



## I. The Objectives of the Reform.

The bill being submitted by the Federal Executive for the consideration of the Congress of the Union, proposes that Constitutional Article 27 return to state what President Lázaro Cárdenas left written, word for word, that is, to develop the oil industry under the stewardship of the State. Furthermore, the bill promotes development of a national electrical system based on technical and economic principles, under the leadership and regulation of the State.

The objectives of this Energy Reform are as follows:

- (i) **Improve families' economic situation:** Electricity and gas bills will drop in cost. With cheaper gas, it will be possible to produce better priced fertilizers, which will result in more economical foods.
- (ii) **Increase investments and employment:** New jobs will be created in the coming years. With new companies and lower rates, there will be roughly half a million more jobs in this 6-year presidential term and 2.5 million more by 2025, throughout the country.
- (iii) **Strengthen PEMEX and the CFE:** Greater freedom will be given to each company in its decisions toward modernizing and producing better results. PEMEX and the CFE will continue to be companies that are 100% Mexican and 100% state-owned.
- (iv) **Strengthen the stewardship of the State** as the owner of the oil and gas, and as regulator of the oil industry.

## II. Energy Reform of Oil and Gas.

The Constitutional level Energy Reform is necessary for two reasons: 1) to produce more hydrocarbons at a lower cost, allowing private companies to complement Pemex's investment through contracts for oil and gas exploration and extraction, and 2) to obtain better results under competitive conditions in refining, transportation and storage, allowing private companies to participate under the regulation of the Government of the Republic.

The country will be left with oil revenues, that is, all benefits obtained from oil and gas production, after cash is paid to companies for operating costs and capital, according to transparent, predetermined rules. In addition, all companies will have to pay the corresponding taxes and royalties.

Pemex is not selling or privatizing, it is growing stronger. Pemex will remain a 100% Mexican company. It is time to allow it to be joined by national and international partners to carry out new projects, without compromising our heritage. It will also be possible for individuals to participate in the refining, petrochemical development, transportation and storage of oil and gas and their derivatives, in order to produce more, cheaper fuel. This was the idea laid out by President Lázaro Cárdenas in his time.



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## 1. What is our petroleum industry like nowadays?

Mexicans today have two major challenges with respect to oil and gas: 1) to enable individual companies to share with Pemex their experience, technology and the risk, when it is convenient for Mexicans, and 2) to ensure enough power at a good price for proper national development.

Do we need private companies to complement the work of Pemex?

Although Pemex is an expert in extracting oil from the sea at shallow depths, there is significant oil in harder-to-reach places that requires technologies, experience and more investment to enable its extraction.

For example, projects to extract oil in deep water (sea area with depths between 500 and a 1,500 m) and ultra-deep water (sea area deeper than 1,500 m) are very expensive and very risky. The deposits that lie in the jurisdiction of the United States in the Gulf of Mexico are similar to those in our country. However, while the US already produces one million barrels of oil per day in deep water, Mexico has still not produced a single barrel of oil from such reservoirs.

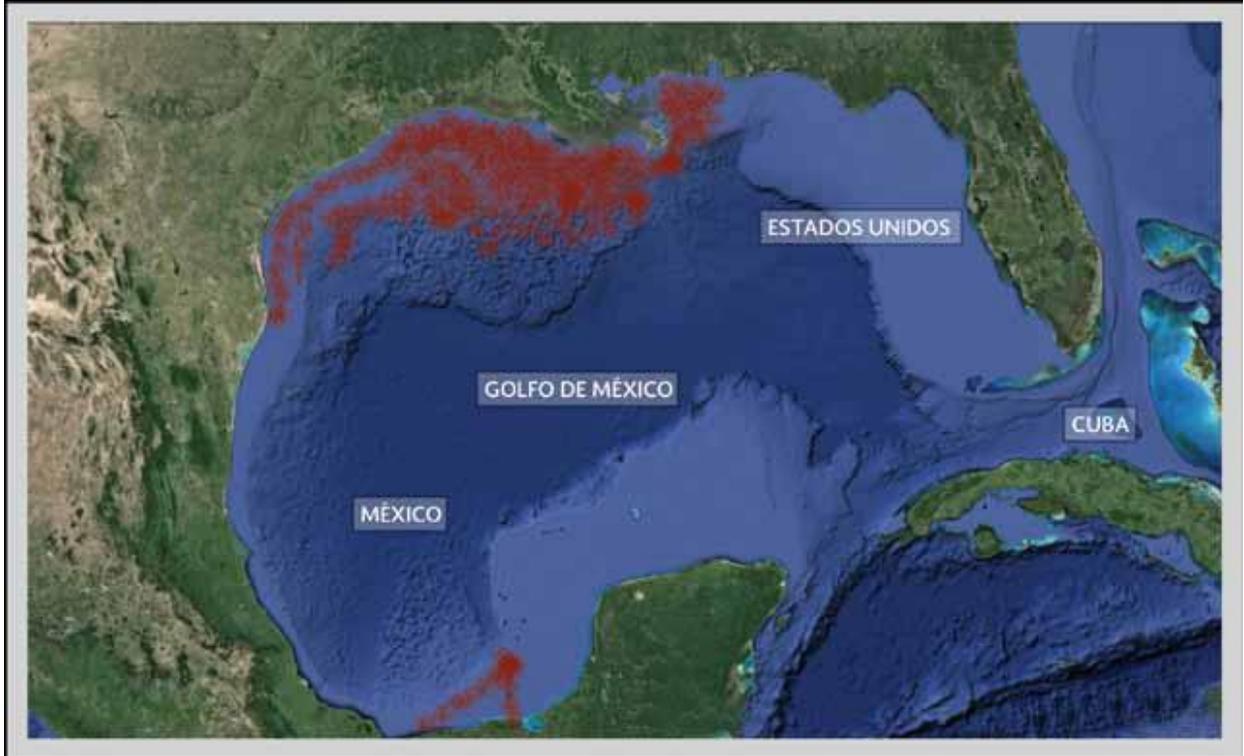
It has not been easy for the United States to achieve and sustain this deepwater production. Each year more than 100 wells are drilled in these fields. In 2012 alone, 137 deepwater and ultra-deepwater wells were drilled. This would not have been possible without the participation of more than 70 oil companies.

In contrast, in Mexico, although 2012 was a record year in terms of Pemex activity in deep water, only six wells were drilled, and for purely exploratory purposes, so there is still no oil being produced from deepwater drilling in Mexican waters.

The following map shows the Gulf of Mexico, the length of which is shared between Mexico and the United States. On the US side we can see the location of multiple wells drilled. On the Mexican side however, there is virtually no activity apparent.



Activity in deep and ultra-deep waters of the Gulf of Mexico, both in Mexico and the United States.



Source: SENER based on National Geographic

Nor are we adequately exploiting the oil and gas we have in shale rocks (oil- and gas-containing rocks that require fracturing to obtain their resources). In 2012, the United States authorized more than 9,000 wells to produce oil and gas from shale, while in Mexico only three were authorized. The same applies to the oil in mature fields (fields with increasingly less natural pressure to remove the oil); if adequate technology were properly applied, we could extract more oil and gas from these fields.

For example, in the following satellite image you can see the great expanse that covers the shale field in Eagle Ford in the United States. There is so much activity that at night you can clearly see the area's economic development. By contrast, on the Mexican side, which has the same oil and gas potential, there is no activity and the only light corresponds to lights from the cities in the area.



## Activity in the shale field of the Eagle Ford Formation in Texas



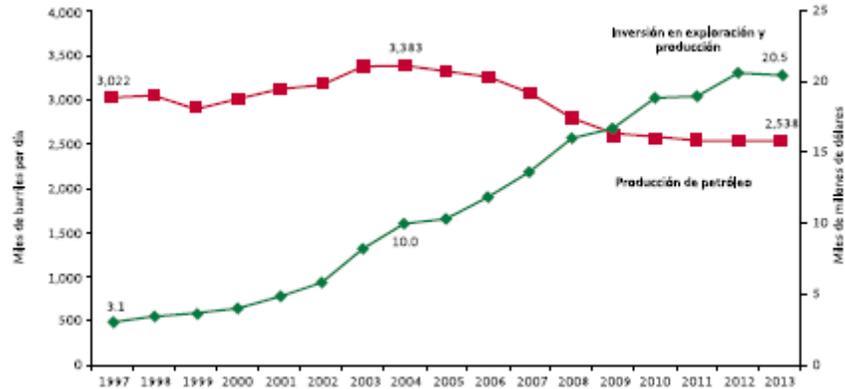
Source: SENER based on Nasa.

Mexico has oil and gas in deep and ultra-deep waters, as well as in shale fields and mature fields, but at present, according to the Constitution, only Pemex can search for and extract it. We need more businesses, technology and investment to further develop the national oil industry.

Moreover, the easy oil is running out in Mexico and worldwide. While we have earmarked more and more funds for Pemex, the country's oil production has declined, as shown in the following chart. In just eight years we have stopped producing about one million barrels of oil, even though we are investing record amounts in this activity.



## Investment in Pemex vs. Oil Production



2013 Data: January-April average in oil production.  
 Source: Pemex (Petróleos Mexicanos) Institutional Database, June 2013.

No company in the world all by itself extracts every type of oil or is an expert in everything, so we, like Brazil, Colombia and many other countries, must allow other companies that have the expertise to extract oil from deepwater and shale rocks, to complement the company that belongs to all Mexicans. In short, Pemex must be joined by individuals, when it suits the country.

We cannot ask Pemex to do everything and do it alone, and insist that where it cannot act effectively no one else may be allowed to do so. It is in our interests to have other companies share with the Government the risks involved in extracting oil and gas from areas that have not been studied.

Why is it necessary to ensure the energy in the country? Is there a risk of having no energy?

With respect to gasoline and diesel, the Constitution states that only Pemex can produce them, so if Pemex does not produce enough, no one else can do so. As such, we have to import 49% of the gasoline we use. Although we export much of our crude oil, we have to import it already processed as fuel.

The same applies to the gas. Pemex production is insufficient, so 33% of the gas we consume is imported. We have even come to the point of limiting the industry's gas consumption. In addition, 65% of the petrochemicals consumed nationally come from abroad.



Therefore we must strengthen the exploration and extraction of oil and gas, as well as refining and the national petrochemical industry, with the participation of private companies, to ensure that we have sufficient fuel and at fair prices.

## 2. Content of the Oil and Gas Energy Reform.

The proposed oil and gas energy reform comprises the following:

- a) That Constitutional Article 27 would revert to stating what President Lázaro Cárdenas left written, word for word, following the petroleum expropriation.

Mexico's first major reform energy was driven by President Lázaro Cárdenas. The spirit of Cárdenas' reform was nationalistic certainly, but also modernizing, visionary and pragmatic. Its key element was that it ensured ownership and guidance of the State in the control of hydrocarbons, while considering private sector participation in various activities.

The model he conceived was based on the exclusivity of state ownership of underground resources; the suppression of individuals' rights to oil and gas through concessions; the incorporation of private contracts to explore and extract under the conditions established by the nation, and the possibility that individuals would undertake refining and transportation activities at their own cost, among other concepts.

The model promoted by President Lázaro Cárdenas does not correspond to the current Constitution, which is the result of subsequent reforms. Therefore, reverting to the original Cárdenas design, which is the reason this bill is being presented to the Assembly, involves a necessary constitutional amendment.

- b) Strengthening Pemex, in giving it greater freedom and an organization that strengthens it as a productive, modern state-owned company: the pride of many generations.

The Energy Reform will enable Pemex to concentrate on the oil industry's substantive activities. The basis of the restructuring is to form a single Pemex by eliminating duplications generated by having four Subsidiaries, strengthen support functions for operations, and increase transparency in the creation of value in each of its activities.

Pemex's Subsidiary Bodies will be integrated into two divisions: **Exploration and Production**, focused on the extraction of hydrocarbons (oil and gas), from the incorporation of reserves to delivery for processing or end use, and **Industrial Transformation**, aimed at processing oil and gas to produce fuels, oil-bearing products and petrochemicals.

Centrally, the current areas of Administration, Finance, Operations, Legal Affairs, Information Technology and Business Processes will remain. To enable the use of synergies and eliminate duplication, areas of Procurement and Logistics will be created. Centralized procurement of critical supplies will allow for better purchasing conditions, greater transparency and efficient communication with suppliers. Links with national suppliers will be strengthened. Integrating logistics areas paves the way for maximizing



synergies and provides transparency in costs associated with the movement and storage of hydrocarbons.

With the integration of four Subsidiaries in two divisions, Pemex transfer prices and duplications will be eliminated without losing economic and operational control of core activities.

- c) The Tax Reform will establish a new fiscal regime for Pemex with conditions similar to those now held by other companies in the world. This will allow it to be more competitive, with greater resources for investment.

One of the pillars of the Energy Reform is the strengthening of Pemex. In this regard, we propose to redefine the relationship between Pemex and the Mexican state, from a narrow view as a generator of revenue in the short term, to a broader, more long-term perspective. The new fiscal regime that will be proposed for Pemex as part of the Tax Reform, will be consistent with this change in approach.

Today, the tax regime for Pemex is supported by a rigid schedule of fees, which are determined without fully recognizing the investment needs of the company. In other countries, such as Brazil, Colombia and Norway, national oil companies pay more moderate contributions than Pemex pays today and then, depending on the return on investment, there is greater flexibility in making the decision whether to reinvest the surplus in the company itself, or transfer it to the treasury.

The proposal to be included in the Tax Reform will be aligned with Pemex's need to be more flexible to obtain better results. This will involve a paradigm shift, with two essential components: first, a royalty payment lower than at present and, second, the surplus from the payment of royalties will be handled flexibly and can be reinvested in the business or part can be transferred to the budget like a dividend that could be used for spending on schools, hospitals, or water and road infrastructure. This new configuration will have Pemex receive tax treatment comparable to other oil companies in the world. The proposed configuration, unlike the current one, will align the incentives between Pemex and the Government of the Republic, while allowing the company to be more competitive.

- d) Promoting greater transparency and accountability in the oil sector, through the institutional strengthening of the Government of the Republic and its decentralized agencies, the National Hydrocarbons Commission and the Energy Regulatory Commission.

If this constitutional reform is approved, it will be possible to effect modifications in secondary legislation in order to develop a model that ensures and strengthens the Nation's control over activities in the hydrocarbon sector, encouraging greater transparency and accountability therein.

The amendment establishes that the Government of the Republic shall lead petroleum activities, by expanding the capabilities of the Ministry of Energy and its decentralized

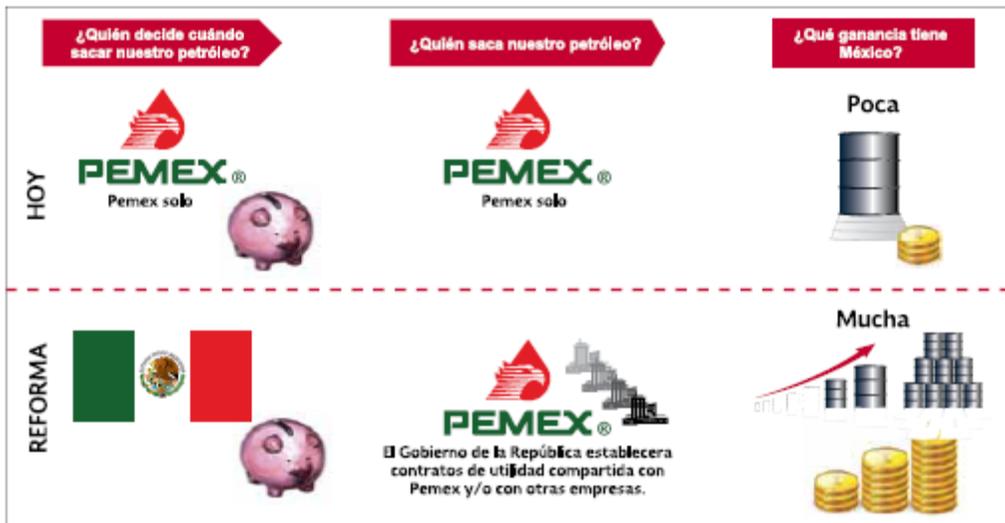
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bodies, the National Hydrocarbons Commission and the Energy Regulatory Commission.

- e) The reform proposes that the Government of the Republic award shared utility contracts to Pemex and private companies to extract oil and gas. Furthermore, the Government will award permits to Pemex and private businesses for refining, petrochemicals, transportation and storage of oil, gas and petroleum products.

First, we propose a system of contracts for exploration and extraction of oil and gas granted by the Government of the Republic. These contracts may be awarded to Pemex alone or in partnership with individual companies, as well as to private companies that wish to participate in the sector. This will allow Mexicans to have more control over our oil.

The following image shows the current situation of the oil sector in which Pemex does everything. This makes it difficult to extract the oil that is needed and obtain a good profit. With the reform, the Government of the Republic will decide when to extract oil and gas and who will be responsible for the extraction. This will yield greater profits to benefit the country.





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Second, the reform provides for the participation of private companies in the areas of refining, petrochemicals, storage and transportation of oil and gas and their derivatives.

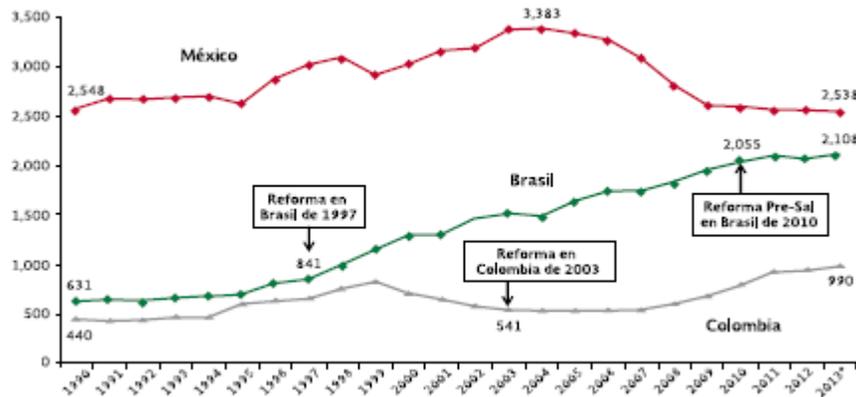
Finally, a national policy would be established to promote purchases from domestic suppliers in the hydrocarbon sector, in order to develop the Mexican industry and create added value. Priority will be given to creating supply chains that would reduce costs through greater national integration of supplies.

### 3. Benefits from the Energy Reform in Oil and Gas.

Reforms in Colombia and Brazil give clear indication of what can be achieved by giving the oil and gas sector appropriate rules. Thanks to these reforms, oil production has increased significantly, which contrasts with the fall in Mexico's production.

In Brazil, 841,000 barrels per day were produced prior to the 1997 reform. Fifteen years later, Brazil has nearly tripled its production. Following the energy reform the country now produces 2.1 million barrels per day.

Oil Production in Mexico, Brazil and Colombia  
(Thousands of Barrels per Day)

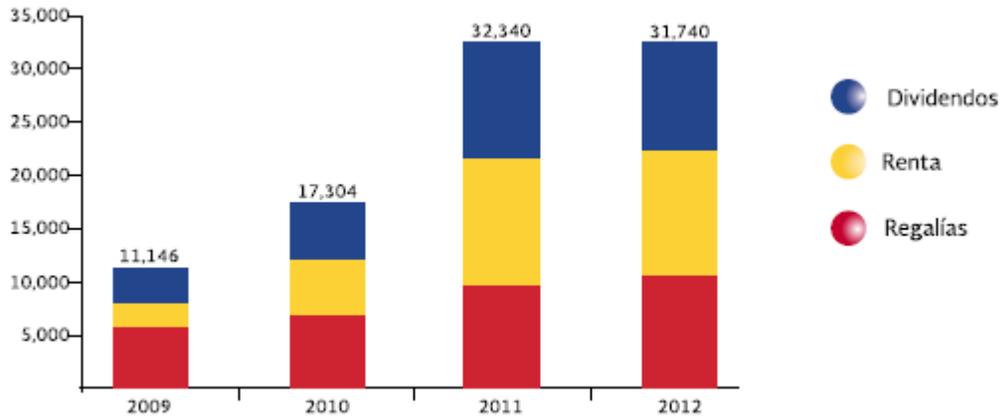


\*January-April 2013.  
Energy Data Management. Energy Department, USA, 2013.

On the other hand, energy reform in Colombia has led to nearly doubling its original production.



Oil Revenues generated by the energy sector in Colombia  
(Billions of Colombian Pesos)



Source: Ministry of Mines and Energy of Colombia, 2013.

In the case of Mexico, investment obtained following the passing of this bill will enable the country to consolidate a hydrocarbon model that is sustainable in the long term, taking into consideration the welfare of future generations.

### Objectives of the Hydrocarbon Policy.

1. Achieve replacement rates for proven oil and gas reserves that exceed 100%. This means that the increase in production would be accompanied by the discovery of an equal or greater volume of reserves.
2. Increase oil production from 2.5 million barrels per day currently, to 3 million in 2018 and to 3.5 million in 2025.
3. In the case of natural gas, production would increase from the 5.7 billion cubic feet per day currently produced, to 8 billion by 2018 and to 10.4 billion by 2025.

The reform in Mexico would produce the following results:

- Mexicans will have sufficient fuels, under competitive conditions.
  - In particular, the price of gas will drop, allowing for domestic fertilizers at better prices, which will result in cheaper foods.
  - Cheaper, more abundant gas will also make it possible to reduce the price of electricity bills.



- The Mexican economy will grow nearly 1 percentage point more in 2018 and approximately 2 percentage points more by 2025, above what has been predicted until now.
- Additionally, nearly half a million new jobs will be created by 2018 and 2.5 million more by 2025.
- Pemex will once again be one of the world's top oil companies.
- Increased production of oil and gas will expand the country's budget: the additional revenue will be earmarked for education, reducing poverty, improving public health, to for building more highways and roads and expanding water services.

### **III. Energy Reform in Electricity.**

The Energy Reform will also help families, businesses and industry in Mexico to pay less on our energy bills. This Constitutional Reform is being proposed in order to modernize the electricity industry and generate electrical energy more cleanly.

#### **1. How is our electricity sector today?**

At present, the electricity industry is facing five serious problems:

- a) High electricity rates. The cost of electricity is high and is affecting the pockets of Mexican households, small and medium enterprises and traders, slowing job creation in Mexico. Compared with the United States, our prices are more expensive: for each dollar they pay, we pay, on average, 1.25. This is despite the high fiscal subsidy is spent annually on lowering rates.
- b) Limitations to electricity production. Although under certain programs, individuals and private companies can already generate electricity, the benefits of cheaper generation remain in the hands of few.
- c) Lack of an impartial arbiter to decide which electricity is sold. Currently, CFE is both the electricity generator who decides which plants to take electricity from, and the one who sells to end consumers. It is obliged to be both judge and jury, having to choose between the electricity generated by its own plants and the electricity generated by individual companies, which may even be cheaper.
- d) Problems using cleaner energy. It has not been possible to increase the use of natural gas to generate electricity due to the shortages that exist, although it is up to six times cheaper than other fuels and is less polluting. Additionally, there are barriers to developing renewable energy such as wind, solar and small hydro energy.

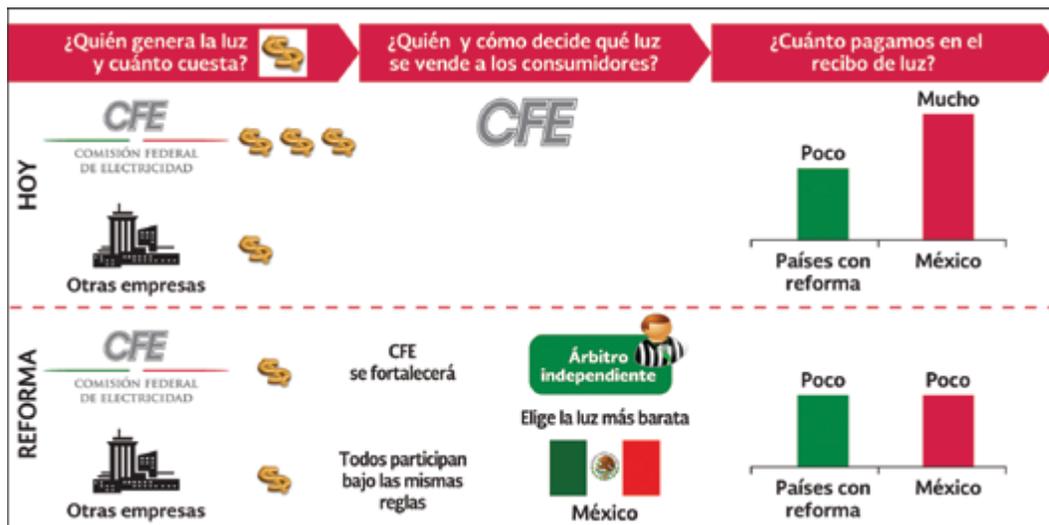


## 2. Content of the Energy Reform in regard to Electricity.

Reform of the Electrical Sector proposes the following:

- a) Article 27 will be reformed to allow private participation in power generation. With the proposed reform, there will be a greater supply of electricity at a lower cost, for the benefit of all users, including households and micro, small and medium enterprises, which are generating three out of every four jobs in the country
- b) The State shall maintain exclusive control over the National Electrical System, as well as the public service of the transmission and distribution networks, ensuring access to them by all electricity producers. With this model it will be possible to acquire the cheapest energy in blocks from each producer.
- c) The Federal Electricity Commission will be strengthened through greater operational and organizational flexibility, which will help to reduce costs. In addition, the Commission will be strengthened in being allowed to compete to recover large users who buy more electricity, and will be given the necessary tools to enable it to reduce energy losses, theft and non-payment.
- d) The Ministry of Energy's powers in terms of planning and stewardship, and those of its decentralized agency, the Energy Regulatory Commission, will be strengthened.
- e) The Energy Reform is also a Green Reform, which favours greater investment in technology development and the adoption of cleaner, cheaper energy sources, such as solar, wind and gas energy.

Below is an image that summarizes the reform of the electricity industry and shows that the reform will lower electrical bills because electricity will only be purchased from those who can produce it at a lower cost, and because losses along the productive chain will be reduced.





### 3. Benefits of the Energy Reform for the Electrical Industry.

- The most important benefit of the constitutional reform of the electricity industry will be that families, businesses and industry will pay less on their electrical bills due to a greater diversity of generation sources, including cheaper gas and renewable energy. At the same time, generation will be carried out by those who produce at lower costs.
- There will be an independent arbitrator to ensure that the electricity sold is the cheapest.
- The Federal Electricity Commission (CFE) will also be strengthened so that it can be a more autonomous and efficient company.

### IV. Conclusion

It is clear that if we do nothing with respect to energy in Mexico, we risk stagnating and not growing. Our country is fortunate to have natural resources that can be exploited for the benefit of Mexicans.

We are ready to compete and collaborate. It is time to modernize, to go back to the basic premise of President Lázaro Cárdenas and bring it into the 21st century in order to strengthen our national identity as a world power and improve living conditions for Mexicans now and in the future.