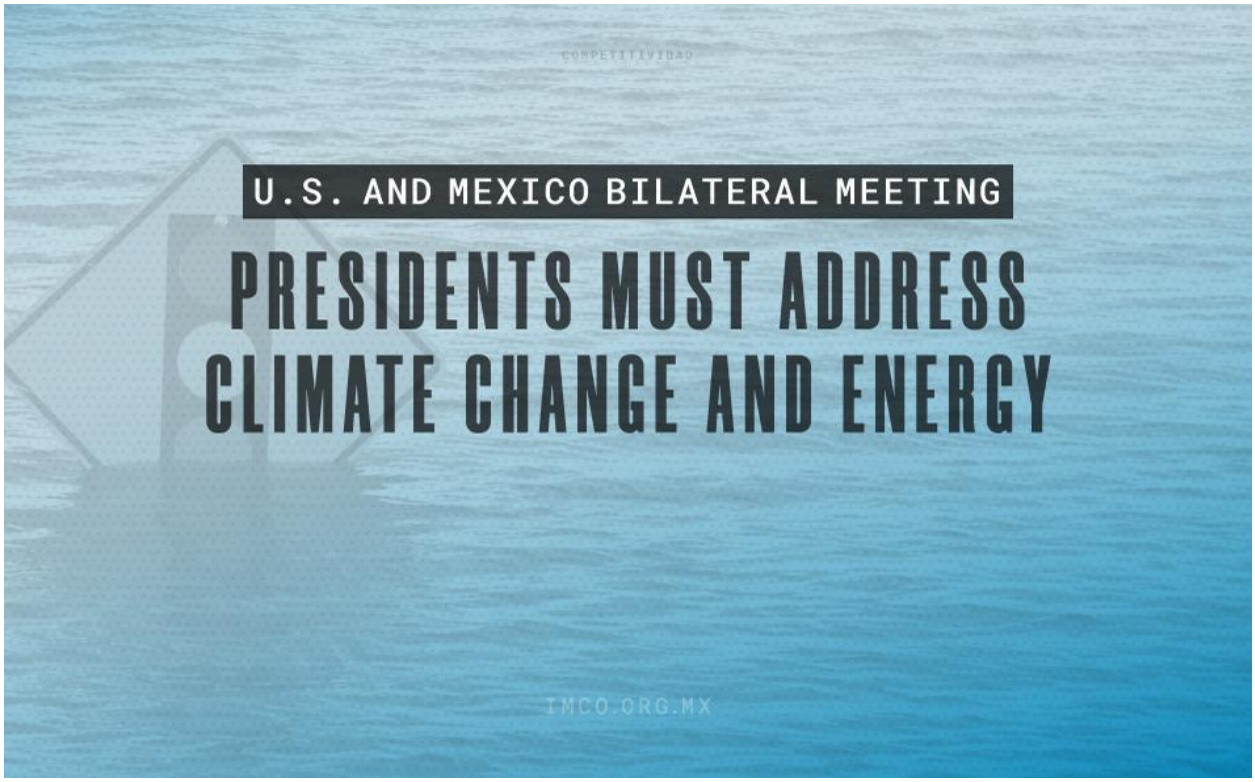

Mexico City, July 8th, 2022

The presidents of Mexico and the United States must address the energy and climate change agenda in Washington

On July 12th, Presidents Andrés Manuel López Obrador and Joe Biden will meet in Washington D.C. to discuss current issues in the bilateral relationship. At the **Mexican Institute for Competitiveness** (**IMCO**) we consider discussing **the energy and climate change agenda essential to the meeting**.

The meeting at the White House is an opportunity to put forward ambitious actions and a clear roadmap to accelerate the transition towards a more productive and sustainable North America. During the Major Economies Forum on Energy and Climate, the Mexican government proposed a ten-point policy agenda to mitigate climate change. **These actions, however, are insufficient –and even counterproductive– to mitigate climate change and promote Mexico's energy transition**.

1. **Modernize and repower hydroelectric plants to add 2,086 gigawatt-hours (GWh) per year of installed capacity**
   Key insights: Due to the current operative conditions and age of the power plants, as well as water scarcity in the region, **it is not feasible to significantly increase power generation with these plants even if the modernization plans are fully implemented**.[3] The National Electric System planning instrument (Prodesen) 2022-2036 envisages 434 megawatts (MW) of hydroelectric power generation additions between 2022-2025.[1] This represents only **1,521 GWh per year adjusted for plant factor**.[2] Moreover, in the last 7 years, the hydroelectric generation capacity grew only 1%. In 2030, Mexico **should have 54 GW of renewable installed capacity**. **The country is**

missing 19 GW, the hydroelectric repowering announced by the president is far from enough.

2. **Invest 2 billion U.S. dollars to reduce fugitive methane gas emissions up to 98%**
   Key insights: Pemex has a **poor track record on methane emissions control –flaring, venting and fugitive emissions–** in all its exploration, production and transformation processes. In 2016, the company was sanctioned by the National Hydrocarbons Commission (CNH) with a fine of 2.1 million pesos for not meeting the gas utilization goals in Ku-Maloob-Zaap.[4] **Gas venting and flaring must be differentiated from fugitive methane emissions**. Avoiding methane emissions has clear environmental and economic benefits, however, the technical complexity and cost of each process is different. Reducing venting and flaring by 98% is technically feasible in the short and medium term, whilst avoiding fugitive emissions implies large investments in modernization and maintenance in all transport, processing and storage processes throughout the gas value chain. **This challenge is unlikely to be achieved for 98% of Pemex's emissions in the short term**, so it must be addressed separately from the flaring and venting phenomenon.

3. **Produce 50% of vehicles with zero emissions by 2030**
   Key insights: Producing electric vehicles with zero polluting emissions using fossil electricity only shifts emissions from the vehicles to power generation plants. The Mexican government has linked the nationalization of lithium, a strategic mineral in the production of batteries, with the objective of producing electric vehicles. Nonetheless, the importance of electromobility in terms of climate change and energy transition lies in the country's electricity generation matrix. To be effective in reducing greenhouse gas (GHG) emissions, the increase in electric vehicles must be accompanied by an increase in renewable and clean generation. Without renewable energy, electric vehicles do not have a relevant effect on climate change mitigation. Considering that in 2021 **3 million vehicles were produced in Mexico**,[5] the commitment announced by the President implies that in 2030 we would have to manufacture **at least 1.5 million electric vehicles (considering that vehicle production remains constant over this period)**, a volume difficult to achieve in a period of 7 years without public policy that encourages and promotes change and investment. In addition, the President's commitment only addresses production and does not include any commitments to **increase electric vehicle sales in the Mexican market**.

4. **Develop a photovoltaic solar plant with 1GW generation capacity in Puerto Peñasco, Sonora**
   Key insights: Not only is the project **insufficient to meet Mexico's renewable integration goals**, but it is also located in a congested area due to underinvestment in transmission lines (4.1% of the CFE's total budget for 2022[6]) and a high density of photovoltaic solar plants (Sonora has 3.86 GW of authorized capacity for photovoltaic solar generation).[7] Mexico currently has 86 gigawatts (GW) of total power generation capacity. Adding 1 GW of additional renewable energy represents **1.2% of the country's total power generation capacity**. Therefore, because there is **not enough capacity to transport power to areas of higher demand**, prices tend to be low during the hours of solar generation in the area.

5. **Attract U.S. investment to install 1,854 MW of new solar photovoltaic and wind power capacity on the U.S.-Mexico border**

Key insights: Expanding the generation capacity along the U.S.-Mexico border is a decision that **makes sense and takes advantage of the renewable potential of the region**. However, projects of this nature have not materialized as a result of both the Energy Regulatory Commission (CRE) regulatory decisions and the energy policy promoted by the Energy Ministry (Sener) and the Environment and Natural Resources Ministry (Semarnat). Strengthening power transmission infrastructure in the region and expanding the grid is essential to integrate the renewable potential of the border region.

6. **Develop photovoltaic solar plants on the U.S.-Mexico border, as well as expanding the transmission grid with the purpose to export the additional power from Mexico to the U.S.**
   Key insights: Investments cannot be guaranteed when CRE has stopped analyzing private requests and in most cases denied them. CRE has not authorized any new large-scale private power generation projects since 2019.[8] The López Obrador administration's energy policy objective is to promote the Federal Electricity Commission (CFE) as the sole developer of any new generation capacity additions. Confirmation of these policy goals is the fact that since 2019, Prodesen stopped including any new private investments.[9] For private investors to plan and commit resources without public policies or an independent regulator is very difficult and unlikely. A level playing field for all market participants is essential.

7. **Achieve fuel self-sufficiency**
   Key insights: Self-sufficiency does not translate into energetic security. The latter is achieved through a reliable supply of energy at competitive prices and the reduction of carbon dioxide (CO2) emissions to mitigate risks associated with climate change. The new refinery in Dos Bocas, Tabasco, is a clear example of the administration's commitment to increase refining capacity that runs counter to Mexico's energy transition, as it further anchors the country to fossil fuels.

8. **Build two coking plants at the Tula and Salina Cruz refineries to process fuel oil into gasoline and diesel**
   Key insights: Producing less fuel oil and more gasoline would improve the operating efficiency of Mexican refineries. Nonetheless, it is essential to understand the costs and benefits of each of the projects, considering the costs of importing gasoline and diesel, as well as contrasting them with domestic projects to increase production and the available financing sources. These strategies run in the opposite direction to long-term global trends for the decarbonization of economies and the electrification of transport and mobility (even if this trend takes years to materialize). In this context the main criteria must be which is the most cost-efficient allocation of public resources.

9. **Plant 1 million hectares of orchard and timber trees**
   Key insights: The baseline of the *"Sembrando Vida"* program was not defined, hence not only is it impossible to assess its benefits, but it created incentives to cut existing forests and species to claim program payments for new trees and species. The program includes an **annual investment of 1.5 billion dollars from public resources with the purpose of absorbing almost 4 million tons of carbon dioxide (CO2)**. Furthermore, **during the first year of its implementation only 7% of the planted trees survived making the CO2 capture objectives very unlikely to be met**.[10] Even if the program managed to capture 4 million tons of CO2, this is insufficient to mitigate climate change and meet Mexico's national and international emission reduction goals; especially given

that the Mexican government has implemented policies in the energy sector that limit the country's ability to advance in the energy transition and reaffirm the country's bet on fossil fuels.

10. **Guarantee that 35% of the energy consumed comes from renewable sources**
Key insights: This goal was already endorsed both in the Paris Agreement,[11] in the General Climate Change Law[12] and the Energy Transition Law.[13] However, no progress has been made mainly due to regulatory barriers, as well as the administration's energy policy. Currently, the capacity expansion lies on CFE. The company does not have renewable projects in its project pipeline other than the 1 GW photovoltaic solar park in Puerto Peñasco and the modernization of hydroelectric plants.[14] Prodesen 2022-2036 estimates Mexico will not achieve the goal until 2031, **seven years after Mexico signed the Paris Agreement**.

The policies promoted by the Mexican government are not only insufficient to transit towards a decarbonized economy, they are also counterproductive. The country must commit to an accelerated deployment of technologies with a low carbon footprint and use its geographical location in North America to catalyze Mexico's energy transition through integrated regional energy markets that trigger sustainable development.

The Mexican Institute for Competitiveness (IMCO) is an evidence-based, non-partisan, not-for-profit think tank that combines research and advocacy to solve México's most important challenges. Our mission is to propose public policies, suggest viable actions, and influence in their adoption and execution to improve competitiveness and achieve prosperity and economic opportunity.

Notes

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