

# CFE: At the heart of energy reform

## INTERVIEW WITH DR ENRIQUE OCHOA REZA

DIRECTOR GENERAL, COMISIÓN FEDERAL DE ELECTRICIDAD (CFE)



**ENRIQUE OCHOA REZA** is Chief Executive Officer (CEO) of Mexico's Comisión Federal de Electricidad (CFE). He holds a Bachelor of Science in Economics from the Instituto Tecnológico Autónomo de México (ITAM), as well as a BA in Law from the Universidad Nacional Autónoma de México (UNAM). He also obtained Master's Degrees in both Political Science and Political Philosophy, as well as a PhD in Political Science from Columbia University in New York City. He began his professional career as an adviser to the Energy Secretary from 1997 to 1999. He is also a member of the Mexican Council on Foreign Relations (Consejo Mexicano de Asuntos Internacionales, COMEXI).

Six months after Mexico's Congress passed secondary legislation that will reshape the country's energy sector by allowing private sector participation in the generation and sale of electricity, the Federal Electricity Commission (CFE), which once held the monopoly on generation, is also being transformed.

One of the main implications of the energy reforms promulgated by the government of President Enrique Peña Nieto is the need for CFE to become a productive state enterprise. These are designed to allow it to compete on equal terms with large transnational corporations with years of experience in the power generation sector. In order for this to happen in a timely manner, operational changes and the appointments of professionals with a more modern attitude have been taking place since the start of 2014.

CFE has already established clear priorities for how it will address the issues facing the national grid and the industry at large. Projects need financing to be developed, technology needs to be updated,

innovation must be harnessed, and the country's considerable talent pool brought into the frame. Engaging in healthy strategic partnerships with the private sector will be needed for CFE to overcome the hurdles separating it from the finishing line, as CEO Dr Enrique Ochoa Reza explains.

"The energy reform establishes new opportunities for CFE and for the energy sector in Mexico overall. For the first time in the country's history, we have a competitive electricity market. Now multiple generators – both public and private – will converge in the marketplace," says Dr Ochoa.

Under the new framework, CFE will be given the authority to establish its own business model, enabling it to compete under equal conditions within the new marketplace and to participate, through subsidiaries, in different market activities. CFE will continue to be the supplier of basic retail services to residential customers and small and medium-sized commercial customers under regulated tariffs, while none of its assets will be privatised.

In terms of their impact on the electricity sector



Photo: CFE

overall, the reforms will leave three key public entities in the electricity sector: the Ministry of Energy (SENER), the Energy Regulatory Commission (CRE) and the National Energy Control Center (CENACE).

SENER and the CRE will supervise the wholesale power market. The CRE will also be responsible for setting tariffs for transmission, distribution and basic retail services, setting general conditions for market participants, issuing forms of interconnection contracts, and managing clean energy certificates. Dr Ochoa says operational control over the national grid and the transmission and distribution of electricity are considered strategic areas that will remain in the hands of the Mexican Government through state entities. However, the private sector will be able to participate in transmission and distribution of electricity through agreements and joint ventures with state-owned agencies.

CENACE, now separated from CFE, monitors the wholesale market to ensure fair competition and efficiency, and to prevent discrimination in the provision of access to the transmission infrastructure. Another fundamental goal of CENACE is to increase the transparency of CFE's operations.

Participants in the wholesale market are required to enter into an agreement with CENACE (the form of which is to be standardised by the regulator). They must also submit their operating costs and prices to CENACE, which will set the spot price for electricity. With this information, CENACE will

be able to assess whether electricity is being priced competitively in accordance with the rules governing the wholesale market.

#### **Public private partnerships**

The energy reforms allow for public-private partnerships throughout the electricity value chain. The CFE will assess these opportunities to determine where the combination of public and private knowledge and experiences can yield profitable results for both parties.

Although the distribution and transmission of electricity will remain under the control of the State, the government will be authorised, through productive state enterprises (most of which will be CFE subsidiaries), to enter into agreements or joint ventures with private parties to finance, install, maintain, manage, operate, and expand the transmission and distribution network.

“CFE is particularly interested in establishing partnerships to modernise its transmission and distribution networks in order to reduce its technical and non-technical energy losses. The reforms allow for modern contractual mechanisms on this matter, which can benefit both public and private investors,” says Dr Ochoa.

#### **Increased use of natural gas**

As part of the government's commitment to provide lower-cost energy, Mexico will continue looking

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Photo: CFE

Left: The Cerro Prieto geothermal power plant in the northern state of Baja California: the second largest geothermal plant in the world, with 570MW of installed capacity

Opposite: CFE's hydropower plant Chicoasén I, in the southern state of Chiapas. The company recently tendered and awarded the contract for the construction of Chicoasén II, five miles downstream

**Mexico, which has the ninth-longest pipeline infrastructure in the world, is expanding its 7,000-mile gas network by 75 per cent by 2018**

north to the United States to supply it with natural gas. Dr Ochoa says the natural gas projects are aimed at building additional capacity into the national pipeline network and increasing its reliability and redundancy.

The lack of transportation infrastructure has meant local industry has missed out on many of the benefits of the US shale-gas boom that significantly lowered North American natural gas prices in recent years. Mexico now has installed power capacity of about 54 gigawatts, nearly half of which is from natural gas, while about a fifth comes from costlier, dirtier fuel oil. The CFE, which generates much of its electricity using natural gas, has been forced to use more expensive, polluting fuels at its power plants to free up available natural gas for industry.

In fact, Mexico has the eighth-most-expensive electricity costs in the OECD. Not only do government electricity subsidies favour agricultural and residential users over industry and crowd out needed infrastructure investments, but Mexico's largest businesses have seen their power costs more than double over the past decade. They have risen from 6 cents per kilowatt/hour in 2003 to about 13 cents per kilowatt hour this year.

Mexico, which has the ninth-longest pipeline infrastructure in the world, is expanding its 7,000-mile gas network by 75 per cent by 2018, as imports increase to record highs thanks to the lowest gas prices in more than a decade. CFE has already awarded pipeline routes along the western mainland and is promoting eleven new natural gas lines to feed its power generation needs in northern markets. The eleven projects add 1,400 miles to the national gas pipeline system and represent a US\$5.2 billion investment. These pipelines will be privately built, run, and operated, says Dr Ochoa.

Developers who build a pipeline with greater capacity than the tender specified will have full commercial rights to market the gas, but CFE will have the right of first refusal in any particular commercial transaction.

Aside from the natural gas pipelines, the CFE will be commissioning seven power plant conversions from fuel oil to natural gas, new combined cycle natural gas-fired power plants (six have been announced since July 2014), as well as modernising transmission and distribution networks, says Dr Ochoa, adding: "The sound operation and management of these assets will enable our company to thrive in the new industrial arrangement." Overall, in the past six months, CFE has announced 35 strategic infrastructure projects amounting to a total investment worth 11.9 billion dollars.

For CFE, says Dr Ochoa, the way forward is clear;

"A large part of the country does not have natural gas pipelines. That means you cannot produce electricity with natural gas in much of the country. So the first step is to transport natural gas from the areas where it is produced to the areas where it is required. That requires a natural gas pipeline." The second and third steps, says Dr Ochoa, are power plant conversions from fuel oil to natural gas, and the construction of new combined cycle power plants. "This will create a true national system of natural gas pipelines to transport gas, with more backup for areas where there isn't enough," he adds.

#### **Looking to the future**

The energy reforms also give state oil company Pemex the opportunity to produce electricity through co-generation plants for its own needs, and to sell the surplus in to the electricity market. At the same time, CFE will evolve into a power and gas company, meaning that it will not only be allowed to participate in the electricity market, but also to commercialise natural gas, an activity that until recently was reserved solely for Pemex.

"In other words, CFE will compete in the natural gas sector and Pemex will compete in the electricity sector," explains Dr Ochoa, adding: "We are going to be doing so on level and competitive playing fields, with new and strengthened regulators. This competition, both nationally and internationally, will help us offer the best outcome to the consumer."

"We will be participating in a competitive market, so we need to make sure that our plants become more efficient, that we leave behind the use of expensive fuel, that we also establish the new infrastructure needed so that we can use natural gas instead of fuel oil to produce electricity," says Dr Ochoa, adding that CFE also intends to take advantage of the new framework to promote renewable energy from water, wind, geothermal, and solar.

He also highlights the importance of bringing in new talent to drive the reform process: "There has to be a cultural change within the company. We have to emerge as a new, productive company of the state. That's going to demand transformation within the company, and that's something we welcome."

To sum up, says Dr Ochoa, the outcome of the reforms will be that Mexico's electricity sector will operate within a new industry structure with robust incentives to promote competition and push generation costs down: "This is a unique opportunity for Mexico to completely overhaul the energy sector, and will affect every aspect of the industry, and most importantly, the new competitive environment will provide all consumers with lower prices and greater stability of supply." **F**