

Mexico Power Market: A Powerful Opportunity

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The Mexican power market offers opportunities for private parties to participate in activities that in the past were reserved to the State. Now there are growing numbers of private generators and suppliers that together with marketers and qualified users, constitute this market.

With the 2013 Mexico Energy Reform, the power industry opened to private participants in certain activities. This important Energy Reform in the Mexican Constitution allows private companies to participate in the power sector, except for transmission and distribution which is considered a public service. The Constitutional Reform was soon followed by the enactment of secondary legislation of 2014 through the new power law: *Ley de la Industria Eléctrica* (the “Electric Industry Law”) which specifically provides for private parties to participate in power generation and trading. This open market initiative provides competition for the *Comisión Federal de Electricidad* (“CFE”) Mexico’s productive State-owned company which used to have the power industry monopoly in all aspects.

Although there is now space for competition in the generation of power, the CFE continues to play a dominant role. Distribution and transmission are reserved activities of the State and the current government appears to continue supporting the CFE’s generation projects to strengthen the public power utility as in past administrations prior to the 2013 Mexican Energy Reform (co-generation and thermoelectric projects).

Private generators are to compete in the market alongside CFE’s generating units. On the purchase side of such market there will be power suppliers, marketers and qualified users (with load of at least 1MW). The wholesale market is in place to transact all energy sales, auxiliary services, transmission financial rights, capacity auctions, clean energy certificates (“CELS”) and related products.

20 GW

Recently, analysts of the Mexican economy have indicated an expectation that in order for Mexico’s industrial, manufacturing and other sectors to meet projected growth rates, together with the projected increase in Mexican population, the country would require an additional 20 GW of power over the next twenty years. The most assured mechanism to achieve this significant growth in power capacity is for an active private sector to enter and participate in the development of the overall Mexican power market.

The current Electric Industry Law provides for two types of power supply: (i) suppliers only servicing qualified users (see below) and (ii) suppliers servicing users which are not qualified users, labeled “basic service suppliers”. Marketers may be traders between generators and suppliers or include the role of a supplier. The CFE or any of the subsidiaries it may create will be able to perform any of these activities, subject to legal and accounting separation requirements.

The State retains the public service of transmission and distribution of power. This public service will continue to be provided by the CFE through its special purpose subsidiaries. However, under the Electric Industry Law, the CFE may enter into joint ventures with private companies or investors for the financing, construction and operation of transmission and distribution projects.

One key feature of the Energy Reform is the obligation to grant access to the grid to all generating and off-take facilities that wish to interconnect to the grid. The CFE will be required to interconnect its networks with all electric plants and load centers whose representatives request such interconnections, under conditions that are not discriminatory, so long as the facilities requesting such interconnection have complied with the technical requirements established by the State power system operator *Centro Nacional de Control de Energía* (“CENACE”) and the model contracts issued by the government regulator *Comisión Reguladora de Energía* (“CRE”). For the purpose of complying with this “open-access” principle, the Wholesale Electricity Market Rules define criteria and principles to be used by CENACE in order to establish an order of priority for interconnection requests.

Professionals

Achieving sustainable growth in the power component of Mexican overall energy reform will require harmonization of the rules, regulations and market expectations with respect to the legal and business regime in force in Mexico as to power generation and distribution prior to 2013/2014 as compared to the new power reform initiated as of and after 2013/2014. This harmonization and business process has provided opportunities for a diverse set of business consultants with power experience to become active in the Mexican market to the industrial sector and the private power sector and opportunities for new consultants and advisors hoping to become active in the market. A thorough legal analysis of the risks, gaps, omissions and inconsistencies in these two power generation and distribution framework regimes, both pre-2013/2014 reform and post-2013/2014 reform, will require market participants and new entrants to understand the two legal frameworks and how they relate to each other.

Power Projects prior to the Energy Reform

Before the 2013 Mexico Energy Reform the “Public Power Service” ranging from generation, to distribution and marketing, was reserved to the State through the Mexican Government: a wholly owned State activity.

The Mexican Constitution and the former Law for the Public Service of Power (*Ley de Servicio Público de Energía Eléctrica* in accordance with its initials in Spanish, the “LSPEE”), provided that the Government of Mexico maintain exclusive authority over the generation, transmission, transformation, distribution and supply of power through the CFE. However, in 1992, several amendments were made to the LSPEE, authorizing limited private investment in services considered to be “Non-Public Power Services” which included the following:

- Independent power production (“IPP”), which power is sold directly to CFE
- Co-generation (“Co-gen”)
- Self-supply Projects

Although the Mexican authorities vigorously promoted these alternatives, several issues came into play: IPP projects have a financial structure that limits competition since the power production, surplus or cost of the project, as the case may be, is sold or transferred, eventually, to the CFE, becoming part of the Mexican public debt, meaning that necessarily the cost of the project for the CFE is a limitation to its capacity to acquire debt and impacts the CFE’s budget for developing other similar projects.

On the other hand, Co-Gen and Self-supply projects provided cheaper and more reliable power output allowing for greater expansion of other private investment projects, such as textiles, apparel and auto-part manufacturing, sectors that are important to Mexico’s economic development. However, such self-supply projects require significant level of investments for companies or participants which are not necessarily related

to the power industry or that generation and trade of power is not within their core business. Also, the number of potential clients in Mexico who can commit to long-term power supply contracts with fixed capacity charges are limited and competing with the CFE is challenging considering the significant market advantage of the State enterprise. Additionally, the import and export of power has been limited because of the lack of efficient and operative interconnection points and transmission lines between the transmission grids of the U.S. and Mexico.

Power Projects after the Energy Reform

As part of the 2013/2014 Mexican Energy Reform, the new power law: *Ley de la Industria Eléctrica* (the “Electric Industry Law”) provides for the State to maintain its strategic role and leadership in connection with the planning and control of the National Power System (*Sistema Eléctrico Nacional*) (in accordance with its Spanish initials, the “SEN”), as well as responsibility for the transmission and distribution of power. However, and importantly, private companies may now participate in the generation and trade of power and may also participate in transmission and distribution activities through contractual arrangements, such as construction and operation of transmission lines.

The new Electric Industry Law brings profound changes to the Mexican power sector, the most important one being the introduction of a wholesale electricity market with CENACE as an independent system operator. Private generators are meant to compete in that market alongside the CFE’s generation units. On the purchase side of such market there will be power suppliers (marketers) and qualified users.

The CFE has been transformed into a “state productive company” (*empresa productiva del Estado*). Through various affiliate companies, the CFE will be able to compete with private companies in the electricity generation and trading industry. At the same time, the CFE continues to manage the transmission and distribution of power as a public service open to third parties on a limited basis as described above. As a State productive company, the CFE is governed by a special legal regime including (i) procurement, leases, services, and construction work; (ii) assets; and (iii) budget/public debt.

Grandfathered Projects. The transitory articles of the Electric Industry Law provide that those permits issued for enterprises that self-supply, or co-generate power as well as small producers, independent power producers and enterprises with interconnection agreements signed by the CFE prior to the enactment of the Electric Industry Law, continue to be in effect pursuant to their original terms. This refers principally to private power projects in operation or under construction. Furthermore, projects which (i) have a permit or have applied for a permit and (a) have invested at least 30% of its total budget and commenced construction by December 31, 2016, and (b) reach commercial operation by December 31, 2019, or (ii) have delivered guaranties under transmission open seasons organized by the CRE, may continue under the legal regime applicable prior to the enactment of the Electric Industry Law.

Wholesale Electricity Market

The new model seeks to improve the productive structure of the industry under the principle of free competition in generation and supply activities and determine the scope and means of implementing projects for expansion and modernization of transmission and distribution activities.

This model has allowed the coordinating authorities Ministry of Energy (*Secretaría de Energía* (“SENER”), CENACE & CRE in cooperation with the CFE as a public enterprise and the productive companies of the country, to design the instruments of planning, operation and regulation that the electricity sector requires to grow.

The transition of the electricity sector can be summarized by the configuration of the wholesale electricity market composed of generators, suppliers, marketers and qualified users that participate on equal terms, who may enter into separate contracts with each other, and will receive instructions from the independent operator to guarantee the reliability of the system and meet demand continuously. In addition, open access to the transmission and distribution service would be granted on terms that are not unduly discriminatory.

In a nutshell, the wholesale electricity market is operated by CENACE, in which the market participants (generators, suppliers, marketers and qualified users) may conduct power purchase and sale transactions, ancillary services, output, financial transmission rights and generate CELs. Generators will sell their generated power to suppliers (i.e. *CFE Suministrador de Servicios Básicos* a subsidiaria of the CFE) at a marginal price in accordance with the procedures set forth by the CENACE according to the rules of the wholesale electricity market (*Bases del Mercado Eléctrico*).

The Long-term auctions/market is intended to facilitate execution of long-term contracts in order to guarantee the supply and price of electricity between generators and qualified suppliers and qualified users. Generators can sell power to “qualified” and “basic” services suppliers under the modality of any combination of electricity, capacity and CELs under proceedings of long term auctions to ensure the best technical and financial conditions of such purchase and sale transactions. Qualified service suppliers are those which supply power under competitive pricing only to “qualified” end users with a capacity in their loading points of at least 1 MW. Basic service suppliers are those which supply power to all other end users below 1 MW (i.e. domestic). The long term auction market is designed to trade power in 15 year PPAs and CELs in 20 year PPAs.

The Short-term market (Spot Market) exists in order to cover short-term requirements of the electricity sector participants. A spot market is created through which transactions will be made in which the CFE and its generation subsidiaries, as well as private generators, offer their energy so that it will be available to any authorized market participant. The Spot Market is divided into three parts, (i) one hour in advance, (ii) one day in advance, and (iii) real-time. Generators that do not have long-term PPAs can sell electricity through the CENACE to “qualified” services suppliers on a more immediate basis.

Medium and Long-Term Auctions

These medium and long-term auctions are also called by CENACE with the purpose of creating a stable and continuous power market that may ensure medium and long-term sale and purchase of power capacity at competitive rates under fairness and transparency principles. The auctions are held for energy, power and CELs. These auctions have a dual purpose: to promote the competitiveness and stability of prices in the purchase and sale of power and CELs from generators to “basic” service suppliers (such as the CFE), and to ensure a stable source of payments to help support financing required for efficient investments to develop new power plants and retain existing plants.

Contracts for power and combinable electric energy will have a term of 15 years. Contracts for CELs will have a term of 20 years.

Since the enactment of the 2013 Mexican Energy Reform, a total of three long term auctions have been completed. These have attracted important investments for Mexico and competitive costs that brought attention from the international markets. The first auction was made in in July 2016 for a total capacity of 2,085 MW, the winners were 11 companies and 18 contracts awarded for the construction of generation power projects: 11 solar projects and 5 wind farms. The total estimated investment was of USD\$2.6B.

The second auction was effected in September 2016 with awards to 23 companies. The total capacity was 2,871 MW, reflecting an investment amount of USD\$4B.

In November 2017 the results of the third auction were announced for the construction of 15 power plants with a total capacity of 7,451 MW composed of 9 solar farms, 5 wind farms and 1 combined cycle plant, with a total estimated investment of USD\$2.4B

The Bilateral PPAs

Another attractive market in Mexico is the market for bilateral PPAs outside the scope of the mid/long term auctions. Smaller projects and generators have found bilateral PPAs to be a convenient spot market that has replaced the prior model of “self-supply”.

Currently there is interest for generators and consumers to seek opportunities in this spot market through the execution of short term PPAs (3-5 year commitments) at competitive pricing and conditions.

There is also an appetite among national and foreign investors for acquisition of existing power projects and facilities that are under development or in commercial operation. The majority of these projects are grandfathered from the past regime prior to the Mexican Energy Reform, under self-supply permits of small generators and power producers, which make these projects attractive for certain market segments.

Utilities: US Midstream to Mexico

Another important business opportunity is the opportunity for business diversification and growth in the U.S. power sector through the entry of various power generators and distributors, such as large-scale U.S. and international utilities, into the midstream natural gas transportation business, taking advantage of the growth in natural gas production resulting from U.S. shale exploration and production to supply natural gas by pipe to Mexico power takers, including the CFE and Pemex. This business diversification by traditionally conservative utility business models to incorporate into their business portfolios traditional midstream oil and gas transportation to supply the Mexican market has expanded over the last five years and should, considering the long-term market expectation of relatively inexpensive natural gas prices, continue to develop into the medium and long-term. Analysis of the two Mexican power generation and distribution regimes, therefore, will continue to be a priority of inherently conservative utility business models. This trend should continue as U.S. utilities continue to experience the long decoupling of the retail price of electricity from national GDP growth.

Mexico Suspended the Medium and Long-Term Auctions

As a measure to strengthen Mexico’s public policy regarding power and CFE’s mandate as the only government power company, the current government administration led by President Andres Manuel Lopez Obrador (“AMLO”) announced in January 2019 that the medium and long-term auctions (of power generation) called by the CENACE are suspended. There is no sign as to when will these auctions will be re-activated.

As per public declarations from Secretary Mrs. Rocio Nahle of the SENER, the government welcomes private investment and wishes to provide certainty and seriousness to these investors. However, the new government considers there to be an imbalance in the power sector between private investment and government activities (the CFE mandate). AMLO’s government reviewed the long-term auctions and found that it does not make sense to open new auctions when transmission lines are saturated.

According to SENER, only 69% of the committed infrastructure was completed for the first auction, 9% for the second auction and 0% for the third auction. Mexico needs an open policy equilibrium between private companies and government companies, declared SENER's secretary Nahle, with a goal of having CFE generate 54% of Mexico's power and 46% by private generators.

There is a clear intent from the government to develop a plan to strengthen the CFE as a generator and power producer through the construction of new facilities and maintenance/modernization of those existing facilities. According to SENER, 24% of power in Mexico comes from renewable energy. The goal is to reach 35% by the end of the AMLO administration in 2024. Hydroelectric plants were not considered renewable energy by the past government administration. These hydroelectric plants are owned by the CFE who in turn has the right to issue clean energy certificates. Secretary Nahle has declared that Mexico will be a domestic producer of energy and fuels.

The new administration (the so called "Fourth Transformation" by AMLO) has declared that they will honor and support the former contracts awarded under the past administration in the first, second and third power auctions. The Mexican Energy Reform will be maintained and there will be no amendments. Although these government declarations are positive, there are worries among private companies and investors that the AMLO administration may change policy and market regulation. According to market experts, it appears that the methodology to fix power tariffs may improve, but the current tariffs and market environment for now looks sufficient for market competition. The main challenge for the current AMLO administration is market growth under fair regulations and equitable terms of the wholesale electricity market, promoting such rules among the market participants.

Private investment must continue with their commitments under the first, second and third power auctions to reach the desired balance which the government has declared nonexistent between private companies and government companies. However, to accomplish the development of transmission lines that can release market saturation, the government must call upon procurement proceedings to award construction contracts to private investors for the development of these transmission lines. Let's not forget that the AMLO administration also suspended the procurement proceedings to award construction of transmission lines in the State of Baja California and Oaxaca.

Recent declarations from Secretary Nahle in various private energy forums held in Mexico, indicate that a fourth long-term auction seems to be under consideration of the AMLO administration, but this may depend mostly in the availability of transmission infrastructure in those regions of Mexico where transmission lines do not exist. *"The federal government recalls the commitment of President López Obrador to reactivate the process of the fourth long term auction in which, once again, renewable energies would be the protagonists."* declared Secretary Nahle.

Initiative: Proposed privately-held auctions for power

Because of the government actions to suspend the power auctions called by CENACE, the market has reacted with an initiative of the private sector (i.e. power market participants: generators, suppliers and consumers) to develop the so called "private power auctions" in which power products will be traded among the market participants through multilateral agreements with a special purpose entity that will act as a "clearing house" for payments and compensations.

These new auctions offer an alternative and are designed to cover needs of each of the participants, under a tailored made basis rather than just serving a uniform market standard. This means that participants will choose what kind of products will be offered, purchased and at what price. These auctions are directed to generators

and qualified end users with a capacity in their loading points of at least 1 MW. Basic supply is excluded thus the CFE (as a “basic service supplier”) will not participate.

The offered products will range from electric energy, power, CELs and balance for energy increase or shortage. Multilateral PPA’s will be designed to cover terms of 5, 10 or 15 years. With this alternative, market participants are expecting to obtain competitive tariffs for power supply and an opportunity for generators to place their products in the market. This appears to be a very beneficial mechanism to secure investment necessary to develop new power generation plants and expansion or modernization of existing facilities.

Although this initiative is still at an early stage, the calendar of the proceedings has been designed with an initial plan to hold the bid process from start to finish from July 2019 to January 2020. Rules of the bid proceedings and a model PPA are being drafted. Private companies and investors are holding many forums and open discussions as to how these “private power auctions” will work.

Questions arise as to how these private auctions will compete with the CENACE auctions in case these are re-activated. Will these “private held auctions” cause for the AMLO administration to reconsider? Only time will tell.