Transforming Mexico’s Power Sector

Agenda

All times are San Diego local times (Pacific Standard Time)

11:00 am Overview of logistics and agenda by Alexis Arthur, Energy Policy Associate, Institute of the Americas

11:05 am Opening remarks by Jeremy Martin, Energy Program Director, Institute of the Americas

11:10 am Presentation by Nick Puga, Partner at Bates White

11:30 am Question and answer session

12:00 pm Session close
Transforming Mexico’s Power Sector: Challenges to the Proposed Reform
Agenda

- Brief review of objectives of proposed restructuring
- Discussion of whether and how these objectives can be achieved
- Realistic timeline of restructuring and its effects
- Q&A
Current Structure of Mexican Electric Sector

- **Generation**: CFE
- **Transmission**: CFE
- **Distribution**: CFE
- **Users**: Pemex, Private sector (IPPs, SSs, Cogens)
Proposed New Sector Structure

- Generation: CFE and Private
- Dispatch: Centro Nacional de Control de Energia
- Transmission: Interconnected Transmission System Ownership
- Distribution: CFE
- Users: Qualified users, Non-interconnected transmission grids, Qualified users

National transmission system
Objectives of the Reform

• Lower electricity prices
• Strengthen CFE
• Introduce full competition to generation
• Open the power sector to further private investment
• Strengthen SENER and CRE legal toolkits
• Promote investment in renewable electricity
• Reduce technical and non-technical T&D losses
Can these objectives be achieved?

Lower electricity prices

• How much can they go down?
  ▪ Residential 24% < 2013 US Avg
    ▪ Most 30-42% of cost – only DAC 49% above cost
  ▪ Small commercial 11-17% above cost
  ▪ Medium voltage 14% above cost
  ▪ High voltage essentially 2-6% above cost

• Reducing distribution technical losses (15.3%) and theft (5.8%) would help some
  ▪ But technical loss reduction will require new investment
  ▪ Lower prices and loss reduction are two other objectives of reform
Can these objectives be achieved?

**Strengthening CFE**
- Change to Empresa Publica Productiva
- Free CFE to compete for (and perhaps recover) largest consumers
- CFE operates under special regime of the Ley de Adquisiciones, Arrendamientos, Servicios y Obras Publicas
- Allow T&D BOTs

- “Empresa Publica Productiva” will have to be written into Law
  - Will this be true - Corporatization?
  - Will Economic Value Creation be measured as profit to State?
  - What happens to current subsidies to promote renewable generation?
    - Low all-inclusive postage stamp transmission rates
    - Capacity credit
    - Energy banking/leveling

- Actions to achieve this objective would advance two other objectives:
  - Open the sector to further private investment and
  - Reducing technical and non-technical losses
Can these objectives be achieved?

Introduction of full competition in generation

- Wholesale Electric Market - energy (and capacity?)
- Bilateral contracts will exist but, will they be novated and renegotiated
- All generators will offer to sell through market (day-ahead)
- Market settlement for differences between committed and dispatched volumes

- May require establishment of multiple Gencos out of CFE generators
  - Otherwise CFE could exercise market power with 64% of generation – some of it in “load pockets”
  - Renewable generation would be favored by security constrained economic dispatch – could afford losing some subsidies

- Will require very significant grid investments to accommodate inter-regional competition
  - CFE grid was designed to minimize investment and to compensate for insufficient pipeline system

- Actions to achieve this objective would advance two other objectives:
  - Open the sector to further private investment
  - Promote investment in renewable electricity
Can these objectives be achieved?

Open the sector to further private investment

- Generation – while old generation plant retirements would open opportunities, compensation for capacity above variable cost will be key
- Promote investment in renewable electricity – potential loss of subsidies would have to be overcome by market prices
- Reduction in technical and non-technical losses through BOT type and other contracts with CFE will bring investments in grid expansion and automation

- Clarity in secondary legislation and IRRs and regulatory certainty will be essential
  - Current investors will have to be compensated or will not return
Restructuring efforts by the Nieto administration began soon after his inauguration and accelerated as the extent of CFE’s economic losses mounted.

The drafting of the secondary laws is almost complete starting with legislation introduced by congress during the 1999 failed restructuring.

While in principle two years provide sufficient time to design, procure and launch the hardware and software systems used in market operations, several more years will likely be needed to fine tune its operation and to realize many of its benefits.

Timeline of Proposed Reform – Ambitious yet doable

- Dec 11, 2013: Mexican Congress approves Constitutional Reform
- Dec 16, 2013: 25 of 31 States had endorsed the Reform
- Dec 20, 2013: President signed Constitutional Reform
- Apr 2014: The congress will pass a law to regulate the nationwide exploration and development of geothermal power generation
- Apr 2014: Congress to pass new and/or modified versions of: LSPEE, Ley de la CRE, Law creating de CNCE y ME – others?
- Apr 2014: The Congress will draft and pass a law to regulate the operation of the state owned electric power company
- Early 2015: SENER will develop a strategy to transition to cleaner generation technology and fuels.
- Mid 2015: Establishment of the Centro Nacional de Control de Energia
- Mid 2016: End of traditional T&D system operation by CFE
- Mid 2017: Wholesale Market begins operations?
Nicolás Puga, MSc  
Partner

- Over 25 years experience as a senior energy advisor to generation and transmission companies and electric utilities in the analysis of electric power and natural gas markets, generation and transmission project development, utility resource supply planning, and renewable energy resource development.

  • Assists renewable energy project developers with interconnection feasibility studies, transmission access applications, and permitting processes in various U.S. and overseas markets.

  • Conducts due diligence, market assessments, and tariff studies for independent power producers; generation and transmission project developers; and lenders for conventional and renewable energy projects.

  • Has provided expert testimony in several state transmission line certification proceedings in California, New York, Texas, Virginia, and West Virginia, and testified on U.S.-México cross-border energy trade and infrastructure in Federal, California, and Texas regulatory proceedings.

  • Has testified on the application of smart meters in electric distribution loss reduction and energy efficiency in customer facilities.
Upcoming IOA Energy Programs

**February 12:** Webinar: Venezuela’s Energy Outlook at the Maduro Administration’s One Year Mark; 11am San Diego (2pm New York/GMT - 8 hours) [http://bit.ly/1d1DObx](http://bit.ly/1d1DObx)

**February 13:** Forum on the Outlook for Natural Gas in the Caribbean - Santo Domingo, Dominican Republic [http://bit.ly/1cB0Czf](http://bit.ly/1cB0Czf)

**March 13:** Webinar: Canada’s Oil Sands: Prospects and Challenges for 2014; 10am San Diego (1pm New York/GMT – 8 hours)

**March 18:** Southern Cone Energy Roundtable – Montevideo, Uruguay

**May 21 – 22:** XXIII La Jolla Energy Conference – La Jolla, CA, [www.iamericas.org/lajolla](http://www.iamericas.org/lajolla)