INNOVATION ▾▴ FREEDOM ▾▴ PROSPERITY

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Energy Policy as Coercion: A Chronic Squelch of Free Markets

Case Study

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The 2013 energy constitutional reform gave Mexico the opportunity to open a generation market that allowed the implementation of mechanisms that encouraged cost-efficiency. The main purpose was to promote technological innovation, energy transition, and security for the country through the concurrence of private and state-owned companies. This change sought to depressurize public finances by making the state-owned company – that previously operated as operator, controller and regulator of the system – a more efficient market player, independent from the regulator and the controller. However, as of 2019, an administrative and legal counter-reform has insisted on forcing circumstances to return to the old model. In this paper we will delve into the effects of Mexican federal public policy committed to giving the greatest possible market power to its state-owned companies (Petróleos Mexicanos "Pemex" and Comisión Federal de Electricidad "CFE"); notwithstanding the Constitution and the United States-Mexico-Canada Agreement (USMCA) – among other treaties signed by Mexico, along with laws and regulations with 46 countries. These establish an obligation to comply with economic competition as well as sustainable and transparency rules.

The Federal Government's aim to increase CFE's market power stems from its inability to support the enterprise with its own means. CFE has closed out its last two years with financial losses of more than 58 billion pesos, a situation not seen since 1990. An abrupt increase in fuel prices after the Covid-19 pandemic, the rise of pensions spending after the 2020 reform of the labor contract, and government controls on electricity rates are three important factors that prevent the company from charging the real cost of producing electricity to consumers. Hence, subsidies – reflected as "state power aids" to low consumption electricity bills households – from the Federal Government to the CFE have been increasing since 2017, and per capita investment is currently at its worst historical level. The impact of subsidies and per capital investments lowers CFE's investment potential and increases inefficiency performance, while private investment is hindered and consumers' welfare forgotten.

I. The Mexican Energy Model: Construction and Dispute

Priorities established by the climate emergency and technological change require that electrical systems be modernized quickly, efficiently and sustainably, allocating the user at the center of the legal framework and public policy design. Thus, as a capital objective of energy policies, global agreements insist on universal access to affordable, continuous, and quality energy services (World Energy Council, 2023).

Worldwide, updating the energy industry causes the most disruptions as it undergoes required clean energy changes often resulting in a profound process of evolution for supplying the population with the cleanest electricity such that the electricity generation mix releases the smallest possible amounts of greenhouse gas emissions (GHGs). Accordingly, technological change can address optimal power production mix, and investment in expanding transmission and distribution networks in order to reach greater infrastructure capacity and efficiency under decentralized energy systems.

Meanwhile, evolution of regulatory bodies and network operators as autonomous bodies with technical and operational independence – in view of achieving regulatory neutrality[1] and impartial management – is essential for allowing companies and stakeholders to enable energy markets to work efficiently. Therefore, deep restructures need to be done for relaxing cost structures while eliminating anomalies derived from inefficient old models.

Concurrence of private and state-owned companies' participation in markets is then a key, basic principle through which such electrical models are able to thrive, fostered by public policies oriented to leverage through market-based mechanisms. This includes vertical separation of former monopolistic entities, and restructuring horizontal entities under competition schemes with strong, transparent, independent, state operators and regulators dedicated to creating and updating regulations for an effective open access and non-discrimination electric system, particularly regarding the neutrality of the electricity dispatch (Comisión Federal de Competencia Económica (Cofece), 2022).

In 2013, based on the rationale that Mexico needed to modernize its electrical system, confirming commitments Mexico signed at the international level to combat climate change, the main political parties in power managed to reach a legislative agreement for reform at a constitutional level. They established an electric market and principles necessary to set an open model for private investment with an independent market operator and a regulatory ecosystem to guarantee a level playing field, energy security, and efficiency. Nevertheless, the road to the 2013 reforms was bumpy. A lack of deeper democratic dialogue with dissident political groups – who reached, years later, the most important political power positions in 2018 – drove an explosive political atmosphere regarding energy policy. Therefore, ten years after the 2013 constitutional reform, México continues to lack a consistent policy.

1. Regulation should strive to preserve a level playing field among different kinds of companies or organizations who compete in a relevant market (OECD, 2012)

At México Evalúa, we have called the swing between protectionist policies and openness policies "the energy paradox" (México Evalúa, 2022). In other words, numerous legal and administrative contrivances, which can be read bitterly as acts of coercion, keep Mexico far away from the noble purpose of a new electrical system. In the following sections, we will briefly review the recent legislative changes and judicial activity that have kept the Mexican electricity sector in suspense. We will also focus on observing four major consequences of such a perpetual dispute over the energy model: the sector's judicialization, the effects on economic and environmental costs and prices, the sector's economic downturn in terms of investment and production, and the complicated stress over public finances.

II. 2013-2018: The Seeds and the Unfinished Road

From 1960 to 2012, the Mexican Constitution kept electricity as a strategic activity and public service organized under a vertical industrial structure – that is, the entire value chain: generation, transmission, distribution and sale of electricity – led by the Comisión Federal de Electricidad (CFE). In 1992, a legal reform was carried out and opened exceptional modalities to private companies investments, such as: i) self-supply or *autoabastos*, where a company could acquire, establish or operate an electric generating plant to satisfy their supply needs on the condition that their surpluses be sold to the CFE; ii) cogeneration, where a company could acquire, establish or operate a plant that generates electricity for its own use or that of third parties; and iii) independent production of electricity for sale exclusive to CFE under exclusive terms and conditions settled by CFE itself. Unlike the hydrocarbons sector, the electricity sector, since the signing of the North American Free Trade Agreement (NAFTA) in 1994, protected foreign investments under the aforementioned modalities in light of the agreed terms in the original treaty and in its updated version, T-MEC.

1960	Nationalization of the electrical industry
1992	Opening to the participation of the private sector in the electrical industry
2008	Energy transition
2013	Electricity industry through the Wholesale Electricity Market

In 2013, with the constitutional reform in energy matters, the nature of Petróleos Mexicanos (Pemex) and CFE changed to a special regime, State-owned Productive Enterprises, which were appointed to a unique mandate: generating value, profitability and sustainability. In the electric sector, this reform intended to convert both companies to real competitors in generation and commercialization, where private initiatives were allowed to participate and diminish market power for the benefit of consumers. It was expected that competition within the generation market would contribute to lower operating costs in the whole system. Regarding nuclear power generation, transmission and distribution, the reform maintained the state-owned monopoly and administrative control.

Previous to that accomplishment, there were numerous attempts for opening the market to private investments. For instance, the sector was limitedly opened to private investments in 1992 as exceptions to the electricity law. And some years before 2013, certain private generators were allowed to operate as *autoabastos*[2] entities to companies who were acknowledged as partners of a single legal entity, a legal figure that was eliminated in the 2013 reform due to the fact that the new (and current) legal framework designed a wholesale power market composed of: i) spot market (short term); ii) power balance market (capacity), iii) market for clean energy certificates; and iv) auctions of financial transmission rights; medium and long-term auctions. That is, the reform introduced cost-efficiency mechanisms that were deemed to be powerful leverages for achieving higher levels of investments in renewable energy, long-run diminishing energy prices, technological change, and high-quality energy supply.

Moreover, due to the foregoing, and notwithstanding the inclusion of chapter 8 in the USMCA at the request of President López Obrador, the foreign private investments in energy are protected under both the terms of NAFTA, and its revised version, the USMCA, since, according to the rules of the treaty, when a country unilaterally opens up a sector previously excluded, it cannot be closed again (IMCO, 2022, p.6).

The 2013 energy reform finally demonstrated a sound performance in some of its components. For instance, in the case of long-term auctions, successful results were observed as they generated 73 projects that added a capacity to the system of 7,563 MW at an average cost of 33.89 USD/MWh (Ramírez, 2023, p.677). As of April 2022, the Mexican Electricity Wholesale Market (MEM) includes 55 power wholesale supply companies (Cenace, 2022) and 669 industrial users registered at the regulator: the Energy Regulatory Commission (CRE) (Ramírez, 2023, p. 677). On the other hand, in terms of distributed generation, installed capacity and contracts doubled annually between 2014 and 2018. As of 2019, growth remained the same. Users do not exceed 10% of total system power (Ramírez, 2023, p.681).

The 2013 reform led also to an increased investment rate in renewable energy as well. The government set a target of generating 35% of the country's electricity from clean sources by 2024, and private companies have invested heavily in wind and solar projects. In 2020, Mexico generated 28% of its electricity from clean sources, up from just 6% in 2014. Currently, such rates have diminished to a rate of 26.6% as of December 2022 (México Evalúa, 2023a, p.9).

It is important to note that during the USMCA negotiations in 2018, – a process that coincided with that of the changeover of the political power – President López Obrador publicly expressed his agreement with the terms of the USMCA and promised to respect the legal framework emanated from the energy reform of 2013. Thus, the current administration agreed on the legal commitment from the beginning, that the course of energy policy would continue in the direction of integrating Mexico to the North America energy system with an emphasis on promoting investment in renewable energy. It would also strengthen current cost-efficiency mechanisms such as tenders, energy and power auctions, and the wholesale electricity market operated by an independent operator, the National Center for Energy Control (Cenace).

2. According to the 2013 constitutional reform, autobastos were allowed to operate until the end of the terms originally agreed in their contracts.

III. 2019-2021: The Counter-Reform, Deeds and Laws

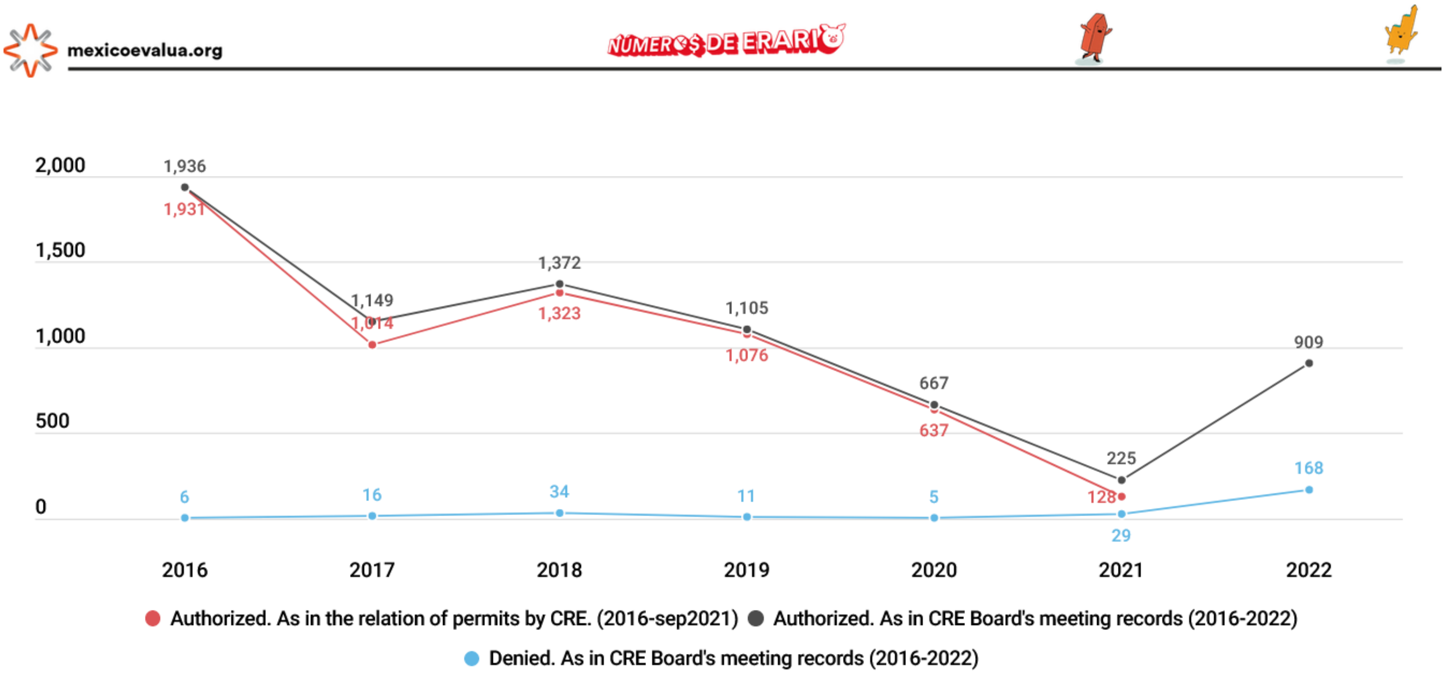
Despite his promise, however, the president decided, since he took power, to carry out an electrical counter-reform in fact, and in law, for several reasons. He believed the 2013 reform did not benefit the Mexican people, and instead favored private companies over the state-owned electricity company, the CFE. He argues – without providing enough evidence – that the 2013 reform led to higher prices for consumers and that private companies did not invest enough in the country's electricity infrastructure.

Another reason for his promotion of the counter reform was his desire to strengthen the role of the CFE in Mexico's electricity sector, a desire that he converted into public policy registered in his national development plan for the country and for the energy sector. President López Obrador's vision of the CFE is a key part of a national sovereignty vision that clearly clashes with the logic of regional trade and energy integration with the United States and Canada. This is also clearly shown when he expresses concern regarding Mexico's dependence on natural gas from the United States, an input highly used to produce Mexico's electricity.

Following his sovereigntist vision, the president started his counter-reform plans from the very beginning of his administration through several administrative measures instrumented by energy authorities and regulators for diminishing current private companies' participation and inhibiting the entrance of new participants, a fact that probably violated antitrust regulations. For instance, On January 31, 2019, the Federal Government canceled the fourth long-term auction despite the fact that the previous ones had positive results, as we mentioned before. In 2020, some CFE competitors submitted to the antitrust Cofece an investigation claim for anticompetitive practices in 2020; this allegation is still under process (México Evalúa, 2023).

As depicted in the following graph, based on information published by CRE, the energy regulator denied 213 total permits related to the power sector between 2019 and 2022, vs. 56 from 2016 to 2018. This reality is itself a drama. Currently, the CRE has also denied or delayed requested permits for operating renewable plants that are already installed. Meanwhile, the CFE expressly obtains the permits it requests. According to data from the Association of Energy Distributors and Retailers, waiting periods are anticipated to be three to four years. These delays in the granting of permits affect businesses that must pay fixed costs while the CRE grants the permit, just when the country is receiving new investments that require energy (González, 2023).

Figure 1: Permits Granted and Rejected by Comisión Reguladora de Energía (CRE).



Source: Prepared by Mexico Evalua based on publicly available information on permits authorized by the Comisión Reguladora de Energía (CRE, 2021); and 2016-2022 CRE board's meeting records.

Forced modification and interpretation of Mexican State "rectory power" – in this case, through decrees, administrative acts, and subsequent legal reform – has curbed private activity for a theoretical benefit of state-owned CFE. Our hypothesis is that current energy policy is harmful for consumers and for the CFE.

Article 28 of the Mexican Constitution establishes that the Mexican State has the power to act as the "rector" or overseer of the national economy. This means that the State has a duty to promote and regulate economic activity in Mexico in a way that benefits the country and its people. Such power includes several specific responsibilities as regulating monopolies, promoting economic development by creating policies and programs that encourage investment and job creation, protecting consumers from unfair business practices, and regulating foreign investment to ensure that it is in the best interests of the country.

Notwithstanding the good intentions current energy policy could have, there exist evident facts that demonstrate it continuously violates the principle of economic competition enshrined in the Constitution, as well as terms and conditions signed by Mexico at trade agreements entered into with other countries. So, given plenty of evidence of the source of uncertainty and discomfort of foreign investors, the respective governments of the United States and Canada requested a consultation for alleged violations of the T-MEC; as such, it was finally presented by the trade representatives of both countries on June 20, 2022. Since then, the procedure has developed into a complex dynamic for all parties, and in which priority has been given to diplomatic sequences to avoid as much as possible a deterioration in relations between the three countries.

However, in April of this year, the United States government gave an ultimatum signal to Mexico. Considering that even with all the diplomatic actions to resolve the disputes, deep down, Mexico's energy policy remains firm in terms of discriminating against private companies and favoring state companies. Negotiations are currently stalled. If the start of the panel is determined at some point, experts would be called to resolve the controversy in up to 180 days. Mexico, in this sense, would be at a clear disadvantage, and if it loses, it must revoke the 2021 reform and adopt measures and sanctions in the form of tariffs in the sectors that the United States and Canada chose. (Lopez, 2023) Nevertheless, President Lopez Obrador continues defending his reform reinforced by critics of North American energy integration who prioritize the concerns regarding the risks of Mexico's dependence on imported fossil fuels. They point out that Mexico depends on decisions taken abroad by boards of companies controlled by investment funds who seek their self interests and not the common good for Mexicans (Rodríguez-Padilla, 2018).

IV. A Dysfunctional Legal Reform

In February 2021, President López Obrador submitted to the Congress a legal reform to the electricity law, which was approved in fast track by his political party and allies. This reform modified the order of electricity dispatch to remove cost-efficiency mechanisms. That prioritized the cheapest energy for substituting property criteria in clear favor to CFE's energy injected into the electric grid, notwithstanding the cost at which electricity is produced. In this reform, the president also relaxed requirements to obtain clean energy certificates in order to allow CFE's old plants to access to such certificates. The reform eliminated CFE's obligation to buy energy through auctions, and forced the regulator (CRE) to withdraw *autoabastos* permits under suspicion that such legal entities' business models commit fraud to the abrogated law, an absurd interpretation of the Supreme Court ruling regarding the authorities' powers to supervise and sanction irregular practices.

The reform was immediately appealed by virtually all WEM participants, Mexico's antitrust agency Cofece, opposition legislators, and by a federal entity. Regarding the appeals submitted by authorities and legislators, in April 2022, the Supreme Court did not declare the whole reform as unconstitutional but declared certain portions of it unconstitutional, leaving significant legal loopholes for private participants in the market. This included the future of *autoabastos*, legal certainty regarding both the investments in themselves, and the operationalization of the future dispatch of electricity. For instance, the Court ruled as constitutional the obvious CRE power to supervise and audit *autoabastos*. Hence, federal authorities have exercised such constitutional power with the purpose of identifying whether *autoabastos* committed "fraud" against the Mexican State. In response, some companies have sought more legal protection from the judiciary, while others have requested mediation with business associations to negotiate with the federal government.

Nevertheless, as prestigious legal firm White & Case warned its clients, "The Mexican energy sector is roiled by an environment of uncertainty and regulatory brakes to execute new and ongoing investments. Potential damage to existing foreign investments in the electricity and mining sectors could result from the amendments to the Electricity Law…" (White & Case, 2022). Recently, in April, 2023, global green power giant, Iberdrola, declared to be ready to invest in the United States and Brazil after reaching a 6 billion dollar sale to the Mexican federal government for the sale of power assets that President López Obrador announced as a new "nationalization". Given the fact that Iberdrola is the world's second largest player in renewable energy, such a divestment sends relevant signals to the market. In their official announcement to investors, Iberdrola officials declared the divestiture was a very good transaction as it liberated Iberdrola from the great burden Mexican regulations signified to the company (Iberdrola, 2023; min 20:48).

V. Effects of a Coercive Energy Policy

In April 2022, the Supreme Court ruled as constitutional the already existent energy authorities' power to change the electric dispatch model if such a technical regulator considered it appropriate to the whole electric system. The Court's ruling determined that there were not enough votes from the ministers (7 out of 11) to declare the whole reform unconstitutional. Legal protection requested by private companies is still awaiting the Court's ruling (Ramírez, 2023, p. 691). In this regard, there is still speculation about the result that private companies can achieve, since throughout the judicial appeal process, several collegiate courts have granted legal protection.

In addition, based on the fact that seven ministers voted for the complete unconstitutionality of the reform, there are high probabilities that those companies affected by the reform may receive legal protection or compensation. As the antitrust agency, Comisión Federal de Competencia Económica (Cofece), indicated in its numerous opinions throughout the counter-reform process, all regulatory modifications must respect existent rights in alignment to the Constitution and the terms agreed at an international level. Today we know due to the clear advantage of the legal loopholes the Supreme Court yielded, the Federal Government seeks to end *autoabastos* private generation. Notwithstanding, those facilities operate under permits and authorizations obtained prior to the 2013 energy reform and are allowed, with previous authority, to operate legally until their full depreciation is completed (Ramírez, 2023)[3].

In September 2021, President López Obrador submitted a constitutional reform to profoundly modify the industrial structure and consecrate all the aforementioned desires: administrative actions and legal reform in the Constitution by centralizing power at the CFE, eliminating its entrepreneurial regime, overriding all private contracts with the government and CFE, canceling all permits granted to private companies, and abolishing regulatory authorities and canceling the independent operator. In April 2022, a qualified majority at the low Chamber was not achieved; hence, the bill did not pass. The electricity legal framework remained, as modified in 2021 when legal reform did pass, although its effects were frozen due to judiciary protection requested by affected private competitors.

3. Moreover, in April 2023, President López Obrador submitted an initiative for approval to the Congress enabling the Federal Government to execute legal appropriation – of what currently is illegal expropriation – of assets deemed to be considered of national security. (López, García-Naranjo, et al, 2023).

Judicialization of the Electric Sector

As of May 2023, the Supreme Court's resolutions to all judicial requests submitted by private parties are still pending (Energía a Debate, 2023). Thus, the scenarios for the future of the electricity sector in Mexico are debated between the possibility that various competitors may obtain legal protection, – and therefore, will be allowed to operate according to the cost-effective rules of the original electricity dispatch – and competitors that would be obliged to operate under the reformed law. This includes possible (if there are to be any) new investors or unprotected current competitors. If that is the case, a double regulatory framework could be created, a fact that would definitely add more complexity to an already complex energy regulatory and operative power system (Flores, 2023).

In the legal framework of Mexico, "amparo" refers to a legal remedy aimed at protecting the constitutional rights of individuals against acts of authority. There are three types of amparo in Mexico: (i) *Amparo Indirecto*, a means of protecting an individual's constitutional rights against specific acts or omissions by public authorities, can be used to challenge administrative decisions, judicial rulings, or any other action by a public authority that violates an individual's constitutional rights; (ii) *Amparo Directo*, a means of challenging final judicial rulings that have been issued in the first instance, such as a judgment or sentence; and (iii) *Amparo en Revisión*, a means of challenging a decision made by a judge or court of appeals. Such amparo is filed with a higher court, typically the Supreme Court of Justice, and it is designed to ensure that constitutional rights are protected throughout the entire judicial process (Amparo Law, 2013). In summary, the *amparo indirecto* is used to challenge specific acts or omissions by public authorities, the *amparo directo* is used to challenge final judicial rulings, and the *amparo en revisión* is used to challenge decisions made by a judge or court of appeals.

Vía the official transparency system, México Evalúa was able to obtain official information on the number of requests for judiciary protection that have been submitted by private companies since 2015 against all the administrative acts fostered by energy authorities for changing market rules. The tipping point was reached when the Electricity Law was reformed, and expressed not only business dissatisfaction but also fear in the market. México Evalúa's team requested from the Mexican Federal Judiciary Council (CJF, by Spanish acronym), via its transparency office, how many cases were registered against the Electric Industry Law. As it is depicted in the following graph, requests for *amparo indirecto* increased 84% between 2018 and 2021 while for the same period, *amparos en revisión* augmented 503%.

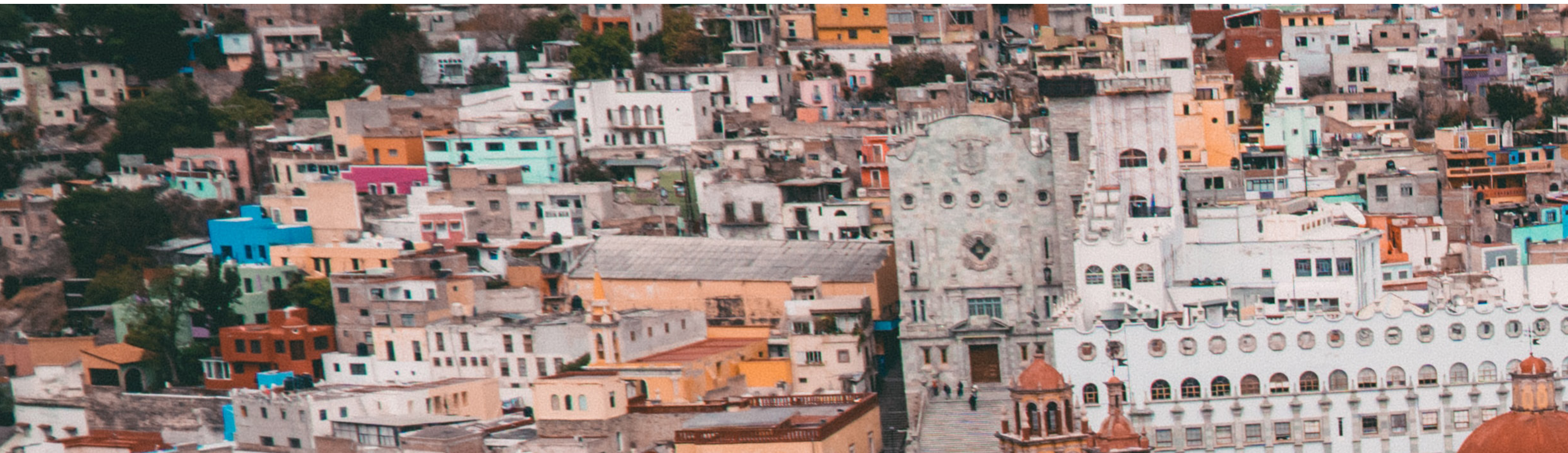
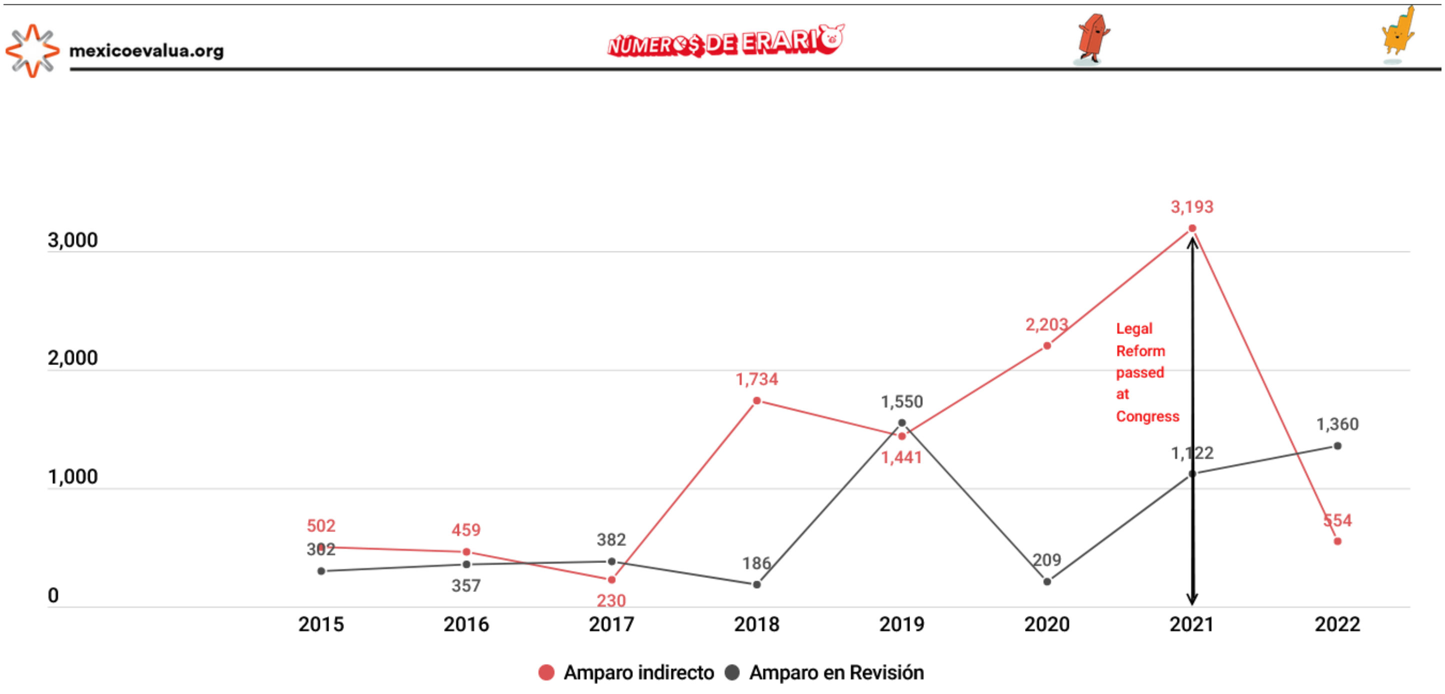


Figure 2: Amount of Judicial Cases Submitted to Judiciary Against Modifications to the Electric Industry Law and or Administrative Actions within the Electric Sector (2015-2022)



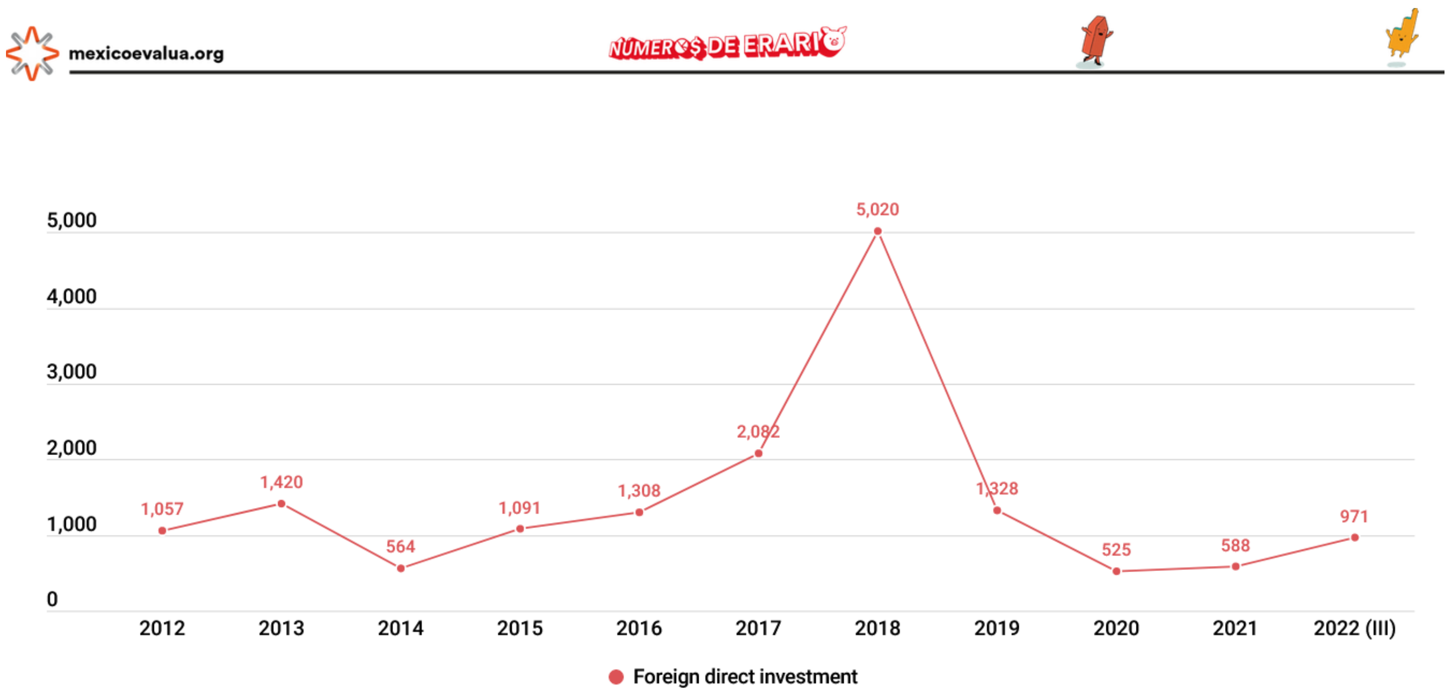
Source: Elaborated by the authors with information from: Formal Information Request, answered by Consejo de la Judicatura Federal (CJF) folio 330030423000016, through Plataforma Nacional de Transparencia (PNT).

The sudden rise of cases in both *amparo indirecto* and *amparo en revisión* from 2018 to 2021 suggest a high level of discomfort and mistrust toward the legal reform. If granted, the sentences on these cases could protect claimants against the application of the reform (in general terms); but if they were to be denied, there could be an open door for a next level of complaints. International legal forums have not yet been explored by enterprises, as the consultation at the USMCA, for example, was activated in July 2022 based on a State vs. State mechanism. Furthermore, in terms of the energy sector operation, this could have deeper implications due to the increased uncertainty stakeholders, such as companies, civil society, or even other authorities (as subnational ones) have in relation to the real effects this judicialization may have in relation to energy supply and final prices.

Effects on Foreign Direct Investment in the Electricity Sector

Critics of the counter-reform have argued that it will lead to higher electricity prices for consumers, discourage investment in renewable energy, and undermine Mexico's commitment to reducing its carbon emissions. Between 1992 and 2021, the sector attracted approximately 44,000 million dollars in private investment — 19,000 in renewables. Private power plants now generate, according to the Government, two thirds of the energy consumed while *autoabastos* generate 12% of the total electricity by supplying various economic sectors that represent around 14% of GDP; that is approximately 239 *autoabastos* power plants with 77,767 large consumers such as big manufacturers (automotive, machinery, soft drinks, processed food), banks, supermarkets, university campuses, and telecom operators, among others (Animal Político, 2021).

Figure 3: Foreign Direct Investment in Electricity Sector in México 2012-2022 (millions of dollars)



Source: Secretary of Economy (2022-III)

The success of the 2013 electric reform can be seen in an increased competition in the market. Based on official data, accumulated investment between 2012 and the first quarter of 2022 amounted to 15,300 million dollars, of which 10,000 million dollars entered Mexico between the years 2014 and 2018. After that period, from 2019 until the first quarter of 2022, accumulated investment added to 2,800 million dollars, which means that 65% of the total of the investment attracted to the country entered through the result of energy reform (Secretaría de Economy, 2022). Thus, between 2018 and 2021, the decrease of the investment was equivalent to 88%, as can be observed in Figure 3.

Moreover, it is necessary to mention that Mexico suffers a deficit in electric transmission lines due to an historical underinvestment in the country's electricity infrastructure (a sector reserved to state investment and operation), a lack of clear planning and regulatory frameworks, and challenges in securing financing for large-scale infrastructure projects.

As the country's population and economy have grown, Mexico's electricity sector has experienced significant growth over the past several decades, with demand for electricity increasing steadily at an annual 3% rate. However, the transmission and distribution systems that are responsible for delivering electricity to consumers have not kept pace with this growth resulting in a deficit of transmission lines and other infrastructure. Additionally, Mexico's electricity sector faces technical challenges related to the integration of renewable energy sources into the grid. The country has significant potential for renewable energy, particularly solar and wind power; but integrating these sources into the grid requires significant investments in new transmission lines and other infrastructure.

Effects on Industrial Activity

As we have discussed, before the 2013 reform, the Mexican government implemented a number of policy initiatives aimed at modernizing the country's electricity sector and promoting investment in new infrastructure: strengthening the MEM, the continuation of the competitive bidding processes, and the design and implementation of tenders for new public-private associations for expanding transmission lines. Significant positive impact on the deficit electric transmission lines in Mexico would be observed. However, as it has been described in this paper, Mexico's federal government is neglectful in using current cost-efficient tools for boosting the sector and the economy. Far away from ideological discussions, the reality is that current energy policy is not making the economy thrive.

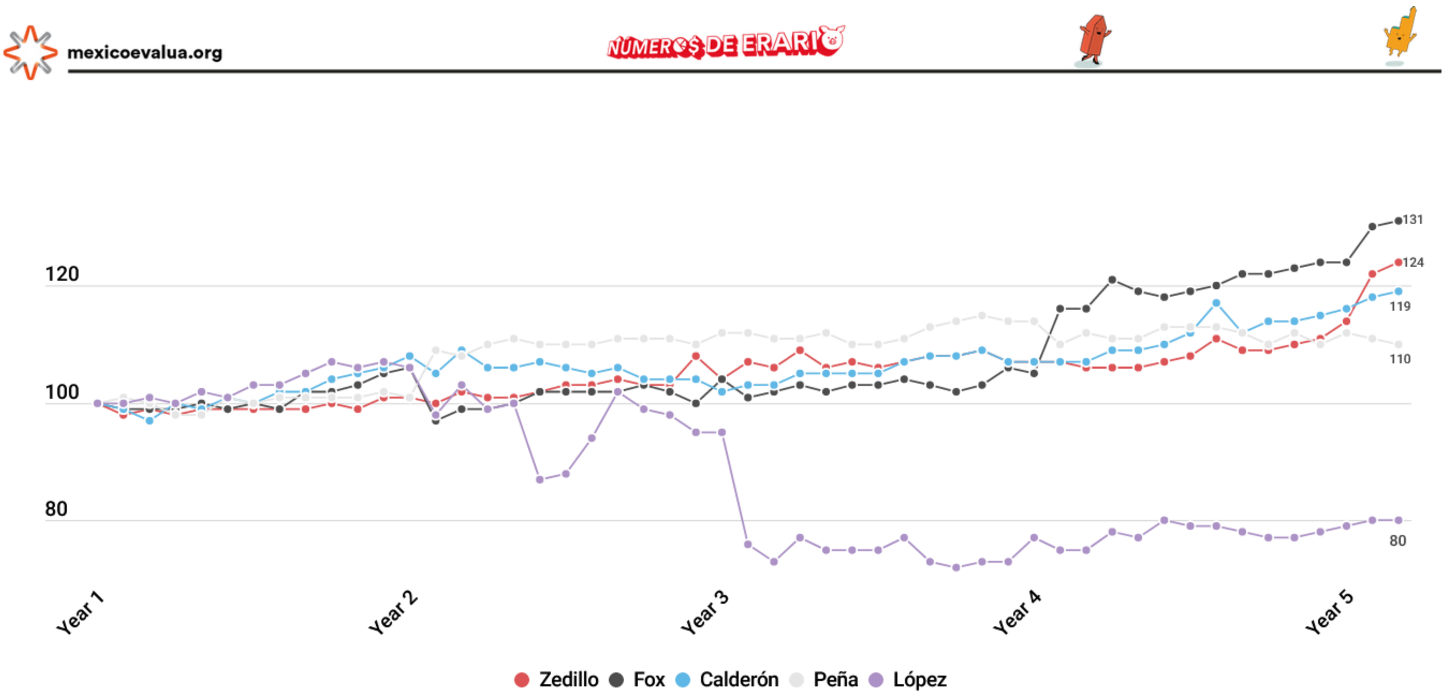
Let's look at some numbers.

Observing the dynamics of industrial activity in the electricity sector registered by Instituto Nacional de Estadística y Geografía (INEGI) as the entire supply chain of electricity (generation, distribution, transmission, and commercialization), inspired by the ideas of economist Carlos Ramírez (2023), México Evalúa's team displayed data from the Monthly Industrial Activity Index (Base = 2003) of that sector. México Evalúa converted it to base 100, whereas the first year of each administration = 100, that is, a starting point, and compared said activity during the first 51 months of each administration since President Ernesto Zedillo (1994), during which the first legal reforms opened the electricity sector to private investment. The results are clear: the worst performance corresponds to the period corresponding to the current administration, which is now in its fifth year of government.

Overall, the industrial activity of generation, transmission, and distribution of electricity is essential to modern society, as it provides the energy needed to power homes, businesses, and other facilities. It is also an important driver of economic growth, as it creates jobs and provides essential services to consumers. One interpretation of this decline could be attributed to the slow down of the economy observed during the

Covid-19 pandemic (years 2-4). Nevertheless, according to the Mexican Secretary of Energy, in 2020, the national gross consumption of the National Electric System (SEN) was equivalent to 315,968 GWh, which means it slowed down, registering a decrease of 2.76%, compared to 2019 (Sener, 2021; p.38). Therefore, a deep slowdown in electric industrial activity is not consistent with the degree of diminishment the demand depicted during the critical period of the pandemic.

Figure 4: Industrial Activity Index. Generation, Transmission and Distribution of Electrical Energy in Mexico (1994-20231Q) Distributed per Year of Each Administration [First Year =100]



Source: INEGI (2023), Ramírez Carlos (2023)

Another hypothesis to explain the observed decrease can be pointed out to efficiency improvements within the system. However, given the fact that the federal government through regulatory coercion has hindered the development of renewable energies in the industry, and that the electricity sector has stagnated due to a significant level of judicialization, it is difficult to explain from that perspective the downward slant of the industrial activity index for electricity during the current administration. Moreover, according to CRE's official records on cost structures of the Mexican electricity sector, the average electricity generation costs of CFE plants are approximately double the generation costs of private plants (Admonitor, 2023; p.3). This efficiency relationship also rules out the hypothesis of a decrease in industrial activity, according to INEGI data.

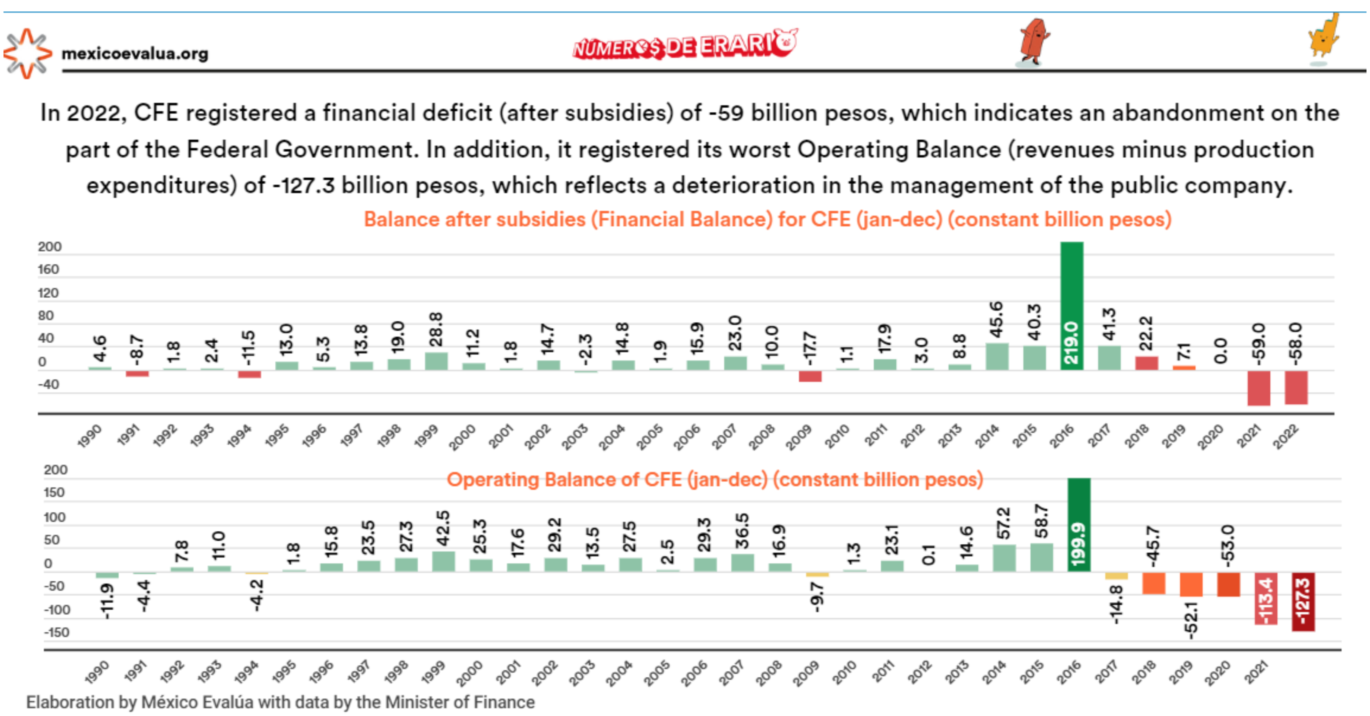
CFE: Market Power and Financial Performance

Historically, CFE has been ordered to sell energy below its production cost to make it affordable for households. In return, the Ministry of Finance has the obligation to give the CFE enough subsidies to compensate for its losses. However, the combination of low tax collection in 2021 and 2022, the overspending in priority government projects[4], and the rise in fossil fuels resulted in the inability of the Finance Ministry to maintain this arrangement.

In 2022, the CFE reported a programmable (operating) spending of 552.4 billion pesos, 4.5% (23 billion pesos) higher than in 2021 and 18% (84 billion pesos) higher than the average of the last administration (2013-2018). This situation was caused by higher gas prices and pension costs. On the contrary, the CFE's own revenues were only 425 billion pesos, 2.4% (9.9 billion pesos) higher than in 2021 but 17% (88 billion pesos) below the average of the last administration. In historical perspective, CFE's revenues have fallen, but its expenses continue to rise.

The above combination of factors caused the CFE's operating balance[5] to fall into a deficit of -127.3 billion pesos, 12% (13.9 billion pesos) higher than in 2021, and the worst on record since 1990. It should be noted that from 2013 to 2018 such a balance recorded an average surplus of 45 billion pesos, but during the current administration, an average deficit of -86.5 billion has been recorded. Although the deficits began in 2017, there has been a clear rise in recent years.

Figure 5: Balance after Subsidies (Financial Balance) for CFE (jan-dec) (constant billion pesos)

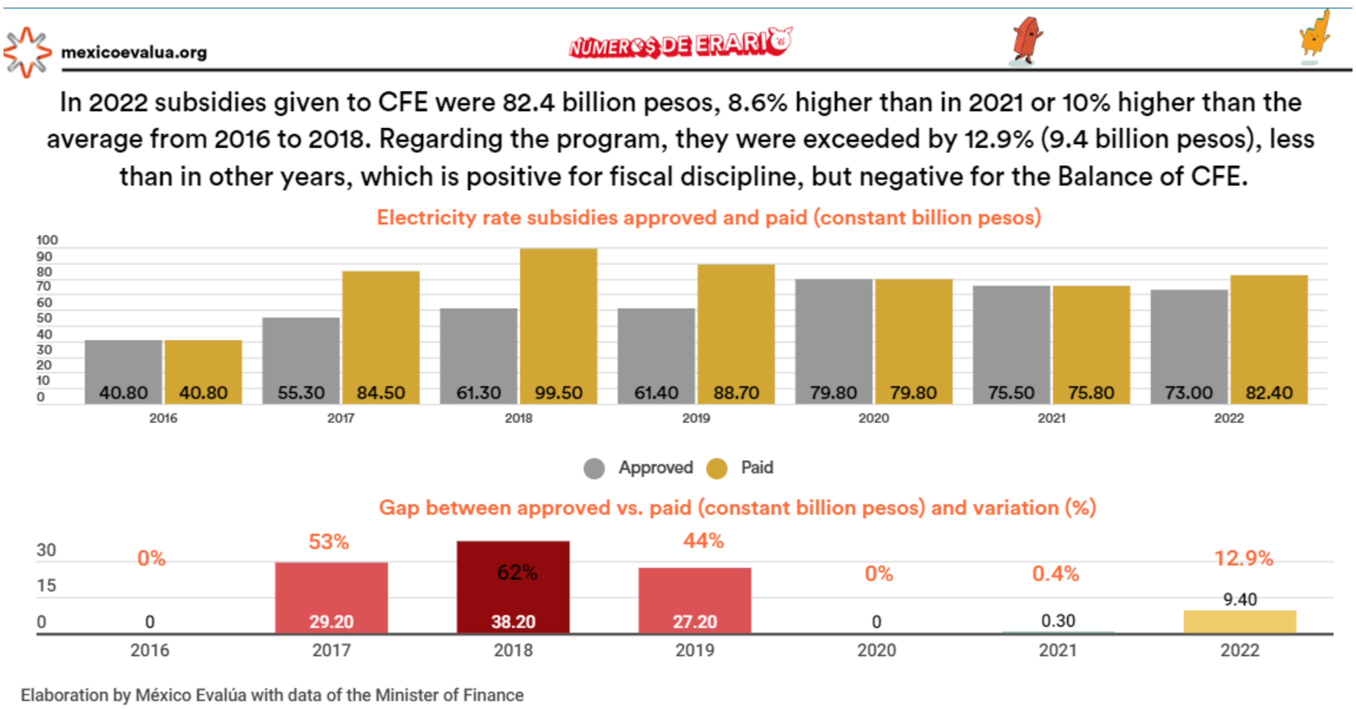


4. For example, the Mayan Train, the Dos Bocas Refinery or the gasoline subsidies.
5. The operating balance is the difference between CFE's own revenues from the sale of electricity minus its operating expenses, excluding debt service payments. If this balance is negative, it means that the company is not profitable on its own.

Due to the fact that CFE sells energy below its production cost, it is allowed to have operating deficits. In 2022, the Ministry of Finance and the CFE set a target for the operating balance at -43.4 billion pesos. In other words, an operating deficit had been accepted, but limited. However, this balance closed at -127.3 billion pesos, three times more (83.9 billion pesos) than estimated. In fact, from 2019 to 2022, the operating deficit has been four times (-58 billion pesos on average) higher than estimated, while in the previous administration there was an average surplus 1.9 times (25.5 billion pesos) higher than estimated.

Because the operating deficit in 2022 was so high, government transfers were not enough to achieve a neutral financial balance[6]. In 2022, the subsidies transferred to CFE reached 83.3 billion pesos, 8.6% (6.5 billion) more than in 2021, or 10% (7.4 billion) above the average from 20167 to 2018. It is worth to note that the 2022 subsidies spending exceeded the approved budget by 12.9% or 9.4 billion pesos. This additional spending was not inconsequential, as it was equivalent to the budget of the Humans Right Commission, Antitrust Commission, Federal Telecommunications Institute, and National Institute of Transparency combined.

Figure 6: Electricity Rate Subsidies Approved and Paid (constant billion pesos)



However, in 2022 the CFE's balance after transfers (financial balance) fell to a deficit of -57.9 billion pesos, 1.7% (1.1 billion pesos) less severe than the one observed in 2021 (-59 billion pesos): the worst since 1990. However, if the Ministry of Finance had not exceeded its budget in subsidies for the company in 2022, the energy company's deficit would have reached -67.3 billion pesos, and would have set a new record in equity loss.

6. Financial Balance, also known as balance after transfers, takes all of the company's revenues (including subsidies) minus all of its expenses (including debt repayment). If the balance sheet is negative, it means that the company is not profitable even with government support, meaning it has to borrow money to operate.
7. Since 2016 a new methodology was established to account for and program the federal government's subsidies to the CFE.

In any case, the financial balance goal for 2022 was zero; in other words, the Ministry of Finance had committed to rectify all CFE's operating losses through subsidies, and to ensure that the company closed with a neutral balance. However, conditioned by a series of fiscal pressures, such as the gasoline stimulus, the reduction of taxes to Pemex (the national oil company), and the overspending in priority projects, the Treasury was once again unable to fulfill its purpose for the second year in a row.

Financial neglect towards the CFE is new. It should be remembered that in 2017 and 2018, the CFE fell into operating deficits of -14.8 and -45.7 billion pesos respectively, but the SHCP had a commitment to bring the CFE to a financial surplus of 40 and 22 billion each year. To meet the 2017 target, the government had to overexert its budget in subsidies by 52% (29 billion), and by 62% (38 billion) in 2018. Although questionable, it is clear that in the last administration the CFE was a priority in spending.

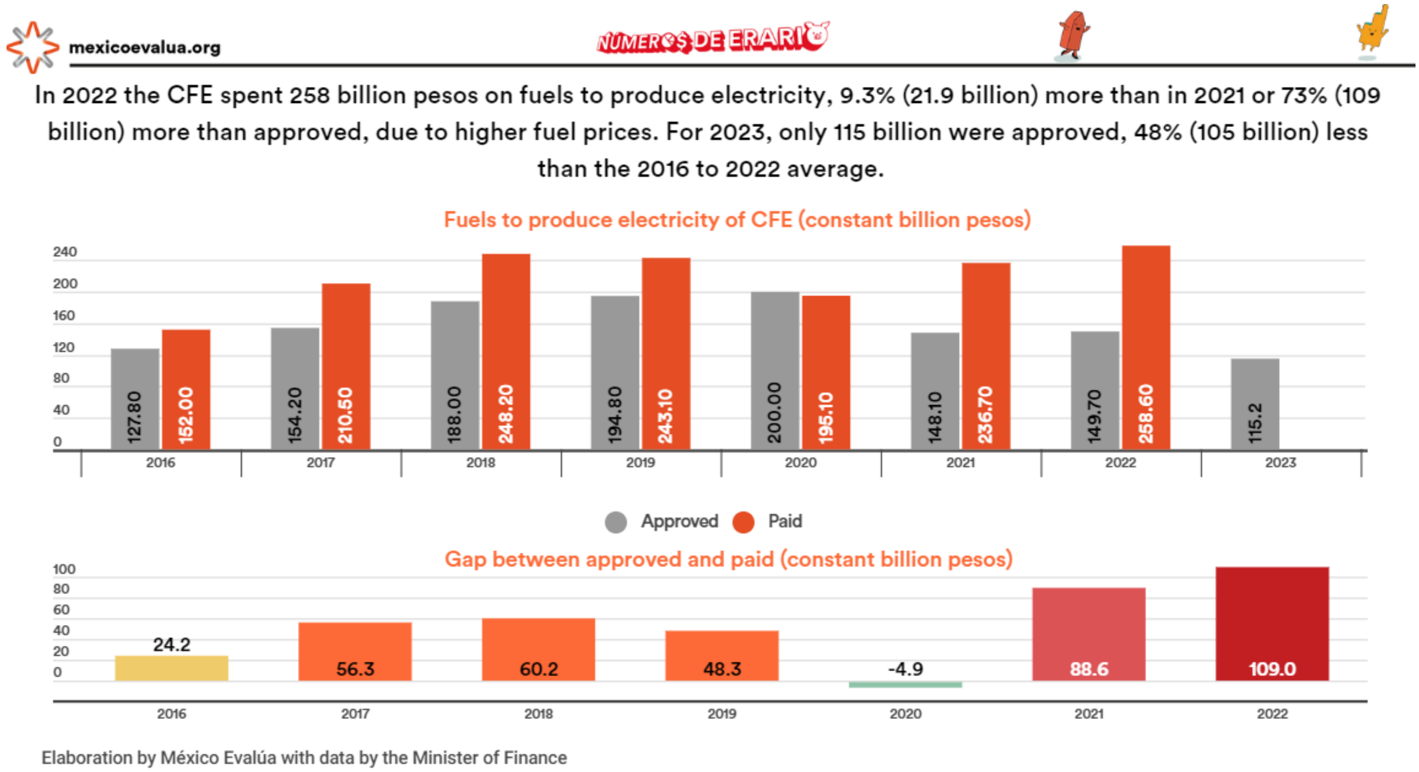
Needless to say, electricity tariff subsidies should be limited, as they don't benefit the poorest sectors in Mexico. However, in the short term, the Ministry of Finance should avoid further deterioration of the CFE so that a company must reach its financial balance goals in order to limit its indebtedness. It also must allow higher investment spending to improve its productivity and, in the future, stop depending on subsidies to survive.

To achieve this goal, better budget planning is needed. One of the main financial problems of both the CFE and the Ministry of Finance is that the company's operating costs are systematically underestimated, especially its fuel and pension expenses. By underestimating the CFE fuels and operating costs, what is actually underestimated is the operating deficit and the subsidies needed to get the CFE to a neutral financial balance. By doing so, the Ministry of Finance can program more resources into other programs during the budget discussion and appeal to other political and social sectors. This also means that in order to obtain the financial support it needs, the CFE depends on other programs being cut or on government revenues being much higher than estimated. In 2021 and 2022, those circumstances were not met.

From 2019 to 2022, the CFE exceeded its operating expenditure by 15% (66 billion pesos). In fact, only in 2020, due to the unexpected plunge in fuel prices, the company managed to achieve its goal, spending just 0.4% (1.9 billion pesos) below the target. However, in 2021, the excesses returned, with a current expenditure of 522 billion, 22% (95 billion) higher than approved. By 2022, 542 billion were spent, 26% (111.6 billion) more than approved: the largest gap in recent years.

Clearly, the deficit is due to overspending in fossil fuels to produce electricity. From 2019 to 2022, overspending in fuels averaged 39% (60 billion). It is noteworthy that in 2022, an expenditure of 149.7 billion had been approved, but 258 billion ended up being spent, 173% more, or 109 billion in excess, enough to quintuple the Electoral National Institute (INE) expenditure for 2022 (19.5 billion). In 2023, only 115 billion were approved for fossil fuels purchases, 48% (105 billion) less than the average from 2016 to 2022. Therefore, we can foresee more financial imbalances.

Figure 7: CFE's Fuels Expenditure to Produce Electriciy and Gap between approved and paid (constant billion pesos)

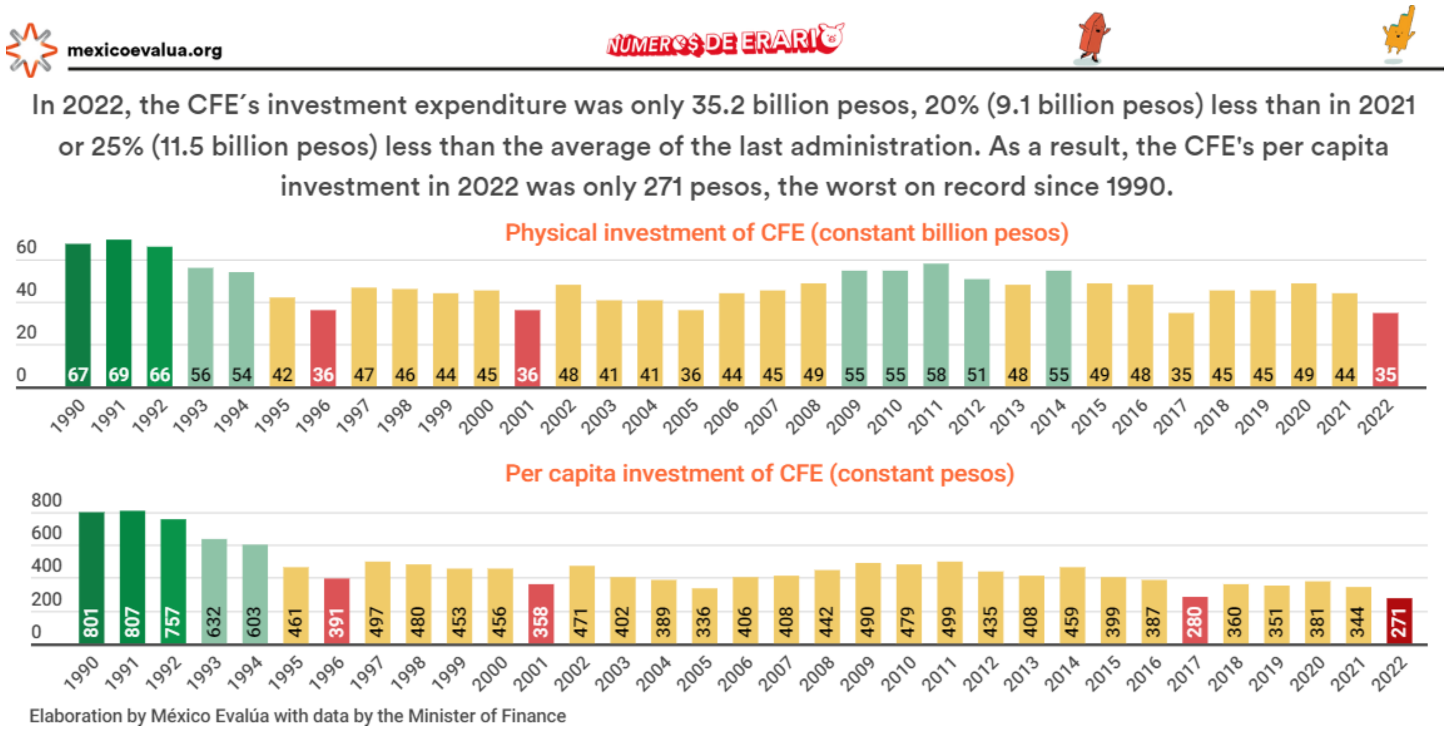


Another factor that has intensified the pressure on the CFE's finances is the payment of pensions. In 2022, 51.3 billion pesos were paid in pensions, 1.8% (900 million pesos) more than in 2021 and 18% (7.7 billion pesos) more than the average of the last administration. The 2022 expenditure also meant an overspending of 5% (2.5 billion pesos) compared to the approved budget.

In 2016, the CFE's Collective Labor Contract was renegotiated. Its main modification was the increase in 10 years of service to retire. Previously, workers could obtain a pension at 100% of their last salary if the worker (male) had 25 years of service and was 55 years old, or worked 30 years with no age limit. In the case of women, 25 years of service without age limit was the rule. This implied the possibility for workers to retire very young and the need to allocate more resources, for a longer period of time, to the payment of pensions. However, in 2020, the 2016 reform was abolished, increasing the pressure of pensions over the CFE again.

Finally, the budgetary pressure on fuel purchases and higher spending on pensions has led to a neglect of the CFE's investment spending. In 2022, only 35.2 billion pesos were spent, 20% (9.1 billion pesos) less than in 2021 and 25% (11.5 billion pesos) less than the average of the last administration. In addition, 26% (12.4 billion pesos) approved in the 2022 budget were not spent. As a result, the CFE's per capita investment was only 271 pesos, the worst on record since 1990. The CFE's low investment rates will prevent the company from becoming profitable in the long-run, prevent the provision of electricity at competitive prices, and cease its dependence on subsidies.

Figure 8: CFE Physical and Per Capita Investment (Constant Pesos)



VI. Conclusions

This article describes the pernicious effects of an energy policy that, given the failure to modify the Constitution for eliminating the principles of competition, has forced the circumstances to inhibit participation of the private sector in the electricity generation market, notwithstanding if such acts are deemed unconstitutional.

The energy policy in Mexico currently aims to return to the statist approach that dominated Mexico for practically the entire 20th century since the electricity industry was nationalized in 1960. But that vision clashes with reality by hindering investment and, therefore, economic growth, and by affecting public finances with a significant opportunity cost for the Mexican population.

Basically, Mexico's public finances are not robust enough to boost the sector with public money alone. The electricity sector necessarily requires the participation of the private sector. And, for this to happen, conditions of trust and legal certainty are required. Currently, there is a race to attract investment that is migrating from Asia and Eastern Europe: the famous phenomenon of "nearshoring". If Mexico seeks to take advantage of this opportunity, it needs to modernize its electrical system and offer energy that is not only cheap, but also clean and of good quality. The sovereigntist policy in electricity matters is not enough to cover such an expectation.

Within the contemporary history of Mexican energy policy, the great paradox continues to be present, notwithstanding the lack of definition impling important costs. Effectiveness, translated as good or bad results for the population, should be the compass, the guide through which energy policy should be built far away from ideological standpoints. For this reason, at México Evalúa, we hope this paper contributes to fortifying the understanding of what is happening in Mexico and its energy policy, as well as its effects on the economy.

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