



Project Information Document (PID)

Concept Stage | Date Prepared/Updated: 19-Dec-2024 | Report No: PIDDC01098

**BASIC INFORMATION****A. Basic Project Data**

Project Beneficiary(ies)	Operation ID	Operation Name	
Mexico	P507616	Mexico: Decarbonizing Value Chains with clean energy and sustainability investments in SMEs	
Region	Estimated Appraisal Date	Estimated Approval Date	Practice Area (Lead)
LATIN AMERICA AND CARIBBEAN	03-Mar-2025	05-May-2025	Energy & Extractives
Financing Instrument	Borrower(s)	Implementing Agency	
Investment Project Financing (IPF)	NACIONAL FINANCIERA SNC (NAFIN)	NACIONAL FINANCIERA SNC (NAFIN)	

Proposed Development Objective(s)

The Project Development Objective is to facilitate clean energy and sustainability investments in Mexican small and medium enterprises (SMEs) in order to reduce their greenhouse gas emission and enhance their market opportunities.

PROJECT FINANCING DATA (US\$, Millions)**Maximizing Finance for Development**

Is this an MFD-Enabling Project (MFD-EP)? Yes

Is this project Private Capital Enabling (PCE)? Yes

SUMMARY

Total Operation Cost	213.00
Total Financing	213.00
of which IBRD/IDA	150.00
Financing Gap	0.00

DETAILS**World Bank Group Financing**

International Bank for Reconstruction and Development (IBRD)	150.00
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Non-World Bank Group Financing



Trust Funds	63.00
Clean Technology Fund	60.00
Energy Sector Management Assistance Program	3.00

Environmental and Social Risk Classification

Moderate

Concept Review Decision

The review did authorize the preparation to continue

Other Decision (as needed)

B. Introduction and Context

Country Context

1. **Mexico in 2024 faces multiple transitions, with historic opportunities confronting acute resource and policy challenges.** After suffering one of the toughest Covid-19 trajectories globally, with an economic contraction of more than 8 percent in 2020 and a rebound of about 6 percent in 2021, Mexico’s economy has returned to moderate growth rates: 3.7 percent in 2022, 3.2 percent in 2023, and an expected 2.3 percent in 2024 and forecast 2.1 percent in 2025. Total factor productivity has stagnated for the past three decades, despite Mexico’s free trade deals and diversifying economy over the period since signing NAFTA in 1994.¹ Yet at the same time Mexico’s privileged position in the world economy is being accentuated by changing patterns of international trade and investment since the late 2010s, most notably the shift of global value chains (GVCs) away from East Asia, or “nearshoring”.

2. **These shifts in international production and trade patterns are raising the stakes attached to resolving longstanding impediments to investment, productivity, and inclusive growth in Mexico.** Nearshoring is having marked local effects on investment, production, and trade², but more limited national effects on income and social outcomes. State and local authorities in northern and central Mexico report significant demand for industrial real estate (industrial parks), heightened investor interest, and corresponding increases in employment and economic activity. States such as Nuevo León and Chihuahua in the north, and San Luís Potosí and Guanajuato in the central Bajío region, report large economic impacts from nearshoring. Still, recent studies estimate the impact of nearshoring on *national income* over the past five years to have been only about 0.2 percent per year.³ Meanwhile, firms locating in industrial parks report infrastructure and regulatory bottlenecks as the most important factors holding back investment.

¹ World Bank, 2022, “Productivity Growth in Mexico.”

² For example, Deloitte’s “Global Manufacturing Competitiveness Index” reports that nearshoring contributes to a more resilient supply chain and stimulates local economies by creating new business opportunities for SMEs and fostering economic growth.

³ Chiquiar, Daniel and Martin Tobal, 2024, “Nearshoring: Possible Scenarios of its Size and Impact on Mexico’s Economy,” Washington, DC: Georgetown Americas Institute.



3. **The deployment of clean energy will foster economic growth, while improving energy security and climate change country profile.** Scaling up energy efficiency (EE) and renewable energy (RE) are the lowest cost options for helping meet growing energy demand. EE is always faster and cheaper than building new generation. From the power generation options, RE are the cheapest form of electricity in the country⁴. As a result, the deployment of EE measures and RE would make Mexican industries more competitive. Cheaper and cleaner energy would also attract new industries, thereby maximizing the nearshoring potential. That said, renewables deployment comes with its own challenges. Chiefly amongst them are the integration of intermittent resources such as solar PV and wind, and the consumption centers being far from the generation plants. The expansion and upgrade of transmission and distribution grids are key for a successful transition – along with greater use of distributed renewable energy. For scaling up EE, while Mexico has had experience with deploying EE programs, a key piece of the puzzle remains increasing the interest and ability of financiers to offer affordable financing for energy cost-saving investments⁵.

Sectoral and Institutional Context

4. **The global shift towards sustainability and green investments is reshaping industries and markets.** There is increasing demand for environmentally friendly products and practices, driven by both consumers and regulatory requirements. Indeed, green value chains are emerging as a key component of global trade, reflecting a growing emphasis on sustainability throughout supply chains. These value chains integrate environmentally friendly practices and products, requiring suppliers to meet stringent environmental standards, specially related to greenhouse gas (GHG) emissions mitigation. Globally, about a quarter of the world's GHG emissions are associated with the industrial sector⁶ and approximately 80 percent of those emission are attributed to value chain activities⁷. Pressure is growing on many companies to make progress in reducing their GHG emissions, including “scope 3 emissions”, which occur across their entire value chain and are the most challenging to mitigate. Reducing these emissions – mostly associated with energy consumption - is critical to achieving sustainability goals.

5. **In Mexico, SMEs⁸ are vital to the country's economy⁹ by contributing about 50% of the national GDP and providing close to 70% of employment.** SMEs also contribute to a significant share of the country's GHG emissions – a figure that is difficult to estimate with precision to their large number and widespread activities. Their emissions stem from activities linked to energy consumption, as well as manufacturing processes and transportation. Their cumulative impact is estimated to be in the order 30 to 40% of industrial emissions¹⁰.

6. **SMEs are found in both the commercial and industrial sectors, facing different energy challenges and opportunities.** Half of the energy consumption in the Mexican commercial sector comes from electricity. Because most of the electricity in the country is generated through natural gas, increasing the shares of renewables in the mix will make the electricity cheaper and cleaner for SMEs. The greater use of distributed renewable energy is also part of the solution. The remainder commercial sector's energy consumption consists of fossil fuels (liquefied petroleum gas (LPG) and diesel)

⁴ IRENA (2023). Renewable Power Generation Costs in 2022.

⁵ World Bank Group and ESMAP (2018). *Energy Efficiency in Industry*. Livewire.

⁶ See Intergovernmental Panel on Climate Change Sixth Assessment Report and the International Energy Agency.

⁷ World Resources Institute (WRI) and the Carbon Disclosure Project (www.cdp.net).

⁸ There are an estimated 4.7 million SMEs in the country. In Mexico, enterprises with 1 to 10 employees are considered of “micro” size; enterprises with 11 to 50 employees are considered “small”; and those with 51 to 250 people are considered of “medium” size ([Secretaría de Economía, Subsecretaría de Comercio Exterior. Mipymes mexicanas: motor de nuestra economía, Ciudad de México, 2024](#)).

⁹ [Secretaría de Economía, Subsecretaría de Comercio Exterior. Mipymes mexicanas: motor de nuestra economía, Ciudad de México, 2024](#)

¹⁰ SEMARNAT 2021



– representing 48% of the total-; and solar thermal representing 2%. SMEs in the commercial sector would benefit from an increase in electrification and solar thermal. For industry, in turn, 67% of the energy consumption comes from fuels to generate heat, 30% in electricity and 3% in diesel and gasoline. Within the industry’s fuel consumption for heat, which is also reliant on gas, 51% is in low and medium temperatures, for which solar thermal technologies could be employed.¹¹ For high industrial temperatures, biofuels or clean fuels such as hydrogen would make SMEs in industry greener. In all cases, improvements in energy efficiency will lower the use of fossil fuels and help enhance competitiveness.

7. **In the evolving landscape of global trade and value chains, Mexican SMEs have a unique opportunity to capitalize on nearshoring through clean energy and sustainability investments.** By participating in nearshoring, Mexican SMEs can enhance their competitiveness in the global market. Integration into Global Value Chains (GVCs) not only opens new business opportunities but also enables SMEs to adopt best practices and technologies from international partners. Furthermore, aligning with sustainability trends and meeting the increasingly stringent environmental and social criteria required by multinational corporations can improve market positioning and access to larger contracts, as well as contributing significantly to the country’s greenhouse gas objectives. Finally, these investments would reduce costs and increase productivity among SMEs through optimized use of resources such as raw materials, energy, water, and waste, leading to enhanced competitiveness and reduced carbon footprint.

8. **Despite the potential benefits, Mexican SMEs face several challenges inhibiting their ability to make clean energy and sustainability investments, lower their carbon footprint, and connect to green GVCs.** These challenges stem from a combination of factors related to the nature of these investments and the general barriers SMEs face when seeking financing. On the one hand, Mexican SMEs are characterized by lack of awareness, capacity or expertise in implementing sustainability practices, and difficulties in meeting the rigorous national and global standards. On the other hand, there are also hurdles on the side of the financial institutions (FIs) in Mexico, including: (i) FIs’ lack of capacity to appraise green investment, such as those in EE, RE or sustainable technologies (57 percent of SMEs have never received any form of credit¹²); (ii) high risk perception of SMEs, as they often struggle to provide sufficient collateral to secure loans and may have limited credit history; and (iii) reflecting the FIs’ funding structure, limited availability of longer term loans to SMEs required to undertake green investment projects. FIs also lack the capacity to assess compliance with green investment standards leading to additional costs, constituting a deterrent to providing affordable financing to SMEs for green projects.

9. **Addressing these challenges, crucial for enabling SMEs to make investments in clean energy and sustainability, will require a comprehensive solutions package, which includes: (i) affordable financing; and (ii) technical assistance and capacity building.** Through the proposed Project, SMEs will receive support in designing cost-effective plans to improve their environmental performance (mainly by EE and RE investments). To facilitate FIs’ appraisal and determination of sustainability, SMEs participating in the proposed Project will require a certification recognized across FIs and SMEs. The IBRD financing should ideally be blended with other sources of concessional financing in order to lower financing costs to SMEs and to offer TA for design of green sub-projects. The package will also require mitigation of the risk of non-repayment by SMEs perceived by FIs. This will be accompanied by technical assistance to help FIs better understand and assess requested loans for sustainability investments.

10. **The Mexican government has adopted several policies aimed at promoting SME’s sustainability, such as its Nationally Determined Contribution (NDC) and the Sustainable Taxonomy.** The updated 2022 NDC highlights key measures to support GHG mitigation in Mexico’s SMEs, including the promotion of actions in SMEs through the NAMA

¹¹ Ferrari et al (2024). Transición energética justa y sustentable

¹² https://www.inegi.org.mx/contenidos/saladeprensa/aproposito/2023/EAP_DIAMIPYMES.pdf



PYME¹³ seeking to provide support with cost-effective mitigation measures, in particular EE. It has also implemented programs, such as (i) Program for EE and RE in SMEs (PEER), and Sustainable Energy Fund for SMEs (FOSME), providing financing to SMEs to implement EE and RE projects; and (ii) EE certification for SMEs, which is a voluntary program certifying SMEs' efforts to improve EE. In this line and with support of the World Bank, SHCP also published in March 2023 the Mexican Sustainable Taxonomy¹⁴, a classification system for investments according to their environmental and social attributes. Additionally, programs like the National Environmental Audit Program (PNAA) provide certification for companies meeting environmental standards. These initiatives create a supportive environment for SMEs to adopt green practices and access green financing.

11. **Mexican public development banks (PDBs) can play a key role in fostering sustainable finance markets and are key actors in the authorities' sustainable finance strategy, as they are well-positioned to drive new private-sector investment.**¹⁵ Mexican PDBs have been leaders in the issuance of green bonds (NAFIN issued the first such bond in Latin America) and FIRA issued the first resilient bond. Under the EMFS, PDBs would need to scale up their sustainable finance operations. PDBs have strengthened their capacity to comply with international standards for environmental, social, and governance (ESG) practices, such as IFC's Performance Standards. These banks have adopted the Environmental and Social Risk Management System (SARAS in its Spanish acronym), which follows international best practice for Sustainable Banking Strategy. These include policies and procedures for the identification, evaluation, and mitigation of environmental and social risks. These institutions have also advanced in project appraisal methods. They are also committed to align their financing to the Sustainable Taxonomy.

12. **NAFIN has a long-standing history of supporting Mexican SMEs through various financial programs and initiatives**, in line with its mandate for addressing the market failures and the financing gaps not fully met by private FIs. In particular, NAFIN has been actively involved in promoting EE and RE through targeted financial products and programs through both first and second-tier interventions (wholesale loans to other FIs and guarantees). This includes providing loans and financing options specifically designed to support the adoption of green technologies by SMEs, such as the *Eco crédito empresarial*¹⁶, which support the replacement of inefficient equipment with more energy efficient alternatives and the *Eco crédito Sustentable*¹⁷, which promotes the adoption of EE and RE measures in SMEs. It has partnered with various national and international organizations to enhance its capacity to support green investments. These collaborations have enabled NAFIN to leverage additional resources and expertise to effectively finance EE and RE projects. In addition to providing financial support, NAFIN also has the capacity to offer technical assistance and advisory services to SMEs and other FIs. This may include guidance on project design, implementation and monitoring to ensure that investments in EE and RE achieve the desired outcomes. However, NAFIN requires to scale its sustainable lending, given that it still represents a small share of its total portfolio.

¹³ The Mexico NAMA PyME (National Appropriate Mitigation Action for SMEs) is led by the Ministry of Finance (SHCP), the Ministry of Environment and Natural Resources (SEMARNAT) together with Nacional Financiera (NAFIN) as the Project Partner, and supported by the GIZ German Cooperation, with funding from Germany (BMUB). See <https://mitigation-action.org/projects/mexico-energy-efficiency-in-small-and-medium-enterprises/>

¹⁴ In 2021, IFC and the World Bank's Finance, Competitiveness, and Innovation Global Practice (FCI) joined hands to establish the '30 by 30 zero' program in four target countries: Mexico, South Africa, the Philippines, and Egypt. FCI, financed by the '30 by 30 zero' Trust Fund, has supported the Mexican authorities' with the coordination of the Technical Sectoral Groups for the development of the taxonomy.

¹⁵ A recent World Bank report underlines that PDBs can play a key role in mobilizing private finance towards sustainable goals through the development of bankable projects using technical assistance, market education, standardization of procedures, and the creation of project preparation facilities. <https://openknowledge.worldbank.org/handle/10986/40432>

¹⁶ <https://ecocreditoempresarial.com/>

¹⁷ <https://www.nafin.com/portalnf/content/financiamiento/eco-credito-sustentable.html>



Relationship to CPF

13. **The proposed Project is well aligned with the World Bank Group’s Mexico Country Partnership Framework (CPF) for 2020-2025.** The Project would support the focus area C “Enabling Sustainable Infrastructure and Climate Action” under Objective 6 to “provide more sustainable and inclusive infrastructure services,” as well as Objective 7 to “Support the government in reaching its climate change goals” and the focus area A “Supporting more rapid, more inclusive growth” under Objective 1 to “Foster financial intermediation and inclusion”. The proposed project would also contribute toward Maximizing Finance for Development (MFD) by improving the financial capacity of NAFIN to mobilize private capital for infrastructure. Finally, the project supports the World Bank Group’s mission to end extreme poverty and boost shared prosperity on a livable planet.

14. **In June 2024, a USD 1 billion Development Policy Financing (DPF) was authorized to support Mexico’s efforts in improving the policy framework for sustainable finance and access to finance for MSMEs.** This DPF aligns with Mexico’s FSAP roadmap and aims to develop markets for green finance, foster economic resilience, and support Mexico’s NDCs.

15. **The Project is consistent with the country’s NDC.** In the latest NDC submitted to the United Nations Framework Convention on Climate Change (UNFCCC), Mexico has committed to an unconditional reduction of GHG emissions by 35%¹⁸ (and a conditional reduction of 40%) by 2030 on mitigation and strengthening resilience and reducing the vulnerability of people and the environment to climate change on adaptation. The project contributes to the NDC by lowering the carbon footprint of SMEs.

16. **The proposed Investment Project Financing (IPF) for US\$ 205.65 million supports key components of Mexico’s Sustainable Finance Mobilization Strategy (Estrategia de Movilización de Financiamiento Sostenible, EMFS)¹⁹ and the National Financial Inclusion Policy (Política Nacional de Inclusion Financiera, PNIF)²⁰** by leveraging a Mexican Public Development Bank (PDB) to support sustainable finance investments and access for small, and medium enterprises (SMEs).

C. Proposed Development Objective(s)

17. The Project Development Objective is to facilitate clean energy and sustainability investments in Mexican small and medium enterprises (SMEs) and to reduce their greenhouse gas emission and enhance their market opportunities.

Key Results (From PCN)

18. The potential PDO results expected through completion of the proposed Project are described below:
- Renewable energy capacity enabled (GW);
 - Projected lifetime electricity savings (MWh);
 - Projected lifetime fuel savings (MJ);
 - Net GHG emission per year (tCO₂e per year);

¹⁸ This is estimated to represent a reduction of 347 MtCO₂e in 2030 (Gobierno de Mexico, *Contribución Determinada a nivel Nacional – Actualización 2022*)



- Total private capital mobilized aligned with Mexico Sustainable Taxonomy (\$ billion); and
- Enhanced ability of Mexican SMEs to integrate in green value chains (# of sustainability certifications by SMEs).

D. Concept Description

19. **The PDO would be achieved through the following components:** (i) Clean Energy and Sustainability investments in SMEs; (ii) Risk mitigation facility, and (iii) Capacity Building, technical assistance, and project management.

20. **Component 1: Clean Energy and Sustainability investments in SMEs.** This component will provide access to affordable financing to SMEs through a credit line administered by NAFIN. The decision on the modality of credit line – ie., lending to beneficiary firms through private participating financial institutions (PFIs) or direct lending by NAFIN to beneficiary firms or combination thereof - will be made during project preparation based on further analysis of market demand and capacity of lenders to implement this innovative and technically complex loan product. The Project financing will mostly be channeled towards investments which will help beneficiary SMEs lower the carbon footprint and increase sustainability. These include investments that will reduce thermal and/or electric energy consumption, which will lower energy costs otherwise borne by the SMEs.

21. **Component 2: Risk Mitigation Facility.** This component will help financing a guarantee mechanism to cover risk of non-payments by SMEs and attract the participation of commercial banks, wary about risks associated with lending to SMEs.

22. **Component 3: Capacity building and technical assistance, and project management.** This component will deploy capacity building and technical assistance to: (i) raise SMEs’ awareness in clean energy and sustainability opportunities and provide support to SMEs in developing plans for improving their environmental and sustainability performance; (ii) offer support o SMEs for obtaining the sustainability certification; (iii) enable commercial banks to assess financing proposals by SMEs for investments in clean energy and sustainability; (iv) development/updating of technical guidance and templates with the aim of simplifying, standardizing, and lowering transaction costs; (v) facilitate the sharing of experiences through workshops and include an evidence-based communications campaign; (vi) outreach to clean energy and sustainability service providers to make them aware of the Project and to encourage their provision of services to the SMEs; (vii) outreach to 3rd party verifiers who will offer sustainability certification to SMEs; (viii) outreach and communications strategy targeted at commercial banks; and (ix) support the origination of the Project’s pipeline and the business development. Under this component, the supervision, monitoring and reporting of the Project will also be covered.

Legal Operational Policies

Policies	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Area OP 7.60	No

Summary of Screening of Environmental and Social Risks and Impacts



23. **The Project’s E&S risks are considered Moderate under the Environmental and Social Framework (ESF) and its Environmental and Social Standards (ESSs).** The Project is expected to yield environmental and social benefits, including: (i) providing resources to SMEs for acquiring clean technology, assets, and financing small-scale infrastructure activities that support resilience and climate change mitigation; and (ii) building the capacity of SMEs to align their business models with sustainability and gender equality principles, in accordance with the Sustainability Taxonomy of the Government of Mexico (GoMX). Given the Project's moderate E&S risk, compliance with national laws will serve as a framework for managing these risks. National legislation will be applied to subprojects with minimal or no adverse environmental or social impacts. Although NAFIN has extensive experience working with the World Bank as a fiduciary agent, the Project preparation phase will include an assessment of NAFIN’s capacity to manage the Project’s ESF requirements.

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APPROVAL

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