Webinar: A First Look at Mexico’s Planned Wholesale Electricity Market

Institute of the Americas
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From Draft “Bases del Mercado Eléctrico” to the Market Rules

- The Mexican Ministry of Energy (SENER) sent draft “Bases del Mercado Eléctrico” (Guidelines for the Electricity Market) to the Federal Commission for Regulatory Improvement (COFEMER) on February 24, 2015.

- Under the Law of the Electrical Industry, effective August 12, 2014 (the “Law”), the Bases establish the principles for the design and operation of the Wholesale Electricity Market (WEM), as defined in the Law, including the auctions contemplated by the Law.

- Under the Federal Administrative Procedures Law, regulations are sent to COFEMER for a determination if the benefits of the regulation outweigh its costs. The SENER draft Bases are subject to that review.

- Elements of review: Regulatory Impact Report, public comment.
The Regulatory Impact Report (MIR) for the Bases submitted by SENER focuses on cost benefits, i.e. a 26-48% reduction in tariffs. Based in part on the experience of Chile (for 1990-97, both residential and industrial tariffs down about 48%) and Argentina (for 1992-97, residential tariffs down 26% and industrial down 16%).

All regulations before COFEMER are subject to public comment. Very simple comment process. Many interested parties will submit.

After COFEMER review and “dictamen,” SENER will issue final Bases, which will certainly have changes from the draft.
Then the Bases must be elaborated into “Market Practice Manuals,” “Operational Guidelines” and “Criteria and Procedures of Operation,” collectively “Market Operational Provisions.”

- Market Practices Manual: Principles for calculation, instructions, rules, directives, examples and procedures for the administration, operation and planning of the WEM. There will be a detailed Market Practices Manual for each of the 10 chapters of the Bases.

- Operational Guidelines: Formulas and procedures that, due to complexity and specificity, are contained in documents different from Market Practices Manual.

- Criteria and Procedures of Operation: Specifications, technical notes and operating criteria required for the implementation of the constituent elements of the Market Rules above, in the design of software or daily operations.
From Draft “Bases del Mercado Eléctrico” to the Market Rules (cont.)

- The Bases alone, which are nearly 200 pages, are in some respects a highly-annotated table of contents, with the details to be filled in by the Market Operational Provisions.

- The Bases del Mercado Eléctrico (Guidelines for the Electricity Market) and the Market Operational Provisions together constitute the “Market Rules,” which is equivalent to the tariffs issued by US ISOs and RTOs.
The Bases Contain the Expected Elements of a Wholesale Electricity Market

- Draws heavily from CAISO, PJM, and NYISO
- The Bases are for the wholesale market only – CRE still sets retail tariffs. Nothing in the Bases addresses potential disconnects between wholesale market and retail rate design.
- We will comment on general characteristics and then focus on what is unique about Mexico. Three specific areas to discuss today:
  - Market Participants.
  - Staged implementation of the market.
  - Clean Energy Certificates (CELs).
General Characteristics of the Market

- After receiving offers to purchase and sell energy, CENACE will determine economic dispatch in which injections and withdrawals at each node will be balanced.
- Locational marginal prices at each node will consist of an energy component, a congestion component, and a loss component.
- Some ancillary services will be competitively supplied through the market (regulating reserves, spinning reserves, and operating reserves), while others will be regulated by CRE (reactive reserves, reactive power, and black start).
- Gas-electric coordination – to ensure that gas supply and gas transport can be scheduled in coordination with energy offers (a subject for the Market Monitor).
Market Participants and their Obligations

- Five Types of Market Participants
  - Generators – Representing electric plants in the market. Physical and operating characteristics must be registered.
  - Intermediation Generators – Representing electric plants and load points included in Legacy Interconnection Contracts in the market.
  - Suppliers – Marketers with a permit to provide Electric Supply in the modalities of Supplier of Basic Services [CFE only], Supplier of Qualified Services and Supplier of Last Resort.
  - Non-Supplier Marketers (no physical assets)
  - Qualified User Market Participants

- Bound to the Market Rules through a Market Participation Contract (not yet published) with CENACE, the independent system operator
- Strict Credit Requirements to cover trading activity
Market Participants and their Obligations (cont.)

- Loss of market privileges if rules are violated (including disgorgement of profits) or if credit requirements are not met.
- Special rules for distributed generation at circuits with a high concentration of load centers, i.e. generation must be less than the expected demand of the load centers on the distribution circuit, or it must reduce the peak net loading of the circuit.
- CENACE and CRE will not intervene in disputes between Market Participants.
- Note: Although Transmission and Distribution Providers are not Market Participants, they are subject to the direction of CENACE.
The Case of Qualified Users

- Final users of electricity with a demand at a load point of at least 3 MW in first year after adoption of the Law, dropping to 2 MW the next year and 1 MW the year following (and SENER may decrease further). Loads of a single economic interest may be aggregated.

- Registration as Qualified User for those who meet requirements is optional unless no previous receipt of Public Service of Electricity.

- A Qualified User may elect to be a Market Participant, if it wishes to acquire energy, capacity, Ancillary Services and Clean Energy Certificates for its own account through the WEM.

- Or it may be “represented” by a Supplier of Qualified Services.

- Qualified Users can enter into long term contracts with a Supplier of Qualified Services, but with backup from a Supplier of Last Resort.
Components of the WEM to be Governed by the Market Rules

- The Day-Ahead Market and the Real Time Market for energy and Ancillary Services.
- The Capacity Market
- The Market for Clean Energy Certificates
- Auctions for the Medium Term for energy
- Auctions for the Long Term for Capacity, clean energy and Clean Energy Certificates
- Auctions for Financial Transmission Rights
Implementation of the Energy and Ancillary Services Market – Two Phases

- Energy and Ancillary Services Market Operations - Phase One:
  - Day-Ahead market in which participants submit binding schedules
  - Real Time market is part of Phase 1 (also used for after-the-fact settlements)
  - Import and Export transactions
  - No demand bidding or virtual bidding

- Energy and Ancillary Market Operations Scheduling - Phase One:
  - Testing of the Phase One Market: Beginning in September 2015.
  - Operation of the Phase One Market: Beginning on December 31, 2015
    (operation of the Day-Ahead Market for the operating day of 1/1/2016).
Implementation of the Energy and Ancillary Services Market – Two Phases (cont.)

- Energy and Ancillary Services Market Operations – Phase Two
  - Adds an hour-ahead market
  - Adds demand bidding by controllable resources
  - Adds virtual bidding subject to the respective validation of such offers on the part of the Market Surveillance Unit
    - Virtual bidding does not require physical delivery
    - Trader’s profits or losses come from settlement of the difference between the day-ahead and real-time price
    - Much concern over market manipulation of congestion due to virtual bidding
    - Enforcement action against Louis Dreyfus Energy Services, 146 FERC P61072 (2014)
    - William Hogan, a consultant to SENER, has written an analysis of market manipulation through virtual bidding

- Both testing and operations for Phase Two will take place in 2018.
Implementation of other Components of the WEM

- Other Components of the WEM will also be phased in:
  - Financial Transmission Rights (FTRs): Phase One – Testing, October 2015, Operations, November 2015 (with maturity of 1, 3 and ten years); Phase Two - January 2017 (with monthly terms).

- Remaining Components of the WEM instituted in one phase:
  - Long Term Auctions for Capacity, clean energy and CELs (10 year contracts): Testing, September 2015; Operations, October 2015 (for contracts beginning in 2018; facilities can be constructed after award).
Clean Energy Certificates (CELs)

- Still the primary mechanism for encouraging clean energy (not just renewables).
- SENER issued the first requirement for CELs.
- LSEs must obtain CELs for 8.2% of delivered energy for 2018.
- First auction for 2018 CELs to be held this fall through CENACE.
- Provides over a two-year window for new clean energy facilities to develop.
- LSEs can also obtain CELs bilaterally but all CELs registered through CRE.
- Per the CEL Guidelines, SENER cannot lower the percentage requirement in subsequent years (goal is 33% by 2024, but only if economically feasible).
- Baseline and ability to contract bilaterally may allay concerns about ability to finance clean and renewable projects which rely in part on income stream from CELs.
THANK YOU

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