SAP004

Energy Efficient Consumption Loan Programme

Mongolia

May 2022

Interim Evaluation Report

This report presents the Interim Evaluation of the Green Climate Fund (GCF)-funded project “Energy Efficient Consumption Loan Programme”. The evaluation was independently commissioned by the Accredited Entity (AE), XacBank, and submitted to GCF. GCF assumes no responsibility for the accuracy of the information in this report.

BlackRock Partners LLC
Bridge Expertise

INTERIM EVALUATION REPORT

Green Climate Fund (GCF) Funded Activity
"SAP004 – Energy Efficient Consumption Loan Programme"

Ulaanbaatar, May 2022

GREEN CLIMATE FUND

XACBANK

REPORT REVISION NOTE

Date	Report	Submitted by	Reviewed by	Description
May 16, 2022	*First draft*	*BRP LLC*	*XacBank*	*Reviewed*
June 9, 2022	*Second draft*	*BRP LLC*	*XacBank*	*Comments incorporated*
June 27	*Third draft*	*BRP LLC*	*XacBank*	*Comments incorporated*
Dec 15	*Final*	*BRP LLC*	*GCF*	*Comments incorporated*

DISCLAIMER

This report is developed by an Independent Evaluation Team and does not necessarily represent the views or formal policies of the XacBank LLC and the Green Climate Fund.

TABLE OF CONTENT

ACKNOWLEDGMENTS .....**Error! Bookmark not defined.**
LIST OF ABBREVIATIONS AND ACRONYMS.....5
EXECUTIVE SUMMARY 7

Programme summary..... 7
Independent Evaluation summary 8
Findings' summary 9
Conclusion summary..... 10
Recommendations..... 10

INTRODUCTION 12

Background of the Programme..... 12
Programme Description and Strategy..... 13
Programme Objectives and Expected Outcomes 13
Evaluation Methodology 14
Methodology description and data collection tools..... 16

EVALUATION FINDINGS 20

1. Relevance, Effectiveness and Efficiency of the Programme..... 20
2. Coherence in climate finance delivery with other multilateral entities..... 2927
3. Gender Equity 28
4. Country Ownership of projects and programmes..... 30
5. Innovativeness in results areas 35
6. Replication and Scalability..... 35
7. Unexpected Results 37

CONCLUSIONS 38
LESSONS LEARNED 41
RECOMMENDATIONS.....42
ANNEX 1: TERMS OF REFERENCE (TOR) .....**Error! Bookmark not defined.**
ANNEX 2: EVALUATION MATRIX.....**Error! Bookmark not defined.**
ANNEX 3: LOGICAL FRAMEWORK.....**Error! Bookmark not defined.**
ANNEX 4: LIST OF STAKEHOLDERS/ INTERVIEWEES.....**Error! Bookmark not defined.**
ANNEX 5: LIST OF DOCUMENTS REVIEWED .....**Error! Bookmark not defined.**
ANNEX 6: CONSULTANTS CODE OF CONDUCT .....**Error! Bookmark not defined.**

LIST OF FIGURES

Figure 1. Loan category by EE heating appliance and EE housing, by amount in USD.....8
Figure 2. Illustrative diagram of the Programme performance evaluation results 10
Figure 3. The rating system for each evaluation criteria.....16
Figure 4. Stakeholder mapping 17
Figure 5. Loan amount disaggregated by M1 and M3 results.....22
Figure 6. Loans by loan category and male and female borrowers 25
Figure 7. Outputs and corresponding Indicators.....25
Figure 8. Loan disbursement to final beneficiaries, by year vs target**Error! Bookmark not defined.**
Figure 9. GAP Outputs and corresponding Indicators 3129
Figure 10. Gender mainstreaming by loan amount/ USD, disaggregated by Impacts M1 and M3 .....32**Error! Bookmark not defined.**
Figure 11. Gender mainstreaming by % of borrowers, disaggregated by sex.....3229
Figure 12. Loan amount disaggregated by Fund level impact results by women-led households. 29
Figure 13. Loans by location .....**Error! Bookmark not defined.**

Figure 14. Number of borrowers, disaggregated by location .....**Error! Bookmark not defined.**
Figure 15. Programme loan M&E scheme 33
Figure 16. Source: https://www.facebook.com/PassiveInclusiveLabHouse 35

LIST OF TABLES

Table 1. Programme components 13
Table 2. Lifetime emission vs Actual emission as of 2021.....22
Table 3. Tonnes of carbon dioxide equivalent (t CO2eq) Target vs Reduced – update actual, midterm, 3 year and lifetime actuals/estimates.....22
Table 4. Results areas and corresponding indicators.....23
Table 5. Component and corresponding indicators 23
Table 6. Results achieved per gender-sensitive indicators.....25
Table 7. Assumption example taken from the Log frame 25
Table 8. Loan disbursement to final beneficiaries (borrowers) .....**Error! Bookmark not defined.**
Table 9. Grant disbursement.....**Error! Bookmark not defined.**
Table 10. Partners/stakeholders matrix.....**Error! Bookmark not defined.**
Table 11. Gender mainstreaming throughout the Programme results31**Error! Bookmark not defined.**
Table 12. GAP results per Outputs 3330
Table 13. The alignment of the Programme to the National Policy and Programmes.....31
Table 14. The Programme indicators alignment with other climate change mitigation indicators 3633
Table 15. Conclusions on Evaluated Criteria 38
Table 16. Suggested ToC .....**Error! Bookmark not defined.**
Table 17. Evaluation matrix.....**Error! Bookmark not defined.**
Table 18. RMF .....**Error! Bookmark not defined.**
Table 19. List of interviewees.....**Error! Bookmark not defined.**

LIST OF ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
AE	Accredited Entity
AMA	Accreditation Master Agreement
APR	Annual Performance Report
BCM	Business Council of Mongolia
BEEC	Building Energy Efficiency Center
BRP	BlackRock Partners LLC
CEO	Chief Executive Officer
CO_2eq.	Carbon dioxide equivalent
COVID-19	Coronavirus
CSR	Corporate Social Responsibility
DWM	Developing World Markets
EBD	Eco Banking Department
EE	Energy Efficient
ERC	Energy Regulatory Committee
FAA	Funded Activity Agreement
FMO	Dutch Entrepreneurial Development Bank
FP	Funding Proposal
FP	Focal Point
GAP	Gender Action Plan
GCF	Green Climate Fund
GCPF	Green Climate Partnership Fund
GEF	Green Environment Fund
GERES	Groupe Energies Renouvelables, Environnement et Solidarités
GHG	Green House Gas
GIZ	Gesellschaft für Internationale Zusammenarbeit
GoM	Government of Mongolia
HS	Highly Satisfactory
HU	Highly Unsatisfactory
IEU	Independent Evaluation Unit
IFC	International Finance Corporation
INDC	Intended Nationally Determined Contribution
IPCC	Intergovernmental Panel on Climate Change
LLC	Limited Liability Company

M1.0	Mitigation core indicator
M&E	Monitoring and Evaluation
MBA	Mongolian Banker's Association
MCUT	Ministry of Construction and Urban Development
MET	Ministry of Environment and Tourism
MNT	Mongolian Tugrug, national currency
MRA	Mitigation Results Areas
MS	Moderately Satisfactory
MSFA	Mongolia's Sustainable Finance Corporation
MU	Moderately Unsatisfactory
NDA	National Designated Company
NDC	Nationally Determined Contributions
NGO	Non-governmental organization
PIN	People in Need
PMF	Project Management Framework
RE	Renewable Energy
RMF	Results Management Framework
S	Satisfactory
SDC	Swiss Agency for Development and Cooperation
SDG	Sustainable Development Goal
SMART	Specific, measurable, achievable, realistic, timely
TNA	Technology needs assessment
ToC	Theory of Change
ToR	Terms of Reference
U	Unsatisfactory
UNEP	United Nations Environmental Program
UNFCCC	United Nations Framework Convention for Climate Change

EXECUTIVE SUMMARY

Programme summary

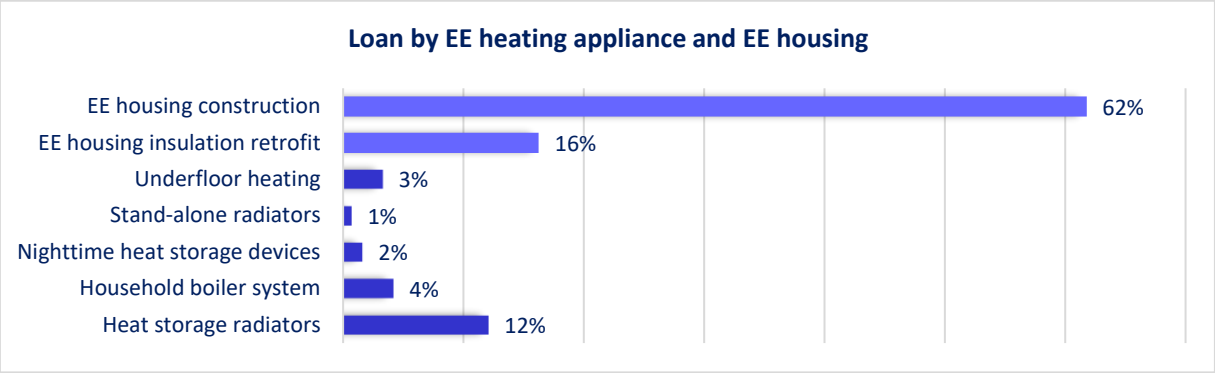
The Energy Efficient Consumption Loan Programme (EECLP) is an innovative new project aimed at increasing consumer adoption of EE products like heating appliances, improved insulation and EE housing. The EECLP has great potential to make an impact on Mongolia's largest environmental and social problem: air pollution resulting from coal burning in stoves in the ger-district throughout the extended winter season and major contributor to GHG emission. By giving residents access to lower-cost financing for EE products, the EECLP can have a paradigm shifting effect on the uptake of green technology at the household level in Mongolia. The concept of *green & eco* loan has grown in popularity since the launch of the program due to extensive marketing efforts and low interest rates compared to other consumption loans available in the market. It is important to note the continued effects of the COVID-19 pandemic as Mongolia's case numbers increased by 500% from the previous year, followed by closures, restrictions resulting in macro-economic shocks negatively effecting the program to a certain level, which is discussed thought the report.

XacBank is experienced in supporting energy efficient buildings through implementation of the recommendations of the current Interim Evaluation Report: "SAP004 – Energy Efficient Consumption Loan Programme, on financing the heating and housing solutions with reduced emissions and improved environmental and health co-benefits realized though the Energy Efficient Consumption Loan Programme supported by the Simplified Approval Process (SAP).

One-half of Mongolia's population lives in Ulaanbaatar, where more than 60% of its residents live in the surrounding ger (peri-urban) areas. Many of whom migrated to Ulaanbaatar in response to climate change-driven livelihood disruptions. Faced with extremely low winter temperatures and challenging economic conditions, these residents burn low-grade coal and rubbish in inefficient stoves, with dire consequences for health and the environment. There is a need to improve access to affordable financing for energy efficient (EE) solutions that improve health and wellbeing without placing an undue financial burden on households. In 2019 XacBank received GCF financing to implement the "SAP004-Energy Efficient Consumption Loan Programme", which aims to tackle these issues by financing energy efficient (EE) technologies to reduce CO_2 emission at the household level. Technologies include EE heating, EE housing insulation retrofits and EE housing construction. The concessional loans offered promote EE uptake at the consumer level and create a strong support system for EE products in Mongolia, specifically in the capital city, Ulaanbaatar. The grant facility was issued to support the XacBank, the Accredited Entity (AE)'s complementary efforts that maximize the impact of the lending facility.

Programme started in May 28, 2019 and will continue through May 25, 2029. As of December 31, 2021, a total of 88 consumption loans were provided to borrowers.

Figure 1. Loan category by EE heating appliance and EE housing, by amount in USD



Independent Evaluation summary

This evaluation report covers the Programme implementation period from 18 April 2019 to 31 December 2021. Based on the approved Funding Proposal ("FP"), Funded Activity Agreements ("FAAs") and other relevant documents and reports (*see Annex 5: List of Documents Reviewed*) associated with the Funded Activities, the Evaluation Team assessed the performance of the Programme against seven (7) GCF evaluation criteria, listed hereafter, specified in the GCF Independent Evaluation Unit (IEU)'s TOR (GCF/B.06/06), GCF Evaluation Policy (approved by the B.BM-2021/17 and came into effect on 4 May 2022) and OECD (DAC) evaluation guideline:

1. Relevance, effectiveness and efficiency of the Programme,
2. Coherence in climate finance delivery with other multilateral entities,
3. Gender equity,
4. Country ownership of the Programme,
5. Innovativeness in results areas,
6. Replication and scalability, and
7. Unexpected results, both positive and negative.

The evaluation was conducted in the period of April 12 – May 6, 2022 to provide an objective assessment of the results of the GCF's Funded activity, its effectiveness and its efficiency, to identify lessons learned and to provide recommendations. The evaluation team made use of several evaluation tools and instruments and gathered information from the different types and levels of stakeholders. The evaluation was guided by key questions and sub-questions developed for each evaluation criterion, formulized in an evaluation matrix, which was the basic guiding document for the interviews, data collection and extraction of findings.

The evaluation covers the review of documents, including the Nationally Determined Contribution (NDC), GCF policies and manuals, Programme documents, list of loans, the energy auditors' report, the analysis of the loan approval process and the loans, and review of the use of the GHG emission monitoring tool.

The evaluation is based on detailed data of the loans provided by the AE. Data sampling is made out of 88 consumption loans. For sampling a total of 19 loans and 19 borrowers located in Ulaanbaatar city were selected based on 6 selection criteria (year, EE eligibility criteria, location, borrowers' sex, women-led, supplier, GHG mitigation results).

A total of 37 stakeholders were identified at implementation, participation and partnership levels, which were met and interviewed in-person and virtually.

This report contains 5 Chapters, including Introduction, Findings, Conclusion, Lessons Learned and Recommendations, and 7 Annexes, including RMF, evaluation matrix, list of interviewees and reference materials.

Findings' summary

Key finding 1: The energy efficient housing target market is 2434 houses with a budget of $35.5 million US dollars, and the sub-urban district (ger area) housing insulation retrofit target market is 3542 houses with a budget of $8.6 million US dollars, while the energy efficiency business loan market potential is $58.5 million US dollars. The Programme is relevant to the national level needs and priorities and responds to the market and beneficiary needs.

Key Finding 2: Measurable outputs are being delivered, although not always as planned because of the COVID-19 pandemic in 2020-2021. Some activities' milestones and targets are not achieved in full within the implementation period, therefore, it is recommended to revisit some targets and assumptions.

Key Finding 3: Numerous events, including COVID-19 pandemic, the policy on debt-income ratio, consumers' knowledge and capacity on EE and affordability of the needs are unmatching circumstances on the ground, whereas targets are likely to be achieved with additional efforts from the AE to improve sales. The implementation is considerably low in terms of efficiency due to bank of Mongolia's regulation on debt-income ratio, households' low income, inability to recover from current loans (salary, vehicle, tuition, livestock etc.), households' ability to prioritization of the basic and luxury needs rather than EE, given the outputs produced within the three years of implementation.

Key finding 4: The Programme is coherent with national priorities and adequately collaborates with stakeholders to complement each other and fill in the climate finance needs and capacity gaps.

Key Finding 5: Programme Outcome M6.0 "Increased number of small, medium and large low-emission power suppliers" result is also supported by the implementation of the GAP to consider gender equity. Four (4) Output results are reported with sex-disaggregated data as required by the GAP. The GAP provides a tremendous support to the Programme to mainstream gender and its outputs are directly linked with the funded activity implementations throughout the Programme lifecycle.

Key Finding 6: The Programme facilitated the development of green building evaluations and energy audits, by increased utilization of energy auditors, and by building their capacity in close collaboration with partner organization Groupe Energies Renouvelables, Environnement et Solidarités (GERES), Building Energy Efficiency Center (BEEC) and ERC. The Programme contributes to "reducing energy loss, improve energy efficiency up to 20%, reduce heating loss up to 40% by 2030 and improve EE appliances supply and trade"[1].

Key Finding 7: The Programme promotes the energy efficiency of the construction sector, mainly residential housing sector. The Programme contributes to the real estate market development through increased value of the green building and evaluation of the energy efficiency of the houses. This establishes the conditions to increase climate finance to this sector and encourages the population to save the energy, decrease household heating costs, change livelihood habits, and create positive attitude towards ultimate goal reducing GHG emission.

[1] *Mongolia's National Green Development plan, 2014*

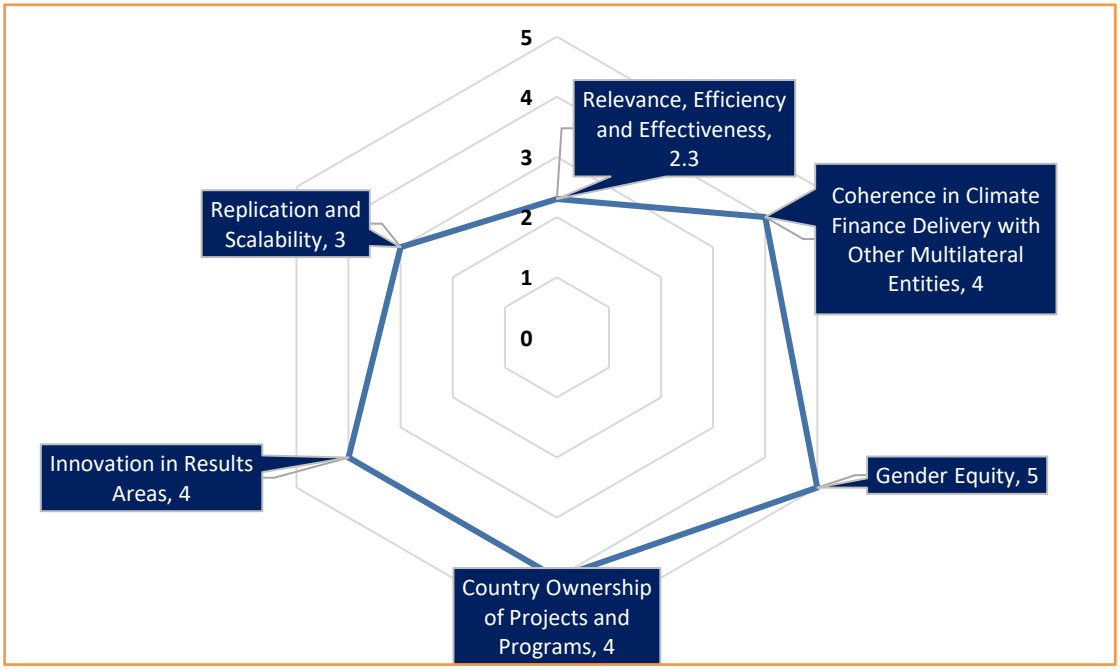
Key finding 8: Since Mongolia is highly dependent on coal burning and most of the energy production is based on raw coal Ulaanbaatar city is one of the most polluted capitals. Air pollution is also linked with diseases such as bronchitis and asthma and is highly damaging for children. Therefore, there is a need to reduce pollution with improved techniques, which lead to reduced heating expense and reduced energy consumption in the ger areas of Ulaanbaatar, where most of the low-income population lives. Key informants repeatedly mentioned that Bank of Mongolia's President's Resolution[2] to limit debt-to-income ratio to 60% creates a burden on low-income borrowers during post-COVID crisis. This could be one of the challenges for the scaling up of the Programme.

Key finding 9: As a result of the Programme, the owners of the EE houses will receive the certificate of energy efficiency, which will add value to the real estate. The Certificate indicates efficiency level, which further will be an integral part of the housing market.

Conclusion summary

The performance of the Programme has been evaluated as Moderately Satisfactory (MS). The conclusion of the assessment is provided below with an illustrative diagram for each evaluation criterion.

Figure 2. Illustrative diagram of the Programme performance evaluation results



Recommendations

Overall, seven recommendations and suggestions for actions are provided to streamline the current progress to reach the final targets and complement the achievements.

1. The ToC does not include barriers, that may prevent problems to be solved, or issues that could threaten the achievement of the results and assumptions of the Programme results. The ToC should be revisited and revised to reflect the chain of changes towards fund level impact. *See Table 16. Suggested ToC.*

[2] *President of Bank of Mongolia's Resolution, A-83, March 22, 2019*

2. Collaboration on information sharing with government stakeholders needs to be improved so that results and good practices are recognized by the governmental organization and used for policy improvement and decision making. This could include consideration and acceptance of results achieved by the Programme to be counted towards NDC action plan implementation results, namely NDC Objective 9, activity "Sub-urban district 2000 housing insulation" of the construction sector to reduce GHG emission reduction. It is recommended to initiate acknowledgment of the private sector results towards national objectives by the city Governor's office MET and MCUD.
3. Programme grants can be utilized towards an increasing number of energy auditors, especially those settled in the provinces, for building their capacity to conduct pre- and post- project evaluation of energy efficiency projects. This will enable a Programme scale-up to the provinces, reach vulnerable population in the countryside, and create employment and other opportunities related to the needs.
4. The list of Programme eligibility products can be expanded with renewable energy supply products (solar and wind) and trees and bushes[3] according to the green product list approved by National Committee for Environmental Pollution Reduction, updated in 2022.
5. Logic framework should be revisited and analysed according to the current situation, and some targets should be revised to match current assumptions. Consider the timeframe and current condition to revisiting targets to be more realistic and achievable.
6. The internal record keeping system is malfunctioning, therefore the AE should strengthen internal monitoring and reporting of the results with the evidence and documentations properly, such as the list of trainings conducted, signed participant sheets along with the agenda of the events, which will further ease internal and external monitoring and evaluations.
7. The APRs report different value under "Current values" of GHG emission, e.g., Mitigation core indicator 1.0, instead, cumulative value of the lifetime emission to be reduced should be reported. Besides, the Programme results were not reported per Outcome level indicators. Accordingly, the AE should improve accuracy of the APRs in the next reporting period.

[3] *"One billion trees" Initiative, 2022*

INTRODUCTION

This report covers the Interim Independent Evaluation of the GCF-financed "SAP004 – Energy Efficient Consumption Loan Program" (Programme) with a thorough analysis of its design, and implementation progress and results during the period of 18 April 2019 to 31 December 2021. The evaluation was conducted as per Schedule 4 of the FAA within six (6) months after the end of two (2) years and six (6) months as of the Effective Date during the period of April 12 – May 6, 2022.

The main goal of this evaluation is to deliver credible and trusted evaluations that provide an assessment of the progress and results achieved in relationship to the GCF investment, identify learning and areas where restructuring or changes through adaptive management in project implementation are needed, and make evidence-based clear and focused recommendations that may be required for enhancing project implementation to deliver the expected results and to what extent these can be verified and contributed by GCF investment. The objectives of the Evaluation are as below:

Objective 1: GCF financed progress and results are assessed.

Objective 2: Lessons learned, and areas of improvement are identified.

Objective 3: Evidence-based, clear and focused recommendations are provided.

The target user of this evaluation report is the GCF, the AE and other GCF financed Programme implementers to utilize important findings and lessons learned. Based on analysed and triangulated evidence and data the recommended actions are suggested to the AE to improve the implementation of the Programme to achieve mid-term and final targets and results.

Background of the Programme

One-half of Mongolia's population lives in Ulaanbaatar, where more than 60% of residents live in the surrounding ger (peri-urban) areas, many of whom migrated to Ulaanbaatar in response to climate change-driven livelihood disruptions. Faced with extremely low winter temperatures and challenging economic conditions, these residents burn low-grade coal and rubbish in inefficient cook stoves for heating, with dire consequences for health and the environment. There is a need to improve access to affordable financing for energy-efficient (EE) solutions that improve health and wellbeing without placing an undue financial burden on households.

Because of the situation in Ulaanbaatar's ger districts, action towards EE and air pollution reduction is required.

An extensive Technology Needs Assessment (TNA) identified 1) lighting and 2) improvement of insulation of residences as priority climate change mitigation technologies for the residential sector.6 The TNA's Barrier Analysis assessed the barriers to those technologies. Barriers to lighting adoption are indicative of barriers to other residential EE purchases, such as the EE heating solutions proposed in this Programme. Economic and financial barriers indicate a lack of proper financial incentives, financial resources, and high upfront costs that limit technology uptake. The non-financial barriers identified for efficient lighting (and related) purchases relate to a lack of product awareness and a lack of consistency in product quality. Building insulation measures are further impeded by a market failure in which there are no incentives for owners to invest in EE.

Programme Description and Strategy

The GCF Board (Board decision B.21/15), approved the Funding Proposal in the amount of USD 10,000,000 (ten million US Dollars) subject to the conditions referred to in annex XV of Approval Decision and in the respective Term Sheet, of which USD1,000,000 (one million US Dollars) as a grant for a dedicated technical assistance facility for the implementation of the Activities under Component 2 of the Funded Activity (including contingencies) ("Technical Assistance" or "TA"), and USD9,000,000 (nine million US Dollars) as a loan for the implementation of the Activities under Component 1 of the Funded Activity, as further described in Schedule 1 and the Funding Proposal;

The Funded Activity is estimated to be the equivalent of USD $21,500,000 (Twenty-one million five hundred thousand US Dollars), which includes the Total GCF proceeds and the co-financing.

All consumption loans were issued to borrowers located in Ulaanbaatar city, surrounded by its ger area which contributes strongly to GHG emission and consumes most of the energy for heating the housing. Considering the need for saving energy for heating the housing and to contribute to clean air, the Programme targets core problems to be solved in the nearest future. International studies identified technologies for the residential sector for climate change mitigation actions, such as lighting and improved housing insulation amongst others[4], while the national policy document Nationally Determine Contribution of Mongolia identified insulation of houses as one of the GHG mitigation actions of the construction sector.

The implementation of the funded activities is divided into two (2) components:

Table 1. Programme components

Components:
1. Financing Facility of EE Consumption Loan Programme
2. Grant Activities

Programme Objectives and Expected Outcomes

Paradigm Shift Objectives

Shift to low-emission sustainable development pathways: The EE Consumption Loan Programme will stimulate the consumption of EE heating appliances and EE housing in Mongolia, which will help the Bank improve consumer EE and create a strong ecosystem for EE products in Mongolia. When successfully implemented, the programme will enable robust development of each respective market, the benefits of which have the potential to reverberate throughout the city. The supply-side and demand-side market stimulation brought about by this programme will set the stage for further EE-related lending activity across Mongolia's commercial banking sector, enable families and vulnerable population groups to live in healthier environments, enable EE producers and suppliers to jumpstart their growth progression (due to increased demand), and strengthen local knowledge about EE investment best practices at the household level through community capacity building workshops, awareness-raising, and dissemination of information about products eligible for the concessional loan.

[4] *Technology Needs Assessment (TNA), 2013, UNEP*

Mitigation Results Areas (MRAs)

The Programme is being implemented within two (2) mitigation results areas (MRA), which facilitates systematic results reporting. Program mitigation areas are:

(i) Reduced emissions through increased low emission energy access and power generation, and
(ii) Reduced emissions from buildings, cities, industries and appliances.

Programme Outcomes

Programme's implementation towards contribution to fund level outcomes are as below:

(i) Increased number of small, medium and large low-emission power suppliers, and
(ii) Lower energy intensity of buildings, cities, industries and appliances

Grant

GCF provided USD 1,000,000 (one million US Dollars), in the form of a grant for the purposes of, and to assist in financing the funded activities.

The grant facility supports the adaptation of EE technology through training households, awareness-raising for stakeholders, capacity building activities for loan officers etc. Activities carried out through the grant component (Component 2) maximizes the loan facility's impact, such as old unit disposal and household energy usage and energy efficiency evaluations through an energy audit. The Programme is currently into its third year of implementation and is comprises a portfolio of 88 GCF-funded consumption loans distributed as of the end 2021, on which an interim independent evaluation is conducted.

Gender objectives

The AE has conducted a Gender assessment of the Programme in January 2019, based n which the Gender Action Plan (GAP) was developed and approved.

Impact Statement: Increased resilience of vulnerable communities including women, children and the elderly to the negative impacts of air pollution/climate change.

Outcome Statement: By reaching the targets and objectives mentioned below in the gender action plan the Bank will ensure that pregnant women, children, and the elderly will be the core beneficiaries of the EE Consumption Loan programme loan activity focus.

The GAP was developed towards four (4) Programme level output objectives:

- *Output 1:* 30% of EE housing loans disbursed through the EE Consumption Loan facility to women-led households.
- *Output 2:* Developing energy efficiency training/demonstrations for male and female-led households
- *Output 3:* Raising awareness for men and women-led households by creating a case of EE Consumption Loan Programme clients
- *Output 4:* Beneficiaries with improved access to low-emission energy efficient heating technologies

Evaluation Methodology

The Evaluation is to provide an objective assessment of the results of the GCF's Funded activity and its effectiveness and efficiency, to identify lessons learned and to provide recommendations. The evaluation is conducted with the use of participatory approaches and principles, including a)

participatory consultancy, b) applied knowledge and skills, c) results-based management and d) respect and anonymity. The evaluation is guided by the draft Evaluation Policy for the GCF (GCF/B.28/05/Rev.01) on the evaluation approach, evaluation criteria and practices of the Fund. Evaluation criteria found in standards and guidelines from the Organization for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC) were also considered to apply the following evaluation criteria:

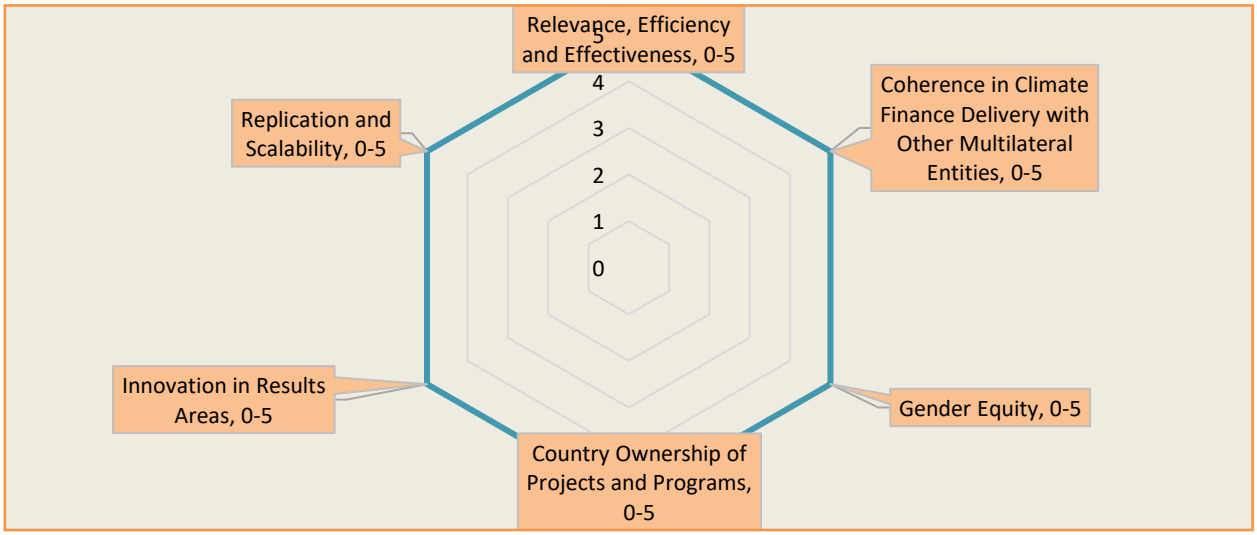
1. Relevance, effectiveness and efficiency of projects and programmes,
2. Coherence in climate finance delivery with other multilateral entities,
3. Gender equity,
4. Country ownership of projects and programmes,
5. Innovativeness in results areas,
6. Replication and scalability, and
7. Unexpected results, both positive and negative.

Performance of the Programme was evaluated based on the rating system presented below. Spider web, a graphical method was used to visualize the triangulated results, transferred to an illustrative diagram. Rating descriptions:

- Highly Satisfactory (HS): Programme is on track to exceed its mid-of-project targets and is likely to achieve transformational change by its closure. That can be presented as 'outstanding practice'.
- Satisfactory (S): Programme is on track to achieve its mid-term targets and its end-of-project targets. That can be presented as 'good practice'.
- Moderately Satisfactory (MS): Programme is on track and to achieve its mid-term targets and its end-of-project targets by with minor shortcomings.
- Moderately Unsatisfactory (MU): Programme is on track and is expected to partially achieve its mid-term targets and end-of-project targets with significant shortcomings. Programme results might be fully achieved by its closure if adaptive management is undertaken immediately.
- Unsatisfactory (U): Programme is off track and is not expected to achieve its mid-term and end-of-project targets. Programme results might be partially achieved by its closure if major adaptive management is undertaken immediately.
- Highly Unsatisfactory (HU): Programme is off track and is not expected to achieve its end-of-project targets without major restructuring.

In benchmarking applications, each of the axes of the radar chart represents Programme assessment in the designated key performance requirements to be measured. Based on evaluation criteria, the radial axes of the radar chart will visualize the degree of performance.

Figure 3. The rating system for each evaluation criteria



5-Highly Satisfactory (HS)	**4-Satisfactory (S)**	**3-Moderately Satisfactory (MS)**	**2- Moderately Unsatisfactory (MU)**	**1- Unsatisfactory (U)**	**0-Highly Unsatisfactory (HU)**

Methodology description and data collection tools

The evaluation methodology combines several evaluation tools and instruments. Information was gathered from the different types and levels of stakeholders, guided by key questions and sub-questions for each evaluation category.

- An evaluation matrix was developed which was used as the guiding document for interviewing participants, collection of relevant data and for extracting findings. A documentation review will be conducted using guiding questions included in the evaluation matrix.
- A thorough desk-based review of internal documents and secondary sources was conducted. Evaluation contained contextual information about the Programme design and its planned activities, information on progress and results of the project implementation through the APRs, improved understanding about the Programme's overarching assumptions and rationale, identified cross-cutting factors and key actors, identified key issues and areas that need further analysis, and triangulated and cross-checked primary and secondary data.
- Key informants were interviewed using guiding questions developed and suggested by the Evaluators. Stakeholder mapping was used to determine informants, considering inclusiveness and gender ratio.
- Success stories and cases were identified from key informant interviews (KII) conducted during evaluation and site visits. The evaluation considered inclusiveness of all types of the beneficiaries in sampling and interview.

A total of 88 GCF- funded consumption loans were provided as of the end 2021, disbursing a total of USD $385,320.94 (Three hundred eighty-five thousand three hundred twenty US dollars and ninety-four cents) out of the GCF loan of USD $1 million, the preliminary dispatched amount. The Evaluation conducted an analysis of the 88 consumption loans to further conduct sampling and analysis, interviews and site visits.

Data sampling

According to the desk review of the AMA, FP, FAAs, detailed list of consumption loans and other supporting documents provided by the AE. The AE's main eligibility requirement that the loans to be financed must be used for products that achieve 20% reduction in energy usage or 20% reduction in CO2 emissions, and it has three (3) types of investment eligibility criteria: 1) EE heating appliance, 2) EE housing insulation retrofit, and 3) EE housing construction. The evaluation team reviewed the loan list, year of loan approval, loan category, supplier, lifetime GHG emission reduction per impact category (M1, M3), sex, and women-led household. To avoid sampling bias, these criteria and other specifics of the loan were used in the selection of borrowers for interviews and loans for data sampling.

A total of 19 borrowers and loans were selected for data sampling, site visits, and interviews. The selected borrowers covered all criteria listed above, as:

- Year: 2019 – 3 loans; 2020 – 8 loans; 2021 – 8 loans
- Eligible measures:
    a. EE housing construction: 4
    b. EE housing insulation retrofits: 4
    c. Heat Storage radiators: 4
    d. Household boiler system: 2
    e. Night time heat storage: 2
    f. Stand-alone radiators: 1
    g. Underfloor heating: 2
- GHG emission reduced per Impact indicators:
    a. M1: 11
    b. M3: 8
- Supplier: 14
- Gender and inclusiveness:
    a. Borrower's sex: Female – 9; Male – 10
    b. Women-led households: 4
    c. Location: all districts of Ulaanbaatar
- Disposed stoves: 2

Stakeholder mapping

The desk review of the documents resulted in a list of stakeholders in varying levels of engagement, as follows: 1) implementation, 2) participation and 3) partnership levels.

1) Implementation level: AE, NDA, GCF Focal Point
2) Partnership level: GERES, Government organizations, Gesellschaft für Internationale Zusammenarbeit (GIZ), BEEC, MSFA, and other stakeholders as identified by the evaluation team.
3) Participation level: borrowers, loan officers

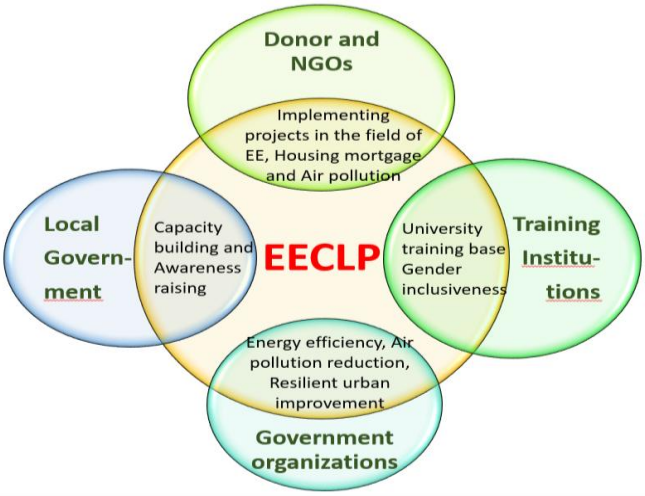


Figure 4. Stakeholder mapping

Interview questionnaires were developed for each type of stakeholder: a) AE, b) Government stakeholders, c) international and local organizations, and d) borrowers. Interview questionnaires were developed using the evaluation matrix.

The evaluation team considered gender equity in stakeholder mapping and meetings. 37 (57% female) stakeholders' representatives were interviewed at all levels. Almost 70% of the key informant interviews were conducted in person. *See Annex 4.*

Roles and Responsibilities of the Stakeholders

The AE provided all required documents and detailed data of the loan for assessment and desk review, arranged an interview with borrowers and site visits, and issued official letters to ease arrangement of meetings with Government officials and representatives of the international organizations. The AE's roles and responsibilities were to provide additional data requested by the Evaluation team to support in-depth verification and triangulation of the findings, results and analysis.

Government stakeholders' roles and responsibilities in the evaluation consisted mainly of contributing their feedback and assessment on relevance of the programme to the country needs, whether the Programme supports the situation on the ground, its alignment with the national and provincial levels of programs and plans and degree of contribution to low-emission sustainable development enabling environment.

Multilateral entities, international and local organizations participated in the evaluation process by providing observations and insights in the Programme potentials to amplify green financing, their engagement and involvement in Programme implementation and coherence with their projects and activities.

Borrowers' roles and responsibilities in this evaluation were to provide a practical view and ongoing feedback on the implementation of the Programme and its inclusiveness and responsiveness to support evaluation in determination of replicability and scalability.

The Evaluation team considered inclusiveness of all levels of stakeholders in the evaluation process at the evaluation design stage to avoid bias. Interviews with stakeholders were conducted by more than two evaluators to prevent unconscious influences, while interview notes and records were taken to reduce miss of information. Quality control and quality assurance were conducted via weekly team meetings, and review of the notes and minutes. Independence in the evaluation has been ensured through various approaches, including selection of the borrowers for interview and site visit, conducted interviews and meetings with stakeholders and borrowers without participation of the AE, interviews with AE's officers to obtain in-depth information and data for verification.

Triangulation assessment

The evaluation is based on triangulation of data obtained through desk review cross-checked with additional detailed data (loans disbursement, grant disbursement, event information (internal/ external), participants list (F/M), energy auditors' reports and public awareness activities and events provided by the AE) and qualitative data obtained through the interview. A mixed and participatory research approach is applied, relying on both quantitative (loan) and qualitative (semi-structured key informant interviews) data collection methodologies. The combination of these data collection instruments supported the followings:

- Enabled triangulation by comparing findings derived from different sources.
- Provided explanatory depth to desk review findings.

- Cross-examination was conducted on the results obtained on primary and secondary data.

Code of conduct

The Evaluation was carried out in accordance with the ethical guidelines and Code of conduct established by the BRP LLC based on internationally recognized guidelines independently, impartially, and rigorously. *See Annex 6.* The following ethical principles will be applied:

- Borrowers' confidentiality
- Consent to use the information obtained in the interview in the report

Limitation of the evaluation

The evaluation respects anonymity and confidentiality of the key informants, and accepts the condition arose with several selected borrowers, who refused to participate in the evaluation[5], which created a limitation of the evaluation. Loan borrowers' rights are protected by the banking sector's relevant laws, therefore, the borrowers have right to protect their personal information and not to share loan information with third parties. A total of 5 borrowers were refused, thus the evaluation team included additional 8 borrowers (considering inclusiveness of all years, types of EE heating appliances, sex of the borrowers, location of the AE branches) and their loans in the sampling.

[5] *Law of Mongolia on Central Bank, 1996; Law on Deposits, loans and banking transactions, 2021*

EVALUATION FINDINGS

The evaluation findings based on the seven (7) evaluation criteria and key proposed questions, presented in the next chapters. Key proposed questions are presented in boxes under each criterion to guide the readers through the findings.

1. Relevance, Effectiveness and Efficiency of the Programme

Relevance

This section analyses the Programme's Relevance to the country's needs and priorities, and links with local situation, and consideration of its design in formulation of Theory of Change (ToC).

- ✓ *Were the context, problem, needs and priorities well analyzed and reviewed during Programme initiation?*
- ✓ *Are the planned Programme objectives and outcomes relevant and realistic to the situation on the ground?*
- ✓ *Is the Programme Theory of Change (ToC) and intervention logic coherent and realistic?*
- ✓ *Does the ToC and intervention logic hold, or does it need to be adjusted?*
- ✓ *Do outputs link to intended outcomes which link to broader paradigm shift objectives of the Programme?*
- ✓ *How realistic are the risks and assumptions of the Programme? How did the Programme deal with issues and risks in implementation?*

1. Overall national-level problems and needs are clearly identified in the FP under the investment criteria "Needs of the Recipient". About 210,000 households use the processed coal briquettes, the alternatives of the raw coal for heating purposes[6]. The Programme identified about 15,278 direct beneficiaries as per FP, which will reduce 469,574 tCO_2eq. Direct beneficiaries mentioned in the FP are persons of the household-borrowers. However, borrowers should not be counted towards direct beneficiaries since this is a mitigation project. GHG emission over 10 years, contributing to Mongolia's 2030 targets of 22.7% reduction in national GHG emissions and a 40% reduction in building heat loss. The Programme supports the needs of the beneficiaries through its Grant activities by providing technical assistance in terms of conducting energy audit, building capacity and raising awareness on benefits of the EE products and EE housing and insulation retrofits.
2. The Government of Mongolia revised the Nationally Determine Contribution (NDC) Action plan in 2021[7]. Objective 9 includes the activity "Eco town and eco-house" under Affordable Housing Urban Renewable Project (AHURP), and "Sub-urban district 2000 housing insulation" of the construction sector to reduce GHG emission reduction. Therefore, the Programme objective to reduce GHG emission by installation of heating appliances and insulation of houses is relevant to the country needs and objectives.
3. The ToC was developed at the Programme design stage and is included in the FP. The analysis of the ToC identified the background understanding and interpretation of the demonstration of the causal connection of the changes by the AE. However, certain adjustments need to be made, based on analysis indicated in the next paragraph.
4. Activities' results formulated in the ToC are slightly different from the activities included in the FAAs. The Activity "Verification of emission impacts" is far beyond the Programme. Under Output the indicators are stated, instead of changes to be foreseen. Two Outcome level results are stated in the ToC, however, the "*Household demand for EE-oriented product*

[6] www.1212.mn
[7] NDC, 2019

lending increases" interprets as an opportunity at the corporate level, rather than the Programme results. Two Impact level changes are foreseen in the ToC: *1) "Increased prevalence of construction and heating purchase decisions based on absence or lack of energy efficient criteria"* interprets as a negative result, rather than a positive; *2) "Critical mass of energy efficient products supports development of maintenance and resale markets"* is unclear and hardly interprets as an impact level result.

5. The Logical framework (logframe) responds to the situation on the ground. Logical hierarchy is established with clear objectives and corresponding indicators. Identified activities are designed systematically and logically and directly linked with the outputs results. The ToC does not include barriers, that should be determined to prevent problems to be solved, and risks that may threaten the achievement of the results, while assumptions are indicated in the logic framework. Details of logframe analysis and findings are presented under Effectiveness.
6. The energy efficient housing target market is 2434 houses with $35.5 million US dollars, and sub-urban district (ger area) housing insulation retrofit target market is 3542 houses with $8.6 million US dollars, while the energy efficiency business loan market potential is $58.5 million US dollars.[8] Therefore, the Programme itself is relevant to the national level needs and priorities and accordingly responds to the market and beneficiary needs.

Effectiveness

This section analyses the Programme's logical framework and assesses the extent to which results and impacts are achieved relative to an ex-ante projections.

- ✓ *What and how much progress has been made towards achieving the overall outputs and outcomes of the Programme?*
- ✓ *To what extent is the Programme able to demonstrate changes against the baseline (assessment in approved Funding Proposal) for the GCF investment criteria?*
- ✓ *To what extent did the Programme's M&E data and mechanism(s) contribute to achieving Programme results?*
- ✓ *To what extent did the design of the Programme help or hinder achieving its own goals?*
- ✓ *Were there clear baselines indicators and/or benchmark for performance measurements? How were these used in Programme management?*
- ✓ *To what extent and how the Programme applies adaptive management?*
- ✓ *What, if any, alternative strategies would have been more effective in achieving the Programme objectives?*

7. Target for Mitigation Core Indicator 1 "*Tonnes of carbon dioxide equivalent (tCO2eq) reduced as a result of Fund-funded projects/ programmes*" is 469,574 tCO2eq., which is both Programme Final target and Lifetime emission target as per the FP and FAA. According to FP Annex 9B, the EE housing loan will reduce 155,910 tCO2eq., and the EE appliance loans will reduce 313,664 tCO2eq. emission. Loan projects lifetimes differ from 10 to 20 years depending on sectors (eg. Construction loan, heating appliances), therefore lifetime emission reduction of the 88 loan projects is 9580.80 tCO2eq. verified based on list of loans and annual and lifetime GHG emission reductions. Accordingly, the AE reports the final and lifetime differently in each APR, depending on the loan project lifetime emission to be reduced over time. Besides, "Current values" of the Mitigation core indicator in the APRs are reported differently, not cumulative. A total of 19 borrowers reduced 387.02 tCO2eq. in 2019, 48 borrowers reduced 709.19 tCO2 eq. in 2020 and 21 borrowers reduced 267.96 tCO2eq. in 2021, totalling 1,364.19 tCO2eq. reduced by a total of 88 borrowers as of end of 2021. See Table 2 below.

[8] *Market study, Mongolian Sustainable Financial Corporation*

Table 2. Lifetime emission vs Actual emission as of 2021

Target	Lifetime emission reduction as of 2021 (tCO2eq)	Actual emission reduced as of 2021 (tCO2eq)
469,574	9,580.80	1,364.19

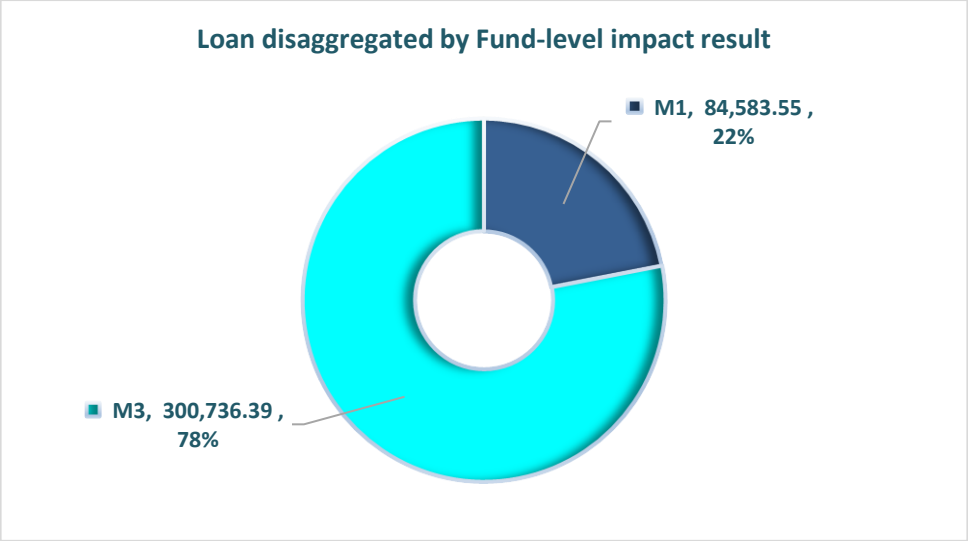
8. A total of 9,580.76 tCO_2eq. lifetime GHG emission reduced through disbursement of 88 loans. Total CO_2 emission reduction is calculated based on each project's lifetime emission to be reduced. Current progress of GHG emission reduction is compared against 3-year and mid-term targets and represents 6.8% and 4% accordingly. It also represents only 20% of the annual estimated GHG reduction value of 46,957.40 tCO2eq.

Table 3. Tonnes of carbon dioxide equivalent (t CO2eq) Target vs Reduced – update actual, midterm, 3 year and lifetime actuals/estimates

Mid-term Target (tCO2eq.) by 2023	Target (tCO2eq.) by end of 2021	Annual target (tCO2eq.)	Lifetime emission reduced as of end 2021 (tCO2eq.)	Actual emission reduced as of end 2021 (tCO2eq.)
234,787	140,872	46,957.40	9,580.76	1,364.19

9. Fund-level objectives are identified from the GCF results area 1) M1.0 (2,900.59 tCO_2eq.) and 2) M3.0 (6,680.23 tCO_2eq.) to be measured carbon dioxide equivalent (tCO_2eq). M3 was expected to generate 33% of total impact while actual is 70%. Below Figure 5 shows loan amount disaggregated by each of result areas, where 32 loans under M3 represents 78% and 56 loans under M1 is 22% of the total loan amount.

Figure 5. Loan amount disaggregated by M1 and M3 results



10. Selection of the key expected Outcomes and corresponding indicators from the GCF RMF and PMF are appropriate and relevant with activities. It is noticed that APR template does not require reporting on Outcome results. The Evaluator assumes one household behind 1 consumption loan, Outcome M6 result per indicator 6.2[9] is 56 households, which are heating appliance loans only. Therefore, the achievement towards mid-term target of "Increased number of small, medium and large low-emission power suppliers" is 2.3%.

[9] *Logframe per FAA "Represents incremental number of households with access to lower emission heating via the electricity grid. All heating appliance loans are assumed to be disbursed by the end of the fifth year".*

Table 4. Results areas and corresponding indicators

Outcomes	Indicators	Mid-term target	Result
M6.0 Increased number of small, medium and large low-emission power suppliers	*6.2 Number of households, and individuals (males and females) with improved access to low-emission energy sources*	*2,420 households*	*56 households*
M7.0 Lower energy intensity of buildings, cities, industries and appliances	*7.1 Energy intensity / improved efficiency of buildings, cities, industries and appliances*	*n/a*	*167.63[10] kW/m2/year*

11. The Intervention's logical framework is designed with six (6) outputs and thirteen (13) activities divided into two (2) interlinked components: 1) sub-loan disbursement and 2) grant disbursement. Results of the activities are logically designed and expected to deliver component outputs, which are considered to contribute to outcomes through stakeholder engagement, institutional capacity building, dissemination of best practices and cases, dismantling and disposing of old stoves and providing energy efficiency evaluations.

Table 5. Component and corresponding indicators

Component 1: Financing Facility of EE Consumption Loan Programme		Component 2: Grant
Sub-component 1.1: Financing of EE heating appliances		Sub-component 2.1: EE Consumption Loan identification capacity increased across internal and external institutions
1.Volume of financing for EE heating appliance loans		*1. Number of loan officers trained to offer EE Consumption Loan products (both components)*
2.Percentage of financing provided to women-led households		*2. Number of households participating in EE housing training workshops (EE housing component*
		3. Number of stakeholder meetings (both components)
Sub-component 1.2: Financing of EE housing products		Sub-component 2.2: Increased awareness of benefits of EE consumption across local stakeholders
1.Volume of financing for EE housing loans		*1. Number of contacts made through various awareness raising and marketing efforts (both components)"*
2.Percentage of financing provided to women-led households		*2. Number of unique page views on EE Consumption Loan Programme website*
		3. Number of EE Consumption Loan Programme case studies published (both components)
		Sub-component 2.3: Improve programme inclusiveness for vulnerable populations
		1. Number of households having the evaluation done (EE housing component)
		Sub-component 2.4: Disposal of old stoves
		1. Number of households with stoves disposed and dismantled under the programme

12. The logic model is designed with two (2) overarching Outcomes, which do not necessarily link with specific Outputs. However, output results are reported per each outcome, whereas the linkage between the outcome and outputs is not clearly seen due to default template given by GCF.

[10] *The weighted average specific energy consumption of households (32) participating in the EE housing component*

13. Programme level Output indicators are assessed per SMART (Specific, Measurable, Achievable, Realistic, Timely) assessment. A total of twelve (12) indicators are formulated around six (6) outputs to measure Programme results. Two (2) gender-sensitive indicators are included to quantify the loans provided to women-led households. Although mid-term targets are not set in the initial log frame, the AE reports the "*percentage of financing provided to women-led households*" under Component 1 disaggregated by women-led. The evaluation has verified the results against list of loans disbursed as of 2021. Table 6 shows results of the financing provided to women-led households, while Figure 6 shows financing issued to males and females.

Table 6. Results achieved per gender-sensitive indicators

Outputs	Indicators	Target (2029)	Results 2021
Financing of EE heating appliances	Percentage of financing provided to women-led households	10%	10%
Financing of EE housing products	Percentage of financing provided to women-led households	30%	8%

Figure 6. Loans by loan category and male and female borrowers

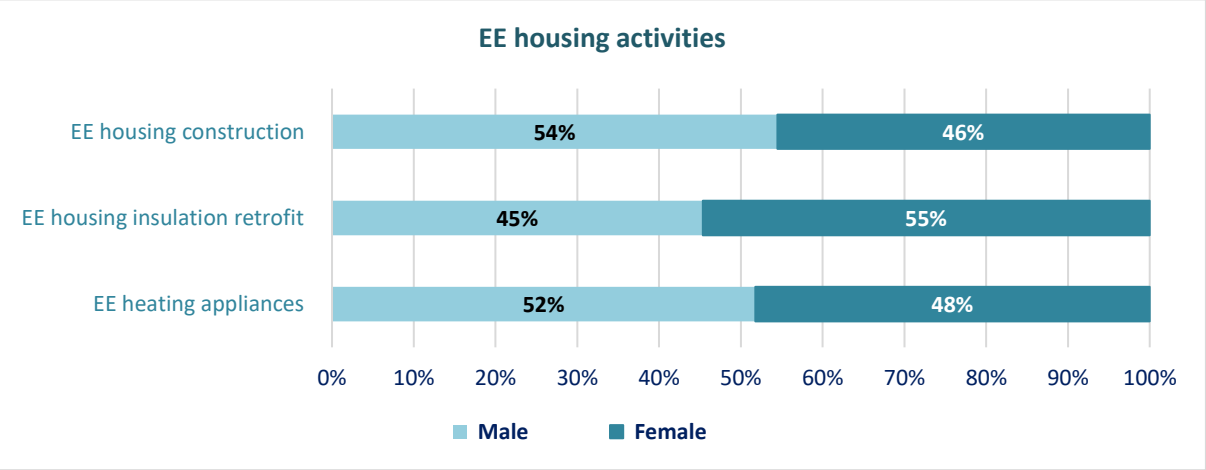
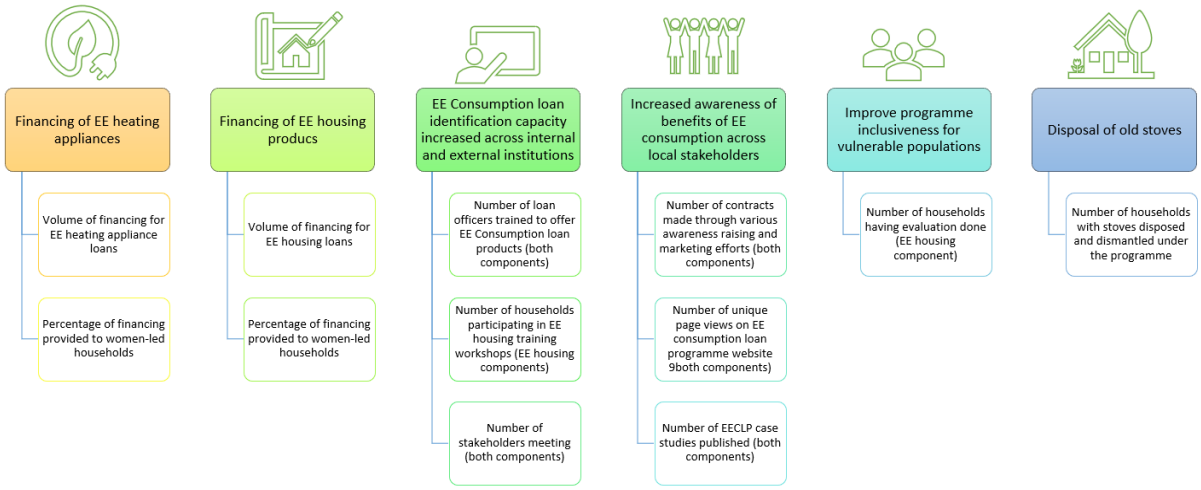


Figure 7. Outputs and corresponding Indicators



14. Analysis of results achieved concluded that the Component 1 results per indicators "*Volume of financing for EE heating appliance loans*" and "*Volume of financing for EE housing loans*" are 4% and 3% respectively compared to the three-year financing target, thus mid-term targets are not timely achievable.

15. Analysis of Component 2, Grant activities are conducted through desk review of the APRs for 2019-2021, the data and findings are triangulated with additional evidence requested from the AE. Grant activities are incentivized to reach out households to go green, by supporting the replacement of old stoves to low-emission products. The GoM decree[11] on prohibition of raw coal burning has been active since May 15, 2019.

[11] *Degree of Government of Mongolia, Feb 28, 2018.*

16. Gender-sensitive indicators are not included under Grant activity outputs however, the AE reports the sex-disaggregated data through the implementation of the Gender Action Plan. Details of gender consideration are included under the criterion "Gender equity".

17. The highest achievement is reported for indicator "*Number of unique page views on EE Consumption Loan Programme website*" reaching 14,682 hits triangulated per Google analytics vs mid-term target of 2,500 views. Combined results are included in the logframe, included in Annex 3. Logframe.

18. Overall, measurable outputs are being delivered, although not always as planned, partly because of the COVID-19 pandemic in 2020-2021. Some activities' milestones and targets are not achieved in full within the implementation period, therefore, it is recommended to implement adaptive management given the current circumstances.

Efficiency

This section describes the assessment of quality of the execution of the Programme implementation plan as regards Programme governance and resource utilization during implementation.

- ✓ *Are the planned inputs and strategies identified realistic, appropriate, and adequate to achieve the results? Were they sequenced sufficient to efficiently deliver the expected results?*
- ✓ *Are the outputs being achieved in a timely manner? Is this achievement supportive of the ToC and pathways identified?*
- ✓ *Have Programme resources been utilized in the most economical, effective, and equitable ways possible (considering value for money; absorption rate; commitments versus disbursements and Programme commitments; co-financing; etc.)?*
- ✓ *Are the Programme governance mechanisms functioning efficiently?*

19. The loan approval process is clear and trained loan officers of the branches adequately follow the procedure of the review of the loan requests and differentiate eco and green loans from regular loans to further transfer the EE consumption programme requests to the Eco Banking Department (EBD) for review and approval. The FP clearly demonstrated the loan process flow, which is effectively managed by the EBD. Through key informant interviews, the borrowers confirm efficiency of the loan process and approval.

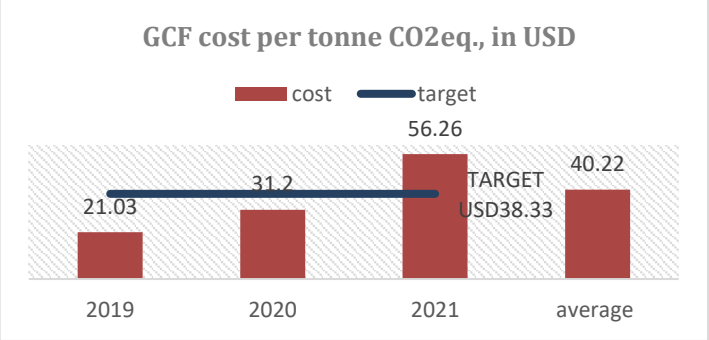
20. According to key interviewees, the EE consumption loan eligibility requirements are higher than other commercial banks, nonetheless, the AE mitigates risks and keeps the green concept through the Programme to continuously contribute to the chain of change and demonstrate the true value of climate financing for the long-term country benefits.

21. The AE signed a Cooperation Agreements with EE product suppliers, EE housing construction firms and insulation teams and assures their visibility on web pages to directly and indirectly contributes to the local supply chain on EE. Each supplier company with at least one year of experience must comply with eligibility criteria: 1) the product must achieve a minimum of 20% energy savings and/or CO_2 emission reduction; and 2) the product must have a warranty, including maintenance and repair. AE's webpage presents a list of suppliers on each service for customer selection. Several interviewees mentioned that there is a need to expand the list for broader selection and market opportunity. However, there is a lack of firms that can comply with the eligibility requirements. The positive finding is that the eligibility requirement encourages other suppliers to build their capacity for broader business opportunity, which can be counted towards value for money.

22. The financial model is unique for this Loan Programme. Although the loan is disbursed to individuals, the borrowers will not receive the loan in cash. The loan amount is transferred to a supplier and/or construction firm to execute the construction work or conduct insulation retrofit services. The amount is split into up to three (3) instalments depending on the service specifics. The model has two-pole of consequences: 1) positive – the loan will be used for purpose; and 2) negative – the supplier uses its own fund to provide the service with little advance instalment as starter in some cases, which creates financial burden on suppliers and causes a limitation of service providers or affect the quality of the services. Yet, the model is functioning and appreciated by all parties.

23. As of 2021, the Programme received $1 million USD GCF loan as First Disbursement, while only US$385,320 were disbursed to borrowers, which is 38.5%. Table 8 shows the percentage of the loan disbursement to borrowers against the Schedule included in the FAA. Simultaneously, US$87,162 were spent from GCF grant amount, which is 28.4% versus the scheduled amount.

24. Final target for Core Indicator 2 "Cost per tCO_2eq decreased for all Fund-funded mitigation projects/ programmes" is US$38.33 per tCO2eq. Average value per tCO_2eq reduced is US$40.22, which is 5% higher than expected so far, although the AE will report the result for this indicator at the end of Programme.



25. Overall, the Programme is relevant to the needs and priorities, aligned with the national and international policies and programmes and meets the nowadays demand in the green and affordable climate finance. Numerous events, including COVID-19 pandemic, the policy on debt-income ratio, consumers' knowledge and capacity on EE and affordability of the needs are unmatching circumstances on the ground, whereas targets are barely achievable at this point, hence the Programme will require additional efforts to revisit the ToC to concentrate on the effectiveness of the Programme. The implementation is considerably low in terms of efficiency due to bank of Mongolia's regulation on debt-income ratio, households' low income, inability to recover from current loans (salary, vehicle, tuition, livestock etc.), households' ability to prioritization of the basic and luxury needs rather than EE, given the outputs produced within the three years of implementation, while activities were actively implemented towards the targets during the COVID-19 pandemic.

2. Coherence in climate finance delivery with other multilateral entities

This section describes findings on how GCF financing is additional, able to attract other investments and amplify climate finance to Mongolia through partnerships not limited to multilateral entities but including local programs.

- ✓ *Who are the partners of the Programme and how strategic are they in terms of capacities and commitment?*
- ✓ *Is there coherence and complementarity by the Programme with other actors for local other climate change interventions?*
- ✓ *To what extent has the Programme complimented other on-going local level initiatives (by stakeholders, donors, governments) on climate change adaptation or mitigation efforts?*
- ✓ *How has the Programme contributed to achieving stronger and more coherent integration of shift to low emission sustainable development pathways and/or increased climate resilient sustainable development (GCF RMF/PMF Paradigm Shift objectives)? Please provide concrete examples and make specific suggestions on how to enhance these roles going forward.*

26. GERES is implementing a Switch Asia II Project on EE housing through which it supports the Programme. Co-implementers are Building Energy Efficiency Center (BEEC), Mongolian National Construction Association (MNCA) and People in Need (PIN)). GERES provides support to conduct capacity building, public awareness events, and pre- and post- energy efficiency evaluations for EE housing retrofits to come up with energy saving calculations. SWITCH Asia II Project and this Programme complement each other on green initiative for low-emission pathways.

27. GIZ is one of the stakeholders at the partnership level working on EE housing construction. It is considered that GIZ is a strategic partner to incentivize the loan to build EE housing in the sub-urban districts of Ulaanbaatar. "Energy Efficient building refurbishment in Mongolia" project (2019-2021).

28. Building Energy Efficiency Center (BEEC) is a strategic stakeholder partnering to provide energy auditors to conduct pre- and post- energy evaluations for both heating appliances and EE housing activities.

29. The Programme is coherent with national and international organizations' activities and adequately collaborates with stakeholders to boost mutual activities to complement each other and fill in the climate finance needs and capacity gaps.

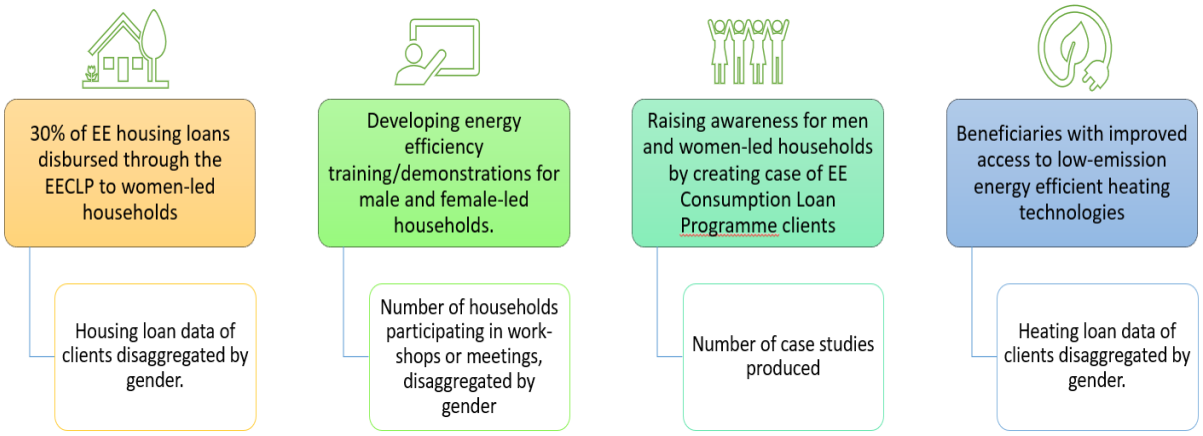
3. Gender Equity

This section describes linkage of the Programme to the needs of both men and women, and the alignment and consistency of the Gender Action Plan (GAP) with the objectives and indicators of the Programme, and assessment of the GAP results.

- ✓ *Does the Programme rely on sex-disaggregated data per socio-economic, demographic statistics? Do they use administrative statistics? How well do they use those sex-disaggregated data for analysis?*
- ✓ *Are financial resources/Programme activities allocated to enable both men and women equally to benefit from the interventions? Does the Programme account in activities and planning for local gender dynamics and how Programme interventions affect women as beneficiaries?*
- ✓ *How are the results for women compare to those for men measured? Are there any indicators indicated in the GAPs?*
- ✓ *Are there any evidence of unexpected challenges encountered during the implementation of GAPs and lesson learned? Are gender objectives of the Programme being achieved on time? What are the major internal and external factors influencing the achievement or non-achievement of the outcomes on time?*
- ✓ *Has the Programme managed to attract substantial financial or in-kind support from central or local government, beneficiaries or other partners on gender activities? Is the decision-making process transparent and inclusive of both women and men? Are there any consultations held?*
- ✓ *To what extent are female stakeholders or beneficiaries satisfied with the Programme gender equality results? Did the Programme sufficiently address cross cutting issues including gender?*

30. Gender-sensitive consideration is applied to targeted direct and indirect beneficiaries to reach 15,278 direct and 1,400,000 indirect beneficiaries, 30% and 50.8% of which should be female[12]. In order to contribute to this goal, the developed Gender Action Plan (GAP) is well formalized, its outputs and indicators are clear, targets are achievable, the timeline is consistent with the Programme, and responsible parties are well identified. The GAP consists of four (4) Outputs with corresponding indicators, which are assessed as SMART.

Figure 8. GAP Outputs and corresponding Indicators



31. Programme Outcome M6 result is also supported by the implementation of the GAP to consider gender equity. Four (4) Output results are reported with sex-disaggregated data as required by the GAP. The GAP provides tremendous support to the Programme to mainstream gender and its outputs are directly linked with the funded activities implementations throughout the Programme lifecycle.

32. Gender mainstreaming is managed thought implementation of the Gender Action Plan (GAP) and considered at all level of results. Although the Fund-level impact results indicators are not gender-sensitive the AE can disaggregate the results by sex. Evaluation determined that the Programme activities (Component 1) enabled both men and women equally to benefit from the intervention. Figure 10 shows sex disaggregation by loan amount under M1 and M3 results. Figure 11 shows sex disaggregation of borrowers under M1 and M2 results. Figure 12 shows the loan amount disaggregation by women-led households under each M1 and M2 results.

Figure 9. Gender mainstreaming by % of borrowers, disaggregated by sex



[12] *SAP004: EECLP Funding Proposal*

33. As part of the gender consideration, the inclusiveness is taken into account in the selection of borrowers. Borrowers represent seven (7) districts of Ulaanbaatar city.

34. No unexpected challenges were encountered during the implementation of the GAP. Gender objectives of the Programme were achieved and will be achieved on-time. Women are the main drivers in households, thus count as a major factor in the achievement of the Output results. Table 12 shows the GAP results.

Table 7. GAP results per Outputs

GAP Outputs	Indicators	Mid-term Target (2023)	Actual Results
30% of EE housing loans disbursed through the EE Consumption Loan facility to women-led households	Housing loan data of clients disaggregated by gender.	30% of housing loans to women and women-led households	54%
Developing energy efficiency training/demonstrations for male and female-led households.	Number of households participating in workshops or meetings, dis-aggregated by gender	At least 25 women-led households participate in workshops or meetings per year	810
Raising awareness for men and women-led households by creating case study of EE Consumption Loan Programme clients	Number of case studies produced	1 case study per year.	3
Beneficiaries with improved access to low-emission energy efficient heating technologies.	Heating loan data of clients disaggregated by gender.	10% of loans to women and women-led households.	69%

35. The Programme sufficiently addresses gender issues. Interviewees are highly satisfied with the Programme.

4. Country Ownership of projects and programmes

This section emphasises the findings to the extent of the Programme aligns with national and global goals, and sustainability of the results through country ownership.

- ✓ *To what extent is the Programme aligned with national development plans, national plans of action on climate change, or sub-national policy as well as Programmes and priorities of the national partners?*
- ✓ *How well is country ownership reflected in the Programme governance, coordination and consultation mechanisms or other consultations?*
- ✓ *To what extent are country level systems for Programme management or M&E utilized in the Programme?*
- ✓ *What level and types of involvement Programme is implemented as responsive to local challenges and relevant/appropriate/strategic in relation to SDG indicators, National indicators, GCF RMF/PMF indicators, AE indicators, or other goals?*
- ✓ *Were the modes of deliveries of the outputs appropriate to build essential/necessary capacities, promote national ownership and ensure sustainability of the result achieved?*
- ✓ *To what extent is the Programme aligned with national development plans, national plans of action on climate change, or sub-national policy as well as Programmes and priorities of the national partners?*

36. The Programme is aligned with national policies including Vision 2050 (2020), NDC (2019), and international commitments, including Sustainable Development Goals (SDGs) 2015, and

with a selection of results area and related indicators to measure programme level impacts and whether reporting was in compliance with the GCF Integrated Results Management Framework, 2021. The Programme's component "EE heating appliances" aligned with Ulaanbaatar city master plan 1) Sustainable city: Reduce and eliminate environmental pollution; 2) Adaptive city: Strengthen resilience to climate change and its challenges; 3) Affordable city: Increase the use of standard guaranteed housing, whereas, the Vision 2050 targets to "Improve the condition of ger district by increasing access to and provision of affordable and quality green housing that conform to the purchasing power of the population".

37. The Programme facilitated the development of green building evaluations and energy audits, by increased utilization of energy auditors, and building their capacity in close collaboration with partner organization GERES, BEEC and ERC. The Programme contributes to "reducing energy loss, improve energy efficiency up to 20%, reduce heating loss up to 40% by 2030 and improve EE appliances supply and trade"[13].

Table 8. The alignment of the Programme to the National Policy and Programmes

National Policy and Programme	Priorities/ Objectives
"Vision 2050" long-term policy document, 2020	– *Create an enabling environment for the developmental needs of families and individuals, and improve the quality of comprehensive action;* – *Abide by the standards for housing and city greenery and create a healthy and safe environment;* – *Create a comfortable living environment, and bring the planning for apartment complex and residential districts up to the international standards and requirements with proper waste management In place;* – *Completely remove the negative impact on human and the economy caused by environmental pollution, and create a comfortable eco-environment in cities, soums and settlements with parking lots, green areas, swimming pools and sporting spaces for residents to relax and spend their leisure time;* – *Improve the condition of ger district by increasing access to and provision of affordable and quality green housing that conform to the purchasing power of the population;* – *Provide households with comfortable and quality housing fit to their needs and purchasing power;* – *Improve the public debt management of the Government, reduce the budget resources to economic and social development;* – *Reduce greenhouse gas emissions and increase carbon absorption in energy, agriculture, construction, transport, industry and waste management sectors;* – *Support and develop a national green financing system based on public-private partnership, and finance environmentally friendly green projects and programmes using international financing instruments;* – *Implement measures for climate change mitigation, and close the gap between emissions and absorption of GHG;* – *Reduce air, soil, and environmental pollution and pollutants by introducing environmentally friendly and advanced know-how and technologies;* – *Introduce and implement green building standards;*
National Action Program on Climate Change, 2011	– *To create a legal environment for the full inclusion of source data required for large-scale GHG emission inventory and calculations in the state statistical information;* – *Establish a mechanism for external audit of energy production, consumption, construction quality, and insulation;*

[13] Mongolia's Nationally Determined Contribution, 2019

National Policy and Programme	Priorities/ Objectives
	– *To develop and enforce new norms and standards for energy, steam, water saving, waste use, and processing;*
Intended Nationally Determined Contribution, 2014	– *Reduce greenhouse gas emissions in the construction sector by 16% by 2030;* – *Reduce building heat loss by 20% by 2020 and by 40% by 2030., compared to 2014 levels;*
Concept of Ulaanbaatar Urban master plan 2040	– *Sustainable city: Reduce and eliminate environmental pollution;* – *Adaptive city: Strengthen resilience to climate change and its challenges;* – *Affordable city: Increase the use standard guaranteed housing;* – *Economical city: Increase the use of smart technology and systems;*
National Programme for Reduction Air and Environmental pollution, 2017-2025	– *Decrease air pollutants by 80%, prohibit the use of unprocessed coal anywhere except for TPPs in Ulaanbaatar, and reduce air and environmental pollution by at least 50% by 2025;* – *Reduce sources of pollution through the introduction of environmentally friendly and advanced techniques and technologies, gradually ban the use of raw coal, and reduce pollutant emissions;* – *Increase the participation and responsibility of citizens and communities in reducing environmental pollution, develop healthy living habits, strengthen environmental quality monitoring capacity, and expand research and development;* – *Establish and implement legal regulations to support domestic production of environmentally friendly, efficient and advanced construction materials that do not adversely affect human health; 4.2.6. Implement projects and programs to improve ger and house insulation and reduce heat loss;*
Mongolian Green taxonomy, 2019	– *To develop a nationally agreed classification framework of activities that contribute to climate change mitigation, adaptation, pollution prevention, resource conservation, and livelihood improvement in the context of green finance;* – *Provide financial institutions, businesses, policy makers, and other market players with a common understanding and approach to identify, develop and finance green projects;* – *Support investors' confidence to finance green projects and mitigate the risk of "greenwashing";* – *Boost green finance flows from various sources including the private sector, international financial institutions, and foreign investors;* – *Track private sector investments in green projects, and measure the impact contribution to Mongolia's green development and climate change related policies and targets;* – *Inform and help shape national policies and regulations on green finance that will boost the market development of green opportunities;*
National Energy Efficient Action Programme, 2018-2022	– *Reduce GHG emission, mitigate climate change through integrated management of conservation and efficient use of energy, and to introduce and promote use of advanced energy efficient techniques and technologies;* – *Increase public awareness and disseminate information on importance and value of energy efficiency, organize required trainings;* – *Identify and promote national criteria for energy-efficient and green buildings;* – *Reduce the heat loss of apartments and develop a programme on the financial leverage and green mortgage in order to support the energy conservation;* – *Identify needs of introducing equipment and machinery with the lowest energy consumption in production and business activities and enforce into practice;*

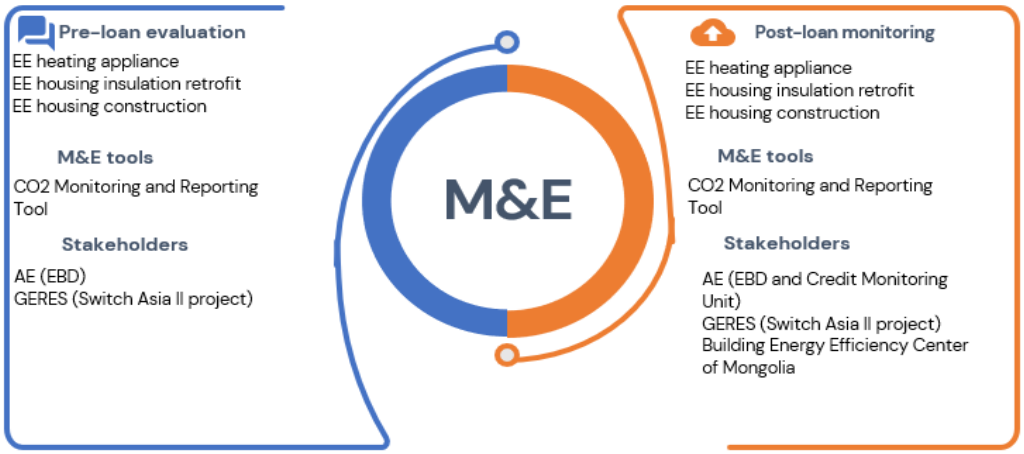
38. The Evaluation assessed the main indicators of the Programme against the national and international policies and plans' indicators. The Programme is responsive to local challenges on raw coal prohibition, where main emphasis is given to housing insulation as per the NDC. Energy auditors' interviews confirmed that housing insulation is the primary contribution of the population to reduce GHG emission and air quality.

Table 9. The Programme indicators alignment with other climate change mitigation indicators

Fund-level impact core indicators	**Aligned indicators**	
	National level Programme indicators	**Global level indicators SDG, GCF/RMF**
Mitigation core indicator 1. Tonnes of CO2 reduced as a result of programme	*NDC: Energy sector GHG emission reduction*	*SDG 13: Climate change* *SDG 9: Industry Innovation and infrastructure* *SDG 5 – Gender equality* *GCF: M1, M3*
Mitigation core indicator 2. Cost per CO2 decreased for programme	*National Energy conservation programme: GHG emission 0.6mln tCO_2eq*	*SDG 13: Climate change* *SDG 12: Responsible consumption and production*
Mitigation core indicator 3. Volume of finance leveraged by Fund (disaggregated by public/private source)	*NDC: Financial need estimated initially as US$11.5 billion and for mitigation and adaptation*	*SDG 9: Industry Innovation and infrastructure* *SDG 5 – Gender equality* *GCF Gender Policy*
Mitigation impact Indicator 1. M1.0 Reduced emissions through increased low-emission energy access and power generation	*NDC: Energy sector GHG emission reduction*	*SDG 13: Climate change* *SDG 9: Industry Innovation and infrastructure* *SDG 5 – Gender equality* *GCF: M1, M3*
Mitigation impact Indicator 2. M3.0 Reduced emissions from buildings, cities, industries and appliances	*NDC: Construction sector GHG emission reduction (eco green houses and housing insulation retrofits)*	*SDG, GCF/RMF*
Mitigation impact indicator 3. M6.0 Increased number of small, medium and large low-emissions power suppliers	*"Vision 2050" long-term development policy*	*SDG 7: Affordable clean energy* *SDG 8: Decent work and economic growth* *SDG 12: Responsible consumption and production* *SDG 13: Climate action*
Mitigation impact indicator 4. M7.0 Lower energy intensify of buildings, cities, industries, and appliances	*NDC: Reduce building heat loss*	*SDG 11: Sustainable cities and communities* *SDG 12: Responsible consumption and production*

39. The monitoring and evaluations performed in compliance with GCF, and AE's internal policy as outlined in the AMA and FAA. The AE's pre-loan evaluation criteria and post-loan monitoring steps per each component are outlined at the design stage, which is a distinguished approach used by XacBank.

Figure 10. Programme loan M&E scheme



Overall, the evaluation acknowledges the country ownership of the Programme, which promotes the ownership of the approach for further sustainability of the green concept.

5. Innovativeness in results areas

This section presents the observed innovations and describes the changes that bring about a paradigm shift in terms of contribution or attribution to the GCF investment.

- ✓ *What role has the project played in the provision of "thought leadership," "innovation," or "unlocked additional climate finance" for climate change mitigation in the project and country context?*
- ✓ *Please provide concrete examples and make specific suggestions on how to enhance these roles going forward.*

40. Programme promotes the energy efficiency of the construction sector, mainly residential housing sector. The Programme contributes to the real estate market development through increased value of green building and evaluation of the energy efficiency of houses. This establishes the conditions to amplify climate finance to this sector and encourages the population to save energy, decrease household heating costs, change livelihood habits, and create positive attitude towards ultimate goal of reducing GHG emission.

41. Normally, privately owned houses do not follow building construction and insulation norms, households just purchase insulation materials and retrofit houses on their own. With this Programme citizens are aware of the building norms, such as "БнбД 25-01-20", and aware of the advantages of the heating energy savings. Therefore, the value is added to privately owned houses as quality is assured through the practices gained on this Programme. Practices such as 1) tripartite agreement signed by AE, borrower, and construction team, 2) housing standard development introduced to individuals, and 3) technology use promotion by the borrowers are considered as the main success items of the Programme.

Figure 11. Source: https://www.facebook.com/PassiveInclusiveLabHouse





42. The Programme promotes innovativeness through the five (5) case studies[14] published by the AE and individual customer cases, independently promoting the EE housing and insulation retrofits conducted by the Programme.

6. Replication and Scalability

This section presents the explicit conditions and success factors that enable the replicability and scalability of the Programme.

[14] *Case: https://m.facebook.com/story.php?story_fbid=621744182562225&id=129407511528&__rdr*

- ✓ *What are Programme lessons learned, failures/lost opportunities to date? What might have been done better or differently?*
- ✓ *How effective were the exit strategies and approaches to phase out assistance provided by the Programme including contributing factors and constraints?*
- ✓ *What factors of the Programme achievements are contingent on specific local context or enabling environment factors?*
- ✓ *Are the actions and results from Programme interventions likely to be sustained, ideally through ownership by the local partners and stakeholders?*
- ✓ *What are the key factors that will require attention in order to improve prospects of sustainability, scalability or replication of Programme outcomes/outputs/results?*

43. A total of 88 loans were issued to 88 borrowers through 35 AE branches[15]. 87 loans out of 88 loans were issued in Ulaanbaatar, accordingly, the Programme location-wise coverage is 97% within the Ulaanbaatar city. The Programme is open to provincial households, as the AE is willing to scale-up the Programme to provinces, as stated in the FP and mentioned during the interview conducted with the AE and loan officers.

44. Scaling up of the Programme to the provinces is somehow limited due to requirement to conduct energy efficiency evaluation of the projects by energy auditors. Travel to the countryside creates financial burden to the Programme implementation. Despite this, the Programme has the potentials to increase the number of loans thanks to widely organized public awareness and training activities. Through the interview, the loan officers confirmed the usefulness of the Programme and willingness of the borrowers to apply for a second loan.

45. The programme engaged EE housing construction and insulation companies and EE heating appliance suppliers through the Cooperation agreement, a tripartite communication and collaboration approach, that enables business opportunity and creates a win-win for all parties, while contributing to low emission development in the long run.

46. Scale-up and replication potentials present in the form of EE housing mortgage. Zero energy house i.e. passive house and hybrid house are in a high demand. While loan on EE housing construction is one of the pillars of the Programme, the EE house purchase is included, however not actively interested by the borrower. The FP includes supplementary EE housing products, where borrowers can direct a portion of their total loan investment towards supplemental products, such as air purifiers and pit latrines, beneficially impact health and livelihood in the ger district. The National Committee for Environmental Pollution Reduction approves and expands the list of green products for green loan each year.

47. Since Mongolia is highly dependent on coal burning and most of the energy production is based on raw coal, and Ulaanbaatar city is one of the most polluted capitals. Air pollution is also linked with diseases such as bronchitis and asthma and is highly damaging for children. Therefore, there is a need to reduce heating expense and energy consumption, in particular coal-based energy, in the ger area, the rural district of Ulaanbaatar, where most of the low-income population live. Key informants repeatedly mentioned that Bank of Mongolia's President's Resolution[16] to limit debt-to-income ratio to 60% and limit loan duration to 30 months creates burden on low-income borrowers during COVID-19 and post-COVID crisis. This could be one of the challenges to scale up the Programme.

[15] *Annual report, XacBank, 2020 (77 branches: 35 in UB, 42 in provinces as of end 2020)*
[16] *President of Bank of Mongolia's Resolution, A-83, March 22, 2019*

7. Unexpected Results

This section describes the factors that contributed to the results and effects observed at Programme, AE and national level.

- ✓ *Can any unintended or unexpected positive or negative effects be observed as a consequence of the project's interventions?*
- ✓ *What factors have contributed to the unintended outcomes, outputs, activities, results?*

48. The Programme is a pioneer in provision of housing EE certificates, The owners of the EE houses receive a certificate of energy efficiency, which is new practice in Mongolia and which will add value to the real estate. The Certificate indicates the efficiency level, which will be an integral part of the house market.

49. Most of the borrowers are vulnerable citizen from sub-urban districts of Ulaanbaatar. Bank of Mongolia's President's Resolution[17] to limit debt-to-income ratio to 60% and limit loan duration to 30 months for the consumption loan creates burden on low-income borrowers, which could be one of the factors of the loan disbursement volume. This limitation was not applied during the Programme design stage. The Resolution was adopted on March 22, 2019, prior to COVID-19 pandemic with effective date of April 1, 2019, and has no termination date.

[17] *President of Bank of Mongolia's Resolution, A-83, March 22, 2019*

CONCLUSIONS

This section presents evidence-based comprehensive and balanced conclusions based on the key findings, highlighting strengths, weaknesses and results of the Programme, which current performance has been evaluated as "*MODERATELY SATISFACTORY*".

Table 10. Conclusions on Evaluated Criteria

#	Evaluation Item	Rating
1	*Relevance*	*Satisfactory*
	Effectiveness	*Moderately Unsatisfactory*
	Efficiency	*Unsatisfactory*
2	*Coherence*	*Satisfactory*
3	*Gender*	*Highly Satisfactory*
4	*Country ownership*	*Satisfactory*
5	*Innovativeness in result areas*	*Satisfactory*
6	*Replication and Scalability*	*Moderately Satisfactory*
7	*Unexpected results*	-

The expected mid-term results are satisfactorily achieved at this point. The detailed logframe with mid-term targets, achievements and corresponding ratings has been provided in Annex 3. Results Management Framework.

Relevance, Effectiveness and Efficiency of the Programme – (MU)

1. The Intervention is relevant to all climate change related national and international policies and plans in terms of energy efficiency. National level problems and needs are clearly identified in the FP under the investment criteria "Needs of the Recipient". Therefore, the Programme objective to reduce GHG emission by installation of heating appliances and insulation of houses is relevant to the country needs and objectives. The Logic model is coherent with the needs and adequately addresses issues incorporating gender-disaggregated targets.
2. Numerous events, including post COVID-19 pandemic, consumers' knowledge and capacity on EE and affordability of the needs were unfavourable circumstances on the ground and it will require additional efforts and adaptive management to improve the effectiveness of the Programme. Programme grant activities are partially on track and will achieve mid-term and end-of-project targets. Some activities can be presented as "good practice", for example public awareness activities. Measurable outputs are being designed, although not always delivered as planned during the COVID-19 pandemic.
3. Programme efficiency is considered as low, as it has significant shortcomings and will require major attention to achieve its mid-term and end-of-project targets.
4. Overall, the Programme is evaluated as Moderately Satisfactory and major action is required towards fulfilment of the intended results.

Coherence - (S)

1. The Programme is coherent with other projects and programmes being implemented in Mongolia and complements their implementation with an unique and adaptive approach,

labelled by XacBank. The financial model is in harmony with other financing on EE products and services and is functioning coherently with EE product and supplier's market needs.

2. The Programme is inclusive of a wide range of stakeholders, and it fills the gaps of climate finance needs, addresses the current situation, and responds to the needs coherently with many stakeholders engaged, including GERES, GIZ, BEEC, MSFA etc. Stakeholder engagement is a "good practice" for other commercial banks. The findings through desk reviews and interviews support the evaluation's conclusion of the Programme to be satisfactory.

Gender Equity- (HS)

1. Inclusiveness is highly considered by the Programme and the AE. It is highly appreciated by all parties, that the Programme targets urban and sub-urban area population, mainstreaming gender. Additionally, stakeholders appreciate the AE's inclusiveness and courage to take risk and concentrate on consumers, who has needs in low-rate finance, additional incentives, and support from third parties.

2. GAP targets are realistic, and implementation maximized gender consideration of the Programme and overperformed its mid-term targets. Key findings confirm women participation at all levels of Programme implementation and the evaluation promotes the spirit of the sustainability of the results. The GAP is a balanced and well-developed document, uncomplicated to implement and monitor. Overall, gender equity is assessed as highly satisfactory.

Country ownership of the Programme – (S)

1. The Programme is considered as an ice breaking Programme, which could reach certain results on its own during COVID-19. A pioneer accredited entity, the XacBank's programmes and projects will serve as "lessons learned" for other programmes and projects. The GCF funds and accreditation supports the AE to be on track in terms of climate finance and ensures organic growth based on needs and demand of the population and AE's experience, knowledge, and vision.

2. The Programme keeps the green concept no matter how slow Programme implementation is and how low the achievement is today. After all, the value added by the AE is assessed as reasonable and sufficient to be concluded as Satisfactory.

Innovativeness of the Programme – (S)

1. The Programme promotes innovativeness through cases by the AE and individuals, independently acting as a booster of the EE housing and insulation retrofit loans. The evaluation identified several cases of borrowers that witnessed the benefits and the practicality of the new approach.

2. The Programme supports the supply chain through the financial model, tripartite engagement of parties allows to mutually address the needs, and it responds to market demand and increases supply.

3. Overall, the energy efficiency context is still new to everyone in Mongolia, therefore, the context is positively progressing and is innovative by itself.

Replication and Scalability – (MS)

1. Scaling up of the Programme to the provinces is currently limited due to the requirement to conduct pre- and post- project evaluations of energy efficiency by energy auditors. Travel to the countryside creates a financial burden. However, stakeholders need to consider development of capacity of energy auditors, located in the countryside, which will create employment and other opportunities related to the needs.
2. Additional and supplementary products can be added to widen the list of eligibility products on the Programme.
3. Replication of the financial model and tripartite collaborative approach is replicable not only in Mongolia but also in other countries with similar needs in EE housing loan. However, the repeatedly mentioned comments towards Bank of Mongolia's decree on debt-to-income ratio of 60% limits the scale-up potentials to the provinces, which are also considered as low-income populated.

Unexpected Results – (u/a)

1. The Programme suppliers' capacity is being built through this Programme. By participating various in events and trainings organized by the AE, suppliers understand their market and are encouraged to develop and improve their product and services.
2. While the value of the constructed EE houses, as well as retrofitted houses is increased, durability of the houses is also extended. Furthermore, comfort and a green mindset is the inheritance by the Programme.

LESSONS LEARNED

From the desk review of project documents, interviews and meetings with key informants, and the analysis of the triangulated information and data, several lessons learned were formulated and presented below:

1. “Good practice” can be taken from the Programme in terms of stakeholder engagement. The Programme involved a wide range of stakeholders, who are also directly and indirectly benefited.
2. Synergy of the climate change projects is appreciated by all parties, which activities complemented each other to enhance results and increase impact and sustainability of investments.
3. The COVID-19 pandemic affected certain objectives to be reached, so the logframe requires a deep analysis of the intended achievements and the assumptions, as some targets are unachieved. Considering the need for green loans, the loan disbursement can be speeded-up by grant activities and additional actions from the AE, such as expansion of the list of eligible green products and list of EE product suppliers, EE housing construction firms.
4. The evaluation captured behind the scenes “success stories” of the borrowers, who promote EE housing construction and retrofits and EE appliances. These can be shared through various channels.

RECOMMENDATIONS

Overall, the recommendations are aimed at streamlining the current progress to reach mid-term and final targets, complementing the achievements with additional actions suggested.

1. The ToC does not include barriers, that may prevent problems to be solved, or issues that could threaten the achievement of the results and assumptions of the Programme results. The ToC should be revisited and revised to reflect the chain of changes towards fund level impact. *See below Table 16. Suggested ToC.*
2. Collaboration on information sharing with government stakeholders needs to be improved so that results and good practices are recognized by the governmental organization and used for policy improvement and decision making. This could include consideration and acceptance of results achieved by the Programme to be counted towards NDC action plan implementation results, namely NDC Objective 9, activity "Sub-urban district 2000 housing insulation" of the construction sector to reduce GHG emission reduction. It is recommended to initiate acknowledgment of the private sector results towards national objectives by the city Governor's office MET and MCUD.
3. The Programme grant can be utilized towards an increasing the number of energy auditors, especially those living in the provinces, for building their capacity to conduct pre- and post- project evaluation of energy efficiency projects. This will enable Programme scale-up to the provinces, reach vulnerable population in the countryside, and create employment and other opportunities related to the needs.
4. The list of Programme eligibility products can be expanded with renewable energy supply products (solar and wind) and trees and bushes[18] according to the green product list approved by National Committee for Environmental Pollution Reduction, updated in 2022.
5. Logical framework should be revisited and analysed according to the current situation, and some targets should be revised to match current assumptions. Consider the timeframe and current condition to revisiting targets to be more realistic and achievable.
6. The internal record keeping system is malfunctioning, therefore the AE should strengthen internal monitoring and reporting of the results with the evidence and documentation, such as list of trainings conducted, signed participant sheets along with the agenda and dates of the events, which will further ease internal and external monitoring and evaluations.
7. The APRs report different values under "Current values" of GHG emission, e.g., Mitigation core indicator 1, instead, cumulative value of the lifetime emission to be reduced should be reported. Besides Programme results were not reported per Outcome level indicators. Accordingly, the AE should improve accuracy of the APRs in the next reporting period.

[18] *"One billion trees" Initiative, 2022*

Green Climate Fund
Department of Monitoring,
Evaluation and Learning (DMEL)
OCSIO.DMEL@gcfund.org