

MEXICO: A MARKET-BASED CLIMATE POLICY CASE STUDY

MÉXICO₂
Plataforma Mexicana de Carbono

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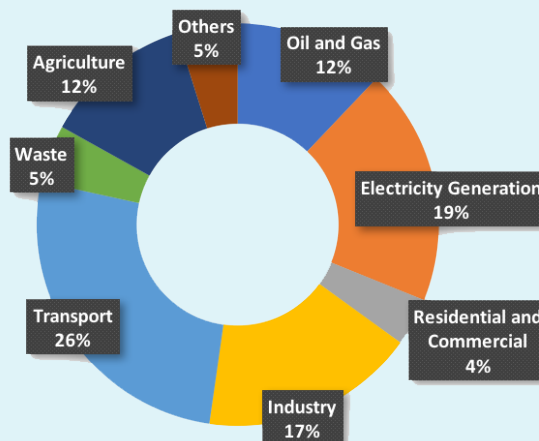
Mexico: A Market-Based Climate Policy Case Study



Background

Mexico is the world's 10th-largest emitter¹ and is expected to be the world's seventh largest economy in 2050². In Mexico, total greenhouse gas (GHG) emissions in 2013, excluding carbon sequestration, were 665 million tCO₂e.³ The biggest contributors are the transport, electricity generation and industry sectors. A detailed breakdown of 2013 emissions is provided by the graph below.

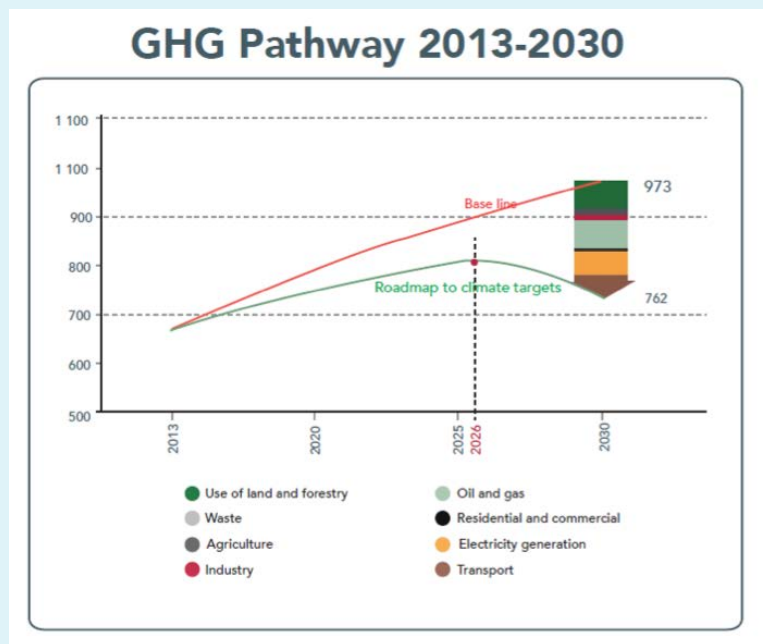
Breakdown of Mexico's GHG emissions by sector



1 CAIT Climate Data Explorer: <http://cait.wri.org/historical>

2 The Long View: How will the global economic order change by 2050? PwC. February 2017. <https://www.pwc.com/gx/en/world-2050/assets/pwc-the-world-in-2050-full-report-feb-2017.pdf>

3 Compromisos de mitigación y adaptación ante el cambio climático para el periodo 2020-2030. National Institute of Ecology and Climate Change, 2015. http://www.inecc.gob.mx/descargas/adaptacion/2015_indc_esp.pdf



Source : Data from the National Institute of Ecology and Climate Change

In April 2012, Mexico's Congress passed the **General Law on Climate Change Law (GLCC)**, which was signed into law in June of that year. The law sets a target for a 30% reduction in GHG emissions below business as usual (BAU) by 2020, and a 50% reduction below 2000 levels by 2050. While these targets are ambitious, they were set forth in the GLCC as dependent on an influx of international technical and financial support.

The GLCC created the National Climate Change System, composed of the Inter-Ministerial Commission on Climate Change (CICC), a Climate Change Council (C3), the National Institute of Ecology and Climate Change, Congress, States and Municipalities. The aim of the system is to involve all branches of government and make them responsible for climate change action. The law also provides the institutional framework to develop and implement climate policies.

While the GLCC became law at the conclusion of the previous presidential administration, the current administration (2013-18) has been tasked with implementing it. The climate planning instruments the current administration has published to date include:

- 1) The National Climate Change Strategy (ENCC) 10-20-40, which provides a broad short, medium and long term vision on climate action. The ENCC includes the development of economic instruments as one of the six key pillars to build climate policies; and,
- 2) The Special Climate Change Program 2014-2018, that provides a framework that links development and other national priority targets with climate mitigation and adaptation targets through specific strategies and actions from the federal government. The GLCC mandates the next administration to develop an updated Climate Change Program.

Building on the passage of a national climate change law, Mexico was the first developing economy to submit its Intended Nationally Determined Contribution (INDC) to the UNFCCC. Significantly, this INDC included non-conditional and conditional GHG mitigation targets, with the conditional target expressing further ambition under certain conditions. As per the INDC, **Mexico's Nationally Determined Contribution (NDC)** under the Paris Agreement explicitly calls for international, regional or bilateral market-based mechanisms to achieve rapid and cost effective mitigation. Mexico signed the Paris Agreement in April 2016⁴, and the country is now committed to its non-conditional target of 22% GHG emission reduction, compared to BAU, and the conditional target of a 36% reduction by 2030⁵ under the NDC. This will likely see Mexico's congress update the GLCC to reflect the new targets, which are now binding due to the Mexican Senate's ratification of the Paris Agreement on 21 September 2016.

⁴ Paris Agreement signature ceremony – list of representatives. UNFCCC, 22 April 2016. <http://newsroom.unfccc.int/media/632121/list-of-representatives-to-high-level-signature-ceremony.pdf>

⁵ Mexico INDC, 30 March 2015. <http://www4.unfccc.int/submissions/INDC/Published%20Documents/Mexico/1/MEXICO%20INDC%2003.30.2015.pdf>

Summary of key carbon pricing initiatives in Mexico

Carbon tax

In October 2013, as part of the fiscal reform package, President Enrique Peña Nieto put forward plans for a **carbon tax** on fossil fuel production. The initial tax was set at MXN\$39.80 (US\$3.50) per tCO₂e of fossil fuels, excluding natural gas, and instituting a price cap on some high carbon intensity fuels. All monies collected are directed to the central revenue collection. The fiscal reform legislation also included language for entities subject to the tax to surrender certified emission reductions (CERs) from Mexican projects in lieu of the tax. In November 2013, a voluntary carbon exchange, MÉXICO2, was established to trade carbon credits as a potential means to comply with the carbon tax. Compliance with the new carbon tax law began in January 2014; however, the rules to use CERs have not yet been developed, thus the tax can only be paid directly at present. According to estimates by the Ministry of Environment, the carbon tax has been responsible for an abatement of approximately 1.8 million tCO₂e per year.⁶

International markets

Mexico's international carbon market experience thus far has come primarily via the **Clean Development Mechanism (CDM) through which Mexico generated CER credits**. Mexico is currently host to the fifth-highest number of registered CDM projects, behind China, India, South Korea and Brazil, and has significant potential to expand its CDM project base. However, since the EU ETS has restricted eligible offsets from new projects to just those in Least Developed Countries (LDCs) since 2013, Mexican CDM projects have struggled to find sufficient demand, selling their CERs primarily in the local voluntary carbon market.

Mexico has also made **progress towards becoming a leader in global supply for jurisdictional REDD+ credits**. Since 2010, the federal and state governments have taken action to create incentives and build capacity for forest management, sustainable agricultural practices, and conservation. The National Forest Commission (CONAFOR) is leading the process to develop and implement the National REDD+ Strategy (ENAREDD+). This document has gone through an extensive consultation process and its final version is pending. The GLCC recognises state authority to implement state REDD+

programs and several states have also developed their REDD+ vision or strategies in coordination with CONAFOR. The 2010 MOU between Chiapas, Acre and California set up an expert working group to explore the technical challenges for establishing a mechanism for a crediting mechanism between California's carbon market and a jurisdictional (ie, national, state, or provincial) REDD+ programme.

The most recent development in México has been the start of a pay-for-performance initiative under the Forest Carbon Partnership Facility (FCPF), where the jurisdictional framework for REDD+ is being tested. Mexico is one of the most advanced countries in the FCPF pipeline and is negotiating an Emissions Reduction Purchase Agreement. After the implementation and verification of emissions reductions, the payment for performance will come. This initiative is intended to prepare countries for future potential compliance markets, such as California's or through other potential mechanisms like the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) under the International Civil Aviation Organization.

ETS development

The GLCC provides authority to design and promote the establishment and implementation of economic, fiscal, financial and market instruments related to climate change actions. This law enables the Ministry of Environment, with the participation of the C3 and Council, to establish a voluntary emissions trading system with the objective of promoting emissions reductions at the lowest possible cost.

- The GLCC mandated the creation of the National Emissions Registry (RENE), which is comprised of two main features: an emissions registry requiring mandatory emissions reporting from covered entities, as well as
- a voluntary emission reduction registry.

Both programmes could, in the future, help provide the basis for the development of an ETS in Mexico.

Under the mandatory reporting requirement established by REME, beginning in 2015 all entities emitting more than 25,000 tCO₂e/year had to report their emissions

of carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulphur hexafluoride (SF₆), perfluorocarbons (PFCs), hydrochlorofluorocarbons (HCFCs), nitrogen trifluoride (NF₃) and black carbon for the first time in Mexico. The scope of this inventory extends to direct and indirect emissions from both stationary and mobile sources. Roughly 3,000 facilities from a variety of sectors, including energy, transport, agriculture, services, industry, construction, tourism and government, are subject to annual reporting obligations. Reported emissions will be verified every three years by government-approved third party verifiers. This programme can potentially inform the development and implementation of an ETS in the future.

In 2014, the Mexican Ministry of Environment signed an MOU with the California Environmental Protection Agency and California Air Resources Board, focused on climate change, which included cooperative technical and policy work on MRV and carbon pricing. The two governments released a joint work plan the following year. On 31 August 2016, the federal government also signed cooperative MOUs focused on carbon pricing with California's existing and soon-to-be-linked partners, the Canadian provinces of Québec and Ontario, respectively.

The Ministry of Environment announced in August 2016 its intention in developing a compliance market starting with a pilot phase in 2018. However, details such as scope and other features are yet to be determined. The Ministry of Environment has also developed an MOU with MEXICO2- to collaborate on a voluntary carbon trading simulation exercise for companies in the Mexican private sector, with the aim of improving the private sector's familiarity with the mechanics of emissions trading and to help inform the public consultation process.

Mexico underwent a constitutional-level energy reform to both its oil and gas and electricity sectors beginning in 2013. Two important bills were part of this reform that potentially provide additional legal authority toward emissions trading in Mexico: the Law of Electric Industry in 2014, and then the Energy Transition Law (ETL), approved in Nov 2015. These laws make the generation of energy from clean sources obligatory and facilitate increased investment in clean and renewable technologies. Further laws and regulations

⁶ Mexico carbon tax: Semarnat presentation. 22 March 2017. https://www.thepmr.org/system/files/documents/Mexico%20Carbon%20Tax_PMR_march_2017.pdf

derived from these two pieces of legislation also establish a mandatory Clean Energy Certificates (CECs) market to start in 2018.

The ETL also established important authorities for the Ministry of Environment that could further facilitate the establishment of a cap-and-trade system in this sector: the authority to design

and implement instruments to foster and regulate the prevention, control and remediation of pollution from the sector, including GHG; and to elaborate norms that establish progressive emissions limits according to the type of generation and consider best international practices; and to establish flexible offsetting mechanisms to comply with the GHG emissions norms.

When an ETS is developed, it will have to be implemented alongside complementary measures such as the CECs market and the fossil fuel tax, amongst other policies.

Carbon price evolution

In the absence of an ETS, the only domestic policy tool that currently sends an explicit price signal to the Mexican economy is the carbon tax. As previously mentioned, the initial tax was set at MXN\$39.80 (US\$3.50) per tCO_{2e} of fossil fuels, excluding natural gas. The tax has since been adjusted annually for inflation, its current amount is MXN\$43.77 per tCO_{2e}. The tax rate was capped at 3% of the sales price of fuel, and collected MXN\$9.6 billion in 2014 and MXN\$7.5 billion in 2015.⁷ The table below offers an overview of the tax levels for different fuels.

TAX				
FOSSIL FUEL	Initial Proposal	Final Proposal	Difference (%)	2017
Natural gas	11.94 ¢/m ³	0		0
Propane	10.50 ¢/l	5.91 ¢/l	43.7	6.50 ¢/l
Butane	12.86 ¢/l	7.76 ¢/l	39.7	8.42 ¢/l
Gas (Regular & Premium)	16.21 ¢/l	10.38 ¢/l	36	11.41 ¢/l
Jet Fuel	16.21 ¢/l	10.38 ¢/l	36	11.41 ¢/l
Turbosine & other Kerosene	18.71 ¢/l	12.40 ¢/l	33.7	13.64 ¢/l
Diesel	19.17 ¢/l	12.59 ¢/l	34.3	13.84 ¢/l
Fuel Oil (Heavy & Regular 15)	20.74 ¢/l	13.45 ¢/l	35.1	14.78 ¢/l
Oil Coke	MXN\$189.85/ton	MXN\$15.60/ton	91.8	MXN\$17.65/ton
Mineral Carbon	MXN\$178.33/ton	MXN\$27.54/ton	84.6	MXN\$30.28/ton

⁷ 2015 and 2016 report. Mexican government. http://www.gob.mx/cms/uploads/attachment/file/145709/ReporteAnual2015_Retos2016.pdf

Commentary on market functioning

Looking forward, there are challenges surrounding the future implementation of emissions trading in Mexico. Ensuring quality, verified data in 2017 and establishing a robust starting point that also provides flexibility for future adjustments will be key to a successful pilot programme in 2018. Other important components to ETS policy design, such as public consultations and data-driven examination of market design implications and complementarity or integration with existing policy tools, will also contribute to a high-quality policy development process.

In absence of an ETS, it is worth looking at the experience in the voluntary market. Many companies in Mexico, including

two of the largest national airlines, Aeromexico and Volaris, have gained valuable experience through the voluntary carbon market. These lessons, for example on greenhouse gas inventories, long-term carbon management strategies and improved sustainability reports, have incentivised capacity building relevant for carbon markets and may facilitate the acceptance of a future ETS.

Policy continuity between the current and future (2018-24) administrations will also be important to expand a pilot phase into a cohesive national ETS that can link with other international markets. So far, political parties as well as likely presidential candidates have been silent on the issue of

carbon pricing for the upcoming election.

If Mexico chooses to link with other North American markets, as it has expressed the intention to do, some design choices may be narrowed in order to achieve sufficient harmonisation with existing markets. This can be particularly complex as most linkages have occurred between jurisdictions that share common political and economic features (Québec-California, EU-Switzerland, Tokyo-Saitama). In order for Mexico to achieve sufficient rigour to link with other North American markets, it must first address gaps in institutional capacity and the quality of emissions data.

What Distinguishes this Policy?

UNIQUE ASPECTS

1. Mexico's **GLCC enables, but does not mandate, the implementation of an ETS.** Mentions of emissions trading as a GHG mitigation tool are in the law, as well as the Ministry of Environment's authority to set forth sectoral GHG reduction programmes, and the law's emphasis on cost-benefit analysis and economic efficiency of mitigation measures probably favour such systems.

2. Mexico's NDC includes an unconditional commitment to cut GHG emissions to 25% below BAU by 2030, and explicitly mentions the development of international carbon markets as a mechanism to achieve deeper emission reductions.

3. By 2050, Mexico is projected to grow from the world's 11th-largest economy to the seventh. Such growth will require large scale and long-term infrastructural development. The right policy signals, such as a price on carbon, in the short-term could steer the country away from locking in carbon intensive, and likely less efficient, infrastructure and towards clean development and efficient technologies.

4.

The overhaul of Mexico's federal oil and electricity monopolies through constitutional and secondary law reforms, the implementation of the Clean Energy Certificates market starting in 2018, and the passage and implementation of the Energy Transition Law are significant prospects for making the energy sector cleaner.

5.

The passage of the carbon tax and the development of a new domestic offset trading platform on the Mexican stock exchange could serve as potential building blocks for emissions trading in taxed sectors. However it is still unclear what the scale and rules around the use of offsets under the tax law will be.

CURRENT CHALLENGES

1.

National legislation such as the 2012 General Law on Climate Change, which stipulates absolute emissions reduction targets, is a critical first step to achieving Mexico's ambitious targets, but **implementation and enforcement** will determine whether such laws are ultimately effective. Increased technical and financial capacity is key to Mexico's development of emissions trading as a robust and effective mitigation tool to achieve Mexico's climate targets.

2.

Many of the provisions of the Mexican Energy Reform have only recently been implemented. The extent to which Mexico takes advantage of the intersection between its sweeping energy reform and low-carbon development opportunities, particularly through the development of cap and trade, is not yet clear.

3.

While the initial National Strategy on Climate Change provided very general guidance, and the Special Programs on Climate Change provide more specific information and initiatives, the emissions reductions outlined in these policy guidance documents still leave significant gaps to achieve the full 2020 and 2030 targets.

Author Acknowledgements

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