

A photograph of several wind turbines in a field of green shrubs under a clear blue sky. A large white curved graphic element is on the right side of the image.

Mexico's Energy Sovereignty in Practice

Prioritizing investments for
a secure and sustainable
energy future

IISD REPORT

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Mexico's Energy Sovereignty in Practice: Prioritizing investments for a secure and sustainable energy future

September 2026

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Executive Summary

Mexico's new energy framework is now largely in place. The next challenge is implementation: deciding where limited public money, institutional capacity, and private investment should go first.

This report argues that Mexico can strengthen its energy security by looking beyond efforts to reverse the structural decline of domestic oil and gas production or expand refining capacity at any cost. Reducing dependence on imported gas and refined fuels through cleaner, low-risk investments can support greater energy security by strengthening the electricity system, cutting demand for fuels, and making energy more affordable over time.

Recent data illustrate the scale and persistence of Mexico's energy-security risks. Gas accounts for 64% of electricity generation, while imports—almost entirely from the United States—supply 74% of national gas demand. Mexico also has storage capacity equivalent to just 2.4 days, leaving the country exposed to price spikes, supply disruptions, and political pressure. Transport shows a similar pattern: petroleum fuels provide 97% of the energy used in the sector, while imports meet 59% of demand for refined products. Mexico also exports 51% of the crude it produced for refining abroad, before importing more expensive gasoline, diesel, and other products back into the country. Broad fossil fuel and electricity subsidies compound these vulnerabilities: while cushioning consumers in the short term, they sustain demand for imported fuels and absorb fiscal resources that could instead be used to reduce that dependence.

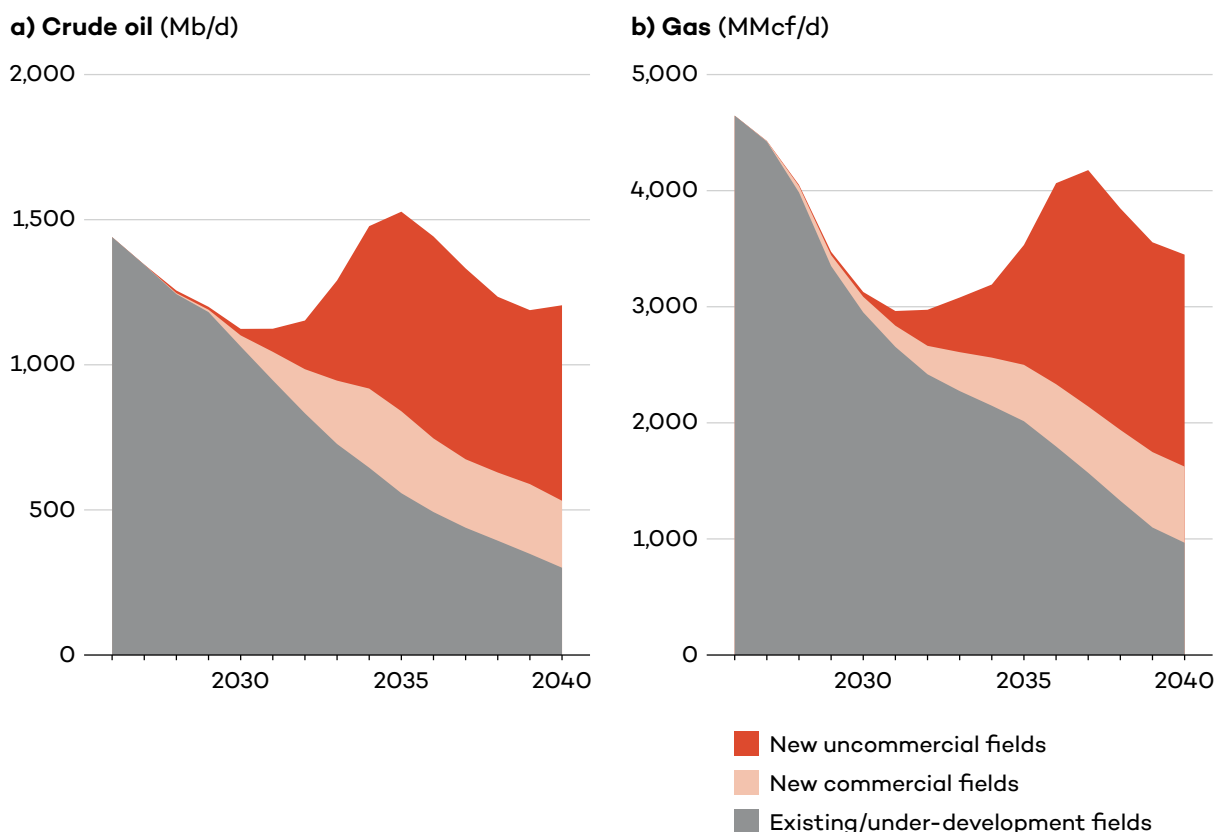
The government's new framework seeks to address these vulnerabilities by strengthening state control over the energy sector, reinforcing Petróleos Mexicanos (Pemex), the state-owned oil company, and the Comisión Federal de Electricidad (Federal Electricity Commission [CFE]), the state-owned electric utility; and setting ambitious targets for hydrocarbon production, clean electricity, battery storage, energy efficiency, and energy justice. Given that resources are limited, pursuing these objectives simultaneously involves real trade-offs in where money is invested. Pemex is highly indebted, public finances are constrained, and several prospective oil and gas investments would require large capital outlays while delivering uncertain or negative returns. The newest fields would not break even under plausible oil price scenarios, and large-scale gas expansion is unlikely to displace imports quickly or cheaply enough to resolve Mexico's near-term exposure.

New analysis of data from Rystad Energy, presented in this report, shows that pursuing the government's oil and gas production targets would depend heavily on developing fields that are not commercially viable. Around USD 160 billion in capital expenditure—including nearly USD 110 billion from Pemex—would be required to meet these targets. However, developing uncommercial fields to this end could generate a net loss of USD 17.4 billion over the next 15 years.

Even after this expenditure, the oil target would only be approached around 2035, 5 years later than the government's target date. Gas production would peak at approximately 4,177 million cubic feet per day (MMcf/d) in 2037, below the government's target of 5,000 MMcf/d by 2030, at a time when demand is expected to decline (Figure ES1). Nearly 80% of new gas production would come from fields with a negative net present value (NPV).



Figure ES1. Crude oil and gas production forecast and economic viability of new fields



Note: Uncommercial fields are defined as economically unviable assets that have a negative NPV over their project lifetime, as categorized by Rystad Energy based on their standard oil price scenario.

Source: Rystad Energy UCube, version 2026-05-05.

The five largest uncommercial oil fields contain close to 1 billion barrels of discovered resources and have breakeven prices ranging from USD 71.9 to USD 127 per barrel with a combined NPV of -USD 2.1 billion (Table ES1). The commercial viability of a field is determined based on the NPV calculation which encompasses several aspects that affect the field's economics. These include recoverable volumes, fiscal terms, transport costs and—most importantly—breakeven prices, which are based on Rystad Energy's standard price scenario, with Brent oil prices fluctuating between USD 70 and USD 100/bbl until 2040.

These findings bring Mexico's investment choices into sharp focus: the country can either prioritize high-cost upstream developments that carry substantial stranded-asset risk and are unlikely to meet production targets on time, or invest directly in reducing the country's underlying energy security vulnerabilities. Meeting the government's upper target of 45% clean electricity by 2030 could reduce gas import costs by approximately USD 1.6 billion each year and cut the power sector's dependence on U.S. gas by about one fifth (Suárez, 2025). More than 3.3 GW of renewable capacity and 1,257 MW of storage were awarded in just 2 months, demonstrating investor interest under the new framework. Renewable energy, storage, and electrification can deliver strong gains in all dimensions of energy security. These investments carry fewer fiscal risks and can crowd in private capital if the rules are clear.



Table ES1. Largest oil fields likely to face economic challenges in Mexico

Field name	Discovered resources (MMb)	Average breakeven oil price (USD/bbl)	NPV (USD million, standard case)
Zama Phase 2	647	83.7	-588
Yopaat	105	86.5	-280
Xaxamani	88	127	-800
Saasil	80	80	-166
Sayulita	72	71.9	-223

Note: NPVs by different oil prices are based on a 15% nominal discount rate.

Source: Rystad Energy UCube version 2026-05-05.

The report's central message is therefore practical: Mexico should use its new planning framework to prioritize investments that deliver the greatest energy-security return per million peso spent. Annual reviews of the binding plans under the Ley de Planeación y Transición Energética (Law of Planning and Energy Transition) provide the mechanism to do this. The report provides an investment prioritization framework that can be used to assess planned investments based on their impact on energy sovereignty, ability to mobilize private finance, speed of deployment, and fiscal efficiency. It provides possible key performance indicators to measure these dimensions, which can be incorporated into the operations of the energy state-owned enterprises (SOEs).

Applying these four criteria to the available evidence highlights several short-term priorities: (1) transmission and grid expansion and improvement, (2) deployment and scaling of renewable energy, (3) accelerated distributed solar deployment, and (4) storage and grid flexibility investments. The criteria also imply a revised operational logic for the energy SOEs. For Pemex, public support for new oil and gas investment should be conditional on field-level metrics that demonstrate viability without continued transfers, methane abatement performance, and other indicators of the overall energy security return of investment. For CFE, the framework points toward prioritizing projects and investments that reduce outage and grid bottleneck metrics, connection times, and curtailment rates, as well as other indicators of efficiency of investments over time.

The report recommends nine priorities:

1. Strengthen the Secretaría de Energía's (Secretariat of Energy's) capacity to implement the energy reform and complete all sectoral plans and technical rules to support evidence-based energy planning and facilitate private investment.
2. Apply clear fiscal and energy-security tests to Pemex investments, including their commercial viability, capital requirements, delivery timelines, and impact on imports.
3. Prioritize grid expansion and modernization, as they are necessary to reap the benefits of renewable energy.



4. Scale renewable energy, storage, and distributed solar through transparent mechanisms that provide clear conditions for public and private investment.
5. Implement gas storage plans and reduce flaring and venting to improve energy security while the transition is implemented.
6. Reform broad fossil fuel subsidies toward targeted support for vulnerable consumers, redirecting savings to clean energy investment. Peer support through the 17-government Coalition on Phasing Out Fossil Fuel Incentives Including Subsidies (or COFFIS) can help Mexico create political momentum for this structural reform.
7. Coordinate transport electrification with clean power expansion and treat them as a single agenda.
8. Adopt an investment-screening test for the planning cycle. The investment prioritization framework in this report (Table 3) is a decision tool that the government can already start using.
9. Establish new, clear conditions for continued state support for Pemex and CFE, grounded in a rigorous analysis of investment paths for both SOEs and their fiscal, social, and environmental trade-offs.



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Abbreviations and Acronyms

BESS	battery energy storage systems
CapEx	capital expenditure
CENAGAS	Centro Nacional de Control del Gas Natural (National Natural Gas Control Centre)
CFE	Comisión Federal de Electricidad (Federal Electricity Commission)
CONAHCYT	Consejo Nacional de Humanidades, Ciencias y Tecnologías (National Council of Humanities, Sciences, and Technologies)
EV	electric vehicle
IEA	International Energy Agency
IMF	International Monetary Fund
IISD	International Institute for Sustainable Development
LPTE	Ley de Planeación y Transición Energética (Law of Planning and Energy Transition)
NPV	net present value
Pemex	Petróleos Mexicanos
PROSENER	Programa Sectorial de Energía (Energy Sectoral Program)
PV	photovoltaic
SENER	Secretaría de Energía (Secretariat/Ministry of Energy)
SOE	state-owned enterprise
STEPS	Stated Policies Scenario
USD	United States dollar



Technical Units

bbl	barrels (oil)
GW	gigawatt
GWh	gigawatt-hour
Mb	thousand barrels (oil)
Mb/d	thousand barrels per day (oil)
Mcf	thousand cubic feet (gas)
MMb	million barrels (oil)
MMb/d	million barrels per day (oil)
MMcf/d	million cubic feet per day (gas)
MW	megawatt
MWh	megawatt-hour
PJ	petajoule



1.0 Introduction

Mexico has entered a critical phase in implementing its new energy framework. Following the constitutional and legal reforms of 2024–2025, attention is shifting from institutional reform to the investment decisions needed to deliver the government's energy objectives. The Programa Sectorial de Energía (Energy Sectoral Program [PROSENER]) 2025–2030 sets ambitious targets across oil and gas production, electricity capacity, renewable energy, battery storage, energy efficiency, and energy justice. With public finances constrained and Petróleos Mexicanos (Pemex) highly indebted, these objectives cannot all be pursued without careful prioritization of public resources.

These investment decisions have direct implications for Mexico's energy security. The country remains heavily dependent on imported U.S. gas for electricity and imported refined fuels for transport, while its domestic oil and gas reserves and production are declining. Expanding domestic fossil fuel supply cannot resolve these vulnerabilities. Reducing dependence on imported fuels through renewable energy, stronger electricity infrastructure, energy efficiency, and electrification can play an important role in strengthening energy security.

This report examines these investment choices within Mexico's new planning framework. It combines original quantitative analysis of the economics of prospective upstream oil and gas development with evidence on how renewable energy, grids, storage, efficiency, and electrification can address Mexico's energy security vulnerabilities. It puts forward two main ideas:

1. New oil and gas investments should be assessed carefully against their commercial viability, capital requirements, delivery timelines, and contribution to reducing import dependence. The analysis finds that many prospective developments face significant economic risks and are unlikely to deliver the government's production targets on schedule.
2. Mexico's energy planning should give greater consideration to investments that reduce structural dependence on imported fuels. The mandatory annual review of binding energy plans under the Ley de Planeación y Transición Energética (Law of Planning and Energy Transition [LPTE]) provides an immediate mechanism for reassessing investment priorities as economic conditions and evidence evolve.

The report provides an investment prioritization framework to identify investments that can deliver stronger energy security gains. The analysis is conducted from within the reform's own institutional logic: the state-led model is treated as the operating baseline, and the paper's recommendations are directed at the planning instruments, based on the investment criteria that the reform mandates. The report is structured as follows:

Section 2 provides an overview of energy security, examining vulnerabilities caused by import dependence on gas and refined oil products, and high levels of fossil fuel subsidies.

Section 3 describes the constitutional amendments and legislation of 2024–2025, highlighting the new planning architecture and the key provisions that govern energy investment through 2030.



Section 4 uses original International Institute for Sustainable Development (IISD) quantitative research, based on Rystad Energy field-level data, to examine the economic viability of continued investment in upstream oil and gas projects in Mexico, including a breakeven price analysis and net present value (NPV) assessments for key projects.

Section 5 evaluates the potential of renewable energy and electrification to address energy security. It does not apply the methodology that Section 4 applies to fossil fuel investments because equivalent data for renewables is unavailable. Instead, it synthesizes evidence from external studies and sectoral sources. It presents a framework for the prioritization of investment decisions in the energy sector, which can be used by decision-makers as a screening tool for new investments.

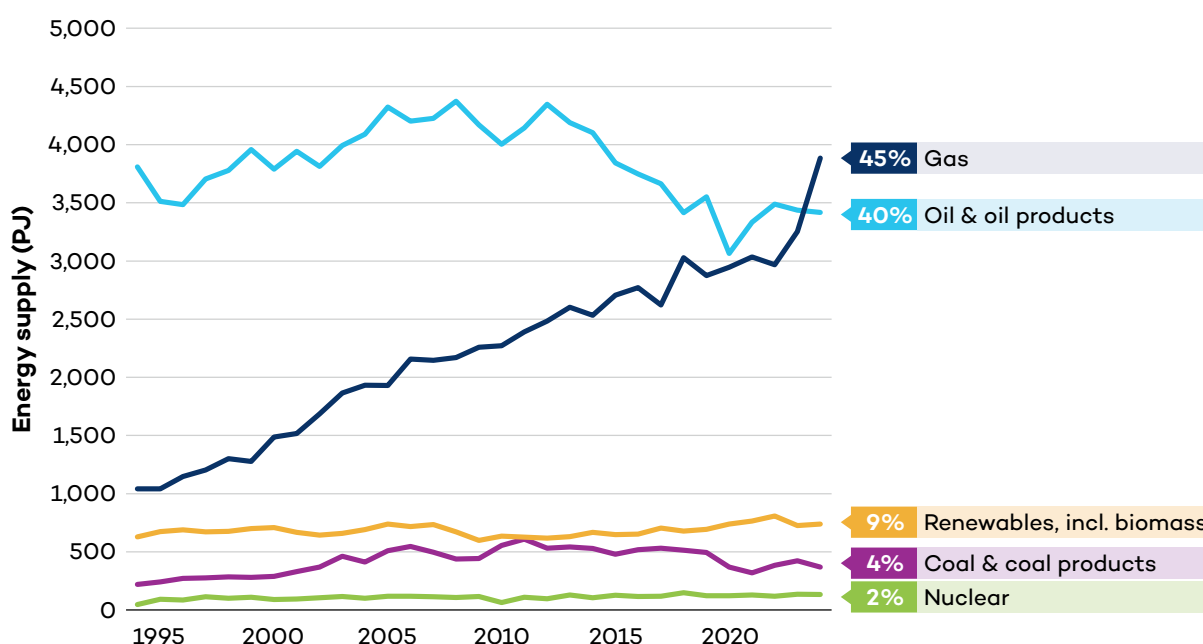
The report concludes with policy recommendations for the Government of Mexico to consider, aimed at strengthening the country's overall energy security in line with the spirit of the recent constitutional and legal reforms.



2.0 Mexico's Energy Security Challenges

This section is an analysis of Mexico's oil and gas sector under the lens of energy security. It gives an overview of the country's oil and gas supply and demand, while emphasizing the energy security vulnerabilities that emerge from their mismatch. In 2024, fossil fuels represented almost 90% of Mexico's primary energy supply (Secretaría de Energía [Secretariat of Energy, SENER], 2025a), underscoring the country's deep fossil fuel dependence even as its production base erodes (Figure 1).

Figure 1. Primary energy supply in Mexico



Source: International Energy Agency (IEA), 2026c.

2.1 Energy Security in the Mexican Context

Energy security is commonly understood through the “4As” framework: availability of sufficient energy supplies to meet demand, affordability of energy prices, accessibility of reliable energy infrastructure for all, and acceptability of the environmental and social costs of energy production (Jones & Dodds, 2017).

In the Mexican context, researchers have built on this framework to emphasize other dimensions that reflect the country's political and social realities. Weight has been given to energy sovereignty, understood as a nation's ability to shape its own energy policies and reduce dependence on foreign energy supplies (Vargas, 2020). This points to Mexico's deep reliance on gas imports from the United States, which is not merely a market outcome but a policy choice: after the 1994–1995 financial crisis, Mexico liberalized its downstream gas market and allowed for rising demand to be met by cheaper imports rather than domestic production (Rodríguez Padilla, 2018). This has driven the share of gas in primary energy



supply from just 18% in 1994 to over 40% in the 2020s (IEA, 2026c). Energy security also depends on the collective social, environmental, economic, and gender dimensions of energy access (Oswald, 2017), as well as on the governance of energy projects at the local level, including the right of host communities to participate in decisions about energy production in their territories (Rousseau, 2017).

This report assesses energy security in Mexico by focusing on the dimensions of energy availability, affordability, accessibility, acceptability, and sovereignty.

Availability

Dwindling oil and gas production and reserves raise serious questions about the country's ability to sustain long-term energy supply from domestic fossil fuels. Crude oil output has fallen 35% since 2015 and reserves have declined over 90% since their 1983 peak (Organization of the Petroleum Exporting Countries, 2026), leaving barely 8.5 years of domestic consumption in reserve (Pemex, 2025). Gas production has similarly declined, pushing import dependence on the U.S. to 74% of supply and leaving only 2.4 days of storage capacity to cover supply disruptions (Instituto Mexicano para la Competitividad, 2022). With the transport sector heavily reliant on refined oil products and the power sector on gas, Mexico needs to identify new energy sources to underpin continued growth before its existing resource base is exhausted.

Affordability

Energy affordability is artificially obscured at the consumer level by government subsidies that represent a significant and growing burden on public finances. These subsidies have historically responded to a legitimate policy goal: to protect access to energy in lower-income households and cushion the distributive impacts of price increases. Over time, however, subsidies have become more of a fiscal burden and obstacle than an effective tool for equity (Kuehl et al., 2025). In 2024, the Mexican government spent more than USD 10 billion on consumer subsidies for gasoline and diesel, USD 1 billion on subsidies for gas, and USD 1.3 billion in end-use electricity subsidies (IISD & Organisation for Economic Co-operation and Development, 2026), which indirectly subsidize gas (see Section 2.2). Because of this government spending, the true cost of energy in Mexico is higher than that paid by consumers. The fiscal pressure from sustaining these subsidies is an important factor that reduces the government's ability to address energy security with other energy investments.

Accessibility

Energy accessibility remains an unresolved dimension of Mexico's energy security. Despite national electricity access reaching 99.64% of the population in 2024 (SENER, 2025b), grid connectivity does not equate to effective access to reliable energy services. Interruptions to electricity service were on the rise by the end of 2025: Comisión Federal de Electricidad (Federal Electricity Commission [CFE]) users experienced an average of 15.4 minutes without power due to causes attributable to the utility in 2025, a 42% increase over 2024 (Usla, 2026), pointing to underlying vulnerabilities in the power grid. Similarly, roughly 4.8 million households still rely on firewood or charcoal as their primary cooking fuel; most lack



adequate ventilation, which disproportionately exposes women and children in rural areas to toxic smoke (México Evalúa, 2021). The deficit in equitable energy access runs counter to Mexico's energy justice objectives and planning commitments.

Acceptability and Sustainability

Energy acceptability includes sustainability. It concerns whether the negative impacts of energy supply, such as climate change, environmental degradation, pollution, and disruption to communities, are held to levels that affected populations regard as tolerable. In Mexico, this dimension is most acute where energy infrastructure intersects with populations and areas of significant cultural and ecological value. The International Monetary Fund (IMF) estimates that fossil fuel use in Mexico resulted in USD 65 billion in negative externalities in 2024 (Black et al., 2025). A 2026 Pemex gas well accident in rural Veracruz illustrates these costs on the ground: large volumes of gas burnt for months, with residents reporting scorched land, defoliated trees, and declining wildlife, alongside fears for their health and livestock (Ó. Martínez & Eschenbacher, 2026). Although the law establishes a process for environmental impact assessments and free, prior, and informed consent under ILO Convention 169, land tenure disputes and inadequate consultation can still occur, and they can cause communities to regard project outcomes as inequitable or harmful.

Sovereignty

Energy sovereignty is the explicit rationale behind the 2024–2025 constitutional and legal reforms of the energy sector. These reasserted state control over the sector on the grounds of restoring Mexico's authority over its own energy policy, reversing what the government described as decades of weakening Pemex and ceding Mexico's sovereignty over its own energy to foreign interests (Presidencia de la República, 2025b). A tangible threat to this sovereignty lies in the dependence on the United States for natural gas and refined oil products.

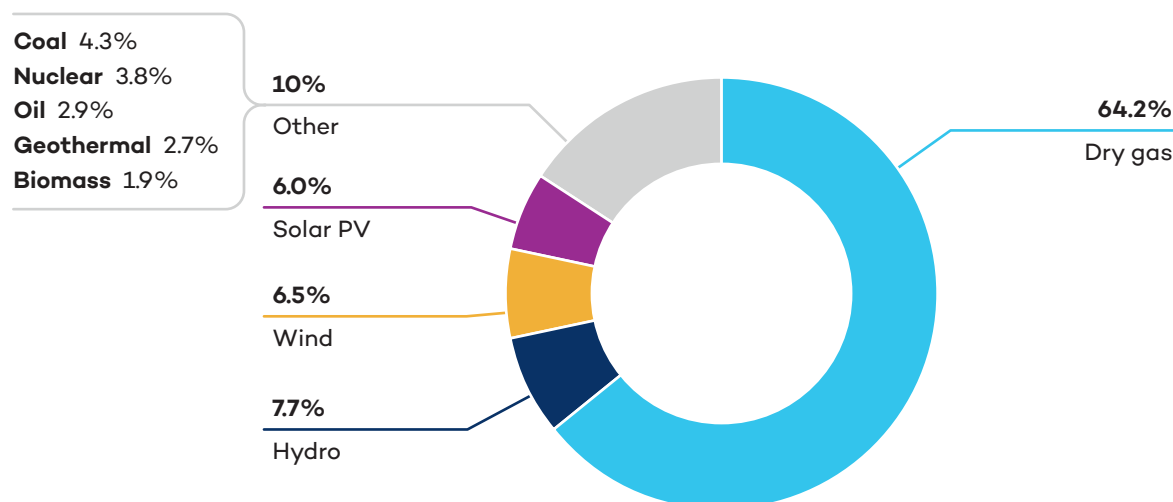
The following sections examine the main causes of Mexico's energy insecurity, which lie in the oil and gas sector: the reliance on gas imports to produce electricity, the dependence on refined oil products in the transport sector, and the magnitude of fossil fuel subsidies.

2.2 Gas Import Dependence in the Power Sector

The main driver of gas demand in Mexico is the electricity sector. It consumes more than 60% of the country's gas supply, up from just 16% in 1994 (Consejo Nacional de Humanidades, Ciencias y Tecnologías [National Council of Humanities, Sciences, and Technologies, CONAHCYT], 2024a). Gas use in power generation alone climbed from 1,017 MMcf/d in 2000 to 5,387 MMcf/d in 2024 (Suárez, 2025), and by 2024, 64% of Mexico's 383,754 GWh of total electricity production came from this fuel (SENER, 2025a). Meanwhile, renewable sources accounted for 25% of generation, including hydro, wind, solar photovoltaic (PV), geothermal, and biomass (Figure 2).



Figure 2. Power generation by primary energy source



Source: SENER, 2025a.

Despite being a hydrocarbon-producing country, Mexico faces what the PROSENER describes as a “critical energy paradox” (SENER, 2025b): domestic gas production has declined since 2010, and therefore Mexico has increasingly turned to imports to meet demand. These rose from 1,459 MMcf/d in 2010 to 6,666 MMcf/d in 2024, which is equivalent to 74% of national supply (CONAHCYT, 2024b; Pemex, 2025).

Mexico’s import dependence is almost exclusively oriented toward the United States. Its northern gas market lies adjacent to the Permian Basin, where associated gas is produced in such abundance that it frequently trades at very low prices, underpinned by Texas’s extensive pipeline and processing infrastructure (Berg et al., 2023). As domestic production declined, Mexico met its rising demand for gas by expanding cross-border pipeline capacity rather than by developing domestic gas storage or diversifying its energy supply, a pattern the 2013 to 2024 energy market design only reinforced. Some northern border industries now approach 100% import reliance (Berg et al., 2023).

Mexico’s gas import dependence on a single supplier country is a clear energy security risk. Mexicans are vulnerable to energy supply disruptions, as the country holds only 2.4 days of gas storage capacity (Mexican Institute for Competitiveness, 2022), far below the ~40 days of reserves that countries like Germany and Spain maintain. The consequences of supply disruptions are well documented. For instance, the 2021 Winter Storm Uri caused massive power outages in the United States, increasing domestic gas demand and halving the volume flowing to Mexico (Berg et al., 2023). The ensuing fuel and power shortages in Mexico caused the deaths of 14 people. Moreover, geopolitical tensions globally, and bilaterally with the United States, make the supply and price of gas highly vulnerable.

A gas storage obligation has existed since 2018, when the Public Policy on Natural Gas Storage directed the Centro Nacional de Control del Gas Natural (National Natural Gas Control Centre [CENAGAS]) to hold at least 5 days of storage capacity—about 45,000 MMcf of gas—by 2026 (SENER, 2018). However, limited progress has been made toward the target: an initial tender for 10,000 MMcf at the depleted Jaf field did not translate into

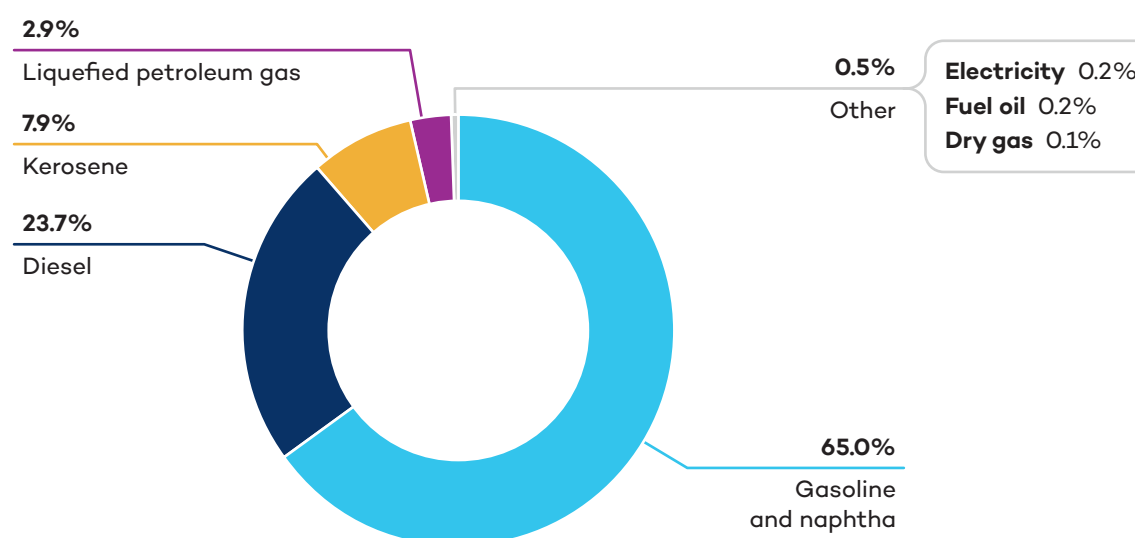


operating capacity, and as of 2026, CENAGAS was still conducting non-binding public consultations on storage projects (CENAGAS, 2023, 2026).

2.3 Oil Dependence in the Transport Sector

The transport sector consumes 44% of Mexico's total energy supply (IEA, 2026c). It is currently dominated by internal combustion vehicles and thus highly dependent on refined oil products (Figure 3). Ninety-seven percent of energy demand in the sector consists of gasoline, naphtha, diesel, and kerosene, while electricity only covers 0.2% (SENER, 2025a).

Figure 3. Energy use in transportation



Source: SENER, 2025a.

Crude oil extraction, however, is in structural decline. Output peaked at 3.37 MMb/d in 2004, driven by the giant Cantarell field (CONAHCYT, 2024c), whose decline triggered a deterioration in national production levels that successive fields have failed to reverse. Domestic production fell 35% over the past decade alone, from 2.27 MMb/d in 2015 to 1.47 MMb/d in 2025 (Organization of the Petroleum Exporting Countries, 2026), and the trajectory shows no sign of stabilizing: Mexico is forecast to record the largest drop in oil production globally between 2024 and 2030, falling from 1.97 MMb/d to just 1.29 MMb/d, and potentially becoming a net crude oil importer (IEA, 2025). Pemex's own strategic plan acknowledges that most of its fields are in maturity and productive decline, leaving a reserves-to-production ratio that can only cover 8.5 years of domestic consumption (Pemex, 2025), while proven reserves have decreased by more than 90% since their 1983 peak of 57,000 MMb to just 5,000 MMb today (Organization of the Petroleum Exporting Countries, 2026).

Against this backdrop of declining production, Mexico faces a second compounding vulnerability in refining: the country exports most of the crude oil it produces and imports the bulk of the refined products it consumes. The principal constraint is the limited capacity of Pemex's refineries that can only process a limited share of its own heavy Maya crude domestically, so it exports the crude to Texas refineries and reimports costlier refined products



(Vivoda et al., 2023). In 2024, Mexico extracted an estimated 568 MMb of crude oil, of which 289 MMb (51%) were exported for refining abroad (SENER, 2025a). Imports of refined oil products, mainly gasoline, naphtha, and diesel reached 59% of the country's demand that year.

This structural dependence exposes Mexico to price volatility, supply disruptions, foreign exchange, and fiscal risks. When international fuel prices rise or the peso weakens, the cost of imports increases, putting pressure on public finances, foreign exchange reserves, and the trade balance. To reduce the dependence on these imports, Pemex has made large investments in refining. Box 1 discusses the impact of these investments and other expenses on Pemex's and the country's financial situation.

Box 1. Pemex's financial situation and its impact on public finances

Pemex's efforts to close the refining gap by adding new capacity have not paid off financially. From 2018 to 2022, refining investments absorbed the equivalent of 90% of Pemex's average annual budget (Ballesteros et al., 2024). These include the Olmeca refinery, which was budgeted at USD 8 billion but ended up costing almost USD 21 billion (Gante, 2025), and the acquisition of the Texas-based Deer Park refinery at USD 1.2 billion. The refining segment alone lost roughly MXN 69 billion (USD 3.7 to USD 4.0 billion) in 2025 (Secretaría de Hacienda y Crédito Público, 2026). These investments did not materially reduce Mexico's geographic dependence on U.S. refining, although Pemex's ownership provides some commercial and supply-security benefits.

The losses in refining are one of many strains on Pemex's balance sheet—alongside upstream costs, its tax burden, and debt service—and have become a liability to the Mexican government, which has been providing direct financial support to Pemex to overcome its difficult financial situation. Pemex closed 2025 with an estimated USD 230 billion in total liabilities including financial debt, obligations to suppliers, and other contractual liabilities, with roughly USD 19 billion maturing in 2026 (Pemex, 2026; Secretaría de Hacienda y Crédito Público, 2026). The IMF projects public debt rising to 61.5% of GDP by 2030 and warns that Pemex's operations are generating contingent liabilities for the sovereign (IMF, 2025). The effect on Mexico's credit standing is already visible: in 2026, Moody's downgraded the country to Baa3 and S&P revised its outlook to negative, both citing recurring financial support to Pemex as a main driver (S&P, 2026; Vizcaino & Butler, 2026).

Pemex and the state are left with severe fiscal constraints, costly external financing, and few high-return investment options to support Mexico's energy security and transition goals. Efforts to slow production decline, service Pemex's debt, and maintain a costly refining system together absorb substantial resources. These existing commitments leave insufficient room for strategic energy investments that Mexico's energy security requires.



2.4 Fossil Fuel Subsidies and the Fiscal Trap of Energy Import Dependence

To shield households and businesses from volatile international energy prices, the Mexican government has repeatedly expanded fossil fuel subsidies during periods of high prices, keeping domestic fuel and electricity tariffs below market levels. This mechanism has become the primary instrument through which the state guarantees energy affordability for consumers, particularly for transport fuels and residential electricity consumption.

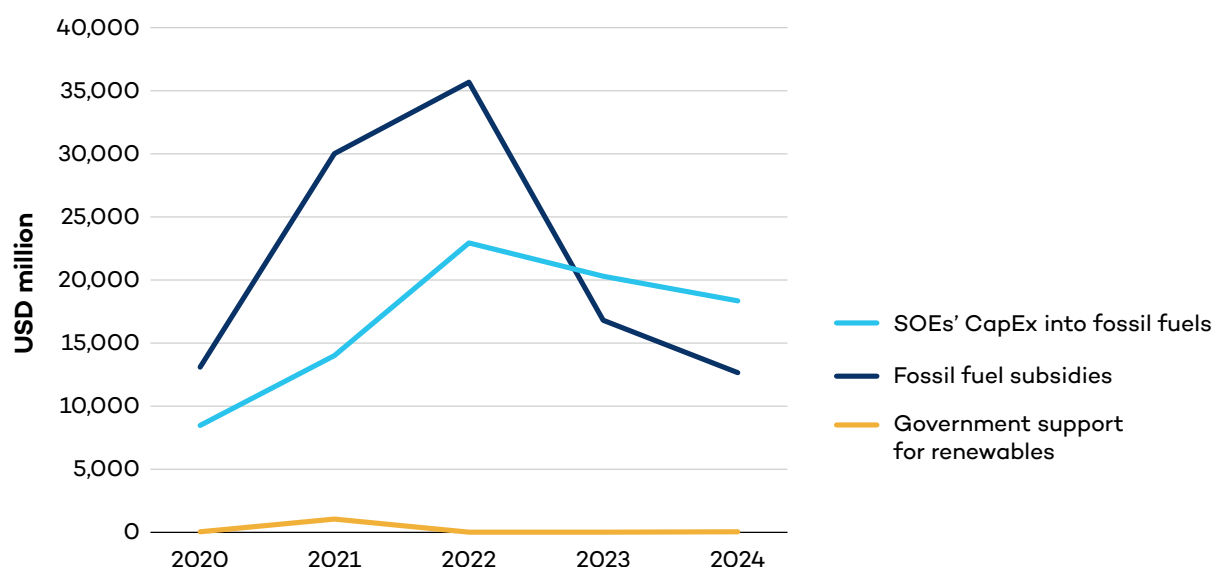
Yet because Mexico depends heavily on imported natural gas for electricity generation and imported refined oil products for transport, this approach transfers commodity price risk directly onto the federal budget. Any policy that decouples domestic prices from international markets means that geopolitical disruptions, such as the wars in Ukraine and the Middle East or the ongoing trade tensions with the United States, translate into fiscal shocks rather than consumer price increases. These subsidies thus make Mexico's public finances hostage to decisions and events well outside the government's control.

Gasoline and diesel subsidies illustrate this dynamic acutely. In 2022, as international fuel prices surged following Russia's invasion of Ukraine, gasoline and diesel subsidy expenditures reached approximately USD 2.39 billion, exceeding by more than double the USD 1.04 billion in additional revenues Mexico earned from higher crude oil export prices that year (Vivoda et al., 2023). Subsidies contracted between 2023 and 2024 as international prices eased (Figure 4), but renewed price spikes tied to the Middle East conflict are likely to have reversed that trend. Because fuel subsidies are universal rather than targeted, a disproportionate share of this public support flows to middle- and high-income households because they have higher consumption levels—a design that raises questions of social justice, since public funds meant to protect vulnerable consumers end up subsidizing those least in need. Narrowly targeted, affordability-focused subsidies exist in Mexico, but they are more the exception than the rule, as demonstrated by the liquified petroleum gas price support for low-income households (Kuehl et al., 2025).

Fossil fuel subsidies in Mexico were estimated at USD 12.6 billion in 2024 (Figure 4). A separate assessment of 19 measures for 2023 found these subsidies vary in how easily they could be phased out: 86% of the fiscal cost sits in subsidies that would require a robust, multi-year phaseout strategy, while 14% of the cost is in measures that could be removed quickly with minimal disruption (Kuehl et al., 2025). Three subsidies account for most of the structural burden: diesel tax credits for passenger and cargo transport (USD 2.4 billion), a reduced utility tax rate for Pemex (USD 3.2 billion), and direct transfers to CFE to cover the gap between regulated tariffs and the actual cost of supply (USD 3.2 billion). These are embedded in the fiscal framework and in sector operations in ways that make them politically and administratively difficult to unwind in the short term.



Figure 4. Public financial support for fossil fuels and clean energy



Note: SOE = state-owned enterprise; CapEx = capital expenditure.

Source: Do et al., 2026; IISD & Organisation for Economic Co-operation and Development, 2026.

Beyond consumer subsidies, the Mexican government also supports fossil fuel production through royalty exemptions, tax deductions for oil and gas investment, research and development funding, pipeline expansion, and SOE CapEx—measures aimed at shoring up domestic supply rather than cushioning prices directly. This support dwarfs anything directed at renewables: in 2024, Pemex and CFE together channelled USD 18.4 billion in CapEx to fossil fuel projects and none to clean energy, while government support for clean energy that year was estimated at just USD 37 million (Figure 4).

These dynamics in public financial support for energy risk consolidating into a structural fiscal trap. The state simultaneously subsidizes fossil fuel consumption to protect households from import exposure and subsidizes fossil fuel production to reduce that same exposure, without either lever resolving the underlying decline in domestic reserves and their economic prospects. Mexico's exposure to imported energy and external price volatility is therefore at risk of deepening.

Sustaining broad fossil fuel subsidies under these conditions requires growing fiscal resources over time, progressively crowding out public investment in the infrastructure and technologies needed to reduce that dependence. The cycle is self-reinforcing: subsidies absorb the fiscal resources that could otherwise finance renewable energy deployment and integration, energy efficiency, electrified transport, and grid modernization, which are precisely the investments that would structurally reduce reliance on imported fossil fuels.



3.0 Mexico's New Regulatory Framework

3.1 Overview of the Energy Policy Reform (2024–2025)

Mexico's 2024–2025 energy sector reforms reshaped the institutional and regulatory framework for energy investment and policy decisions. Constitutional amendments to Articles 25, 27, and 28 in 2024, followed by secondary legislation in 2025, strengthened state-led planning, reclassified Pemex and CFE as state public enterprises, and expanded SENER's role. For this report, the key implications are how these changes affect the allocation of public capital, the role of private investment, and the criteria used to assess energy investments. Table 1 summarizes the main provisions of each amended constitutional article, while Figure 4 provides an overview of the different reforms introduced.

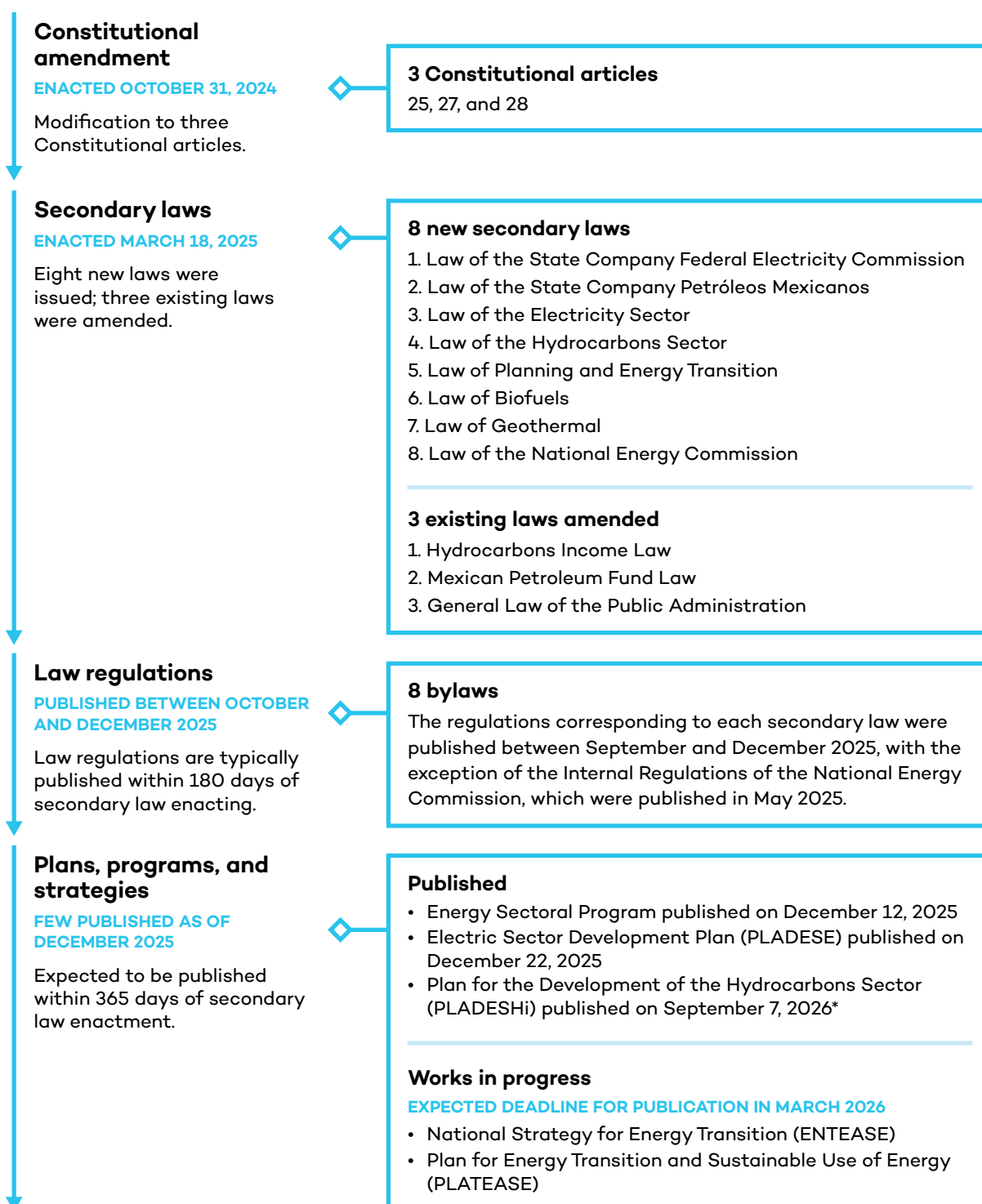
Table 1. Constitutional amendments introduced in 2024

Highlights of constitutional amendments	
Art. 25	State-owned “productive” companies Pemex and the CFE are now classified as state-owned “public” enterprises. This could be interpreted as a shift away from the profit-generating (“productive”) aspects of their prior mandate toward a mandate that is focused on the provision of public goods and services.
Art. 27	Power transmission and distribution activities belong exclusively to the state. Private parties may participate in other electric industry activities, although in no case will they take precedence over the state public enterprise, whose focus is social responsibility and guaranteeing the continuity and accessibility of the electricity service.
Art. 28	Anti-monopoly exception for SOEs. Planning and control of the national electricity system, among others, are now considered strategic activities. The planning and control of the national electric system shall provide residents with electricity at the lowest possible price. State public enterprises must ensure Mexico's security and energy self-sufficiency forgoing profit in favour of these goals.

Source: Secretaría de Gobernación, 2024.



Figure 5. Overview of constitutional, legal, and regulatory changes related to the energy sector introduced in 2024 and 2025



* The PLADESHi was published after the review of this report had been completed, so its content is not included in the analysis.

Source: Authors' own elaboration with information from Presidencia de la República, 2025a.



The energy policy reform represents a complete shift in the legal and regulatory architecture of the Mexican energy sector. Whereas the preceding 2013 legislation prioritized market liberalization as the mechanism for attracting private and foreign investment into hydrocarbon production and power generation, the current framework replaces this approach with one of state-led binding planning, in which increased SOE participation and government-directed investment priorities serve as the primary instruments for securing energy supply and advancing the energy transition (SENER, 2025b).

The reform reasserts Pemex's and CFE's operational leadership across the oil and gas and electricity value chains, respectively, though it does not bar private participation outright. Private investment is permitted in a complementary role and subject to SENER's planning priorities; it is subordinated to, and directed by, national energy goals (SENER, 2025b). Two specific provisions illustrate this balance:

- Pemex has been granted priority in selecting oil fields for development, alongside the freedom to choose partners under a “mixed development” model for exploration and production contracts.
- CFE is required to maintain prevalence over at least 54% of the average annual electricity injected into the grid. The remaining 46% is available to private participants, provided they operate within the rules established by the binding planning policy. State exclusivity over electricity transmission and distribution is maintained.

Moreover, the amended Hydrocarbons Revenue Law simplified Pemex's tax regime by consolidating the previous system into a single framework. The prior tax regime for oil and gas included variable amounts of profit-sharing duties, hydrocarbon exploration duties, and hydrocarbon extraction duties. Such a regime has been replaced by a single Oil Duty for Welfare (“Derecho Petrolero para el Bienestar”), fixed at 30% for oil and 11.63% for gas (Secretaría de Gobernación, 2024). This consolidation reduces Pemex's fiscal burden by replacing the previous set of separate duties with a single, simpler levy. The reform lowers the government's take from Pemex and reduces hydrocarbon revenue in the near term, functioning, in effect, as an additional form of state support to Pemex and reinforcing the tension between strengthening the company and preserving public revenue.

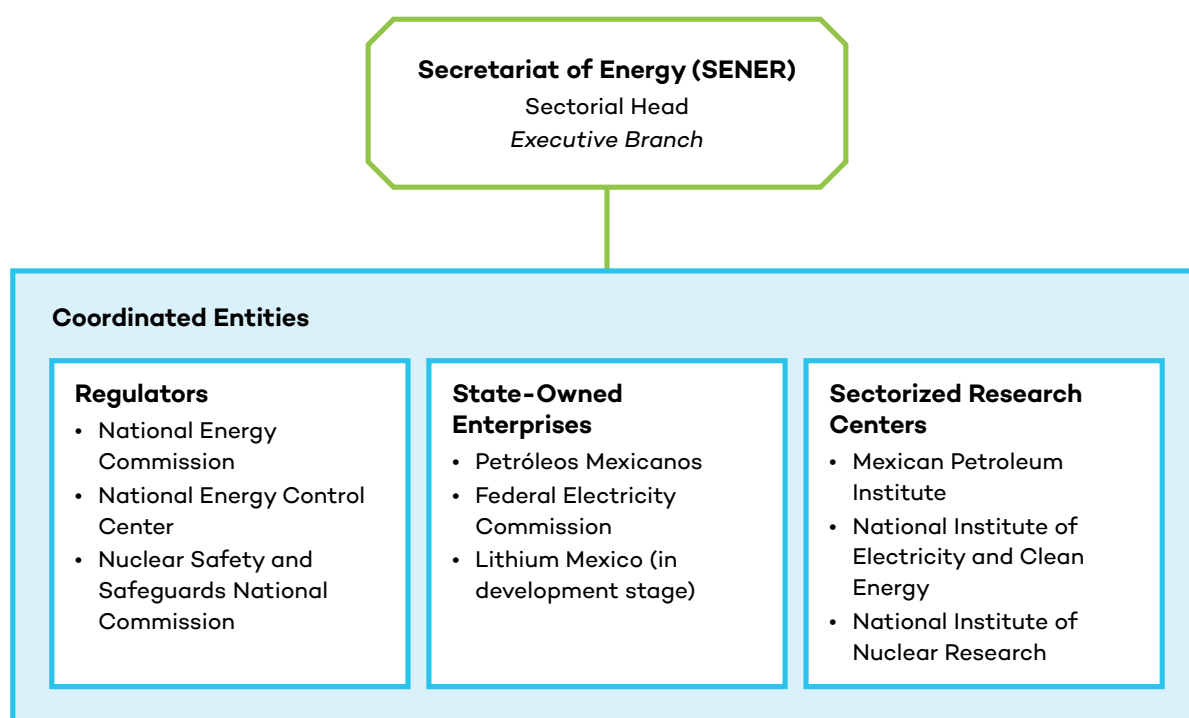
One of the reform's most structurally significant provisions is the elimination of the independent regulatory bodies Comisión Reguladora de Energía (the energy regulator) and Comisión Nacional de Hidrocarburos (the hydrocarbons commission), whose functions have been absorbed primarily by SENER (Figure 5). This consolidation has attracted substantive criticism on the grounds of potential conflicts of interest and the risk of diminished technical autonomy in regulatory decision making (Grunstein, 2024). From a different analytical perspective, however, the centralization of planning and regulatory authority in SENER reflects an institutional design choice that prioritizes state-directed planning over the arm's-length market governance model of the prior model.

SENER is also responsible for observing the SOEs' implementation of the non-profitability-focused mandate included in the renewed Article 28 of the Constitution. Foregoing profit in favour of energy security and self-sufficiency objectives should not be interpreted as a blank check in favour of Pemex or CFE. Properly understood, it is an instruction to redefine the



investment calculus: to measure returns not in commercial margins but in energy security outcomes and the reliable provision of domestic energy for industrial development and social welfare. This reorientation of purpose has direct implications for how the financial performance of the SOEs should be evaluated and for the criteria against which their investment decisions ought to be assessed.

Figure 6. New organizational structure of the energy sector in the Mexican state



Source: Authors' own elaboration based on SENER, 2026.

3.2 Key Legislation and Plans

The constitutional reforms must be understood alongside the laws and policies that put them into practice. Each new rule affects how energy markets work and how responsibilities are divided between government and private actors. The most important of these, for energy policy, is the LPTE, which aims to:

“establish and regulate binding planning in the Energy Sector and the strengthening of the Energy Transition, as well as the Sustainable Use of Energy, compliance with obligations regarding Clean Energy and the reduction of Polluting Emissions, maintaining the competitiveness of the productive sectors, in order to contribute to energy sovereignty, justice and self-sufficiency.” (LPTE, 2025)

The LPTE establishes binding plans and national strategies as the main tools of state-centred energy development. These function simultaneously as developmental roadmaps and as control mechanisms: private market participation is conditionally permitted, but it is strictly



subordinate to government-established capacity targets and demand forecasts. The suite of binding instruments created or elevated under the LPTE is set out in Box 2.

Box 2. Binding policies established by the LPTE

- Energy Sectoral Program (PROSENER) – published in December 2025.
- Electric Sector Development Plan (PLADESE) – published in October 2025.
- Plan for the Development of the Hydrocarbons Sector (PLADESHI) – published in September 2026.
- National Strategy for Energy Transition (ENTEASE) – delayed since March 2026.
- Plan for Energy Transition and Sustainable Use of Energy (PLATEASE) – delayed since March 2026.

At the top of the planning hierarchy sits PROSENER 2025–2030. The 2024 to 2025 reforms significantly elevated its role: the PROSENER is now the mandatory legal baseline for all activity in the sector, and it shifts the sector's core goal from “market efficiency” to “strengthening self-sufficiency, sovereignty, and energy security through binding planning” (SENER, 2025b).

The PROSENER articulates an integrated set of objectives across all major components of the national energy matrix. These are summarized below.

Oil and Gas Objectives

- An explicit mandate to “rescue and strengthen” Pemex, prioritizing its financial viability and operational efficiency as a constituent element of national sovereignty.
- A liquid hydrocarbons production target of 1.8 MMb/d by 2030, alongside the incorporation of 10 years of proven reserves sufficient to sustain that production level.
- A gas production target of 5,000 MMcf/d by 2030.
- Targeted exploration and production fields are detailed in the Pemex Strategic Plan 2025–2035.
- A focus on domestic self-sufficiency in refined products and gas, aimed at reducing structural dependence on imports and mitigating exposure to international price volatility. Production targets are accordingly oriented toward supplying the national refining system rather than export markets.

Power Sector Objectives

- A target of 38% to 45% of clean energy in the generation matrix by 2030—up from a ~24% baseline—with CFE, rather than private actors, designated as the primary investor and driver of the decarbonization agenda.
- A dual mandate for energy efficiency and equitable access, specifically targeting the expansion of electricity service to marginalized regions.



- CFE is mandated to install 2,216 MW of battery energy storage systems (BESS) to stabilize the grid and manage the intermittency of renewable generation.

The Sovereign Energy Transition

- Energy efficiency is elevated from a secondary policy objective to a constitutional goal of equivalent standing to generation capacity.
- A mandate to promote national technological innovation, with the aim of reducing Mexico's dependence on foreign technology transfer in the energy transition.
- Just transition: the energy transition is explicitly linked to equitable access. Renewable energy projects are to be prioritized based on both their capacity to address energy inequality and their carbon reduction metrics.

The PROSENER's objectives are broad and ambitious, with the state at the centre of this vision for the national energy matrix. This makes a rigorous assessment of the costs and trade-offs of different energy sources—across both energy security and transition goals—essential. Any such assessment must account for public investment constraints, the conditions for private participation, and the dynamics of international capital markets, which increasingly factor climate criteria into financing decisions.

The reform's response to this challenge is institutional. The LPTE establishes mandatory annual reviews of the binding sectoral plans (LPTE, 2025). These reviews are the main mechanism through which evidence-based prioritization—including how to allocate resources between oil and gas expansion, renewables and electrification—can feed into binding adjustments to the planning framework.

3.3 Implementation

Almost 2 years after the reforms to Constitutional Articles 25, 27, and 28, and over a year after their secondary laws took effect, Mexico's new energy regulatory architecture is structurally complete. The legislative cycle has concluded, and the focus now shifts to implementation.

Implementation depends on the state performing well in two interdependent roles. First, as the owner and overseer of Pemex and CFE, the state must demonstrate fiscal discipline and operational credibility, which are necessary to sustain investment programs, manage the companies' debt, and attract private investment. Second, as the architect of binding energy policy, the state sets the conditions under which private investment can complement public spending. How well this works depends on the quality of those plans and on SENER's ability to turn strategic objectives into concrete investment frameworks. Fiscal discipline is not a constraint on the reform's ambitions but the foundation upon which they depend.

Early implementation signals are mixed. In June 2026, the government announced plans to add 32 GW of power generation capacity by 2030, 70% of which will be renewable. The plan will cost USD 43.3 billion: CFE will provide about 37% of direct investment, a further 43% comes through mixed (public-private) contracts, and roughly 21% is expected from standalone private investors (Presidencia de la República, 2026). So far, the plan has just been announced, and its construction cannot be guaranteed until public consultation happens,



permits are secured, and private funding is committed. If successful, it would deliver roughly half of the 46 GW of new solar and wind power that Ember estimates is needed to reach 45% of renewable generation by 2030 (Suárez, 2025).

Besides these early plans, the institutional capacity required to execute the new energy agenda has not yet been tested. The only evidence available is SENER's Internal Regulations, published in April 2025, which describe the secretariat's new organizational structure but says nothing about whether it has the technical expertise or coordination mechanisms that its expanded mandate requires (Presidencia de la República, 2025c). What the regulation shows is the scale of the change: functions once split across one ministry and two autonomous regulatory bodies—SENER, Comisión Nacional de Hidrocarburos, and Comisión Reguladora de Energía—each with its own staff, governance, and budget, are now consolidated into SENER and the Comisión Nacional de Energía (National Energy Commission), an associated regulatory body whose internal structures were finalized months after the secondary laws took effect. Whether this new institutional array can deliver on the PROSENER's ambitions is, for now, an open question, one that should be treated as a key risk in assessing whether those ambitions are achievable on schedule.

With the institutional architecture largely in place, the challenge is now investment prioritization. The LPTE-mandated annual reviews of the binding sectoral plans provide an opportunity to test whether investment plans remain realistic as economic conditions change, and to assess projects against their fiscal cost, delivery timelines, impact on import dependence, and contribution to the energy security objectives that the PROSENER sets out.



4.0 The Economics of Upstream Oil and Gas Investments

External forecasters project that domestic crude oil and gas production in Mexico will continue to decline unless significant new investments are made to develop existing domestic reserves (Rystad Energy, 2026). Pemex's strategy for reducing import dependence focuses on expanding domestic hydrocarbon production from these reserves. The PROSENER has targets of expanding crude oil production to 1.8 MMb/d by 2030 and gas production to 5,000 MMcf/d by the same year¹ (see Section 3.2). The oil target is calibrated to match projected domestic refining capacity, while the gas target would roughly double current production and reduce import dependence by about 20% (SENER, 2025b). In a context of heightened geopolitical instability, the logic behind these targets is that more domestic production means less exposure to import disruptions and price volatility.

Both targets are highly ambitious given current production trends and declining reserves. They also face unfavourable economics. Most of Mexico's prospective new fields carry higher breakeven costs than existing production and global competitors, which is a consequence of the maturity of existing fields and the higher costs of moving to new developments. Fully developing Pemex's current portfolio would require about USD 160 billion in CapEx over the next 15 years (Rystad Energy, 2026). The gas outlook is particularly challenging: domestic production costs are on average higher than current imports from the United States, raising questions about the economic rationale for large-scale gas investment. With reserves in structural decline, even sustained CapEx would not secure production over the longer term (Ballesteros et al., 2024; Rystad Energy, 2026).

Whether upstream investment represents the most cost-effective path to energy security warrants serious scrutiny. Expanding renewable energy, improving energy efficiency, and accelerating electrification including through electric vehicle (EV) deployment would also reduce dependence on imported gas and refined products, addressing the same energy security priorities through different means.

Given Mexico's tight fiscal position, prospective upstream investment should therefore be tested against its commercial viability, capital requirements, delivery timelines, and ability to reduce import dependence. The following sections provide that assessment for oil and gas developments currently under consideration, considering production costs and breakeven prices as the baseline against which alternative uses of public capital can be compared.

4.1 Economic Risks of Expanding Upstream Investment

Pemex remains fiscally significant, as its revenues account for around 20% of total government income (Ballesteros et al., 2024). However, Pemex's capacity to sustain those contributions is at risk. Higher breakeven prices in new fields and rapid decline rates in established ones threaten future revenue generation. Baseline projections to assess the economic viability/

¹ The PLADESHi extends the time horizon of the PROSENER's oil and gas production targets from 2030 to 2039; given its publication date, this change was not included in the analysis.



commerciality of oil and gas fields are based on Rystad Energy's standard price scenario which sees Brent oil prices fluctuating between USD 70 and USD 100/bbl until 2040, and Henry Hub gas prices varying between USD 3.7 and USD 7.4/Mcf over the same period.

According to Rystad Energy's (2026) UCube, an oil industry model and database, commercially viable new crude oil fields could contribute only 32 Mb/d by 2030 and around 236 Mb/d by 2035 under a standard price scenario. Reaching close to the PROSENER's 1.8 MMb/d target would require developing fields with negative NPV, which together would generate a net loss of USD 11.8 billion² over the next 15 years and would require approximately USD 88 billion in CapEx, with roughly USD 70 billion from Pemex alone (Rystad Energy, 2026). Even then, the target would only be approached around 2035, 5 years behind schedule (Figure 7).

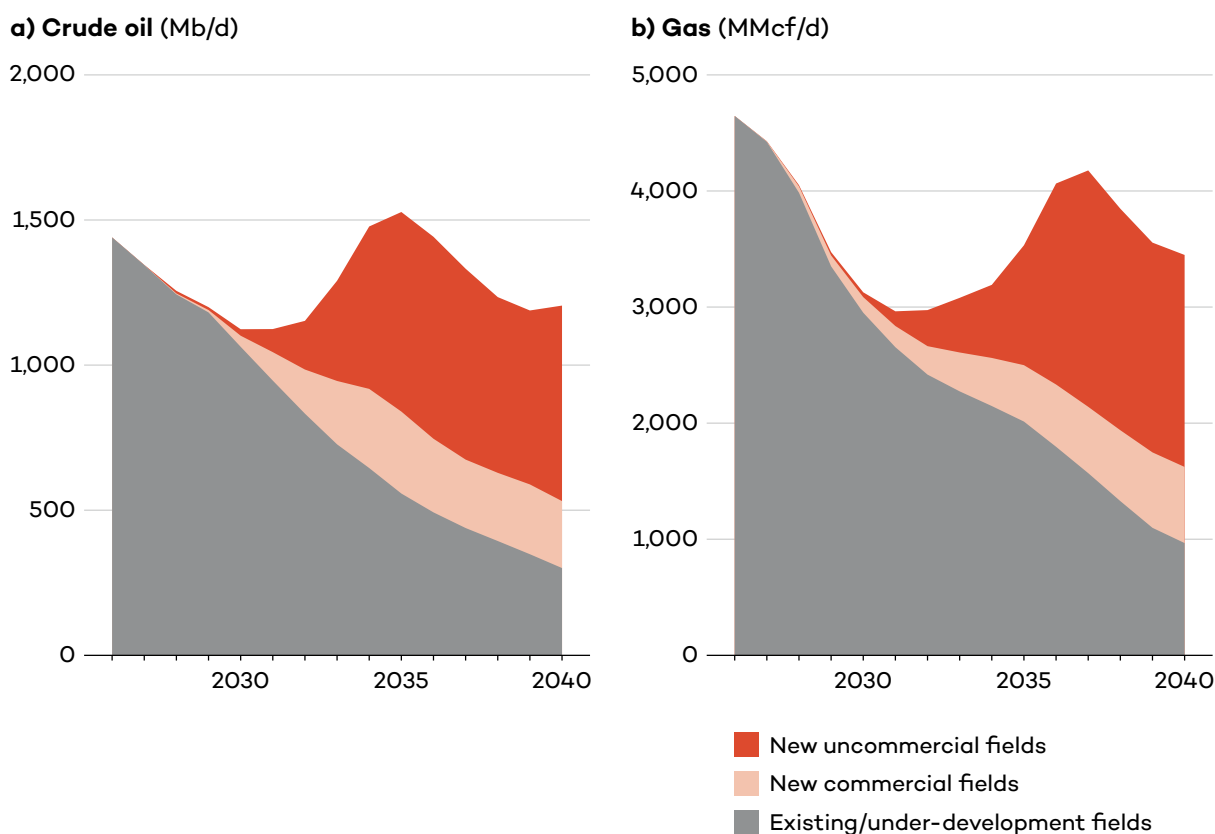
The gas outlook is similarly strained. Commercially viable new fields could yield only 134 MMcf/d by 2030 and 544 MMcf/d by 2035, far short of the PROSENER's 5,000 MMcf/d target. Including uncommercial assets could raise aggregate gas production to 176 MMcf/d by 2030, and a peak of 4,177 MMcf/d by 2037 (Figure 7). However, around 78% of the estimated maximum potential output from new fields in 2037 would come from negative-NPV fields. Developing this uncommercial gas production would result in a net loss of USD 5.6 billion³ and require about USD 41.3 billion in CapEx over the next 15 years, of which USD 24.7 billion would be funded by Pemex (Rystad Energy, 2026).

² This represents the discounted present value of the sum of future cashflows from new uncommercial fields in the next 15 years in Mexico.

³ Just like the equivalent figure for oil, this represents the discounted present value of the sum of future cashflows from new uncommercial fields in the next 15 years in Mexico.



Figure 7. Crude oil and gas production forecast and economic viability of new fields



Source: Rystad Energy UCube, version 2026-05-05.

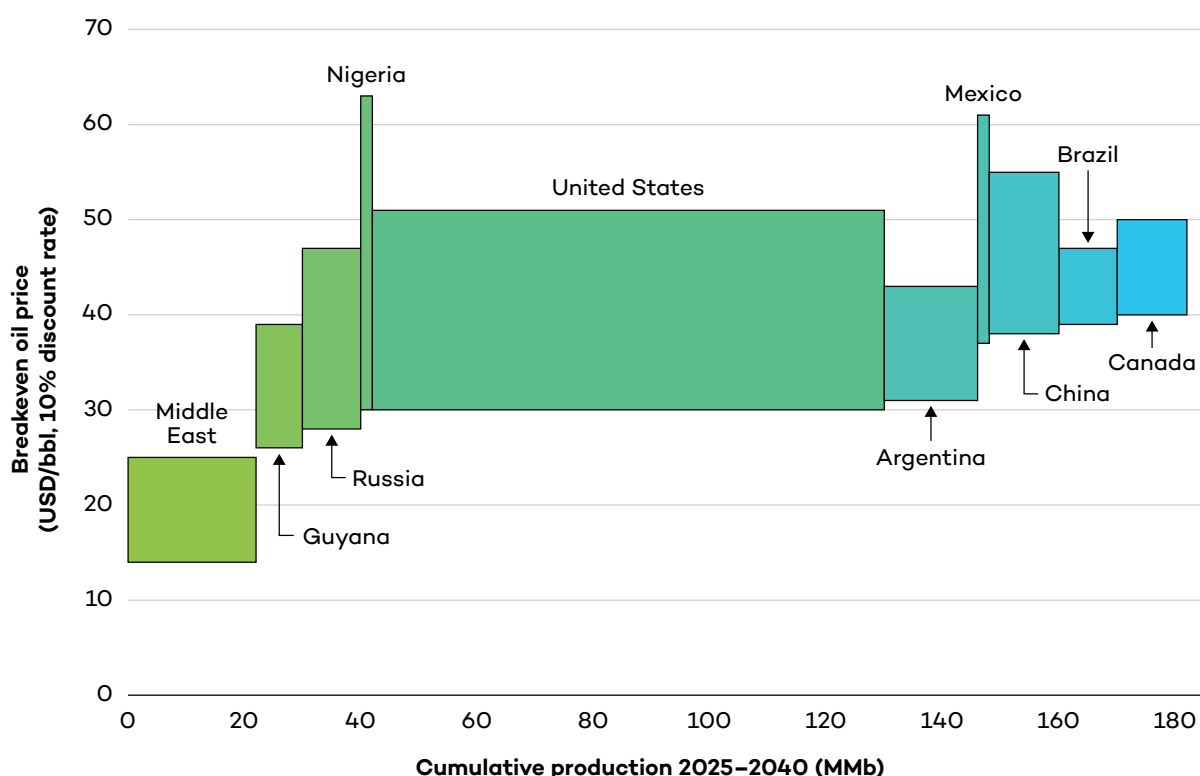
These projections rest on Rystad Energy's relatively optimistic price assumption using their standard price scenario (USD 70 to USD 100/bbl until 2040). Other analyses point to lower trajectories. Combining Rystad Energy's estimates of production economics with demand levels in the IEA's Stated Policies Scenario (STEPS)—which assumes continuation of stated government policies—puts average prices at around USD 63/bbl; while its Announced Pledges Scenario—which assumes governments also meet their mid- and long-term targets such as 2030/35 nationally determined contributions and mid-century net-zero goals—brings prices down to around USD 36/bbl between 2025 and 2040⁴ (Bisel & Prince, 2025). At Announced Pledges Scenario price levels, most fields that Rystad Energy currently classifies as commercially viable would turn unviable, as their operating costs would exceed market prices, generating negative cash flows over the project lifetime (Ballesteros et al., 2024; Bisel & Prince, 2025).

As illustrated in Figure 8, Mexico's undeveloped commercial crude production is located at the high-cost end of the global supply curve. Consequently, these higher-cost barrels are more likely to become uneconomic before the end of their production lifetimes, compounding the fiscal risks already linked to Pemex's financial situation.

⁴ Other estimates that use similar methods have prices of USD 66/bbl under STEPS and USD 47/bbl under the APS (Muttitt, 2025).



Figure 8. Cost curve of undeveloped crude oil production in Mexico compared to other major global crude oil producers



Source: Rystad Energy UCube, version 2026-05-05.

4.2 Fields That Pose Economic Risk

The economic viability of new upstream oil developments over the 2025 to 2040 period deserves closer attention. We assessed the economic viability of all new fields in Mexico based on Rystad Energy's business-as-usual scenario and the average market prices for crude oil in the next 15 years. To identify the fields that face the largest economic risk, we drew on Rystad Energy's forward-looking cost curve that shows the hydrocarbon volumes that can be extracted from each field at each increment of breakeven prices.

Of the undeveloped (pre-final investment decision) new oil fields which have negative NPV with base-case prices, Table 2 shows the five largest (in volume terms). The associated breakeven price represents the price at which operators of the fields need to sell a barrel of oil to make a return on investment. By extension, if the global crude oil market averages below this number, the field does not break even and becomes economically unviable. While Pemex only has a majority ownership of the Zama Phase 2 field (Phase 1 is already under development), this field has by far the largest discovered resources by volume and needs about USD 6.5 billion in CapEx to develop.



Table 2. Largest oil fields likely to face economic challenges in Mexico

Field name	Discovered resources (MMb)	Average breakeven oil price (USD/bbl)	NPV (USD million, standard case)
Zama Phase 2	647	83.7	-588
Yopaat	105	86.5	-280
Xaxamani	88	127	-800
Saasil	80	80	-166
Sayulita	72	71.9	-223

Note: NPVs by different oil prices are based on a 15% nominal discount rate.

Source: Rystad Energy UCube, version 2026-05-05.

Altogether, the five fields in Table 2 have a cumulative negative NPV of over USD 2 billion, even under quite optimistic assumptions about future oil prices. However, the total CapEx estimated to be required to develop these fields—which would be at risk of being stranded if a final investment decision were made—is over USD 14.2 billion.

While further appraisal would be necessary to determine whether these oil fields also contain significant associated gas, Rystad Energy (2026) estimates that the gas volumes that could be extracted from the five oil fields shown in Table 2 would be less than 3% of the gas-equivalent volumes on a preliminary basis. Therefore, investment in gas capture infrastructure during the development stage is unlikely to improve the economics of these fields. In any case, decisions to earmark CapEx for the valorization of associated gas are made at the final investment decision stage, when developers have sufficiently characterized the fields' geology and assessed the cost-benefit of using the gas.

Domestically, preliminary estimates indicate that condensate, natural gas liquids, and associated gas could account for about 12% of total oil-equivalent volumes in daily production on average over the coming 15 years for all new fields in Mexico. However, the economic benefits of utilizing this gas in terms of energy security through reduced import dependence would be very limited: combined forecasted production of associated gas at peak oil production levels, including all the non-commercial fields, could replace less than 1.4% of U.S. imports by 2035 (Rystad Energy, 2026). Nevertheless, retrofitting existing infrastructure to capture gas currently being flared or vented is crucial to enhance efficiency while preventing environmentally harmful and wasteful practices.

4.3 Implications for Energy Security

The analysis in Sections 4.1 and 4.2 uses price assumptions favourable to continued upstream expansion rather than a stress scenario. Even under Rystad Energy's base case, which implies continued growth in global oil and gas demand for another decade, much of Mexico's prospective new production is economically unviable. Under the lower-price paths consistent with the IEA's STEPS and Announced Pledges Scenario, the commercial failure rate rises



further. Mexico's position at the high-cost end of the global cost curve—relative to other major producers—represents a major risk for new upstream investment.

Mexico's upstream-heavy interpretation of energy sovereignty may undermine the very supply independence it is meant to secure, with direct consequences for Pemex's long-term financial position and for energy security more broadly. Independent analysis by Rystad Energy indicates the upstream oil and gas segment is unlikely to meet the government's targets for production volumes, fiscal contribution, or supply security. While it may still offer value through import substitution, committing tens of billions of dollars to fields that fail to break even under base-case price assumptions crowds out capital that could be directed toward alternatives that could address other structural energy security vulnerabilities. Evaluating those alternatives by net welfare impact and their energy security premium falls outside this report's scope. It would require employing macroeconomic energy models to quantify economy-wide policy choices. However, the underlying problem is clear: scarce capital is being directed toward oil and gas production targets while the structural vulnerabilities of the energy system remain largely unaddressed.



5.0 Achieving Energy Security Through Clean Energy Investments

As shown in the preceding sections, structural vulnerabilities in Mexico's oil and gas sectors are compounded by deep import dependence. Yet renewable energy and the electrification of end-uses hold substantial potential to reduce both. This section evaluates this potential through the 4As framework, energy sovereignty, and reduced dependence on the United States (see Section 2.1). Unlike Section 4, which assesses the economic viability of upstream oil and gas, this section does not conduct a comparable NPV or internal rate of return analysis of renewables, grids, storage, efficiency, and electrification because the necessary data are publicly unavailable.

5.1 The Role of Clean Energy and Electrification in Energy Security

Energy Availability

While Mexico's oil and gas reserves are declining, it possesses world-class renewable energy potential, particularly in solar and wind, thanks to its favourable geography and climate (Alemán-Nava et al., 2014). The country ranks among the top 20 globally for solar potential, with high irradiation levels across most of its territory (Rangelova et al., 2025). Between 2013 and 2023, total installed renewable capacity roughly doubled, driven primarily by photovoltaic and wind additions (CONAHCYT, 2024a). Distributed rooftop solar has meanwhile expanded rapidly, surpassing 5.1 GW of cumulative capacity as of 2025 (Energía Estratégica, 2026). Renewables will be the main driver of a projected increase in installed electricity generation capacity, from 90 GW to over 163 GW by 2038 (SENER, 2024). The government has set a target of 38% to 45% clean energy in the generation mix by 2030.

Simulations suggest that solar paired with BESS and an efficient electricity grid could meet 90% of Mexico's electricity demand (Rangelova et al., 2025). Under an ambitious scenario for solar scale-up, Mexico could eliminate all U.S. gas imports for power generation by installing 165 GW of solar combined with 500 GWh of storage, reaching 58% solar power generation by 2030.

Beyond solar, Mexico holds exceptional wind resources concentrated in the Isthmus of Tehuantepec in Oaxaca and parts of the Yucatán Peninsula, as well as significant potential for offshore wind, tidal, wave, and thermal energy in the Caribbean, the southeastern Pacific, and Baja California (M. L. Martínez et al., 2024). The country has also historically ranked among the top global producers of geothermal energy, though high exploration costs have left this resource incompletely surveyed (W. Shen et al., 2020). The updated Geothermal Law provides an enhanced regulatory framework for exploitation of underground thermal energy, particularly in Baja California, and should enable better assessment of untapped capacity (International Trade Administration, 2026).



Energy Affordability

Mexico aims to increase oil and gas production despite rapidly declining reserves and uneconomic prospects, while providing direct and indirect subsidies to imports of gas and refined oil products. This situation comes at a large economic cost for the state. Separate evidence reviewed in this section suggests that investments in renewables and electrification can offer economic benefits while also reducing dependence on imported fuels.

Renewable energy has reached cost competitiveness with fossil fuels globally, even accounting for variability, as measured by adjusted levelized cost of electricity metrics (International Renewable Energy Agency, 2024; Lazard, 2025; W. Shen et al., 2020). In Mexico, the International Renewable Energy Agency estimates that utility-scale solar PV crossed the cost-competitiveness threshold with new fossil-fuel capacity as early as 2019, though average costs remained above the global benchmark and behind regional peers such as Brazil and Chile. More recent data are limited, but CFE's planned mixed investment scheme with private partners is expected to add 7,500 MW of renewable energy at a cost of USD 8 billion (Solís, 2026); this implies that the cost gap with global averages persists.

The clearest domestic evidence of renewable energy competitiveness comes from the three energy auctions held between 2015 and 2017. Average winning prices fell from USD 46.77/MWh in 2015 to a historic low of USD 21.10/MWh in 2017, substantially lower than the cost of electricity from gas at the time (Hancevic & Sandoval, 2023; IEA, 2020). That auction window was suspended in 2019, but the pipeline it generated came online mostly between 2018 and 2020, demonstrating that competitive procurement can translate rapidly into deployed capacity (Hancevic et al., 2026). The slowdown in capacity additions following the suspension of the auctions is likely to be reversed with the recently introduced auctions system.

In addition to the mixed-investment projects, the Mexican government is seeking to facilitate fully private investment. In October 2025, SENER published a call for private investors interested in developing 100% private electricity generation plants (Secretaría de Gobernación, 2025). This tender resembles a competitive auction, but the government exercises much stronger control, and allocation criteria go beyond cost minimization (e.g., contribution to the reliability, continuity, quality, and safety of the national electric system). The call specifies the required capacity (MW) and the generation technology by region, identifies the interconnection substation, and calculates the investment amount required from the private party to reinforce the substation and expand capacity (Barrios, 2025).

The impact of this new auction model on the cost of new renewable energy installations in Mexico is currently uncertain, but positive indications of investor readiness are already visible: more than 3.3 GW of new renewable capacity and 1,257 MW of storage were awarded in just 2 months, with private investors like Sunstone Power, Iberdrola, Idea Energía, Copenhagen Infrastructure Partners, Dhamma Energy, Revolve Renewable Power, GEMEX, and Alten Energías Renovables securing a significant portion of the projects (Lardizábal, 2026). Moreover, the costs of installation and operation of renewable energy under the new scheme will likely be much lower than during the previous auctions, given the steep decline in the cost of solar PV and BESS installations. Recent global and Mexican evidence suggests that



utility-scale solar PV paired with battery storage is approaching cost parity with—and in some cases undercutting—new gas-fired generation (International Renewable Energy Agency, 2024; Lazard, 2025), while also reducing exposure to imported fuel costs and supply disruption.

Scaling up renewables also carries significant macroeconomic affordability benefits. Ember estimates that meeting the PROSENER's 45% clean energy target by 2030 (rather than a less ambitious 36% scenario) would reduce gas import costs by approximately USD 1.6 billion per year and cut the electricity sector's dependence on U.S.-imported gas by roughly one fifth (Suárez, 2025). Yet current public investment runs counter to this logic: for every dollar directed at clean energy, nearly two are allocated to fossil fuels (Climate Finance Group of Latin America and the Caribbean, 2026). Rebalancing that ratio would improve both affordability outcomes and long-term fiscal resilience.

A further affordability dimension lies in Mexico's grid tariff structure and electricity subsidies. Historically subsidized residential rates and cross-subsidies across consumer categories have produced price signals that do not reflect the true cost of electricity production, dampening the financial incentive for households to invest in distributed generation. Reform toward cost-reflective tariffs paired with targeted social protection for vulnerable households could simultaneously improve equity, generate fiscal space for clean energy support, and accelerate deployment.

Energy Accessibility

Accessibility refers to the physical availability of energy services and the capacity of different population groups to connect to and benefit from energy infrastructure. The high vulnerability of the current system, largely based on fossil fuels for energy accessibility, has already been discussed in earlier sections. Renewable energy, on the other hand, presents both significant opportunities and structural challenges on this dimension that must be considered for energy investment planning.

Distributed solar PV has expanded substantially over the past decade, particularly among commercial and small- to medium-sized industrial users (Hancevic & Sandoval, 2023). Mexico's regulatory framework allows residential users to connect rooftop systems to the grid without connection or network access fees, yet fewer than 1% of households have done so, pointing to large, untapped potential (Hancevic et al., 2026). The barriers are primarily universal subsidies for grid electricity, high upfront capital costs, limited access to consumer finance, low awareness, and lengthy grid connection approval processes. To support distributed solar, the National Energy Commission now allows installations smaller than 0.7 MW to be exempt of generation permits—compared to 0.5 MW previously (Comisión Nacional de Energía, 2026).

Grid access and reliability represent a more acute barrier for rural and marginalized communities. Approximately 400,000 people in Mexico lack reliable electricity services, concentrated in Indigenous communities in southern states (CFE, 2025). Off-grid and mini-grid renewable solutions, such as solar home systems and community-scale solar-battery installations, can extend access to remote populations at lower cost and with shorter deployment timelines than grid extension, giving decentralized renewable energy technologies a direct role in closing the accessibility gap (IEA, 2026d).



At the national level, transmission infrastructure is a constraint on how much of Mexico's renewable potential can be dispatched to demand centres. The high-voltage network is concentrated in central and northern Mexico, while the richest renewable resource zones, like Oaxaca, Chiapas, and the Yucatán Peninsula, face bottlenecks that prevent power from reaching major demand centres. Expanding and modernizing transmission is therefore a prerequisite for accessible, renewable energy supply (SENER, 2024).

Energy Acceptability and Sustainability

Oil and gas developments have substantive negative impacts on climate change and on communities through air pollution, water contamination, and land disruption. Renewable projects generally have a significantly lower impact, but they must be properly planned to ensure that they generate social acceptability. Several of Mexico's richest resource zones coincide with areas of significant environmental and cultural value, where project impacts on communities and ecosystems require careful consideration. Research suggests a trade-off: large-scale projects can improve local living standards through expanded electricity access but carry greater environmental risks that erode community support, while smaller-scale installations generate lower impacts and stronger local buy-in through job creation and technology development (M. L. Martínez et al., 2024).

The experience of wind development in the Isthmus of Tehuantepec illustrates this dynamic. Wind farms in Oaxaca have faced sustained conflict rooted in land tenure disputes; inadequate free, prior, and informed consent processes; and perceived inequitable distribution of benefits with Zapotec and Ikojts communities. The lesson is not that large-scale renewable energy is unacceptable, but that siting, negotiation, and benefit-sharing arrangements determine outcomes as much as the technology itself. Community energy models, in which cooperatives or municipalities own or co-own renewable assets, have shown promise in Europe, and increasingly in Latin America, as a mechanism for shifting local perceptions from an extractive imposition to a collective asset (Durán et al., 2025). Other mechanisms that can help shift local perceptions and improve the acceptability of projects are community benefit schemes and community benefit agreements with the affected communities (Fünfgelt & Kurtenbach, 2026).

Mexico's regulatory framework does not yet accommodate these models. The 2025 Electricity Sector Law confines non-utility generation to distributed generation below 0.7 MW and self-consumption of up to 20 MW, with neither pathway contemplating community- or cooperative-scale ownership. State-led rural electrification and clean energy financing



instruments exist but remain CFE-centred rather than community-based. Designing a dedicated pathway that includes simplified licensing, concessional finance, and technical assistance for community organizations could substantially improve both renewable energy acceptability and the equitable distribution of its benefits.

Improved planning and integration of just transition principles in renewable energy development could address these issues. However, the emissions inherent in fossil fuel developments are more difficult to abate. Methane leakage from gas production, which has been heavily underreported in Mexico (L. Shen et al., 2021), can be reduced substantially at relatively low costs, but carbon emissions cannot be addressed except through very costly and ineffective carbon capture and storage projects (Cameron et al., 2023). End-use air pollution from both gas and oil products also cannot be fully mitigated. Altogether, renewable energy, when implemented considering just transition principles, presents a promising alternative to address the acceptability dimension of energy security.

Energy Sovereignty and Reduced Dependence on the United States

As detailed in earlier sections, U.S.-imported gas accounts for a large and growing share of Mexico's electricity generation, exposing the country to price volatility, supply disruption risk, and political leverage at a moment of heightened bilateral tensions. This vulnerability is physically embedded in the pipeline network, import terminals, and storage facilities that bind Mexico's energy system to its northern neighbour. Mexico's situation is not merely one of dependence, which a country can manage through diversified sourcing, but of structural vulnerability: supply is concentrated in a single neighbour, moves overwhelmingly by pipeline, and offers only substitution options that are slow and costly to deploy (Rodríguez Padilla, 2018).

The Mexican government proposes two paths to reduce gas import dependence. One is the expansion of domestic production through Pemex to 5,000 MMcf/d, and the other is the acceleration of renewable energy deployment through CFE (SENER, 2025b). Pemex's production cannot replace gas imports structurally given production decline, financial constraints, and limited infrastructure (Usla, 2025) (see Section 4.1). However, renewables, primarily solar PV and wind, provide the most direct and scalable response to this vulnerability. Scaling renewables to meet 45% of electricity demand by 2030 would reduce gas import costs by approximately USD 1.6 billion per year and cut the power sector's dependence on U.S.-imported gas by roughly one-fifth (Suárez, 2025).

Mexico's import dependence extends beyond gas to refined petroleum products, particularly gasoline and diesel, sourced primarily from U.S. refineries. Electrification of transport is the primary lever for reducing this exposure (see Box 3). Mexico's EV market remains nascent, with fully electric vehicles representing just over 1% of new vehicle sales in 2024, but sales have grown about 80% year-on-year and are projected to continue to grow exponentially (Necoechea, 2025). However, transport electrification can contribute the most to energy security when the power system is decarbonized: to maximize energy security benefits, the deployment of clean energy and demand-side electrification must advance together.



Box 3. Transport electrification: the multiple wins of reducing fuel import dependence from the demand side

Transport electrification is a demand-side energy security strategy: it reduces the need for imported fuel rather than trying to replace it with new domestic oil supply. This is already happening at scale. The IEA estimates that EVs avoided around 1.7 million barrels per day of oil consumption globally in 2025, while road transport accounts for close to half of global oil demand (IEA, 2026a).

For countries like Mexico, EVs therefore contribute not only to reducing domestic emissions but also to reducing fuel imports. Each vehicle shifted from gasoline or diesel to electricity reduces exposure to oil price volatility, exchange-rate risk, and recurring pressure for fuel subsidies. These benefits increase as the power system adds more domestic renewable energy and storage: the more EVs are charged with Mexican solar, wind, and other clean generation, the more transport spending shifts away from imported fuels and toward domestic electricity infrastructure.

Moreover, electrification of the transport sector also brings immediate health co-benefits to dense urban centres by eliminating tailpipe emissions and air pollution where it is most concentrated.

A fiscally efficient approach for promoting increased EV adoption would gradually redirect part of the public money now used to cushion fossil fuel price shocks (e.g., gasoline, diesel, and electricity subsidies) toward targeted clean mobility. This does not mean withdrawing emergency support from vulnerable households during price spikes but gradually shifting toward investments that permanently reduce that exposure: EVs, public transport electrification, charging infrastructure, renewable power, grids, and storage.

When reforming subsidies or creating new ones, the equity case is central. Targeted incentives can be weighted toward lower-income households, public transport users, small operators, and high-mileage fleets, while broader policies can target the growth of the EV market by building complementary infrastructure (e.g., charging stations could be deployed by Pemex or CFE), helping to lower EV costs, and expanding EV model availability. Support for public and community charging, battery swapping, electric two- and three-wheelers, and electric buses can help ensure that cleaner mobility is not limited to higher-income households.

Beyond energy security, electrification of the transport sector can also help to secure Mexico's long-term economic resilience. As global oil demand peaks and domestic crude production faces structural decline, oil exports can no longer be relied upon to anchor the country's trade balance. However, Mexico is one of the largest producers of light-duty vehicles globally, manufacturing almost 4 million in 2025, of which 83% are exported, mainly to the rest of North America (Forbes México, 2026). Expanding its domestic EV manufacturing ecosystem could allow Mexico to replace shrinking oil revenues with high-value zero-emission vehicle exports, potentially safeguarding hundreds of thousands of industrial jobs and maintaining its competitive edge in North American trade (IEA, 2026a).



In Mexico, the overarching strategy set by the PROSENER 2025–2030 explicitly prioritizes the electrification of public and heavy-duty transport while mandating the regulated deployment of charging infrastructure, including its integration with Pemex's fuel retail network.

Another often-overlooked vulnerability of Mexico's energy sovereignty concerns subsidies. Transfers to keep electricity and motor fuel prices low reduce short-term affordability pressures. However, because the fuels in question are predominantly imported, they effectively channel public resources into sustaining demand for imported gas and refined products (Laan, 2026). That sustained demand justifies further cross-border infrastructure investment, and each new fossil fuel asset, amortized over decades, locks Mexico into the same import relationship for its operational lifetime. In contrast, each additional solar panel, wind turbine, or EV reduces the need for fossil fuel imports for one to three decades, depending on its operational life.

Future commitments to binational energy infrastructure should therefore be assessed not only against short-term supply security and price, but also against the multi-decade import dependence they entrench and the externalities they entail. Investments must be weighed explicitly against the alternative of directing those resources toward domestic renewable generation, grid modernization, and demand-side infrastructure that reduce rather than perpetuate fossil fuel import reliance.

5.2 Smart Investments to Address Energy Security

The evidence reviewed across the 4As framework and the energy sovereignty dimension shows that renewable energy, BESS, and electrification can offer Mexico a credible and increasingly cost-competitive pathway to improved energy security—a pathway that addresses energy availability, reduces import dependence, lowers long-term costs, and can be structured to broaden energy access and social acceptability. The case for scaling up investment in clean energy is strong.

However, the transition will not happen by itself. Converting Mexico's renewable resource potential into installed capacity requires substantial policy adjustments and investments:

- Reforming fossil fuel and electricity subsidies to level the playing field for clean energy and to incentivize adoption.
- Expanding and modernizing transmission and infrastructure to integrate grid-scale and distributed renewable energy.



- Introducing policies that provide certainty for clean energy investors while minimizing fiscal impacts, including market mechanisms like contracts for difference.
- Strategically installing storage to balance variability while minimizing grid upgrade costs.
- Addressing the high cost of capital inherent in emerging economies through finance mechanisms like concessional loans, blended finance, and guarantees that ensure sufficient private capital for the investments that are needed for the energy transition.
- Leveraging the stronger steering role of the government in the new model of renewable energy auctions to encourage more competitive dynamics that lower prices, by increasing the transparency of the allocation criteria, the decision-making process, and the contract conditions.
- Streamlining and updating institutional and regulatory processes built for the 2013 to 2024 private-led model to fit the new state-led framework, where public investment leads and private participation is complementary—while preserving environmental, social, and safety reviews of energy projects regardless of who invests.
- Improving consultation and informed consent processes and considering new tools and mechanisms for community engagement, such as community energy models for small- to medium-scale projects and community benefit schemes and benefit agreements for large-scale projects.

The scale of the gap between current plans and what the energy security agenda requires is still large. For instance, CFE's current investment plan includes only 4.7 GW of utility-scale solar projects by 2030, far short of the 36 GW that would be required under the 45% clean electricity scenario (Suárez, 2025). This gap reflects both a financing constraint and a policy choice: public investment has historically favoured fossil fuel infrastructure, with nearly double spent on fossil fuels as on renewable energy (Climate Finance Group of Latin America and the Caribbean, 2026).

At the same time, Mexico faces real fiscal constraints. Public debt sustainability concerns, the fiscal pressures created by Pemex's financial difficulties (see Box 1), and the legacy of large energy subsidies—about USD 12.6 billion in fossil fuel subsidies and USD 18.4 billion in SOE CapEx for fossil fuel projects in 2024 (Figure 4)—all limit the space for additional public expenditure. This makes smart prioritization of available investment essential, whether public or private, domestic or international. Not all investments deliver equal energy security returns per peso spent, and sequencing matters: some investments are prerequisites that unlock the value of others.

Given these constraints, investment decisions in the energy sector should be guided by a set of clear prioritization criteria. The framework in Table 3 proposes four prioritization criteria that are grounded in the 4As and sovereignty dimensions analyzed in this report. It sets out key questions for assessing energy security gains and suggests measurable indicators for answering them.



Table 3. Prioritization framework for new energy investments

Criteria	Guiding questions and examples	Example key performance indicators for framework operationalization
Energy sovereignty impact	Does the investment directly reduce import dependence, increase domestic generation capacity, or improve supply reliability? Investments that displace gas imports, such as utility-scale solar and transmission, deliver the highest sovereignty returns and should be prioritized.	• Annual gas-fired generation displaced (GWh/year) • Clean generation capacity added (GW) and resulting clean-electricity share (%), relative to the PROSENER's 45% clean-electricity target. • Import displacement per MXN million of public expenditure
Crowding-in of private finance	Does the investment create the enabling conditions that attract private capital? Public funds are most efficiently deployed where they can leverage private investment at scale.	• Private capital mobilized per MXN peso of public investment (leverage ratio) • Number and capacity (GW) of private renewable projects unlocked by investment-enabling mechanisms (e.g., renewable energy auctions) • Average contract price achieved (USD/MWh) vs. gas-fired reference
Speed of deployment	How quickly can the investment come online relative to the urgency of reducing fossil fuel import dependence? Distributed solar PV (rooftop and small commercial) has the shortest development cycle and can contribute to decarbonization while larger infrastructure projects mature. Policies to adapt existing technical regulatory and permitting procedures to the new energy system framework led by the SOEs are still needed to support and speed up the uptake of distributed and other clean energy sources.	• Time from investment decision to first energy delivery (months) • Share of portfolio deliverable within 24 months vs. 24–60 months vs. 60+ months • Regulatory approval and permitting lead time (days from application to permit) • Average time to grid connection for new renewable projects (months from application)



Criteria	Guiding questions and examples	Example key performance indicators for framework operationalization
Fiscal efficiency	What is the energy security return per unit of public expenditure, net of fiscal costs (subsidies, direct capital investments, tax expenditures)? Rebalancing public finance away from fossil fuel subsidies and toward targeted renewable energy support would improve the overall efficiency of the energy investment portfolio, considering the negative profitability of new upstream fossil fuel projects.	• Energy security benefit per MXN peso of public support (import savings, MXN/year) • Fiscal support per unit of energy delivered (MXN/MWh or MXN/GJ) • Field NPV and breakeven oil price vs. import parity

Note: Indicators listed are proposed for investment screening and ex-post evaluation. Because of baseline data availability gaps, proxy indicators are proposed but not evaluated quantitatively. Quantitative thresholds for each indicator should be calibrated to national targets (PROSENER's 45% target, nationally determined contributions, etc.) in a full implementation of this framework.

Source: Authors' elaboration.

Applying these four criteria to the available evidence highlights several short-term priorities: (1) transmission and grid expansion and improvement; (2) deployment and scaling of renewable energy under the new energy legal framework with transparent and reliable procurement mechanisms that can help to mobilize private capital at scale; (3) accelerated distributed solar deployment via financing mechanisms and awareness-raising; and (4) storage and grid flexibility investments (e.g., batteries and demand management), which become increasingly critical as variable renewable penetration rises and should be planned in parallel.

The criteria imply a revised operational logic for the two main energy SOEs. For Pemex, public support for new oil and gas investment should be conditional on field-level NPV and breakeven metrics that demonstrate viability without continued transfers, methane abatement performance, and other indicators of the overall energy security return of investment. Investment in new upstream capacity that requires sustained fiscal support, deepens public debt exposure, or scores poorly on fiscal efficiency and sovereignty impact should therefore not be prioritized. For CFE, the framework points toward prioritizing projects and investments that reduce outage and grid bottleneck metrics, connection times, and curtailment rates, as well as other indicators that provide a means of accountability on the efficiency and performance of investments over time.

One important caveat is that this investment prioritization framework treats investments in energy SOEs primarily through the lens of financial and energy security performance—project and field-level returns, fiscal exposure, methane intensity, development speed, etc. This framing is intentional and appropriate for the purpose of this report, but it is also incomplete. SOEs are more than an investment portfolio; they are also a regional employer, a repository of specialized engineering knowledge, and a container of supplier networks built over decades. Investment decisions in SOEs therefore generate consequences that extend well beyond project-level cost-benefit calculations, and a full assessment of their merits requires analytical frameworks that go beyond the scope of this report.



The constitutional reform reclassifying Pemex and CFE as “state public companies” (“empresas públicas del Estado”), with an explicit social responsibility mandate, opens a window to redefine the terms of state support. It also raises a question: what paths should Pemex and CFE pursue as fossil fuel production declines, debt pressures intensify, and renewable markets develop? Answering that question requires deeper analysis than is possible in this report. For full implementation of the investment framework, the Mexican government would need to conduct deeper analysis of the short-, medium-, and long-term investment paths for Pemex and CFE, including not only the fiscal, but also the social and environmental trade-offs of alternative investment paths.

Finally, the investment framework criteria also highlight a crosscutting enabling condition: the technical-regulatory layer itself. The 2024–2025 constitutional and legal reforms (see Section 3.1) inverted the organizing logic of the hydrocarbons and electricity sectors from markets built around open competition, with the state as one participant among others, to an arrangement in which the state holds preferential and—in the case of electricity—majority roles (at least 54% of electricity supplied to the grid [“injected energy”], rising to 59% by 2030 under the Electric Sector Development Plan).

In both sectors, however, much of the secondary technical regulation has not been updated to match the state’s new role. These regulations govern, for instance, measurement, transport, infrastructure access, and industrial safety oversight in the hydrocarbons sector; and interconnection, safety, environmental compliance, and grid operation in the electricity sector. The new sectoral laws delegate these rules to administrative provisions and codes still to be issued, leaving prior-regime instruments in force in the interim. Aligning this technical layer with the state’s new responsibilities and energy security investment priorities, while putting in place social and environmental safeguards, is essential for both public and private investment to flow rapidly in both sectors.



6.0 Policy Recommendations

Mexico's new energy framework is now in the implementation phase. The task is not to revisit the reform but to make it work. That means using planning, public finance, and SOEs to reduce the country's most important energy-security risks: dependence on imported gas for power and imported refined fuels for transport, and broad subsidies that sustain this dependence.

The following recommendations focus on the practical choices that can deliver stronger energy-security gains per peso of public spending, based on the evidence reviewed in this report:

Make SENER implementation ready. Assess whether SENER has the staffing, technical systems, budget, and coordination mechanisms needed to carry out the functions absorbed from the former regulators. Complete the pending technical rules for electricity, hydrocarbons, safety, environmental review, social safeguards, interconnection, and grid operation, so that public and private investors understand the rules and timelines.

Apply a strict energy-security and fiscal test to Pemex's investments. Prioritize maintenance and recovery in existing fields where this can reduce imports at reasonable cost. Defer or avoid high-breakeven new oil and gas projects that require large amounts of public capital but are unlikely to deliver strong fiscal returns or near-term security gains. Use the LPTE-mandated annual reviews of sectoral binding plans to adjust production targets to realistic levels and timelines.

Prioritize grid expansion and modernization. Treat transmission, distribution, grid management, and flexibility as the foundation of Mexico's energy security strategy. Without these investments, renewable energy potential will remain stranded, distributed generation will be harder to integrate, and electrification will increase pressure on the system rather than reduce dependence on imported fuels.

Scale clean electricity through clear, low-risk investment channels. Expand renewable energy, storage, and distributed solar using transparent procurement, targeted finance, and streamlined approval processes. Public spending should be used where it unlocks larger private investment, lowers the cost of capital, and accelerates projects that reduce gas imports and improve reliability.

Foster resilience and security during the energy transition. Two near-term actions can strengthen energy security during the transition to a diversified, low-carbon energy matrix without locking in new hydrocarbon infrastructure. First, capture more of the gas currently lost to flaring and venting: this raises effective domestic gas supply at low cost and advances Mexico's nationally determined contributions commitment to cut methane and end routine flaring (IEA, 2026b). Second, give Mexico's storage ambition a credible path to execution. The 2018 Natural Gas Storage Public Policy set a gas reserve target to cover 5 days of national consumption (SENER, 2018). CENAGAS leadership has since signalled interest in raising this to at least 10 days (Arias, 2025), but that target remains informal. The next step is to formalize it and include it in sectoral plans, such as the 5-year plans for the Sistema de Transporte y Almacenamiento Nacional Integrado de Gas Natural (Natural Gas



Transportation and Storage System) and their revisions, and to prioritize, fund, and schedule concrete storage projects.

Shift broad fossil fuel subsidies toward targeted protection and transition

Investment. Protecting vulnerable households from energy poverty remains an important policy objective and a core dimension of energy security, but it can be pursued more efficiently through targeted transfers, well-designed electricity tariffs, and investment in public transport, rather than universal price support. Government support to cushion energy prices is a longstanding political commitment in Mexico, which means subsidy reform can carry political cost. To manage this risk, make an inventory of fossil fuel subsidies and create a time-bound action plan based on whether they can be quickly phased out or must be phased out with a robust strategy: subsidies worth more than USD 850 million could be phased out quickly with minimal impact on energy access and affordability (Kuehl et al., 2025). Fiscal space freed from untargeted subsidies should instead fund the investments that structurally reduce energy import dependence and build resilience against future price shocks. These include grid infrastructure to integrate variable renewables, storage and flexibility technologies, energy efficiency, and distributed energy solutions—alongside concessional finance and risk mitigation instruments to offset the high upfront costs and cost of capital that these investments might face in Mexico. Peer support through the 17-government Coalition on Phasing Out Fossil Fuel Incentives Including Subsidies (or COFFIS) can help Mexico create political momentum for this structural reform.

Coordinate transport electrification with clean power expansion. Treat EV deployment, public transport electrification, charging infrastructure, and renewable electricity expansion as a single agenda. Segments of the electrification value chain could become part of the energy SOEs' business model (e.g., installation of EV charging stations). Electrification will strengthen energy security the most if new electricity demand is increasingly met by domestic clean power rather than additional imported gas.

Adopt an investment-screening test for the planning cycle. The investment prioritization framework in Table 3 is a decision tool that the government can already start using. SENER can apply the four criteria—fiscal cost, import-reduction impact, speed of delivery, and ability to mobilize private finance—as a first filter to plan investments under the annual review cycle of the LPTE's binding sectoral plans.

Create new investment paths and public support conditions for the energy SOEs.

The constitutional reclassification of Pemex and CFE gives the government an opportunity to reassess this support and establish clear conditions for its continuation. Doing so requires grounding the assessment of energy security benefits and welfare impacts in macroeconomic and energy modelling, so that short-, medium-, and long-term investment paths for both SOEs can be prioritized against their fiscal, social, and environmental trade-offs. Once these paths are set, the key performance indicators included in Table 3 can be incorporated into Pemex's and CFE's operations to keep track of implementation and ensure it stays aligned with the energy security goals outlined in the LPTE.



References

- Alemán-Nava, G. S., Casiano-Flores, V. H., Cárdenas-Chávez, D. L., Díaz-Chavez, R., Scarlat, N., Mählknecht, J., Dallemand, J.-F., & Parra, R. (2014). Renewable energy research progress in Mexico: A review. *Renewable and Sustainable Energy Reviews*, 32, 140–153. <https://doi.org/10.1016/j.rser.2014.01.004>
- Arias, A. (2025, November 25). *CENAGAS va por almacenamiento de gas para 10 días*. Energy21. <https://energy21.com.mx/cenagas-va-por-almacenamiento-de-gas-para-10-dias/>
- Ballesteros, F., Furnaro, A., & Manley, D. (2024). *Pemex and the energy transition: Timely responses to growing threats*. <https://resourcegovernance.org/publications/pemex-and-energy-transition-timely-responses-growing-threats>
- Barrios, R. (2025, October 21). *Overview of renewable energy in Mexico*. México, ¿cómo vamos? <https://mexicocomovamos.mx/publicaciones/2025/10/overview-of-renewable-energy-in-mexico/>
- Berg, R. C., Polo, E., & Ziemer, H. (2023). *For North American energy security, go local: Examining the role of natural gas and Mexico's energy sector*. <https://www.csis.org/analysis/north-american-energy-security-go-local-examining-role-natural-gas-and-mexicos-energy>
- Bisel, O., & Prince, G. (2025). *Fading fortunes: True oil & gas value in Canada and beyond*. Carbon Tracker Initiative. <https://carbontracker.org/reports/fading-fortunes/>
- Black, S., Celniak, W., Garcia Huitron, A., Parry, I., Schulz Antipa, P., & Vernon-Lin, N. (2025). Underpriced and overused. *IMF Working Papers*, 2025(270), 1. <https://doi.org/10.5089/9798229034715.001>
- Cameron, L., Carter, A., & Sievert, K. (2023). *Why the cost of carbon capture and storage remains persistently high*. International Institute for Sustainable Development (IISD). <https://www.iisd.org/articles/deep-dive/why-carbon-capture-storage-cost-remains-high>
- Centro Nacional de Control del Gas Natural. (2023, May 2). *Proyecto de Almacenamiento Estratégico*. <https://www.gob.mx/cenagas/acciones-y-programas/proyecto-de-almacenamiento-estrategico-156833>
- Centro Nacional de Control del Gas Natural. (2026, June 1). *Consulta Pública CENAGAS 2026*. <https://www.gob.mx/cenagas/articulos/consulta-publica-cenagas-2026>
- Comisión Federal de Electricidad. (2025). *Informe Anual 2024*. <https://www.cfe.gob.mx/finanzas/reportes-financieros/Reportes%20Anuales%20Documentos/Informe%20Anual%202024.pdf>
- Comisión Nacional de Energía. (2026). *Acuerdo de la Comisión Nacional de Energía por el que se emiten las Disposiciones Administrativas de Carácter General para la generación de energía eléctrica en la modalidad de Cogeneración*. Diario Oficial de la Federación (DOF). https://dof.gob.mx/nota_detalle.php?codigo=5785044&fecha=16/04/2026#gsc.tab=0
- Consejo Nacional de Humanidades, Ciencias y Tecnologías. (2024a). *Capacidad y generación*. Plataforma Nacional de Energía, Ambiente y Sociedad – Capacidad y Generación. <https://energia.conahcyt.mx/planeas/electricidad/capacidad-generacion>



- Consejo Nacional de Humanidades, Ciencias y Tecnologías. (2024b). *Flujos y uso de gas*. Plataforma Nacional de Energía, Ambiente y Sociedad - FlujoGas. <https://energia.conacyt.mx/planeas/hidrocarburos/flujo-gas>
- Consejo Nacional de Humanidades, Ciencias y Tecnologías. (2024c). *Producción de crudo nacional*. Plataforma Nacional de Energía, Ambiente y Sociedad - ProducciónCrudo. <https://energia.conacyt.mx/planeas/hidrocarburos/produccion-crudo>
- Do, N., Wang, H., Urazova, I., Posada, E., & Picciariello, A. (2026, April 27). *The USD 1.2 trillion problem: Why every energy crisis strengthens the case for clean public finance* [Deep dive]. International Institute for Sustainable Development (IISD). <https://www.iisd.org/articles/deep-dive/usd-12-trillion-problem-energy-crisis-strengthens-case-clean-public-finance>
- Durán, J., Reina, J. D., & Useche, C. (2025, April 4). *Comunidades energéticas en Colombia: Historias de éxito, desafíos y aprendizajes en el marco de la transición energética justa*. World Resources Institute (WRI). <https://es.wri.org/insights/comunidades-energeticas-en-colombia-historias-de-exito-desafios-y-aprendizajes-en-el-marco>
- Energía Estratégica. (2026, June 1). *Distributed generation in Mexico totaled almost 1 GW and in installations smaller than 50 kW during 2025*. Strategic Energy. <https://www.energiaestrategica.com/en/notes/generacion-distribuida-en-mexico-sumo-casi-1-gw-y-en-instalaciones-menores-a-50-kw-durante-2025>
- Forbes México. (2026, January 9). *La producción de autos en México cae 0.9% en 2025 ante amenazas arancelarias de EU*. Forbes México. <https://forbes.com.mx/la-produccion-de-autos-en-mexico-cae-0-9-en-2025-ante-amenazas-arancelarias-de-eu/>
- Fünfgelt, J., & Kurtenbach, L. (2026). *Renewable energy benefit sharing: From social licence to shared value* (Just Energy Transition in Coal Regions Knowledge Hub). Wuppertal Institute. <https://www.jetknowledge.org/knowledge/renewable-energy-benefit-sharing-from-social-licence-to-shared-value/>
- Gante, D. (2025, July 17). *Dos Bocas, entre las refinerías más caras del mundo por sobre costo*. Expansión. <https://expansion.mx/empresas/2025/07/17/dos-bocas-entre-las-refinerias-mas-caras-del-mundo-por-sobrecosto>
- Grunstein, M. (2024, December 10). *From market guardians to monopoly keepers: Regulatory capture in Mexico's energy sector*. Rice University's Baker Institute for Public Policy. <https://doi.org/10.25613/N7HC-3R70>
- Grupo de Financiamiento Climático para América Latina y el Caribe (GFLAC). (2026, May). *Política fiscal y sector energético en México: Trayectoria, incentivos y desafíos para la transición energética (2012–2024)*. https://a1f7a9c2-c300-4bce-a10a-f8410b8932f0.filesusr.com/ugd/32948d_d610115a449e4c42ae2bd6cd746e75a7.pdf
- Hancevic, P. I., García, B., & Sandoval, H. H. (2026). Mexico's energy crossroads: Navigating a complex transition. *Energy Policy*, 214, 115224. <https://doi.org/10.1016/j.enpol.2026.115224>
- Hancevic, P. I., & Sandoval, H. H. (2023). Solar panel adoption among Mexican small and medium-sized commercial and service businesses. *Energy Economics*, 126. <https://doi.org/10.1016/j.eneco.2023.106979>



- Instituto Mexicano para la Competitividad. (2022). *Garantizar la seguridad energética de México requiere de inversión en gas natural*. <https://imco.org.mx/garantizar-la-seguridad-energetica-de-mexico-requiere-de-inversion-en-gas-natural/>
- International Energy Agency. (2020, December 9). *Levelised cost of electricity calculator* [Data Tools]. <https://www.iea.org/data-and-statistics/data-tools/levelised-cost-of-electricity-calculator>
- International Energy Agency. (2025). *Oil 2025*. <https://www.iea.org/reports/oil-2025>
- International Energy Agency. (2026a). *Global EV outlook 2026*. <https://www.iea.org/reports/global-ev-outlook-2026>
- International Energy Agency. (2026b). *Global methane tracker*. <https://www.iea.org/reports/global-methane-tracker-2026#overview>
- International Energy Agency. (2026c). *Mexico*. Mexico - Countries & Regions - IEA. <https://www.iea.org/countries/mexico/energy-mix>
- International Energy Agency. (2026d). *Tracking SDG7: The energy progress report*. <https://www.iea.org/reports/tracking-sdg7-the-energy-progress-report-2026>
- International Institute for Sustainable Development & Organization for Economic Co-operation and Development. (2026, January). *Country data*. Fossil Fuel Subsidy Tracker. <https://fossilfuelsubsidytracker.org/country/>
- International Monetary Fund. (2025, September 19). *Mexico: Staff concluding Statement of the 2025 Article IV Mission*. <https://www.imf.org/en/news/articles/2025/09/19/cs-mexico-staff-concluding-statement-of-the-2025-article-iv-mission>
- International Renewable Energy Agency. (2024). *Renewable power generation costs in 2023*. https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2024/Sep/IRENA_Renewable_power_generation_costs_in_2023.pdf
- International Trade Administration. (2026, February 12). *Renewable energy* [Mexico Country Commercial Guide]. <https://www.trade.gov/country-commercial-guides/mexico-renewable-energy>
- Jones, O., & Dodds, P. E. (2017). Definitions of energy security. In *The role of hydrogen and fuel cells in delivering energy security for the UK* (pp. 32–45). H2FC Hub. <http://www.h2fcsupergen.com/wp-content/uploads/2015/08/IMPJ5213-H2FC-Supergen-Energy-Security-032017-WEB.pdf>
- Kuehl, J., Osorio Figueredo, P., & Cavolo, M. (2025). *Making it happen: How the G20 can end fossil fuel subsidies in practice*. International Institute for Sustainable Development (IISD). <https://www.iisd.org/publications/report/g20-fossil-fuel-subsidies>
- Laan, T. (2026, February 17). *The surprising route to energy security: Scrap fossil fuel subsidies* [Deep dive]. International Institute for Sustainable Development (IISD). <https://www.iisd.org/articles/deep-dive/route-energy-security-scrap-fossil-fuel-subsidies>



- Lardizábal, E. (2026, June 22). *The energy companies that are driving the renewable energy landscape in Mexico: Who is behind the 10 GW awarded in six months?* Strategic Energy. <https://www.energiaestrategica.com/en/notes/las-energeticas-que-mueven-el-tablero-renovable-en-mexico-quienes-estan-detras-de-los-10-gw-adjudicados-en-un-ano>
- Lazard. (2025). *Lazard LCOE+*. <https://www.lazard.com/research-insights/levelized-cost-of-energyplus-lcoeplus/>
- Ley de Planeación y Transición Energética. (2025). <https://www.diputados.gob.mx/LeyesBiblio/ref/lpte.htm>
- Martínez, M. L., Chávez, V., Silva, R., Heckel, G., Garduño-Ruiz, E. P., Wojtarowski, A., Vázquez, G., Pérez-Maqueo, O., Maximiliano-Cordova, C., Salgado, K., Landgrave, R., Mateos, E., & Tapia, E. (2024). Assessing the potential of marine renewable energy in Mexico: Socioeconomic needs, energy potential, environmental concerns, and social perception. *Sustainability*, 16(16), 7059. <https://doi.org/10.3390/su16167059>
- Martínez, Ó., & Eschenbacher, S. (2026, July 31). *Months after Pemex gas well accident in Mexico, health and pollution concerns grow*. Reuters. <https://www.reuters.com/business/energy/months-after-pemex-gas-well-accident-mexico-health-pollution-concerns-grow-2026-07-31/>
- México Evalúa. (2021). *Vivir a oscuras: La pobreza energética en México*. <https://mexicoevalua.org/vivir-a-oscuras-la-pobreza-energetica-en-mexico/>
- Muttitt, G. (2025). *Canadian oil and gas production in the global clean energy transition*. International Institute for Sustainable Development and Environmental Defence. <https://www.iisd.org/publications/report/canada-oil-gas-clean-energy-transition>
- Necoechea, P. (2025, March 13). *By 2035, Mexico aims to phase out fossil fuel-dependent vehicles*. Climate Scorecard. <https://www.climatescorecard.org/2025/03/by-2035-mexico-aims-to-phase-out-fossil-fuel-dependent-vehicles/>
- Organization of the Petroleum Exporting Countries. (2026). *Annual statistical bulletin 2026* (No. 61). <https://publications.opec.org/asb/Download>
- Oswald, Ú. (2017). Seguridad, disponibilidad y sustentabilidad energética en México. *Revista Mexicana de Ciencias Políticas y Sociales*, 62(230), 155–196.
- Petróleos Mexicanos. (2025). *PEMEX: Plan Estratégico 2025-2035*. <https://www.pemex.com/acerca/planestrategico/Paginas/default.aspx>
- Petróleos Mexicanos. (2026). *Resultados 2025 al cuarto trimestre*. <https://www.pemex.com/ri/finanzas/Reporte%20de%20Resultados%20no%20Dictaminados/Reporte%204T25.pdf>
- Presidencia de la República. (2025a). *Decreto por el que se expiden la Ley de la Empresa Pública del Estado, Comisión Federal de Electricidad; la Ley de la Empresa Pública del Estado, Petróleos Mexicanos; la Ley del Sector Eléctrico; la Ley del Sector Hidrocarburos; la Ley de Planeación y Transición Energética; la Ley de Biocombustibles; la Ley de Geotermia y, la Ley de la Comisión Nacional de Energía; se reforman diversas disposiciones de la Ley del Fondo Mexicano del Petróleo para la Estabilización y el Desarrollo y, se reforman, adicionan y derogan diversas disposiciones de la Ley Orgánica de la Administración Pública Federal*. Diario Oficial de la Federación. https://www.diputados.gob.mx/LeyesBiblio/ref/lse/LSE_orig_18mar25.pdf



- Presidencia de la República. (2025b, March 18). *Versión estenográfica. 87 Aniversario de la Expropiación Petrolera*. Blog. <https://www.gob.mx/presidencia/es/articulos/version-estenografica-87-aniversario-de-la-expropiacion-petrolera>
- Presidencia de la República. (2025c, April 17). *Decreto por el que se expide el Reglamento Interior de la Secretaría de Energía*. Diario Oficial de la Federación. <https://sidof.segob.gob.mx/notas/5755222>
- Presidencia de la República. (2026, June 24). *Plan de Crecimiento de Energías Renovables es histórico y aumenta la soberanía, serán 32 mil MW; el 70% de fuentes renovables: Presidenta*. <https://www.gob.mx/presidencia/prensa/plan-de-crecimiento-de-energias-renovables-es-historico-y-aumenta-la-soberania-seran-32-mil-mw-el-70-de-fuentes-renovables-presidenta>
- Rangelova, K., Jones, D., & Suárez, W. (2025). *Falling battery costs can unleash Mexico's full solar potential and boost energy security*. Ember. <https://ember-energy.org/latest-insights/falling-battery-costs-can-unleash-mexicos-full-solar-potential-and-boost-energy-security/>
- Rodríguez Padilla, V. (2018). Seguridad e integración energética con Estados Unidos: De la confianza a la incertidumbre. *Norteamérica, Revista Académica Del CISAN-UNAM*, 13(2). <https://doi.org/https://doi.org/10.22201/cisan.24487228e.2018.2.322>
- Rousseau, I. (2017). La nueva regulación de la gestión social de los proyectos energéticos en México. Seguridad, sustentabilidad y gobernabilidad. *Revista Mexicana de Ciencias Políticas y Sociales*, 62(230), 197–220. [https://doi.org/10.1016/S0185-1918\(17\)30021-1](https://doi.org/10.1016/S0185-1918(17)30021-1)
- Rystad Energy. (2026). *Rystad Energy UCube* (Version 2026-05-05) [Data set].
- Secretaría de Gobernación. (2024). *Decreto por el que se reforman el párrafo quinto del artículo 25, los párrafos sexto y séptimo del artículo 27 y el párrafo cuarto del artículo 28 de la Constitución Política de los Estados Unidos Mexicanos, en materia de áreas y empresas estratégicas*. Diario Oficial de la Federación. https://www.diputados.gob.mx/LeyesBiblio/decretos/66/08/03_dof_31oct24.pdf
- Secretaría de Gobernación. (2025, March 18). *Convocatoria para la atención prioritaria de solicitudes de permisos de generación eléctrica e interconexión al Sistema Eléctrico Nacional, alineados a la planeación vinculante*. Diario Oficial de la Federación (DOF). <https://sidof.segob.gob.mx/notas/5752330>
- Secretaría de Energía. (2018, March). *Política pública en materia de almacenamiento de gas natural*. <https://www.gob.mx/sener/articulos/presentacion-a-consulta-de-la-politica-publica-en-materia-energetica-aplicable-a-la-constitucion-de-almacenamiento-de-gas-natural>
- Secretaría de Energía. (2024). *Programa de Desarrollo del Sistema Eléctrico Nacional 2024–2038*. <https://www.gob.mx/sener/articulos/programa-de-desarrollo-del-sistema-electrico-nacional-2024-2038>
- Secretaría de Energía. (2025a). *Balance Nacional de Energía*. https://www.gob.mx/cms/uploads/attachment/file/1047704/Balance_Nacional_de_Energ_a_2024R.pdf
- Secretaría de Energía. (2025b). *Programa Sectorial de Energía 2025-2030 (PROSENER)*. <https://sidof.segob.gob.mx/notas/5776838>



- Secretaría de Energía. (2026, April 27). *Manual de Organización General de la Secretaría de Energía*. Diario Oficial de La Federación (DOF). <https://sidofqa.segob.gob.mx/notas/5785999>
- Secretaría de Hacienda y Crédito Público. (2026). *Cuenta Pública 2025: Tomo VIII. Empresas públicas del Estado. Petróleos Mexicanos*. https://www.cuentapublica.hacienda.gob.mx/en/CP/Petroleos_Mexicanos-2025
- Shen, L., Zavala-Araiza, D., Gautam, R., Omara, M., Scarpelli, T., Sheng, J., Sulprizio, M. P., Zhuang, J., Zhang, Y., Qu, Z., Lu, X., Hamburg, S. P., & Jacob, D. J. (2021). Unravelling a large methane emission discrepancy in Mexico using satellite observations. *Remote Sensing of Environment*, 260, 112461. <https://doi.org/10.1016/j.rse.2021.112461>
- Shen, W., Chen, X., Qiu, J., Hayward, J. A., Sayeef, S., Osman, P., Meng, K., & Dong, Z. Y. (2020). A comprehensive review of variable renewable energy levelized cost of electricity. *Renewable and Sustainable Energy Reviews*, 133, 110301. <https://doi.org/10.1016/j.rser.2020.110301>
- Solís, A. (2026, May 20). *CFE estima inversiones con empresas privadas por US\$8.000 millones en proyectos de energía renovable*. Bloomberg. <https://www.bloomberglinea.com/latinoamerica/mexico/cfe-estima-inversiones-con-empresas-privadas-por-us8000-millones-en-proyectos-de-energia-renovable/>
- S&P Global. (2026, May 12). *Mexico outlook revised to negative on weakening fiscal flexibility; 'BBB' foreign currency rating affirmed*. <https://www.spglobal.com/ratings/en/regulatory/article/-/view/type/HTML/id/3560935>
- Suárez, W. (2025). *Renewables point the way to Mexico's energy security*. Ember. <https://ember-energy.org/app/uploads/2025/05/EN-Report-Renewables-Mexicos-energy-security.pdf>
- Usla, H. (2025, August 7). Si se cierra 'llave' del gas natural estadounidense, México se 'queda a oscuras', advierte Pemex. *El Financiero*. <https://www.elfinanciero.com.mx/economia/2025/08/07/dependencia-del-gas-natural-de-eu-pondra-a-mexico-en-serios-aprietos-director-de-pemex/>
- Usla, H. (2026, February 13). *Apagones en México duraron 42% más tiempo al cierre de 2025*. El Financiero. <https://www.elfinanciero.com.mx/economia/2026/02/13/apagones-en-mexico-duraron-42-mas-tiempo-al-cierre-de-2025/>
- Vargas, M. del R. (2020). Base jurídica del concepto de seguridad energética en México. *Dikê, Revista de Investigación En Derecho, Criminología y Consultoría Jurídica*, (27). <https://portal.amelica.org/ameli/jatsRepo/48/481820003/index.html>
- Vivoda, V., Krame, G., & Spraggon, M. (2023). Oil theft, energy security and energy transition in Mexico. *Resources*, 12(2), Article 2. <https://doi.org/10.3390/resources12020030>
- Vizcaino, M. E., & Butler, K. (2026, May 20). *Moody's cuts Mexico credit rating to one notch above junk*. Bloomberg. <https://www.bloomberg.com/news/articles/2026-05-20/moody-s-cuts-mexico-credit-rating-as-fiscal-pressures-mount>

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