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# **How Sheinbaum's Energy Policies Could Reshape Mexico's Electricity Sector**

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# The Big Picture

On Nov. 6, 2024, President Claudia Sheinbaum's administration announced [the National Strategy for the Electric Sector for 2024–30](#), which presents a critical crossroads for Mexico.

This brief explores several elements of the proposed strategy:

- Solar panel implementation in northern Mexico.
- Economic viability of a 54% public utility versus 46% private sector split.
- Limitations on renewable energy capacity.
- Private users access to public networks.
- Questions regarding future technologies and innovation.

## The Good: A Move Toward Solar Panels

The initiative to deploy solar panels in the northern regions of Mexico is a commendable strategy that aligns with environmental sustainability and energy independence goals. High temperatures and abundant sunlight make northern Mexico an ideal location for solar energy production. The initiative can have multiple advantages:

- 1. Mitigating high temperatures:** Given the region's climate, solar panels can help alleviate the energy demands usually required for cooling, thus potentially reducing overall electricity costs for residents.
- 2. Enhancing energy independence:** By generating their own power, northern communities in Mexico can reduce reliance on the national grid, which may mitigate risks related to energy shortages and foster greater energy self-sufficiency.
- 3. Supporting economic growth and nearshoring:** The installation of solar panels can spur local job creation in installation, maintenance, and production, leading to an invigorated local economy. Furthermore, this policy can unlock the bottleneck in areas prone to receive nearshoring investments.
- 4. Advancing environmental initiatives:** Transitioning to renewable energy contributes to carbon emission reduction, aligning with global sustainability goals.

The plan to deploy solar panels in the domestic market of northern Mexico would be beneficial not only to local communities but also for energy generation across the country. As **noted in previous work** from the Center for U.S. and Mexico, Mexico's potential for increasing energy independence, reducing emissions, and generating employment is significant. Additionally, experts **have recommended** that policymakers shift from price-based electricity subsidies to quantity-based subsidies with a particular focus on the procurement of solar panels for individuals or households. This approach by the Sheinbaum administration could address significant challenges in Mexico's electricity sector, especially in light of pressures from nearshoring.

## The Bad: A 54%–46% Split in Electricity Markets

Also included in President Sheinbaum's plan is the proposed market structure of allocating 54% of generation capacity to the state-owned utility Comisión Federal de Electricidad (CFE) and 46% to private companies. This plan appears economically unsound, as this split fails to recognize the complexities of supply curves that characterize both public and private entities, carrying the following implications:

- 1. Supply curve dynamics:** CFE's 54% market share creates two distinct supply curves: one for CFE (higher, steeper marginal costs) and one for the private sector (including zero marginal costs from renewables). This atypical arrangement — unlike a typical market's single, ordered supply curve — could lead to price inversions (higher prices at low demand, lower prices at high demand) as well as wasted renewable energy during low-demand periods.
- 2. Required force to reduce demand:** If this policy is enforced to the letter, in the event of a sudden increase in demand — such as that observed in May 2024 with the rise in air-conditioning usage due to heat waves — and if CFE cannot meet the additional demand, they would be forced to implement energy cuts to maintain the regulated 54%–46% split.
- 3. Regulatory capture risk:** The likelihood of regulatory capture by CFE, given its significant market share, is substantial. This would distort the market even further, favoring CFE at the expense of private actors. The lack of genuine competition would severely limit pressure to innovate and improve energy efficiency.
- 4. Investment uncertainty:** A rigid structure that heavily favors one sector can create a less inviting landscape for private investments, limiting overall economic growth and technological advancements. Private investors will likely hesitate to invest in a market where a heavily subsidized, politically favored state-owned entity dominates. Thus, attracting foreign investment would also become difficult.
- 5. Arbitrariness of split:** The policy sets an oddly precise division of shares between public and private power enterprises. This split seems arbitrary, lacking any technical or economic justification as to why the division should be exactly 54%–46%, rather than, for

example, 51%–49% or 55%–45%. This rigid split appears to be based more on policy preference than on sound analysis or optimization.

## The Ugly: Caps on Renewable Energy Capacity

The Sheinbaum administration's proposal **limits new renewable additions to 9,550 megawatts (MW)** by 2030. For Mexico, limiting the installation of renewable energy capacity diminishes the country's ability to meet its climate goal, undermines the progress toward a sustainable energy transition, and runs counter to economic development objectives. For the world, the proposal's call to restrict renewable energy infrastructure directly conflicts with international commitments to curtail greenhouse gas emissions and transition toward low-carbon energy sources.

While concerns about the intermittency of renewable energy exist, numerous countries with higher renewable penetration have effectively managed these challenges. While the intermittency of solar and wind power is indeed a challenge, it is not insurmountable. Technical solutions — such as energy storage, grid enhancements, and demand response strategies — have been successfully implemented in countries, such as Germany and Spain. These examples show that increasing renewable capacity is feasible, even with the inherent variability of sources such as solar and wind.

If intermittency poses a real concern, limiting renewable capacity is the incorrect approach. Instead, since renewables increase intermittency in the system, this should be priced as an externality and incorporated into investment frameworks. The cost of intermittency would include, for example, the need for backup power. Market participants can factor these risks into their decision-making processes, ensuring that the economic implications of intermittency are transparently understood. A Pigouvian tax on externality would help achieve an efficient level of renewable deployment. Private sector investments could more correctly assess the risk if Mexico fully factors intermittency into the market design, instead of using a politically motivated cap on renewable energy capacity.

## The Undeniable: User Payments for Public Network Access

The issue of self-sufficient companies — or **autobasto** — not paying for network usage is finally addressed in this administration's proposed plan. Appropriate charges for network use should be designed and implemented to ensure that those who benefit from the grid infrastructure contribute their fair share, even though new technologies may at times bypass this need.

As **research notes**, users should pay for their usage and the intrinsic value of the public network. It is crucial to recognize that users benefiting from self-generated energy should cover the costs associated with their reliance on public infrastructure. Doing so ensures fair compensation for grid services while maintaining incentives for distributed generation.

## The Forgotten: Future Innovations and Technologies

Mexico's National Strategy for the Electric Sector, while comprehensive in its approach to energy production and distribution, notably omits crucial elements for innovation and new technologies, such as a dedicated digital strategy for the electricity sector. Such a strategy is essential not only for grid modernization and smart grid technologies but also for efficient energy management, consumer engagement, and the overall digital transformation of the energy landscape. Additionally, a strategy for coupling electricity with transportation is lacking. Technological advancements in transport, such as electric vehicles, autonomous vehicles, and shared mobility, heavily rely on a robust and supportive electricity sector.



## The Bottom Line

The strategic direction proposed by the Sheinbaum administration presents opportunities and challenges. While its emphasis on environmental factors, the energy transition, and renewable energy is positive, the plan's heavy reliance on CFE, the artificial limitation of renewable energy capacity, and the overall absence of a well-defined, economically efficient market design are concerning.

The deployment of solar panels in northern Mexico is a beneficial policy that should be supported and financed through strategic subsidies. However, the proposed 54%–46% split between public and private sectors lacks economic soundness and risks stifling competitive dynamics essential for growth. Also, capping renewable energy capacity threatens progress toward climate objectives and undermines potential economic growth arising from a robust renewable energy sector.

As stakeholders navigate these critical decisions, focusing on transparent, economically viable, and environmentally supportive policies will be vital in steering Mexico toward a sustainable and vibrant electricity sector.

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