Grupo ACT MX

NAVIGATING MEXICO'S CARBON AND ENERGY MARKETS:

Practical Insights for Compliance and Voluntary Success

ACT ON IT.

Index.

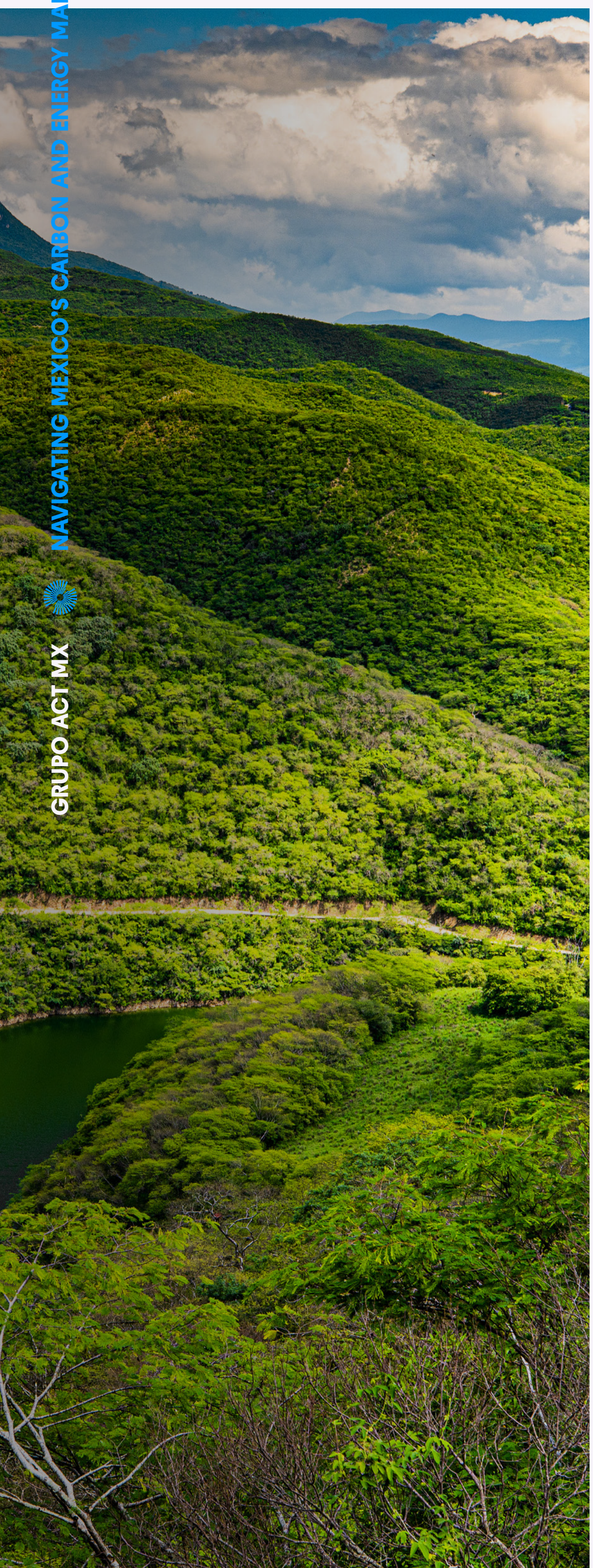
01

EXECUTIVE SUMMARY

Mexico's path toward a low-carbon economy presents a unique mix of regulatory demands and voluntary market opportunities. For businesses operating in this landscape, the challenge isn't just compliance—it's finding a strategic edge in sustainability. Grupo ACT MX's expertise simplifies the journey, guiding you through Clean Energy Certificates (CELs), International Renewable Energy Certificates (I-RECs), carbon credits, and frameworks that support ambitious climate goals.

This paper unpacks Mexico's evolving carbon and energy markets, offering insights to help you confidently meet regulatory requirements and explore voluntary avenues for deeper impact.

02



INTRODUCTION TO MEXICO'S CARBON AND ENERGY MARKETS

As Mexico intensifies its commitment to climate action, its carbon and energy markets are undergoing significant changes. Central to this evolution is the compliance market—a regulated framework where companies must meet set environmental standards. In this space, CELs play a vital role in promoting clean energy and driving decarbonization across industries. They certify the production of power from clean energy sources to meet requirements under Mexican regulation and are associated with the consumption of power load centers.

Alongside CELs, Mexico has implemented localized carbon tax mechanisms, which add another layer to the country's approach to reducing emissions. This section provides an overview of these key components, offering insights into how they shape the compliance framework and support Mexico's low-carbon transition.

The Role and Impact of CELs in Mexico

CELs certify and promote clean energy generation to help Mexico meet its climate goals, which are now aligned with the target announced by President Claudia Sheinbaum in her inaugural address: reaching 45% renewable electricity by 2030. This target builds towards Mexico's broader commitments under the Paris Agreement, aiming for 50% renewable electricity by 2050. Currently, renewables account for only 30% of Mexico's power production, with fossil fuels supplying the remaining 70%. By establishing a structured framework with regulatory support and clear issuance guidelines, CELs are designed to bridge this gap and accelerate the transition to a cleaner energy mix.

Eligible technologies for CELs include a range of clean energy sources as defined in Article 3, section XXII of Mexico's Electricity Industry Law (LIE). This includes but not limited to:

- **Solar and wind energy**
- **Ocean and geothermal energy**
- **Bioenergy and hydroelectric power**
- **Nuclear energy**
- **Methane recovery from waste disposal**
- **Hydrogen (produced via combustion or fuel cells)**
- **Efficient cogeneration plants that meet emissions standards**

CEL Compliance Obligations

Power suppliers and qualified users—including domestic, industrial, and government entities—are obligated to purchase CELs to meet clean energy consumption quotas, which are set three years in advance by the Secretary of Energy (SENER). For 2024, this requirement was set at 13.9% of total energy consumption.

Challenges and Market Dynamics

Despite the CEL market's role in promoting climate action, it faced several challenges, including a legal dispute regarding the prioritization of state-owned utility, Comisión Federal de Electricidad (CFE), over private power generators in dispatching electricity and the issuance of CELs from older power plants. The Supreme Court ruled in favor of private companies, preventing the oversupply of CELs that could destabilize the market.

Additionally, the CEL market coexists with International Renewable Energy Certificates (I-RECs), with I-RECs being largely adopted by international corporations outside of Mexico due to uncertainties around local regulations. As a result, some segments of the CEL market have shifted towards I-REC generation.

03

LOCAL CARBON TAX MECHANISMS

As a complement to the CEL market, several Mexican states have introduced their own carbon tax frameworks—a system that places a fee on greenhouse gas emissions (GHG), typically based on the amount of carbon dioxide (CO_2) emitted. This tax provides companies with a financial incentive to reduce emissions, as lowering their carbon output can reduce their tax burden. Additionally, many of these frameworks allow companies to offset a portion of their emissions by purchasing carbon credits, creating new market opportunities that support both regulatory compliance and environmental impact.

Key developments in these frameworks include:

1. **Federal Carbon Tax:**

   Mexico's federal carbon tax applies to the production, import, and disposal of fossil fuels used for combustion.

2. **State-Level Carbon Taxes:**

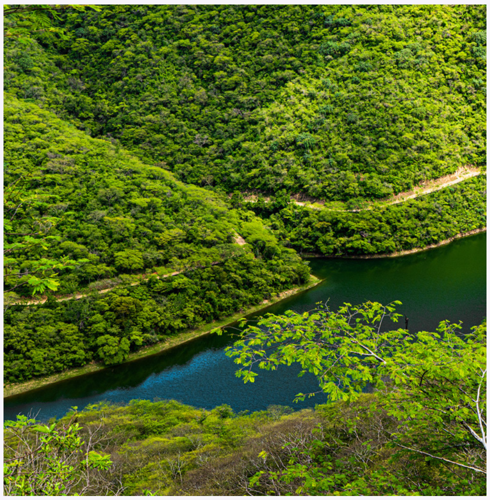
   Following a Supreme Court ruling that affirmed the right of states to implement their own environmental tax initiatives, multiple states have introduced carbon taxes and some allow for offsetting. Examples of state carbon taxes include Tamaulipas, Querétaro, Zacatecas, San Luis Potosi, and Nuevo Leon. These state taxes apply to a wide range of industrial activities and emissions from fixed sources, creating a broader regulatory landscape for businesses.

3. **Opportunities for Offsetting:**

   Notably, states like Querétaro allow the use of carbon credits to offset a portion of the local carbon levy. This framework enables companies to meet local regulatory requirements while supporting regional decarbonization projects, providing a model for how regional carbon taxes can drive both compliance and environmental benefits.

These local carbon tax mechanisms, backed by state authority, represent a significant step toward decentralized environmental regulation in Mexico. By allowing the usage of carbon credits, states encourage companies to contribute to emissions reduction projects that align with their corporate sustainability goals.

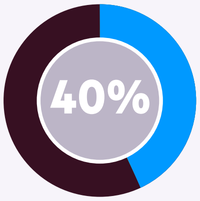
04



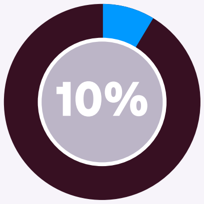
EXPECTED GROWTH OF THE ETS IN MEXICO

Building on this foundation of regional initiatives, Mexico's Emissions Trading System (ETS) is poised to integrate and elevate these efforts at a national scale. It launched its pilot phase in January 2020 and is primarily targeting emissions from the energy and industrial sectors. This pilot phase has allowed the ETS to establish a framework, enhance emissions data quality, and build capacity in emissions trading, setting the foundation for the system's upcoming expansion.

The ETS is expected to transition from the pilot phase to a fully operational phase, with regulations anticipated from the Ministry of Environment and Natural Resources (SEMARNAT) to guide this shift.



273.1
MILLION TONS



Sectors Covered:

The ETS covers direct CO_2 emissions from fixed sources in the industrial and electricity sectors, two of Mexico's largest emitters. Currently, the ETS encompasses approximately 40% of Mexico's national greenhouse gas emissions, helping the country move closer to its climate goals.

Emission Cap:

During the pilot phase, the ETS set a cap of 273.1 million tons of CO_2e, and this cap is likely to become more stringent with the full implementation of the operational phase. As caps tighten, regulated companies will face increased pressure to adopt cleaner practices and technologies, accelerating Mexico's decarbonization efforts.

Offset Allowances:

Up to 10% of a company's obligations can be offset with carbon credits, providing some flexibility for companies while simultaneously stimulating the development of Mexico's local carbon credit market.

Key Features and Growth Opportunities with Full ETS Implementation

1. **Increased Stringency in Emissions Caps and Free Allowances:**
The operational phase will introduce gradually reduced free allowances, pushing companies toward greater emissions reductions. With auction reserves and a general reserve in place, the ETS is designed to stabilize the market while minimizing economic impact.

2. **Enhanced Market Stability and Compliance:**
The ETS has already seen promising compliance rates, with 84% of participants meeting their obligations in 2023, reflecting the market's maturity and companies' growing familiarity with emissions trading.

3. **Expansion of Carbon Credit Demand:**
With the 10% offset allowance, demand for high-quality carbon credits will continue to rise, encouraging the development of local climate projects. This allowance will create incentives for low-carbon projects, while SEMARNAT's planned operational phase regulations will likely clarify offset requirements.

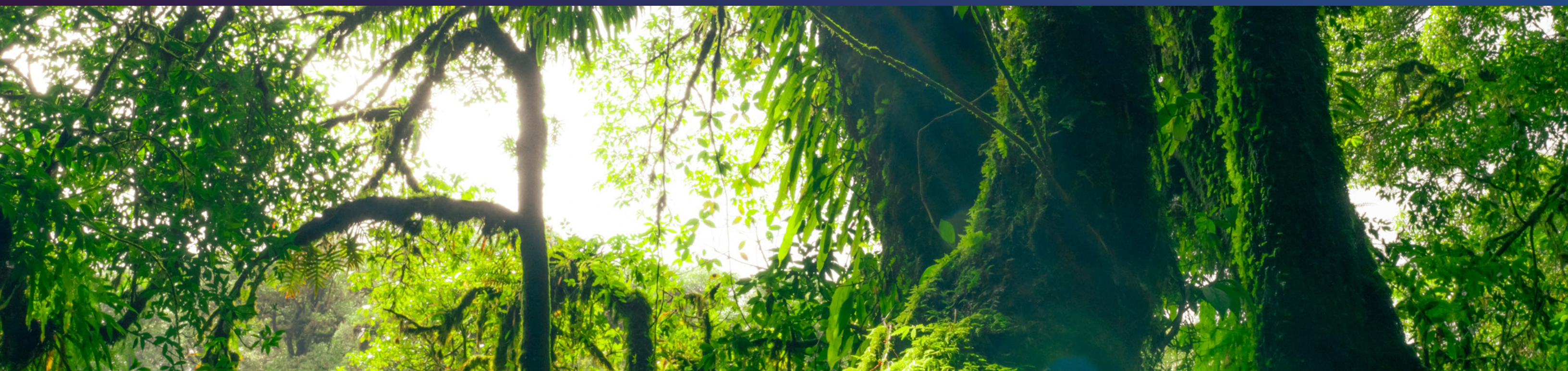
4. **Broader Sectoral Coverage:**
As the ETS evolves, it may expand its reach to additional sectors beyond industrial and electricity, bringing more companies under emissions regulation and enhancing market depth.

5. **Potential Linkage with Other ETS Programs:**
Mexico's ETS could explore linkages with other North American or global carbon markets, offering companies more flexibility in compliance and stimulating cross-border collaboration in emissions reduction.

6. **Revenue Generation for Sustainability Programs:**
Revenue generated from the ETS could support sustainability projects, such as infrastructure improvements and community-focused environmental programs, similar to the revenue use from state-level carbon taxes. This funding would support Mexico's national climate goals, including a 35% reduction in greenhouse gas emissions by 2030.

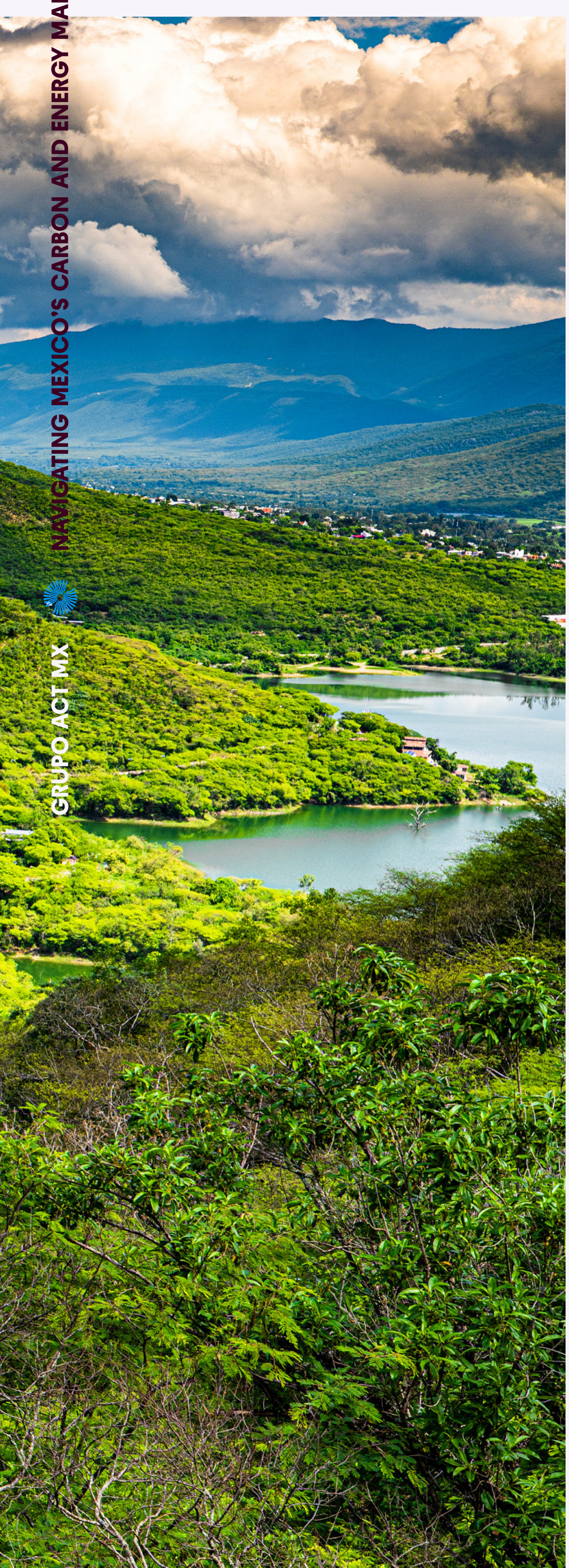
Implications for Corporate Strategy

For businesses operating in Mexico, preparing for the growth of the ETS is essential.
With more stringent emissions caps and offset requirements on the horizon, companies will need to enhance their carbon management strategies. Early investments in renewable energy, process efficiency, and carbon credit portfolios will be critical for navigating the evolving regulatory landscape.



05

ROLE OF CELS AND I-RECS IN SUPPORTING VOLUNTARY GOALS



While compliance markets like the ETS and state-level carbon taxes are essential for meeting regulatory requirements, voluntary markets play a crucial role in enabling corporations to exceed these mandates and achieve their own decarbonization targets. In Mexico, the use of CELs and I-RECs within the voluntary market framework is becoming increasingly significant for corporations committed to sustainability.

I-RECs and Global Renewable Energy Commitments

For Mexican corporations with international footprints, I-RECs provide the flexibility to support renewable energy projects worldwide, matching energy consumption in regions where CELs are not applicable. As globally recognized certificates, I-RECs enable companies to attribute renewable energy use across their operations and align with broader sustainability commitments.

Key Benefits of I-RECs in Voluntary Strategies:

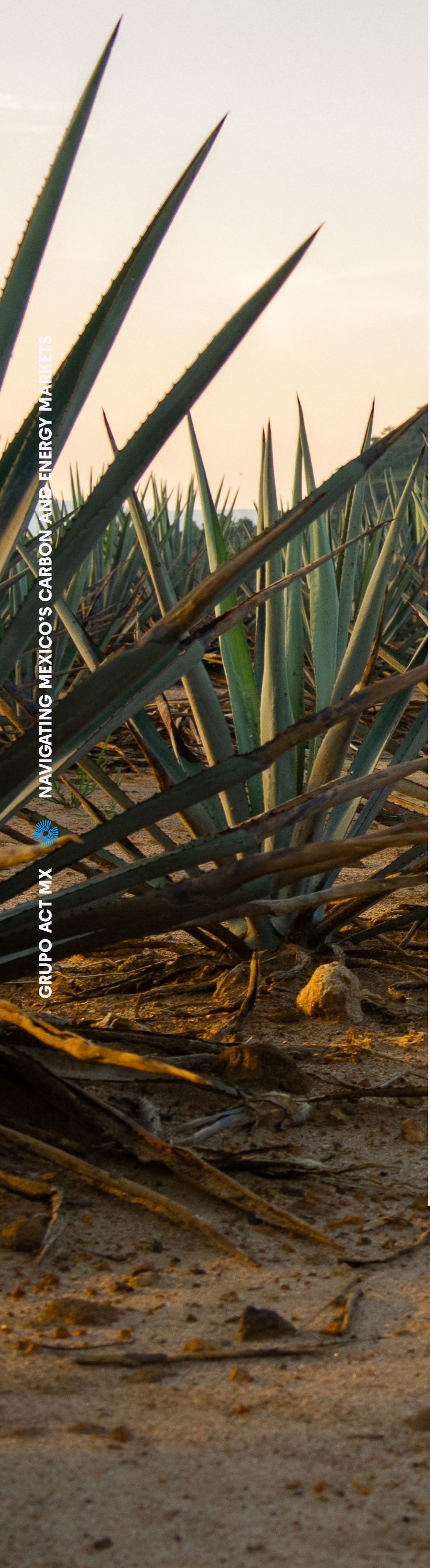
International Reach:
I-RECs allow companies to source renewable energy from projects outside Mexico, providing a global scope for carbon footprint reduction.

Standardized Reporting:
As globally accepted certificates, I-RECs simplify reporting on renewable energy achievements, especially for multinational corporations.

Enhanced Credibility:
I-RECs enable companies to track renewable energy consumption transparently, meeting the reporting standards of the Greenhouse Gas Protocol and other sustainability benchmarks. By aligning with global best practices, companies can reinforce their sustainability profile— gaining a competitive edge in industries where environmental responsibility is highly valued.

CELs in the Voluntary Market

While CELs are primarily known for compliance purposes, they are increasingly utilized by corporations in Mexico to support voluntary clean energy goals. By voluntarily purchasing CELs, companies can support the growth of local clean energy, contributing directly to Mexico's energy transition while demonstrating their leadership in sustainability.



Key Benefits of Voluntary CEL Purchases:

Compliance with Regulatory Obligations:
Voluntary purchases of CELs help companies stay ahead of compliance requirements, ensuring alignment with Mexico's clean energy regulations and minimizing potential risks associated with regulatory shifts.

Brand Enhancement:
Just as voluntary purchases of I-RECs can strengthen a company's market position, voluntary purchases of CELs demonstrate a proactive commitment to clean energy, which can resonate with consumers, investors, and partners.

Local Support:
Voluntarily purchasing CELs stimulates the local clean energy market, fostering new projects and supporting economic development.

06

SUPPORTING SUSTAINABLE GROWTH IN MEXICO WITH ACT'S COMPREHENSIVE SOLUTIONS

As Mexico advances its decarbonization, partnering with a climate action expert is essential for navigating complex regulations and maximizing sustainability. ACT's strategy simplifies the path to net zero, equipping businesses in Mexico with customized solutions across both compliance and voluntary markets. Through integrated digital platforms, expert advisory, and a diverse product portfolio, ACT empowers organizations to make informed decisions, reduce emissions, and create meaningful impact.

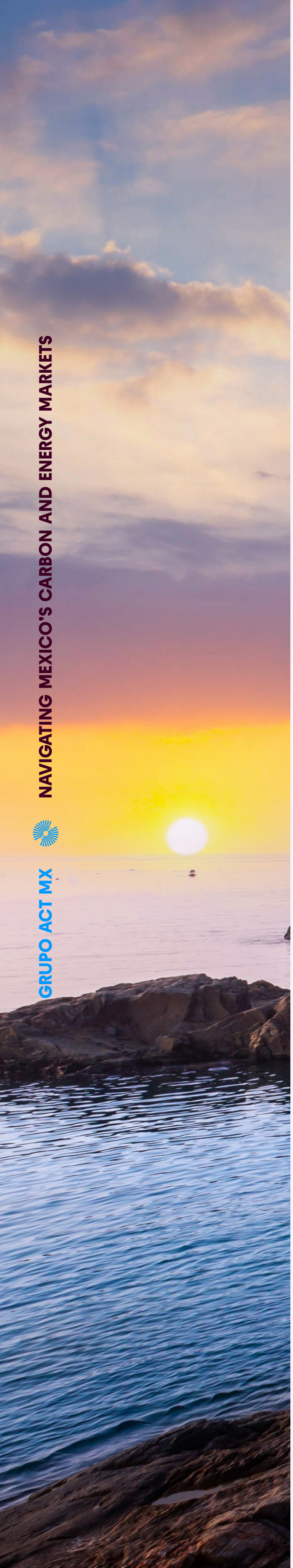
Energy Attribute Certificates (EACs) for Emission Reduction:
With an expansive sourcing network, market expertise, and administrative capacity, ACT creates and executes customized EAC procurement strategies that allow organizations to efficiently meet renewable and clean energy targets across Mexico and beyond. This includes CELs and I-RECs.

Carbon Accounting & Decarbonization Platform for Supply Chain Emissions Management:
ACT's holistic platform supports businesses in calculating, tracking, and reducing their emissions across their supply chain. Featuring intuitive dashboards, automated reporting, and supplier engagement tools, this solution helps companies ensure transparency, simplify compliance, and hit Scope 3 decarbonization targets efficiently and effectively.

Carbon Credits and Climate Projects for Offset Opportunities:
ACT assists companies in mitigating residual emissions through high-quality carbon credits and custom-developed climate projects. By sourcing verified credits and co-developing projects that support local and global sustainability, ACT enables businesses to contribute meaningfully to Mexico's environmental goals while working toward their own net-zero objectives.

EAC Portfolio Management:
Through a cloud-based platform, ACT facilitates the full lifecycle management of EACs, streamlining the trade, inventory, and settlement processes. This integrated approach provides a centralized, reliable source for renewable and clean energy data, ensuring compliance with rigorous standards.

Additional Solutions for Comprehensive Decarbonization:
ACT's expertise extends to additional environmental solutions, including but not limited to renewable natural gas (RNG), energy efficiency, sustainable agriculture project development, and biofuels. These solutions offer diverse pathways for emissions reduction, enabling businesses to support long-term climate action.



Looking Forward: The Future of Mexico's Carbon and Energy Markets

As Mexico's carbon and energy markets continue to mature, the development of both compliance and voluntary frameworks signals significant opportunities for growth and innovation. The CEL market remains pivotal in Mexico's energy transition, equipping regulated entities with mechanisms to meet clean energy quotas while spurring investment in clean energy. With demand for CELs growing among large industrial consumers and power suppliers, the market is likely to see expanded trading opportunities and potentially new pathways for voluntary purchases. Such dynamics strengthen the CEL market as a driver toward Mexico's renewable energy target of 50% by 2050.

Strengthening State-Level Initiatives and Local Carbon Markets

Building on the momentum of state-level efforts, such as those in Querétaro, Mexico's decentralized climate initiatives are expected to expand further. These frameworks continue to mobilize private investment and drive regional carbon reduction aligned with local priorities, reinforcing Mexico's broader environmental and economic objectives. Additionally, as the ETS develops, it will complement these initiatives by providing a national framework for carbon reductions across key industries.

Growth in the Voluntary Market and Expanded CEL Adoption

Mexico's voluntary market is poised for growth, driven by a strong corporate commitment to net-zero targets. Alongside I-RECs, CELs are emerging as valuable solutions for corporations aiming to meet climate action targets beyond regulatory obligations. By incorporating these certificates, businesses can strengthen their sustainability strategies and demonstrate leadership in renewable and clean energy adoption.

A Dynamic Path Forward

The evolution of Mexico's carbon and energy markets represents a critical path toward achieving the nation's ambitious climate goals. By actively engaging with these markets, businesses operating in Mexico can not only fulfill compliance obligations but also drive industry-wide shifts toward decarbonization. With ACT's support through tailored solutions and expertise, organizations can navigate this complex landscape, positioning themselves as environmental leaders and advancing Mexico's broader objectives for a resilient, sustainable economy.

Grupo ACT MX

www.actgroup.com