

# **Energy Trade and Transportation: Mexican Perspective**

**23<sup>rd</sup> IAEE North American Conference  
“Integrating the Energy Markets in North America:  
Issues & Problems, Terms & Conditions”**

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Mexico City**

**Dionisio Pérez-Jácome  
Comisión Reguladora de Energía**

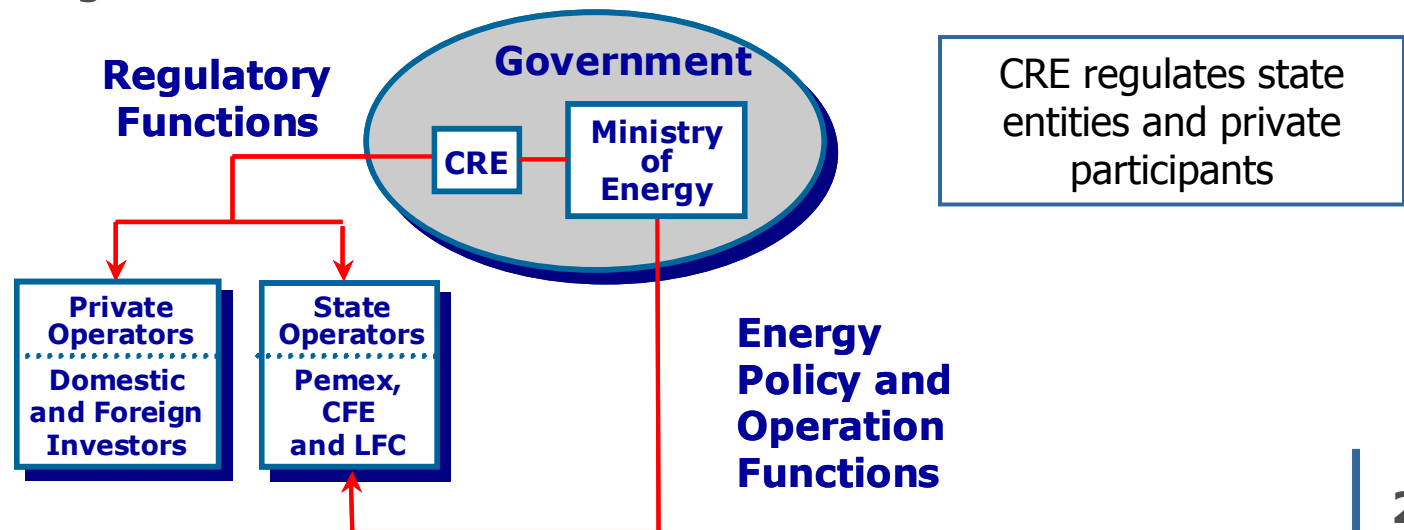
- I.** Energy Regulatory Framework in Mexico
- II.** Natural Gas Interconnections and Trade
- III.** Electricity Interconnections and Trade
- IV.** Final Remarks

## **I. Energy Regulatory Framework in Mexico**

# Institutional Framework

## In 1995, Congress enacted the CRE Act, to:

- ➔ Establish CRE as an independent authority responsible for natural gas and electricity regulation
- ➔ Provide technical and operational autonomy to render the regulatory framework operative
- ➔ Enhance its jurisdiction and legal standing
- ➔ Concentrate regulatory elements previously scattered among several agencies



## CRE's Scope

**The objective of CRE is to promote the efficient development of the following regulated activities:**

### **Natural Gas**

- ➔ First Hand Sales Price Methodology
- ➔ Transportation, Distribution and Storage Permits
- ➔ Approval of Tariffs and Terms & Conditions

### **Electricity**

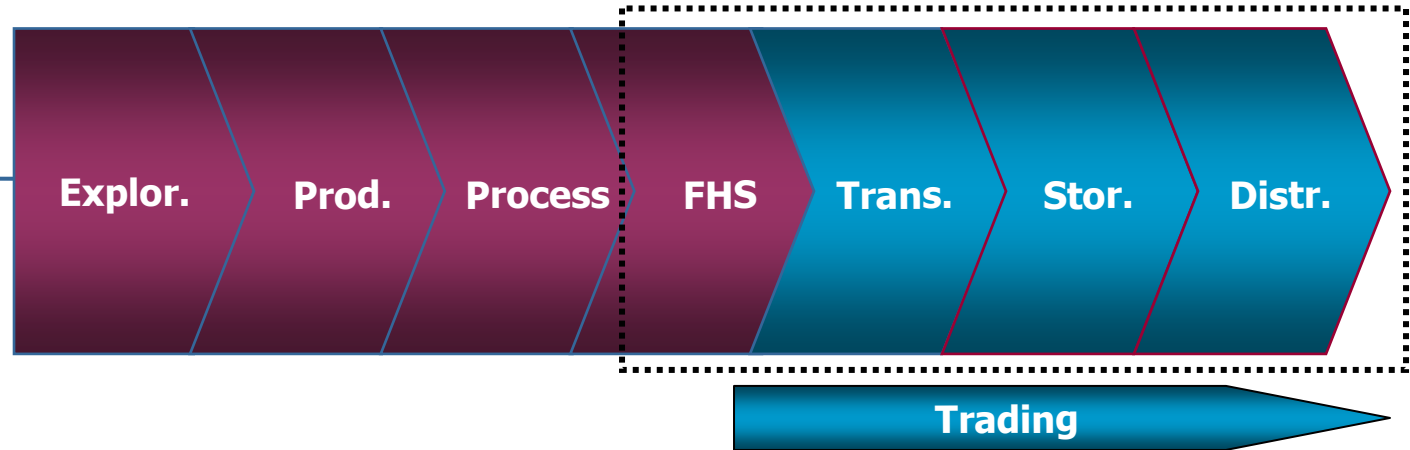
- ➔ Generation and Import Permits
- ➔ Power acquisition by CFE for public service
- ➔ Transmission services between suppliers and permit holders

# Main elements of Energy Regulation in Mexico

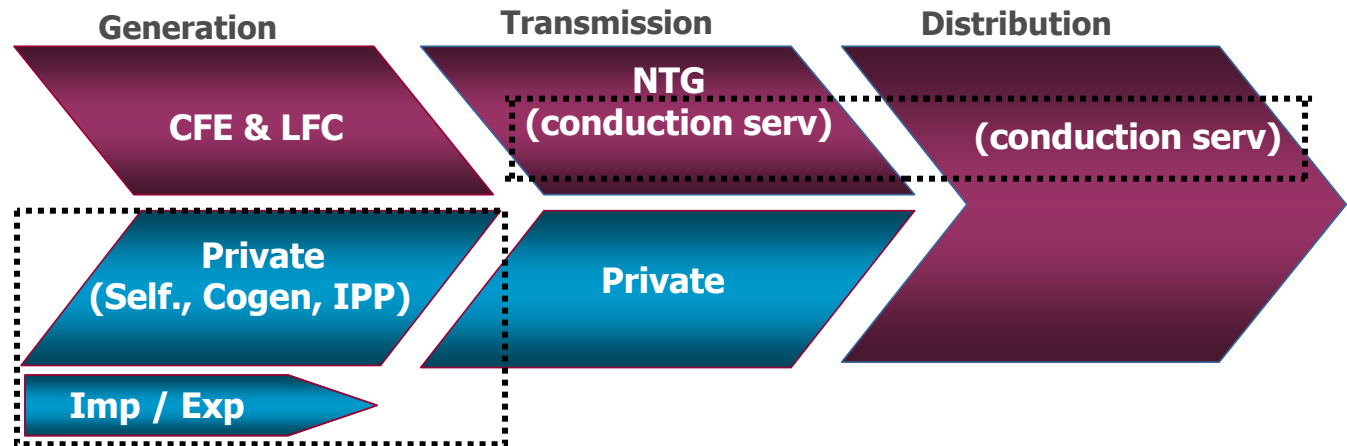
- Natural gas and Electricity Regulation is a Federal Jurisdiction**
- Environmental Regulation is SEMARNAT's responsibility**
- Economic Regulation seeks to simulate market conditions in non-competitive activities**
- Transparency, Fairness, Agility and Autonomy are the guiding principles of CRE, and are reflected in clarity, stability and predictability of the regulatory framework**

# Regulated Activities


## Natural Gas



## Electricity



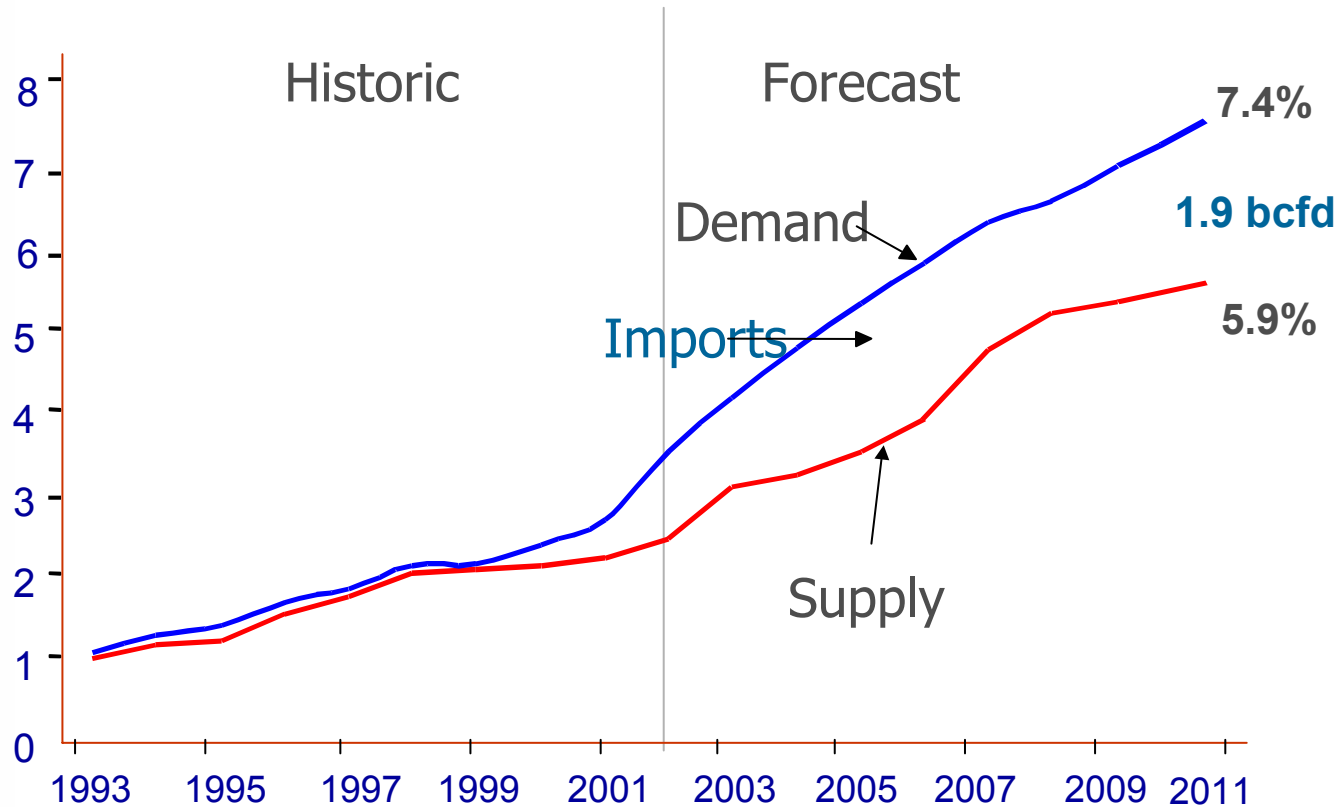
 State exclusive

 Open to private parties

 CRE's competence

# Natural Gas Challenges

**It is expected that in the next 10 years, demand for Natural Gas will outpace domestic supply**



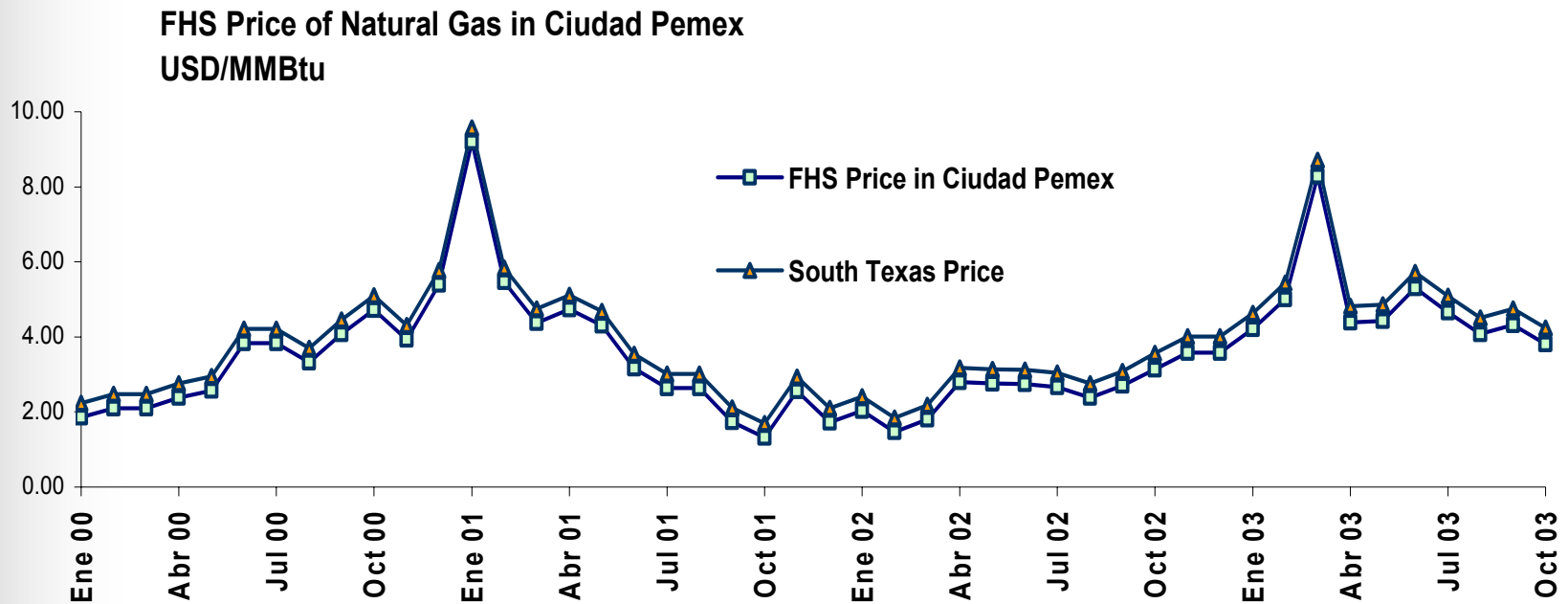
\*Source: Natural Gas Prospective, Ministry of Energy, Mexico 2002

**To meet growing demand, Mexico needs to increase domestic production and develop sufficient import infrastructure**



# Natural gas Challenges...

**On the other hand, Natural Gas prices in North America have registered a significant increase in recent years**

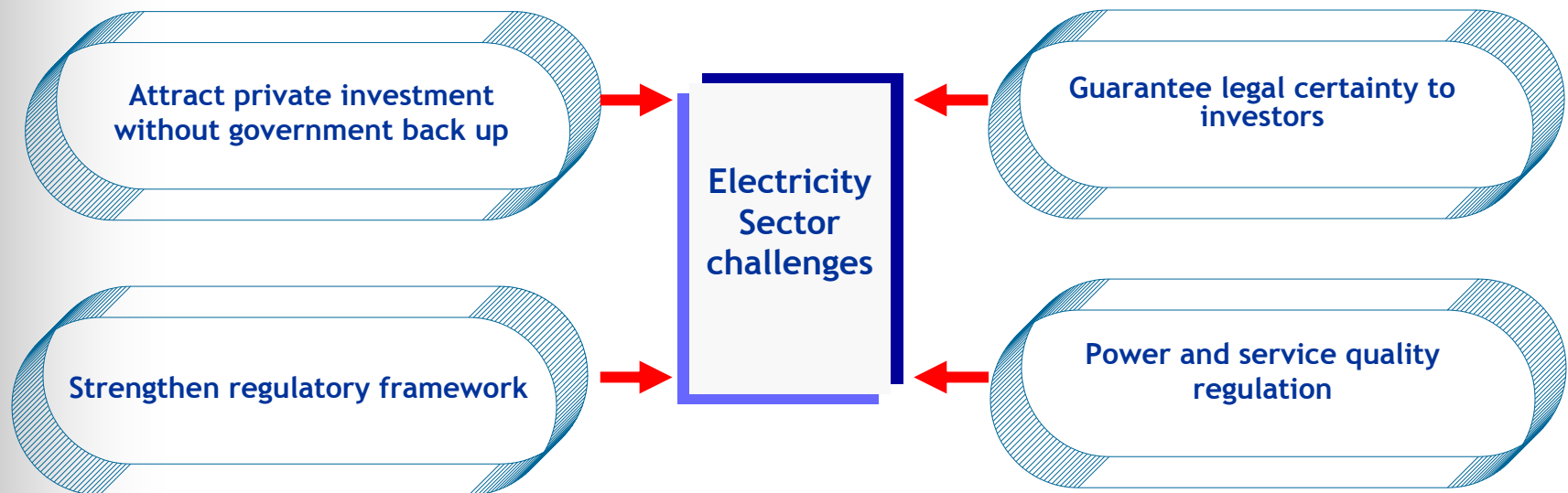


**Natural Gas supply needs to increase to stabilize prices**

# Electricity Challenges

## Electricity demand is expected to grow at an annual rate of 5.6% over the next ten years

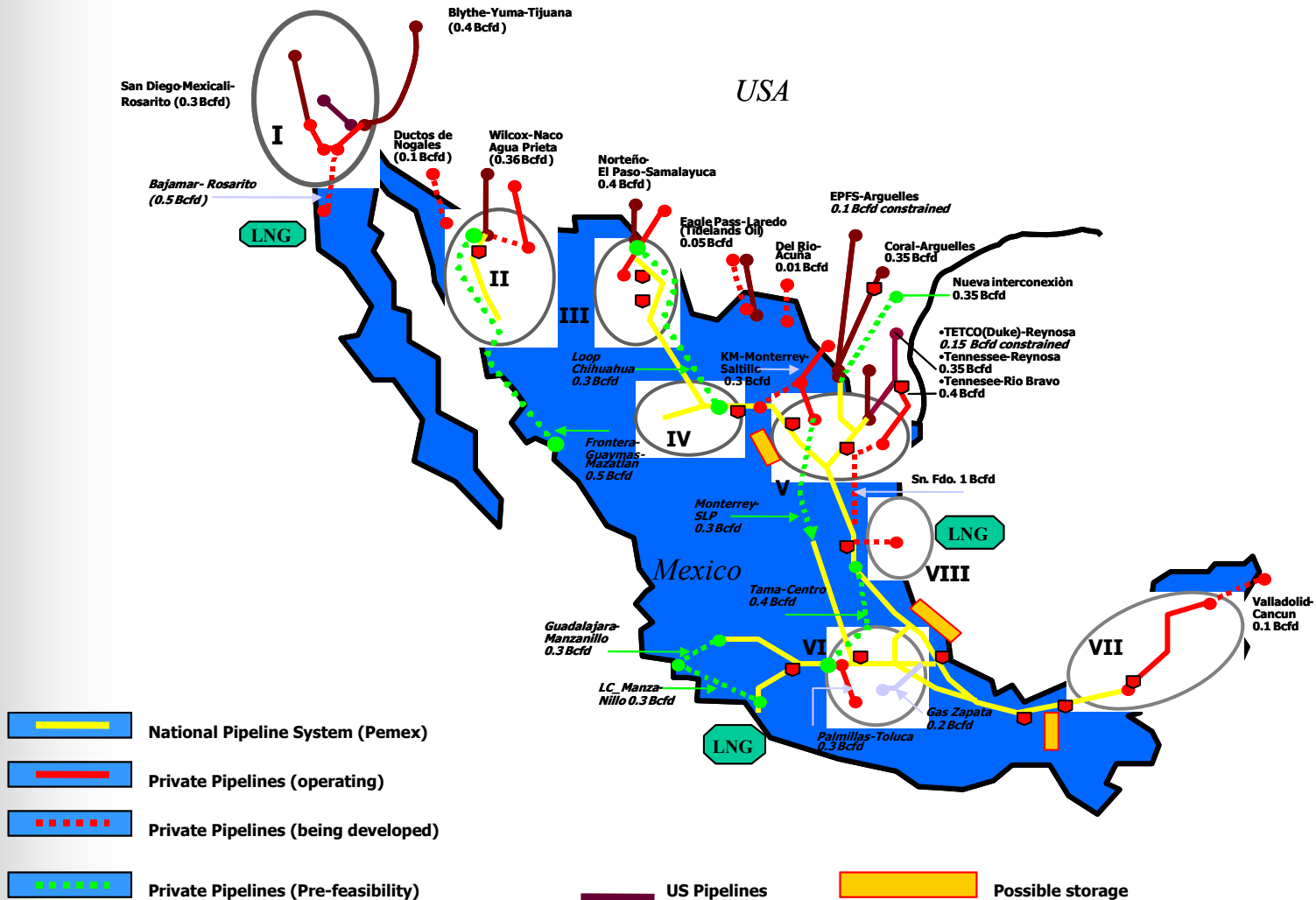
- Between 2002 and 2011, 29,000 MW of new installed capacity will be required to satisfy the growing demand (over 56 billion US dollars)



## **II: Natural Gas Interconnections and Trade**

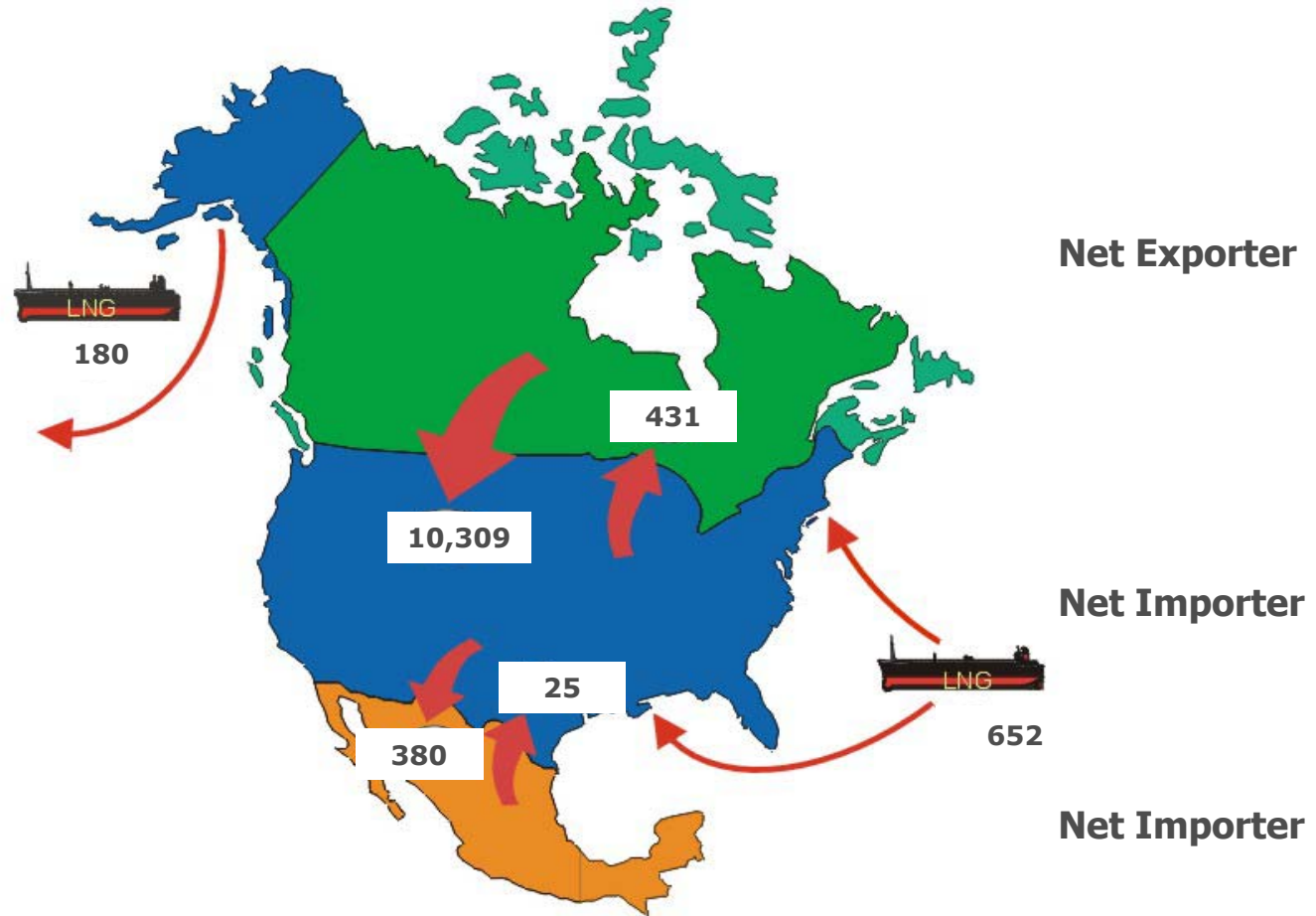
# Natural Gas Interconnection Infrastructure

→ Natural gas infrastructure capacity between Mexico and US amounts to more than 2 bcfd



\*Source: Natural Gas Prospective, Ministry of Energy, Mexico 2002-2011

# Natural Gas Trade in North America



Natural gas imports and exports  
(2011, mcf/d)

\*Source: Natural Gas Prospective, Ministry of Energy, Mexico 2002 - 2011

## **Over the last 6 months, the CRE granted 4 permits to build and operate LNG receiving facilities in Mexico**

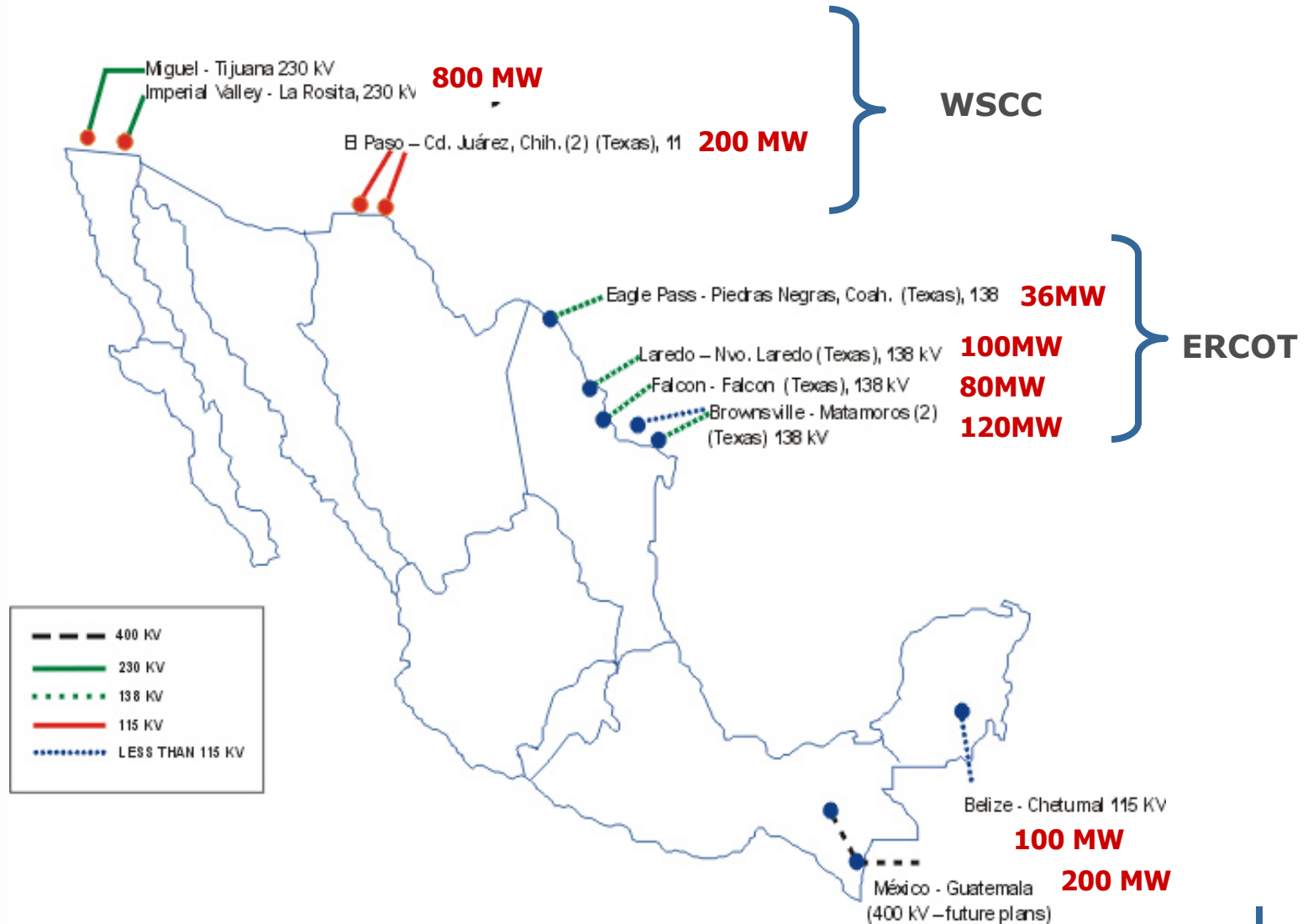
- ➔ Three are located in Baja California and one in the Gulf of Mexico
- ➔ Total regasification capacity amounts to 4 bcfd
- ➔ Projects could begin operations in 2006 and 2007
- ➔ Open access requirement on non-contracted capacity
- ➔ Storage and regasification tariffs based on cost of providing service
- ➔ Projects will diversify sources of gas and help stabilize prices
- ➔ Full containment tanks

- Required Income incorporates the same components (O&M costs, taxes and depreciation)**
- Transmission tariffs are determined by a capacity charge (allows for fixed costs recovery) and a variable charge**
- Different but compatible methodology used in Mexico and US:**
  - Mexico: per unit average income (combines cost of service regulation and incentive regulation)**
  - US: cost of service regulation**

## **III. Electricity Interconnections and Trade**

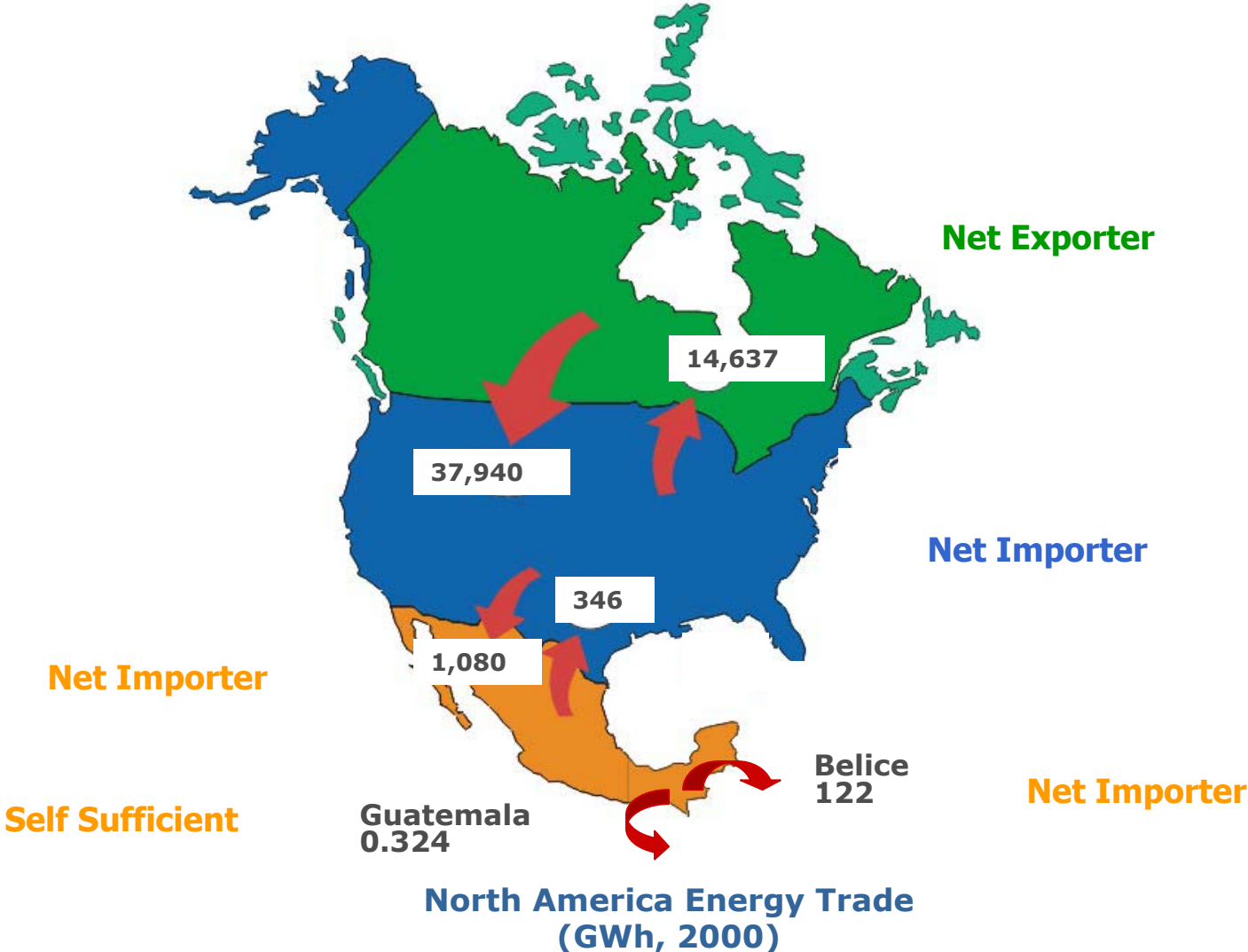


# Electricity Interconnection Infrastructure



Source: Electricity Prospective, Secretariat of Energy, 2002-2011

# Electricity Trade in North America



Source: EIA, Annual Energy Outlook 2002, DOE/EIA-0383 (2002) (Washington, DC, December 2001). Secretariat of Energy of Mexico; Electricity Prospective 2002-2011

# Elements of Electricity Regulation in Mexico and US



<b>Characteristics</b>	<b>Mexico</b>	<b>U.S.A.</b>
<b>Permitting</b>	<ul style="list-style-type: none"><li>• CFE requires authorization for import (CRE) and export activities (Ministry of Energy)</li><li>• Private parties require import/export permit granted by CRE</li></ul>	<ul style="list-style-type: none"><li>• Any party is allowed to import electricity. For exports, a DOE authorization is required.</li><li>• These activities might be developed through bilateral contracts or the spot market</li></ul>
<b>Tariffs</b>	<ul style="list-style-type: none"><li>• CFE imports electricity for public service. Ministry of Finance sets public service electricity tariffs (which include CFE transmission costs)</li><li>• Private parties that import/export energy using CFE's transmission infrastructure, must pay wheeling services (based on MW-Mile methodology)</li></ul>	<ul style="list-style-type: none"><li>• FERC sets inter-state transmission tariffs</li><li>• State Public Utility Commissions set intra-state transmission tariffs</li><li>• Generally these tariffs are integrated by a capacity charge and an usage charge</li></ul>

**In March 2001, the North American Energy Working Group (NAEWG) was integrated among the Governments of Canada, US and Mexico**

**NAEWG's objectives are:**

- ➔ Promote communication and cooperation among the three governments in energy matters
- ➔ Increase energy commerce and interconnections with full respect to national sovereignty and each country's internal policies

**To date, the NAEWG has published the following working documents:**

- ➔ North American Energy Picture
- ➔ Regulation of International Electricity Trade (exports/imports as well as interconnection transmission lines)
- ➔ Energy Efficiency

**Additionally, the CRE has been actively collaborating with FERC and NEB in order to evaluate the potential benefits from stronger cooperation and regulatory standardization**

## **IV. Final Remarks**

## Final Remarks

- North America faces an accelerated growth in natural gas and electricity demand
- Integration in the natural gas industry is a reality. In electricity, the interconnections between US and Mexico are scarce
- To meet growing regional demand, supply must increase and more cross-border infrastructure needs to be developed
- Clear, reliable and compatible regulatory frameworks are required in order to attract investment and promote energy trade
- Regulatory entities in Mexico, US and Canada are coordinated to share & learn from relevant experiences

***[www.cre.gob.mx](http://www.cre.gob.mx)***