Energy Trade and Transportation: Mexican Perspective

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Index

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
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 regulates state entities and private participants.
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**

- **Explor.**
- **Prod.**
- **Process**
- **FHS**
- **Trans.**
- **Stor.**
- **Distr.**

**Electricity**

- **Generation**
  - CFE & LFC
  - Private (Self., Cogen, IPP)
- **Transmission**
  - Imp / Exp
  - NTG (conduction serv)
  - Private
  - (conduction serv)
- **Distribution**

- **Trading**

**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.

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

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

Electricity Sector challenges

- Attract private investment without government back up
- Strengthen regulatory framework
- Guarantee legal certainty to investors
- Power and service quality regulation
II: Natural Gas Interconnections and Trade
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 imports and exports (2001, mcfd)

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

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
Natural Gas Regulatory Compatibility in Mexico and US

1. **Required Income** incorporates the same components (O&M costs, taxes and depreciation)

2. **Transmission tariffs** are determined by a capacity charge (allows for fixed costs recovery) and a variable charge

3. **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

North America Energy Trade (GWh, 2000)

- **Net Importer**: Belice (122), Guatemala (0.324), United States (346), Mexico (1,080), Canada (37,940)
- **Net Exporter**: United States (14,637)
- **Self Sufficient**: Mexico

## Elements of Electricity Regulation in Mexico and US

### Characteristics

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<th>Permitting</th>
<th>Mexico</th>
<th>U.S.A.</th>
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| **Permitting** | CFE requires authorization for import (CRE) and export activities (Ministry of Energy)  
Private parties require import/export permit granted by CRE | Any party is allowed to import electricity. For exports, a DOE authorization is required.  
These activities might be developed through bilateral contracts or the spot market |

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<th>Tariffs</th>
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| **Tariffs** | CFE imports electricity for public service. Ministry of Finance sets public service electricity tariffs (which include CFE transmission costs)  
Private parties that import/export energy using CFE’s transmission infrastructure, must pay wheeling services (based on MW-Mile methodology) | FERC sets inter-state transmission tariffs  
State Public Utility Commissions set intra-state transmission tariffs  
Generally these tariffs are integrated by a capacity charge and an usage charge |
Regulatory Coordination in North America

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