

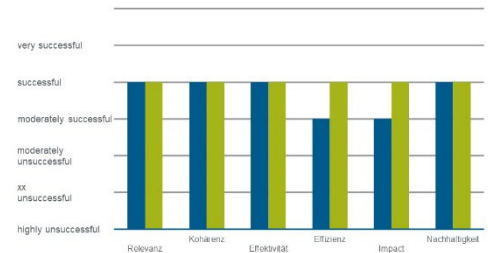
Ex post evaluation SME – Environmental Credit Line, Mexico



Title	A) SME Environmental Credit Line, B) Programme to promote energy efficiency in the SME sector		
Sector and CRS code	Formal sector financial intermediaries (24030)		
Project number	A) 1999 66 664 (Inv.), 2001 70 191 (TA), B) 2013 66 863 (Inv.)		
Commissioned by	Federal Ministry for Economic Cooperation and Development		
Recipient/Project-executing	Nacional Financiera (NAFIN)		
Project volume/ Financing instrument	A) EUR 32.2 million/development loan, B) EUR 50.0 million/interest rate reduction		
Project duration	A) 2007–2019, B): 2015–2019		
Year of report	2022	Year of random sample	2019

Objectives and project outline

The objective at outcome level was to contribute to the efficient and need-based awarding of loans to MSMEs for operational energy efficiency measures. The main starting point here was the establishment of a refinancing line for loans at the official apex bank NAFIN (project-executing agency), which was to be used by the Mexican financial intermediaries to refinance environmental investments. At impact level, the aim was to contribute to reducing the environmental impact of MSMEs and to deepening the financial system by establishing long-term financing instruments for operational energy efficiency measures.



Key findings

The projects contributed to improving access to formal financial services for MSMEs and achieved the desired environmental impacts. Phase I and Phase II are assessed as “successful” for the following reasons:

- The efficiency of both phases was improved by strengthening the capacities of the project-executing agency NAFIN and the implementer Fideicomiso para el Ahorro de Energía Eléctrica (FIDE) in the areas of personnel development, marketing, digitalisation and follow-up. Protracted policy coordination processes and in-house NAFIN bureaucratic processes reduced the efficiency of Phase I.
- The special feature of the Eco-Crédito Empresarial promotional programme is the repayment of the loans via end customers’ electricity bills. During the repayment phase, the end customer pays an electricity bill, which is generally equal to the usual total amount; the monetary equivalent of the saved consumption is used to repay the loan. As soon as the loan is paid off, the customer can take advantage of the full cost savings due to lower consumption (effectiveness).
- The supported investments contributed to an average annual emission reduction of the supported companies of 25% (Project A) and 28% (Project B). The financial system of commercial banks has not been deepened. However, the promotion of Eco-Crédito Empresarial supported the establishment of an important financial instrument to promote environmentally friendly technologies for MSMEs (impact).

Conclusions

- The approach of loan repayment via the end customers’ electricity bills may be of interest for future programmes in order to provide a need-based offer for the target group of MSMEs while keeping the loan default rate low at the same time.
- The principle of benefiting from the microeconomic advantages of energy efficiency measures was abstract and difficult for many beneficiaries to grasp. In addition to the implementation of advertising campaigns for energy efficiency programmes, it would make sense to raise the general awareness of the topic among the target group through training courses or workshops. This would increase the target group’s interest in further programmes.

Rating according to DAC criteria

Overall rating: 2 (both phases)

Ratings:

Relevance	2 (both phases)
Effectiveness	2 (both phases)
Coherence	2 (both phases)
Efficiency	3 (phase I), 2 (phase II)
Overarching developmental impact	3 (phase I), 2 (phase II)
Sustainability	2 (both phases)

Relevance

The core problem identified during the project appraisal (PA) was the high level of pollution of the Mexican environment by small and medium-sized enterprises (SMEs), e.g. due to untreated wastewater, air pollution or inefficient plants. This was accompanied by limited access to formal financing by banks. The aim of Phase I was to address the core problem by refinancing an environmental credit line. In particular, the intention was to support micro-economically viable environmental investments¹ for SMEs. On the one hand, this was expected to contribute to reducing the environmental impact and to the more efficient use of natural resources by SMEs. Furthermore, the deepening of the financial system was expected to take place through the participation of Mexican commercial banks and the establishment of long-term financing instruments for operational environmental investments. The target group was SMEs in the industrial and service sectors. Although microenterprises should not be ruled out, there was no expectation that they would possess the financial strength or the necessary awareness to make use of the refinancing line, which was largely the case in reality.

The implementation concept of Phase I was adapted due to years of delays until implementation. Instead of the planned environmental investments, only the sub-area of energy efficiency investments (EE) was supported. The refinancing of energy efficiency generally had the potential to contribute to solving the core problem. Due to the changed framework conditions since the project appraisal, the adjustment can be understood from today's perspective (see Efficiency). The adjustment of the implementation concept was accompanied by an expansion of the target group, so that all micro, small and medium-sized enterprises (MSMEs) were to profit from the promoted technologies. Only 23% of small and medium-sized enterprises in Mexico have access to financing from banks at all, while among microenterprises the figure is only 8%.² The expansion of the target group and the resulting improved access to favourable formal financial services for micro-enterprises is rated favourably from today's perspective. Phase II was linked to the adapted implementation concept of Phase I as follow-up financing. Specifically, further promotion of the successfully launched Eco-Crédito Empresarial programme was envisaged. The implementation concept of Phase II is therefore also comprehensible from today's perspective in order to address the core problem and the target group.

An additional technical assistance (TA) was intended to assist the applicant companies in planning the investment measures and preparing the loan applications. Due to the adjusted implementation, the FC contribution was ultimately intended to strengthen the capacities of the project-executing agency Nacional Financiera (NAFIN) and the participating financial intermediaries. This adjustment is understandable from today's perspective.

Mexico has committed to reducing GHG emissions by 22% by 2030 in the context of the 2015 Paris Agreement. Against this background, the importance of reducing GHG emissions even increased during

¹ Both so-called "end-of-pipe" investments as well as process-integrated measures for the environmentally friendly modernisation of production processes.

² Source: Study by the National Institute of Statistics and Geography (Instituto Nacional de Estadística y Geografía, Inegi): Encuesta Nacional sobre Productividad y Competitividad de las Micro, Pequeñas y Medianas Empresas (ENAPROCE) 2018

the term of the FC modules. The FC projects evaluated supported the partner country's national priorities and intended to facilitate close cooperation with the relevant political institutions. The involvement of the Mexican Ministry of Energy (SENER) as political patron of the Eco-Crédito Empresarial programme is a particularly positive aspect.

From today's perspective, the relevance of both phases is rated as good.

Relevance rating: 2 (both phases)

Coherence

German-Mexican DC has long focused on urban and industrial environmental protection, promoting renewable energies and increasing energy efficiency. The projects to be evaluated are in line with these priorities and are part of an overarching DC programme. There were synergies with TC modules that have now been completed, which aimed to improve the framework conditions for increasing energy efficiency and increasing the expansion of renewable energies, including by overcoming market barriers. The close integration of the FC and TC instruments was also ensured by moving into a joint office in Mexico City in 2011. Other FC projects that had already been completed promoted, among other things, the refinancing of energy efficiency measures in private households and measures with a priority on solar photovoltaics.

As part of the Mexican-German NAMA³ programme, the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) financed the support of Mexican partners as they prepared NAMA with the aim of reducing emissions in residential buildings (new construction/rehabilitation), SMEs and road freight transport. The NAMA programme promoted practices to increase energy efficiency as well as the wider use of renewable energies and was supported by the German Climate and Technology Initiative. GIZ acted as a technical partner and supported the development of NAMA concepts and the development of financing mechanisms and monitoring systems.

In addition to the DC programme, the British Carbon Trust and the Inter-American Development Bank (IDB) supported NAFIN in the design and financing of the Programa de Ahorro y Eficiencia Energética Empresarial (PAEEEM) individualizado programme. The programme supports the refinancing of energy efficiency investments for larger SMEs. Last but not least, the World Bank supported NAFIN in implementing projects in the area of energy efficiency, but not in the MSME (micro, small and medium sized enterprises) sector. NAFIN is the first Mexican development bank to receive certification as a Green Climate Fund Direct Access Entity. This accreditation gives the bank access to concessional funds to support innovation programmes with social and environmental impacts that contribute to Mexico's global commitments under the United Nations' Paris Agreement and Sustainable Development Goals (SDGs) of the 2030 Agenda. These developments are also in line with the Mexican law on the sustainable use of energy, which was drawn up in 2008. The national programme of the same name sets out strategies and lines of action to achieve optimum use of energy in all processes and activities relating to the extraction, production, conversion, distribution and consumption of energy. For energy efficiency, the aim is to reduce energy intensity per unit of final consumption by 1.9% for the period 2016 to 2030 and by 3.7% for the period 2031 to 2050.

From today's perspective, both internal and external coherence of the programme are rated as good.

Coherence rating: 2 (both phases)

Effectiveness

The objective at outcome level was to contribute to the efficient and need-based awarding of loans to MSMEs for operational energy efficiency measures. Around one third of Phase I funds went to the Hombr-Camión (PACCAR) programme. However, the FC module primarily promoted FIDE's Eco-Crédito Empresarial programme (around 63% of funds). Subsequent funding for this programme was provided through Phase II.

³ A NAMA (Nationally Appropriate Mitigation Action) is a voluntary measure implemented by a developing country that is not subject to mitigation commitments under the United Nations Framework Convention on Climate Change (UNFCCC).

The target achievement at outcome level is summarised in the table below:

Indicator	Status PA, target PA	Ex post evaluation
(1) Period of initial contact between supplier and end customer and replacement of the electrical appliance	Status PA: / Target value: 30 calendar days	Both FC modules: 29 calendar days
(2) The concessionality level of the FC funds is passed on by FIDE to the ultimate borrowers	Status PA: / Target value: Achieved.	Both FC modules: Achieved.
(3) 95% of end customers repay the loans granted by FIDE on time	Status PA: / Target value: Achieved.	Both FC modules: Achieved (99.91%)
(4) Reduction in electricity consumption by beneficiary MSMEs per year	Status PA: / Target value: 118 GWh p.a.	1999 66 664: 41 GWh p.a. 2013 66 863: 113 GWh p.a.
(5) Reduction of expenditure on electricity by beneficiary MSMEs per year	Status PA: / Target value: EUR 27,000,000 p.a.*	1999 66 664: EUR 7,582,000 2013 66 863: EUR 19,585,000 (with exchange rate from May 2014 upon creation)
(6) Proper disposal of the refrigerants contained in the scrapped air conditioning systems and refrigerators and freezers over the duration of the programme	Status PA: / Target value: 4.1 t	1999 66 664: 2.1 t 2013 66 863: 3.5 t

Note: The table indicators refer exclusively to the Eco-Crédito Empresarial programme. A qualitative analysis of comparable factors within the framework of the Hombre-Camión programme is only carried out in the running text.

*The target value refers to the calculated savings resulting from all energy efficiency measures.

The most frequently requested Eco-Crédito Empresarial equipment was commercial refrigerators (86%), air conditioning (10%) and lighting (4%).⁴ The period between the application and the replacement of the electrical appliance was 29 days on average and was only exceeded in around 7% of loan applications. Random visits⁵ to end customers showed a high level of satisfaction with the processing time. During implementation, there were only isolated instances in which end customers were incorrectly registered or registered more than once. The Hombre-Camión programme financed the replacement of outdated lorries. It took 10–15 working days for the loan agreements between NAFIN and PACCAR to be signed after the financial intermediary had given its approval on the financing conditions. This seems appropriate from today's perspective.

The loans under the Eco-Crédito Empresarial were granted to the MSMEs at an interest rate of 11–16% p.a. for a term of four years. The ultimate borrowers of the Hombre-Camión received the financing at an interest rate of 10–12% p.a. with a term of five years. Compared to interest rates of commercial banks (20–24% p.a.) the conditions of the supported programmes were significantly more attractive. From today's perspective, it seems unlikely that the FC modules could have artificially displaced other realistic loan offers for MSMEs from the market. The average annual interest rate paid by Mexican MSMEs in

⁴ The percentages refer to the share of loans.

⁵ As part of the annual progress review, 100 final beneficiary MSMEs and five scrapping centres were visited.

2017 on the financing received was 11.9%, noting that this rate was 13.7% for SMEs and 11.7% for microenterprises.⁶

According to the project-executing agency, 95% of end customers repay the loans granted by FIDE on time. The low loan default rate can be attributed to the uncomplicated repayment of the loans via the end customers' electricity bills. This will continue to be charged at the same amount after the old devices have been replaced. The equivalent of the saved consumption is used to repay the loan. At the time of the evaluation, there were no indications of significant payment defaults or delays at the financial intermediary PACCAR.

The prerequisite for approving the loans from the Eco-Crédito Empresarial was that the cost savings from the energy efficiency investments are at least as high as the interest for the repayment of the loans. Both programmes resulted in microeconomic benefits for ultimate borrowers. The beneficiary companies benefited from average monthly electricity savings of 426 kWh (24%). By participating in the programme, electricity costs fell by around 22%, which is a good result.⁷ A recent report from FIDE even estimates monthly savings of up to 36% when energy-efficient cooling chambers are financed.⁸ Although the reduction in electricity consumption and expenditures on electricity by MSMEs was lower than originally calculated. It was not possible to accurately estimate the demand for the products and the associated energy savings ex ante. Electricity prices were also slightly lower than initially assumed during the project term. The Hombre-Camión programme financed 237 replacement purchases of the Kenworth brand (lorries). This results in annual fuel savings (diesel) of 5.9 million litres, resulting in EUR 5.3 million p.a. saved.

Among other things, the complementary measure financed an advertising campaign and contributed to a significant increase in demand for the Eco-Crédito Empresarial until the end of the implementation period of Phase II.

The average age of the old discarded equipment was 12 years. Scrapping took place in the approved destruction centres, whereby 6.0 t of refrigerant gases were stored properly, which would otherwise have released 14,962.2 t of CO₂ into the environment. Depending on the quantity, the destruction centres regularly send the refrigerant gas to the Mexican Ministry of Environment and Natural Resources for recycling or final disposal. It should be noted that many old units arrived there with smaller amounts of refrigerant due to damage or incorrect maintenance, so that some of the refrigerants had already been removed before scrapping or escaped into the atmosphere. The lorries scrapped under the Hombre-Camión programme were 30 years old on average. Proof of disposal was provided when the 237 vehicles were scrapped.

From today's perspective, both FC modules improved access to formal financial services for MSMEs and promoted the modernisation of companies through the increase in the prevalence of energy-efficient technologies. The effectiveness of both modules is rated as good.

Effectiveness rating: 2 (both phases)

Efficiency

The implementation of Phase I was initially delayed for several years due to problems under international law and subsequently because no suitable financial intermediaries could be identified. Since NAFIN has a Mexican government guarantee, numerous bilateral and multilateral donor programmes are implemented via NAFIN. NAFIN has a long-standing focus on MSMEs as well as strong technical and financial know-how. In addition, NAFIN contributed to the very complex implementation of the international framework of German FC in Mexico. Nevertheless, the Mexican government development bank is an administratively intensive institution with bureaucratic in-house processes, which, among other things, led to significant delays in the implementation of Phase I.

⁶ Source: Study by the National Institute of Statistics and Geography (Instituto Nacional de Estadística y Geografía, Inegi): Encuesta Nacional sobre Productividad y Competitividad de las Micro, Pequeñas y Medianas Empresas (ENAPROCE) 2018

⁷ In order to quantify the change in energy consumption, the average consumption of two months before and after the implementation of the energy efficiency measure per MSME was analysed. The data are taken from the executing agency's reporting and relate to the period from November 2012 to February 2015. More up-to-date data was not available at the time of the evaluation.

⁸ Source: FIDE Report "Retos, Logros y Desafíos 2013–2018" (2019)

Early implementation of marketing activities within the scope of the CM could have counteracted the low demand at the beginning of the Eco-Crédito Empresarial programme.⁹ This was not possible due to lengthy political coordination processes, meaning that the positive effects only occurred in Phase II. Overall, NAFIN and FIDE nevertheless profited in the long-term from the funded measures in the areas of personnel development, marketing, digitalisation and follow-up. FIDE's IT infrastructure was expanded, which was accompanied by efficiency gains.¹⁰

Only manufacturers and distributors that have been tested by FIDE and are authorised to use the FIDE seal may participate in the Eco-Crédito Empresarial programme.¹¹ The list of technologies that are eligible for promotion (known as positive list) is regularly reviewed and, if necessary, added to. The lending process was straightforward and efficient. The end customer only has contact with an authorised distribution partner during the period of application until the equipment is replaced. It registers end customers in the web-based system, checks the creditworthiness of applicants and replaces old appliances and transports them to the scrapping centres provided for this purpose. In order to save resources, the sales partners did not drive to the disposal point until they had collected several old appliances. The implementation structure of the evaluated FC modules proved successful, so that NAFIN and FIDE also cooperate with each other in other FC projects.

Scrapping old electrical appliances is only marginally profitable, depending on the region, due to the high transport costs and the low prices of the materials when they are sold. At the beginning of 2014, the number of collection and scrapping centres participating in the programme was 54 and fell to 39 by the time of the EPE in 2022.¹² SENER paid the centres a premium of EUR 20, which was increased to EUR 35 during the implementation of the FC modules. From today's perspective, it would have made sense to promote more capacity building in the sense of business diversification of the centres, at the latest during Phase II.

The beneficiary MSMEs would have had little access to loans without the Eco-Crédito Empresarial and Hombro Camión programmes. MSMEs also have significant information deficits with regard to the microeconomic benefits of energy efficiency measures. Without the programme, the companies would probably have continued to use the old appliances or would not have paid attention to the energy efficiency of the new appliances when replacing them. It can be assumed that the investments made would not have been carried out by the MSMEs without the programmes and that the environmental impact would have remained unchanged. In order to achieve similar or even greater environmental impacts, the promotion of bigger companies would have been an alternative. However, it is assumed that they already have adequate access to formal financial services and, given the prospect of substantial cost savings through energy efficiency measures, would make the necessary investments without additional promotion.

The production efficiency of Phase I is assessed as no longer satisfactory, Phase II is assessed as satisfactory in this regard. The allocation efficiency of both projects is rated as good. Overall, the efficiency of Phase I is rated as satisfactory; Phase II is still rated as good.

Efficiency rating: 3 (phase I), 2 (phase II)

Impact

The overarching development objective was to contribute to reducing the environmental impact of MSMEs and to deepening the financial system by establishing long-term financing instruments for operational energy efficiency measures.

⁹ Before the FC-financed advertising campaign was carried out in 2017, 90% of beneficiaries stated that they had only found out about the Eco-Crédito Empresarial by visiting an authorised sales partner.

¹⁰ Among other things, an automated platform for the online registration of credit files was developed in its various brokerage phases and integrated into the credit system of the Eco-Crédito Empresarial as an additional module.

¹¹ Suppliers and manufacturers must renew their FIDE seal annually.

¹² Source: FIDE website https://www.FIDE.org.mx/?page_id=15610 (last accessed 11 April 2022)

Target achievement at the impact level is summarised in the table below:

Indicator	Status PA, target PA	Ex post evaluation
(1) Annual CO ₂ savings of at least 20% can be achieved through energy efficiency investments	Status PA: / Target value: 20% p.a.	1999 66 664: 21,641.17 t CO ₂ p.a. (24.8%*) 2013 66 863: 59,544.57 t CO ₂ p.a. (27.7%)

Note: The table indicators refer exclusively to the Eco-Crédito Empresarial programme. A qualitative analysis of comparable factors within the framework of the Hombre-Camión programme is only carried out in the running text.

* The percentage corresponds to the saved t CO₂ p.a. in relation to regular emissions p.a. of businesses (excluding energy efficiency investments). To calculate regular emissions p.a. the emission factor of CO₂ equivalents (CO₂e) was used and multiplied by the annual electricity consumption of the companies. The CO₂e factor varies annually depending on the composition of the energy sources (fuel mix) used for electricity generation within the national electricity system.

In Mexico, greenhouse gas emissions increased by 60% to 724 Mt CO₂/year between 1990 and 2018. This is due to a continued increase in energy-related emissions in all sectors, with emissions from electricity generation, transport and industry increasing particularly sharply.¹³ The FC modules contributed to slowing this trend in the MSME sector, at least in the medium term. An estimate within the scope of the evaluation shows that the subsidised companies, through their participation in the Eco-Crédito Empresarial, reduce annual emissions by 25% and 28% respectively. Proper disposal and replacement of old lorries as part of the Hombre-Camión programme contributed to saving 159 t of nitrogen oxides p.a. and 9.7 ppm (sulphur, soot, etc.) p.a.

Reports from the National Banking Commission (Comisión Nacional Bancaria) show that the number of MSMEs with access to formal loans rose from 44,000 to 78,000 between 2010 and 2016 (an increase of 76%). In addition, there was a 130% increase in the volume of financing and a downward trend in the interest rates associated with the MSME loans. In the context of the Eco-Crédito Empresarial, a total of 28,178 businesses were supported by the FC funds between 2012 and 2018.

At the time of project planning (Phase I), Mexican commercial banks were expected to participate in the environmental credit line. Structural effects were anticipated in the financial sector, in particular the establishment of financial instruments for environmental investments by SMEs at market-oriented conditions. The FC project aimed to encourage banks' willingness to award long-term financing for environmental investments from their own funds. As no banks ultimately participated in the project, the originally planned deepening of the financial system was not achieved. However, after adjusting the implementation concept, an important financial instrument was set up to promote micro and small enterprises, in particular by promoting Eco-Crédito Empresarial. Eco-Crédito Empresarial is one of FIDE's most successful programmes and, in addition to financing energy efficiency investments, has included the promotion of renewable energies since the end of 2018. The path towards introducing renewable energies as eligible investments was paved, in part, by the financed measures within the framework of the evaluated CM.¹⁴ From today's perspective, the programme closes an important supply gap in the financial sector.

The positive environmental effects and the successful development of an important financial instrument make a positive contribution to achieving the objectives at impact level in both phases. As the deepening of the financial system with regard to Mexican commercial banks did not take place as intended, Phase I is rated as satisfactory. The impact of Phase II is rated as good.

Impact rating: 3 (phase I) and 2 (phase II)

Sustainability

The sustainability of the Eco-Crédito Empresarial must be assessed both at programme level as a financial instrument and at the level of individual MSMEs and investments.

¹³ Climate Transparency Report 2021: <https://www.climate-transparency.org/countries/americas/mexico> (last accessed 1 May 2022)

¹⁴ Training for FIDE employees reinforced their knowledge of solar PV technologies.

With the change of government in 2018, the political interests of the partner country shifted, meaning that the initiation of new energy efficiency and renewable energy projects was given less priority than before. The current government under President Obrador, who took office in 2018, is critical of renewable energy sources and is actively committed to the reactivation of old coal-fired power plants.¹⁵ Therefore, the continued existence of already established programmes appears all the more important in order to secure the Mexican contribution to the Paris Agreement and the SDGs. At the time of the evaluation, further promotion of the programme by the Mexican government is guaranteed and FIDE is very interested in continuing the Eco-Crédito Empresarial. The programme is currently being promoted from FC funds as part of follow-up financing. It can be assumed that the FC modules evaluated and the CMs contributed to the creation of the structures and capacities necessary to guarantee the efficient operation of the programme in the long-term. It is only critical to note that the continued existence of the participating scrapping centres is not guaranteed (see Efficiency). As part of the FC modules, it was therefore recommended to further strengthen the capacities of the scrapping centres. So far, no measures have been promoted by NAFIN or FIDE to diversify the portfolio of the centres. However, in 2018, the Ministry of Environment and Natural Resources of Mexico, with the support of the United Nations, carried out training for the collection and destruction centres and provided them with new equipment for identifying gases.

In the meantime, Eco-Crédito Empresarial has been successfully expanded to finance solar photovoltaic systems for self-generated electricity at MSMEs, so that the subsequent phases of the evaluated FC modules support both energy efficiency and renewable energy sources. In 2020, 51% of the promoted technologies were distributed among cooling units, 5% among air-conditioning systems and 44% among solar panels.¹⁶ There is still a high demand for the Eco-Crédito Empresarial programme. The expansion of the programme and the associated adaptability to the needs of the target group should be highlighted as positive from a sustainability perspective.

The Eco-Crédito Empresarial programme funded user-friendly and uncomplicated technologies with a manufacturer's guarantee. As part of the progress review, it was already found that 40% of the equipment had a defect after an average of 10 months of use. However, only around 35% of users claim the manufacturer's warranty because it was not a major defect or because they had lost the loan documents, including the supplier's contact details.

The Hombre-Camión programme has been continued with a number of adjustments since the end of the FC promotion and is subsidised by the state. The Mexican Ministry of Communications and Transport assumes the loan default guarantee. A second phase of the programme was launched in 2015 and was active until the end of 2017. The third phase of the programme started in 2020.

The current market offers efficient technologies for use in MSMEs. The challenge is to improve the affordability of this kind of equipment for companies with little access to formal financial instruments. However, financing is only a first step towards securing the benefits of energy efficiency measures in the long-term. In general, MSMEs are not sufficiently informed about the benefits of energy efficiency measures or perceive these benefits as virtual and intangible. The level of awareness among companies must increase in order to trigger a general change in attitudes that will increase the sustainability of energy efficiency programmes.

The insolvency rate of Mexican MSMEs is quite high. In addition, the global COVID-19 pandemic has shaken the sector since 2020 and led to the closure of many companies. The highest proportion of closures was recorded in private non-financial services (38%), the retail sector (30%) and in manufacturing (26%).¹⁷ At the time of the evaluation, no information is available on how many of the beneficiary companies still exist. It appears plausible that some of the supported businesses were also unable to cope with the economic consequences of the pandemic and had to close, meaning that some of the financed equipment may no longer be in use. However, the executing agency NAFIN was unable to provide any specific data on this. This development cannot be determined based on the (very good) repayment rate. To the

¹⁵ <https://www.theguardian.com/world/2021/feb/15/mexico-coal-fossil-fuels-climate-crisis-amlc> (last accessed 21 February 2022)

¹⁶ Source: FC reporting 2020 (BMZ no. 2016 67 104).

¹⁷ Source: Study by the National Institute of Statistics and Geography (Instituto Nacional de Estadística y Geografía, Inegi): Estudio sobre la Demografía de los Negocios (EDN) 2021

extent that beneficiary companies continue to exist, they should, in principle, be in possession of the funds to maintain and service the new equipment due to long-term energy and cost savings.¹⁸

Overall, the projects contributed to establishing sustainable structures for the promotion of energy efficiency and renewable energies in the MSME sector by promoting the Eco-Crédito Empresarial and Hombre Camión programmes. From today's perspective, the sustainability of both phases is rated as good.

Sustainability rating: 2 (both phases)

¹⁸ In a random survey of the target group, at least 30% of the beneficiaries of the Eco-Crédito Empresarial programme stated that the improved product presentation and the cooling quality of the new refrigeration units led to increased sales.

Notes on the methods used to evaluate project success (project rating)

Projects are evaluated on a six-point scale, the criteria being **relevance, coherence, effectiveness, efficiency, overarching developmental impact** and **sustainability**. The ratings are also used to arrive at a **final assessment** of a project's overall developmental efficacy. The scale is as follows:

Level 1	Very good result that clearly exceeds expectations
Level 2	Good result, fully in line with expectations and without any significant shortcomings
Level 3	Satisfactory result – project falls short of expectations but the positive results dominate
Level 4	Unsatisfactory result – significantly below expectations, with negative results dominating despite discernible positive results
Level 5	Clearly inadequate result – despite some positive partial results, the negative results clearly dominate
Level 6	The project has no impact or the situation has actually deteriorated

Rating levels 1-3 denote a positive assessment or successful project while rating levels 4-6 denote a negative assessment.

The **overall rating** on the six-point scale is compiled from a weighting of all five individual criteria as appropriate to the project in question. Rating levels 1-3 of the overall rating denote a "successful" project while rating levels 4-6 denote an "unsuccessful" project. It should be noted that a project can generally be considered developmentally "successful" only if the achievement of the project objective ("effectiveness"), the impact on the overall objective ("overarching developmental impact") and the sustainability are rated at least "satisfactory" (level 3).