers of new pipelines
- 13.1 billions USD investment

Improvements in Mexico's productivity may mean improvements all over the region because of their economic ties.

US imports 2013



Mexico's imports 2013



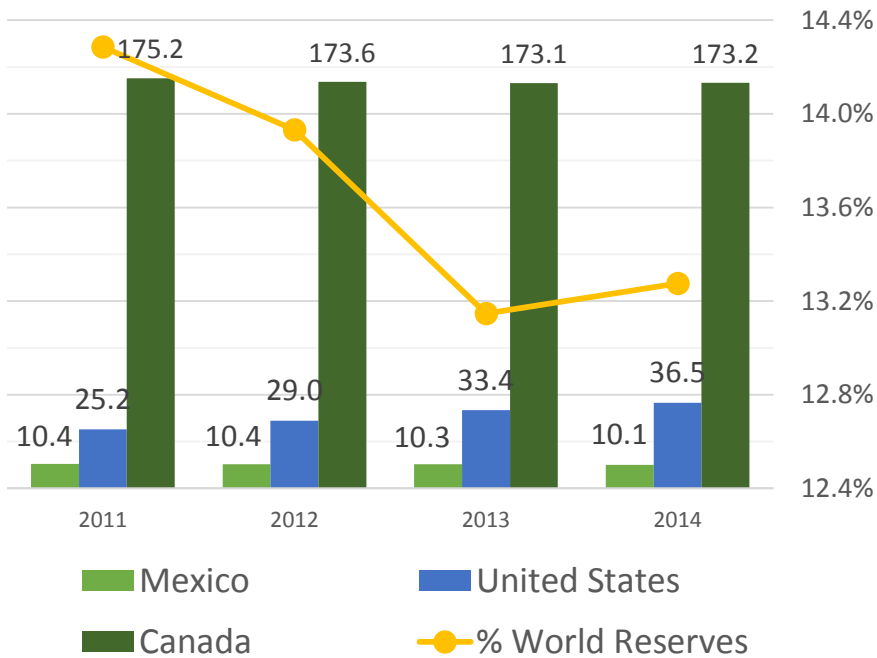
Value of US content in US imports from selected Economies

Mexico	40%
Canada	25%
Malaysia	8%
China	4%
European Union	2%
Japan	2%

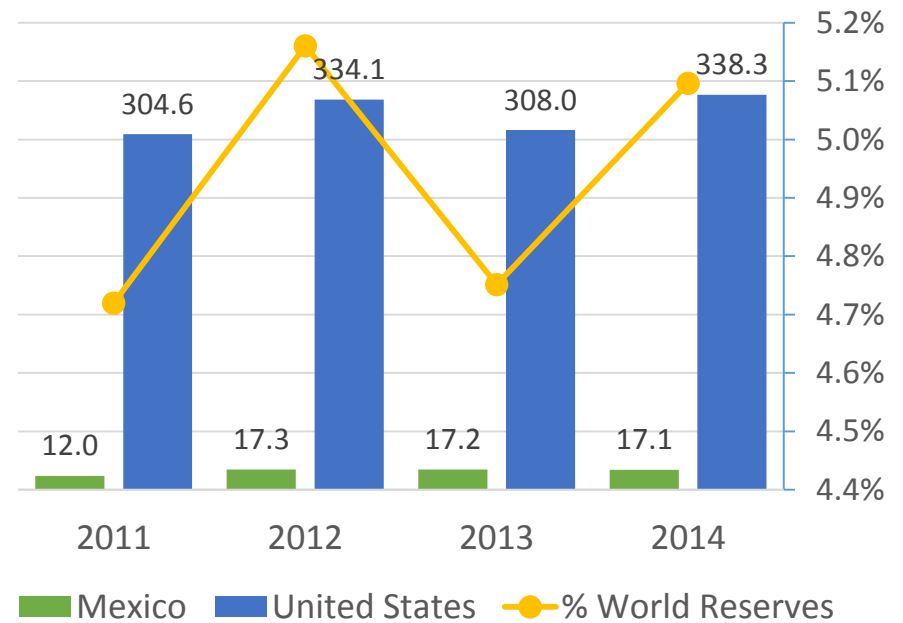
Source: *Working Together*, Christopher E. Wilson, U.S. 2011.

Source: United Nations Commodity Trade Statistics Database

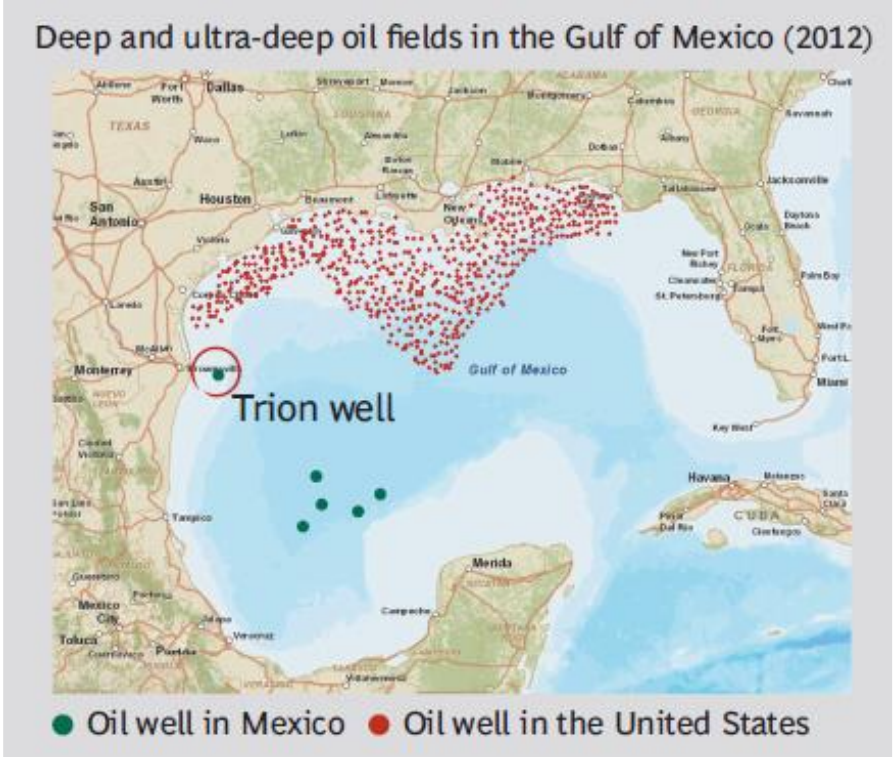
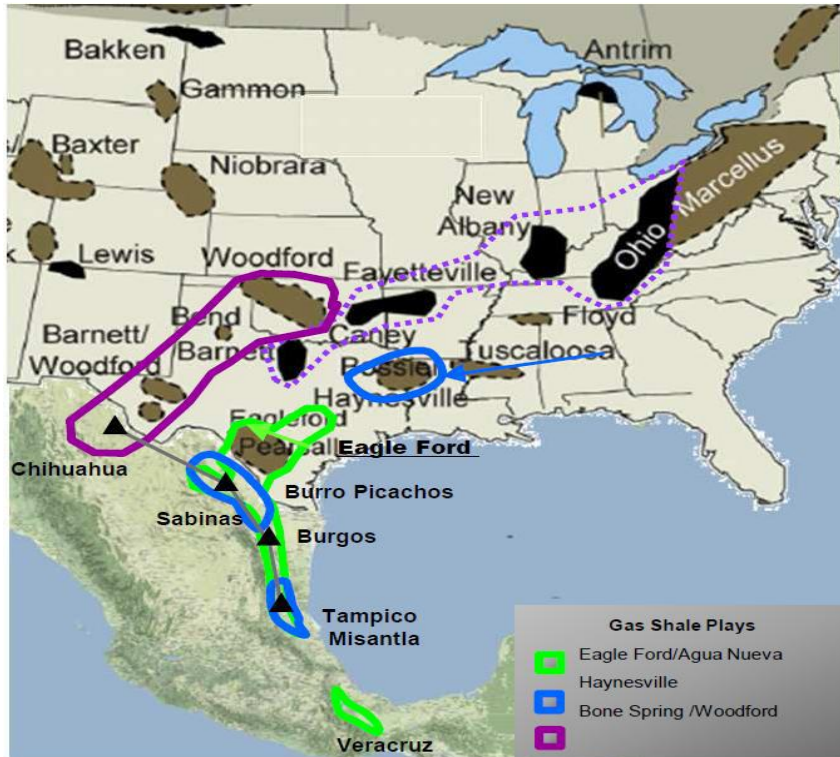
Crude Oil Proved Reserves (Billion Barrels)



Proved Reserves of Natural Gas (Trillion Cubic Feet)



- ▶ Analysis shows that Mexican geological formations are highly correlated with commercially productive U.S. equivalents. Adding proximity the most valuable experience for Mexico is that of U.S.



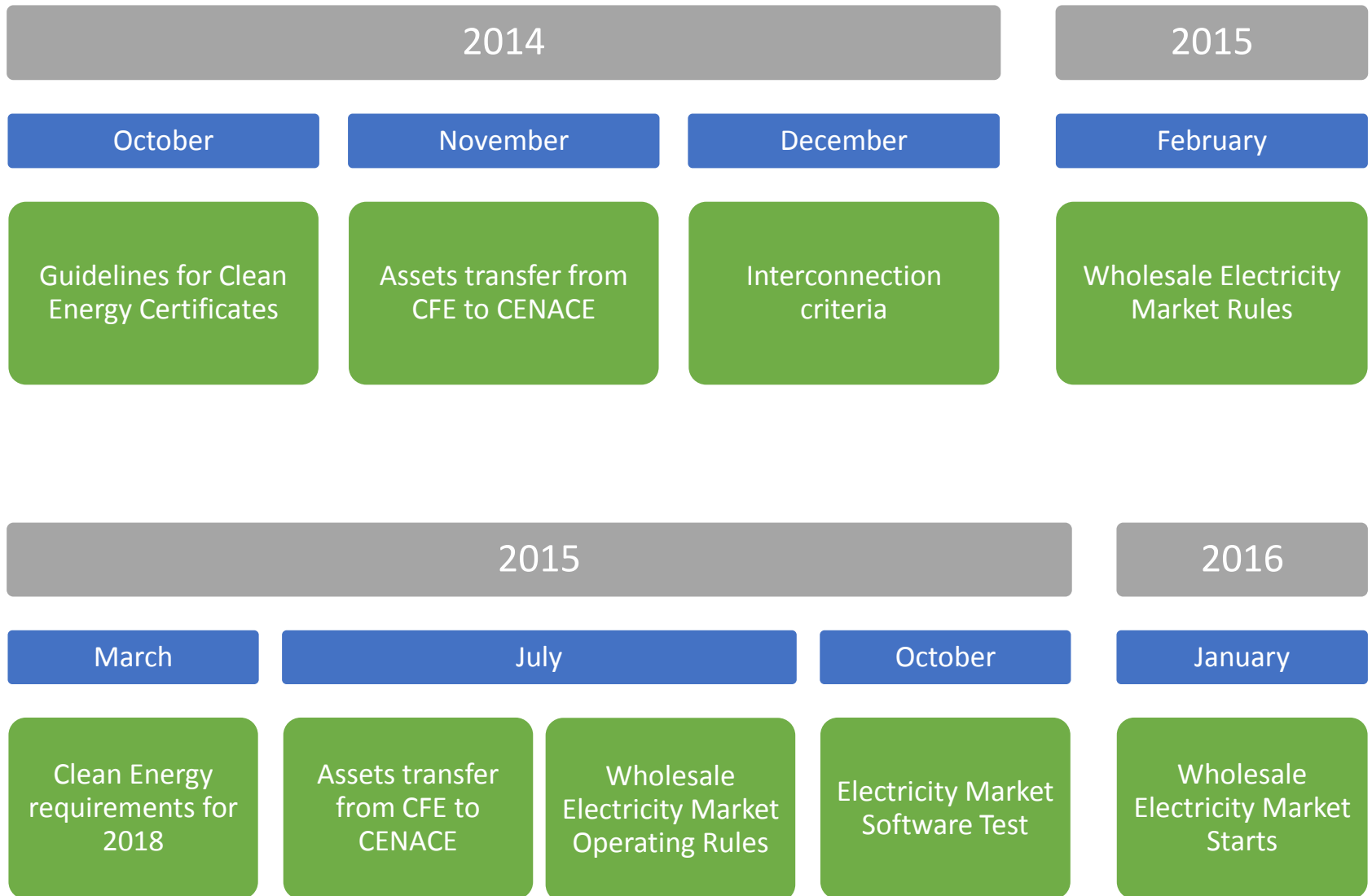
INVESTMENT IN OIL AND GAS

Oil and Gas	Round 1	First invitation to bid Next 5 years	16.7 billions USD
		Second invitation to bid Next 3 years	4.5 billions USD
	Pipelines		13.1 billions USD

- ▶ Clean Energy Certificates could be marketable between U.S. and Mexico.
- ▶ Private investors are able to participate in generation, transmission contracts, distribution contracts, and retail activities.
- ▶ There is no power import / export restrictions. It's possible to generate energy in U.S. and export it to Mexico.
- ▶ Last month the first power import authorization from a plant located in the U.S. and connected exclusively to Mexican grid was given.

			2014 - 2028
Electricity	Generation	27.1 billions USD Next 3 years	92.8 billions USD
	Transmission	4.5 billions USD Next 4 years	19.9 billions USD
	Distribution	10.4 billions USD	34.4 billions USD
	Total	42 billions USD	147.1 billions USD

REFORM: PROGRESS AND NEXT STEPS IN ELECTRICITY





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