Transformation of the Mexican power sector

Implications of the Electricity Industry Law and the CFE Law
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1. Executive Summary

The Electricity Industry Law (LIE) and the CFE Law (the CFE Law) recently passed by President Enrique Peña Nieto, along with other regulations arising from the amendments to articles 25, 27 and 28 of the Political Constitution of the United Mexican States, will radically transform the electricity sector.

The LIE is aimed at the sustainable development of the electricity industry and the assurance of its ongoing, efficient and safe operation, as well as at compliance with the obligations of public and universal service, of Clean Energy and of reduction of polluting emissions.

In this new framework, the more than 38,000 MW of new capacity required by the National Electricity System (SEN) in the next 10 years will be installed under a free competition regime, through the new Wholesale Electricity Market. Likewise, users with a minimum demand (initially >3MW, accounting for more than 20% of the total national consumption of electricity), may purchase electric power from the CFE or from private companies at non-regulated rates, incentivizing competition.

While Transmission and Distribution (T&D) activities will continue being restricted for the private sector, the State, via SENER or the state-owned T&D companies, will be able to enter into partnerships and agreements with private companies in order to foster the development of infrastructure required by the System. These mechanisms will be a key support to increase the annual growth rate of the T&D networks, from 1.0% for the next few years, to 3.5% for the medium and long term, a figure more closely aligned with the expected power demand growth.

In turn, the CFE Law is aimed at regulating the organization, management, functioning, operation, control, evaluation and accountability of the Productive State Owned Enterprise (SOE), the Federal Electricity Commission, as well as at establishing its special regime in matters of its subsidiary productive enterprises, remunerations, purchases, leases, services and works, responsibilities, state dividend, budget and debt.

Through this Law, the CFE will be transformed into a Productive SOE, and will be given flexibility to make pertinent decisions regarding Corporate Governance and the most suitable business model to compete within equal conditions under the new framework applicable to the electricity sector.
Illustration 1. Generation/consumption scheme of the electricity sector before and after the Energy Reform - Source: PwC
2. Who does what?

From now, there will be 3 key public entities in the electricity sector: the Energy Ministry (SENER), the Energy Regulatory Commission (CRE) and the National Energy Control Center (CENACE).

While the powers granted by law to these entities are multiple and diverse, below there is a summary of the most important powers:

SENER

- Design of the country’s energy policy and planning of the National Electricity System (SEN).
- Coordination of the performance assessment of CENACE and the Wholesale Electricity Market (MEM).
- Establishment of criteria and requirements regardin Clean Energy Certificates (CELs).
- Coordination and supervision of the transformation of the CFE into a Productive SOE.

CRE

- Regulation and issuing of permits for the generation of electricity and of interconnection model contracts.
- Issuing and application of regulations of rates for the transmission, distribution, operation of basic services and the CENACE, among others.
- Issuing of the Rules of the Electricity Market and surveillance of its operation.
- Verification of compliance with requirements in matters of CELs.
- Establishment of requirements for Suppliers of Qualified Users and maintaining the registry of Qualified Users.
- Issuing of the regulation in matters of efficiency and quality for the National Electricity System (SEN).

CENACE

- SEN operating control.
- Operation of the wholesale market, revision and update of its operating provisions.
- Carrying out of auctions for the execution of Electricity Coverage Agreements by and between the Generators and the representatives of Load Centers.
- Instructing the state-owned T&D companies to execute interconnection agreements for the Power Stations or the connection of the Load Centers.
- Calculation of the contributions that the interested parties should make for the construction, enlargement or modification of the grid when costs are not to be recovered through regulated rates and granting of the corresponding Financial Transmission Rights.
3. CFE as State Productive Company

In turn, the Federal Electricity Commission (CFE) is transformed into a Productive State Owned Enterprises (PSOE) whose corporate purpose will be the development of entrepreneurial and commercial activities that generate economic value and profitability for the State.

The transformation requires new management, organization and operation standards, as well as the implementation of a new corporate structure and of management and accountability rules.

Additionally as a result of the foregoing, CFE must create and implement a new regime for contracting and acquisitions, leases, services, public works, public debt, administrative and responsibilities that promote competitiveness. This new regime would be coupled with new personnel remuneration policies. Figure 2 shows the compliance timeline for the transformation of CFE.

SENER and CRE will establish the terms under which the CFE will carry out a structural separation, which shall be vertical among the different business lines and horizontal within each line.

It is important to note that the CFE Law shall be effective on the day following the appointment of the Board of Directors, except for Title IV of such Law, which regulates the special regime to which CFE shall be subject as a productive SOE and includes among other aspects, the organization of its subsidiary companies and the organization of affiliate companies; personnel remunerations; the rules for the acquisition of services, goods and works; the responsibilities of the personnel of the CFE and its productive companies; the state dividend; the budget; debt and transparency and accountability.

Said Title IV shall be effective on the day following SENER´s publication, within the Official Gazette of the Federation (D.O.F.), of the formal statement issued by the CFE Board of Directors indicating that such Board is acting in its corresponding capacity and that the scrutiny, transparency and accountability mechanisms provided by the CFE law are in operation.

Notwithstanding, the CFE’s obligation to provide information for the determination and subsequent payment of the state dividend will be effective as of January 1, 2015 in such a way that the CFE will begin paying such dividend at the beginning of 2016.

With the CFE Law coming into effect and with the amendment of the Federal Law of Public Entities and Organizations, CFE’s tax regime is modified to have the productive SOE and its subsidiary productive companies pay taxes according to the provisions of title II "About Business Entities" of the Income Tax Law. Until the CFE Law comes into effect, the CFE shall be governed by the applicable legal statutes.
Illustration 2. CFE’s transformation timeframe
4. Planning and Operation of the System and the Market

In order to promote the installation of enough infrastructure to satisfy the demand in the SEN and to comply with the objectives for Clean Energies, SENER will develop guiding programs for the installation and retirement of capacity. Likewise, the expansion and modernization of the T&D networks will be carried out according to the authorized programs.

The State will exercise the Operating Control of the SEN through CENACE. This Center will determine the allocation of responsibilities and the coordination procedures with the state-owned T&D companies, and it may create partnerships or execute agreements with private companies to provide auxiliary services for the operation of the Wholesale Electricity Market (MEM) that will be created.

CENACE will operate the MEM, in which Generators, Suppliers, Traders and participating Qualified Users will be able to carry out transactions involving different products and services, according to the Market Rules, which are currently being developed. The prices of the operations entered into in the Market will be calculated based on the offers received.

Illustration 3. Example of the operations that the Participants of the Wholesale Electricity Market may carry out - Source: PwC

Based on dispatch security and economic efficiency criteria, CENACE will determine the allocation and dispatch for Power Stations, for Controllable Demand and for import and export programs.

In turn, Generators, Suppliers and Involved Qualified Users of the Market should give notice to CENACE of each Power Station and each Load Center they represent. Offers made by the Generators in the MEM will be based on the cost of the Powers Stations they represent, but they can be lower than such costs if they abide by the terms defined in the Market Rules.

During the electric sector’s restructuring period, SENER will issue the first Market Rules and will be responsible for the surveillance of the MEM during the first year of operations of the Market.

Within a period of 6 months, the President will issue a decree to create the CENACE as a decentralized public entity. CENACE will provide CFE with the required support for the operation of the public service grids for up to 12 months after its creation. CFE’s capabilities including human, material and financial resources for the operating control of SEN, for the definition of technical specifications of the interconnection infrastructure and for planning the electricity network will be transferred to the CENACE.
5. Power generation

Within the new regulatory framework, the power generation activity will be developed under a free competition regime. Generators representing Power Stations interconnected to the SEN will require interconnection agreements and will operate their facilities in compliance with CENACE’s instructions and established obligations.

The estimated annual average growth of electricity demand for the next 10 years will be greater than 3.5%, which represents a requirement of incorporating about 38,000 MW of new capacity by year 2024.

New Power Stations may participate in the electricity system mainly through 3 schemes (see Illustration 4): sale in the wholesale market, sale through contracts with Suppliers and/or Qualified Users, or sale via long-term contracts to supply Basic Users through auctions organized by CENACE, as well as Capacity Tenders.

Illustration 4. Three schemes for participating in the electricity industry

Power Stations owned by the State or whose construction and operation have been included in the Federal Expense Budget as direct investment will be Bequeathed Power Stations, while Independent Power Producers (PIE) and Power Stations included in the Federal Budget as conditioned investment will be Bequeathed External Power Stations. The permits and interconnection contracts of PIEs, self-supply, CHP and a small production projects may continue being governed by the Electrical Power Public Utility Law, the Law that regulated the electric sector before the Electric Industry Law was approved.
Within CFE, the generation activity should have legal horizontal separations. The number of distinct legal entities within CFE’s generation business lines should be sufficient to foster the efficient operation and competitive atmosphere of the sector.

For the development of new Power Stations, CFE may participate in new projects by itself, by through subsidiary companies, through companies in which it has a minority interest, directly or indirectly, or through any partnership or alliance vehicle allowed by Law.

Distributed Generation will have open and of unduly-discriminatory access to the Distribution grid as well as to markets where its production can be sold.
What will happen with the projects currently under development?

One of the key elements to increase the generation capacity, and its associated investments, in the short-term, is to provide legal security to ongoing projects with certain degree of development. The LIE establishes the following requirements to enter into Bequeathed Interconnection Agreements with a term of up to 20 years:

- Prior to the LIE coming into effect, the interested party must have obtained or requested the generation permit and paid the corresponding dues;
- The interested party must have given notice to CRE as to the intention to continue with the project, within a 60-day period following the coming into effect of the LIE; and
- The interested party must prove to CRE by December 31, 2016 that full finance for the project and the acquisition of the main equipment has been contracted and that at least 30% of the total investment in fixed assets have been disbursed (CRE may extend the term if a justification is applicable).

In addition, projects may enter into Bequeathed Interconnection Agreements if they have their transmission capacity allocated during an open season carried out prior to the coming into effect of the LIE provided that they have complied with the required contributions and guarantees for the corresponding open season.

Bequeathed Interconnection Agreements will be cancelled if CRE has issues a negative resolution to the permit request, or if the interested party does not prove to CRE that the project has entered into commercial operation for the total capacity provided for in the Bequeathed Interconnection Agreement by December 31, 2019. In special cases, CRE may extend this term if properly justified.

Illustration 5. Generation permits administered by the CRE as of May 31, 2014 (MW) under construction or about to begin construction. Natural gas plants include CHP plants and combined-cycle plants, among others.
6. Transmission and distribution

The Transmission and Distribution activity will continue being considered as public utility and, therefore, it is reserved to the State. The State, through SENER or through state-owned T&D companies, may form partnerships or enter into agreements with private entities to carry out, the financing, installation, maintenance, management, operation and enlargement of infrastructure. The awarding of such partnerships or agreements will be carried out through free and open competition processes.

**Illustration 6. Main changes expected in transmission and distribution activities**

State-owned T&D companies will be responsible for the National Transmission Network and the General Distribution Networks and will operate their networks according to the CENACE's instructions. Both the transmission and distribution activities will be carried out by subsidiary state productive companies and not by affiliate companies.

The distribution activity must have a horizontal separation by region, which may be in accounting, operation and functional or legal terms, in such a way that it fosters the efficient operation of the sector and provides information required for comparative analyses of performance and efficiency in operations.

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1 Currently, CFE provides service to all the country through 16 Distribution divisions, through a commodate agreement entered into with the Asset Administration and Disposal Service (SAE).
If technically feasible, State-owned T&D companies are required to interconnect their networks to the Power Stations that request so and to connect their networks to the Load Centres of the Final Users and the Suppliers requesting so, under conditions which are not unduly discriminatory. Failure to comply with these requirements may result in fines equivalent to 2-10% of the gross revenues of the company for the previous year.

The enlargement and modernization programs will include elements of smart grids, which integrate advanced technologies for measurement, monitoring, communication and operation in order to improve the efficiency, reliability, quality and security of the SEN.

CRE will issue the methodologies to determine the calculation and adjustment of the Regulated Rates for T&D services, operation of Basic Service Suppliers, operation of the CENACE, in such a manner that the income from these services will be sufficient to recover efficient costs and obtain reasonable profitability, which will not be guaranteed.
7. Retailing

As with the generation activity, the retailing of the electricity energy will be developed under a free competition regime. The LIE establishes several legal concepts, such as the Qualified Users, the Basic Supply Users and the Suppliers, among others.

Illustration 7. User concepts established in the LIE – Source: PwC

The Qualified User status is obtained by inscription in CRE’s Qualified User Registry. The applying entity must demonstrate that it complies with the required levels of consumption or demand established by the SENER. The initial demand requirement is 3MW, which will be lowered to at least 2MW by the end of the first year after the LIE comes into effect and to at least 1 MW by the end of the second year of the LIE’s enactment. SENER will establish the terms under which Final Users belonging to a same economic interest group may add the demand of their Load Centres in order to be registered at the Registry. Qualified Users may supply themselves directly, being represented in the Electricity Market without a Supplier.

Qualified users may receive the Electricity Supply and sell the electricity and Associated Products of their Controllable Demand through a Qualified Service Supplier.

On the other hand, Basic Service Suppliers will offer the Basic Supply at Regulated Rates to the parties requesting so and whose Load Centres are located in the zones they operate, as long as it is technically feasible. Basic Service Suppliers with Controllable Demand may also sell their electricity and Associated Products through a Basic Service Supplier.

Basic Service Suppliers may only enter into Electricity Coverage Agreements through auctions carried out by CENACE.

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2 The Load Centres included in the self-supply and CHP Permits when the LIE is enacted will be automatically registered in CRE’s Qualified User Registry.
Regarding the separation of activities of the CFE, the Law establishes that the retailing activity within the Commission should observe a strict vertical separation in relation to the other activities and it should be legal. As in the generation, given that it is not a public utility activity, it may be carried out by affiliate entities and other partnerships in which the CFE does not have a 100% interest. In order to guarantee the continuity in the provision of the Qualified Supply service, the concept of Last Resource Supplier is provided for. These Suppliers will offer the service to Qualified Users whose Supplier interrupts the service without justification. CRE will authorize the maximum prices and other conditions related to these situations.

In turn, Suppliers will acquire the T&D services based on the rates regulated by the CRE.

The Energy Regulatory Commission will issue methodologies to determine the calculation and adjustment of the regulated rates for the Basic Supply, and the Executive Branch may determine a different pricing mechanism for certain groups of Basic Supply Users.
8. Clean energy requirements

The Law for the Use of Renewable Energies and Financing of the Energy Transition (LAERFTE) established the goal of generating 35% of electricity from non-fossil sources by 2024. The constitutional amendment took a step further by allocating the obligation of using clean energies and of reduction of pollutant emissions to the participants in the electricity industry.

The LIE determines that SENER will establish obligations to acquire Clean Energy Certificates (CELs) and implement all the required mechanisms to comply with the policy in this matter. The requirements to acquire CELs will be established as a proportion of the total Consumed Electricity at the Load Centres.

Illustration 8. Generation of Clean Energy in 2012 vs. Generation of Clean Energy required in 2024 to achieve the goal of 35% - Source: PwC

Suppliers; Qualified Users directly participating in the Market; Final Users that are supplied offgrid; and the titleholders of the Bequeathed Interconnection Agreements that include Load Centres will be the four types of agents subject to compliance with the obligations of Clean Energies. Failure to comply with such obligations may result in fines of between 6 and 50 minimum wages per MWh not backed by a CEL.

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3 The LIE defines Clean Energy as a wide number of sources: wind, solar radiation, ocean energy, heat from geothermal sites, bioenergetics, efficient cogeneration, among others.
For this purpose, in the first quarter of each year, SENER will establish CEL acquisition requirements for at least the following three years. The regulation will allow CELs to be tradable, as well as the transfer of surplus or deficits in certificates between periods, defining charges for such transactions, in order to promote price stability.

Illustration 9. Main participants in the CELs Market – Source: PwC

It should be noted that regarding the incentives for the renewable energies, renewable Power Stations and the efficient CHP plants that keep their Bequeathed Interconnection Agreement will be allowed to keep the Energy Bank and the "Postage Stamp" T&D; however, they will not receive CELs.
9. How can we help you to identify opportunities and capture benefits related to the Reform?

In recent years, Mexico’s electric sector has gained a great dynamism, and this situation will be boosted with the implementation of the energy reform. In this context, PwC has provided support both to the public and private sector (producers and consumers) to develop strategies, assess opportunities and prepare the financial project structuring that maximizes the opportunities and benefits offered by the electric sector.

Some of the projects we have carried out for clients:

- **Collaboration with public bodies and industry organizations** in the development of strategies to inject dynamism to the renewable sector.
- **Involvement in the financial structuring and/or revision of models of more than 1,500 MW of electricity generation capacity** in Mexico.
- **Definition of the expansion strategy** of the electricity sector for an Asian conglomerate and a North American utilities company.
- **Support in the diversification strategy of a Mexican industrial group** for the creation of an energy unit.
- **Advisory to Asian and European developers** regarding their Mexican market entry strategy.
- **Assessment of opportunities of self-supply for a company in the chemical sector and a financial entity** with more than 1,000 branches.
- **Analysis and forecasting of the generation cost and electricity rates** for a financial entity.
- We have supported the Public Administration at different levels to develop programs that inject dynamism and strengthen the sector.
- We have carried out project structuring, developed financial models and electricity price models (if applicable), considering the tax implications and we have collaborated with developers in the search of equity and/or debt.
- We have advised companies on their entry or expansion strategy in the electricity sector. We have supported clients in the establishment of alliances.
- We have collaborated in the construction and operation stages, in the advisory programs of capital projects, to guarantee achievement of the objectives, as well as in the compliance with tax obligations and tax optimization.
- We have supported generators interested in their search of attractive Qualified Users and we have supported the Qualified Users in the search of competitive offers to supply electricity.
- We have advised our clients on the purchase and sale processes of different types of assets within the electricity sector.
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