



**GREEN  
CLIMATE  
FUND**

**Meeting of the Board**  
1- 4 July 2018  
Songdo, Incheon, Republic of Korea  
Provisional Agenda Item 17

**GCF/B.20/10/Add. 21**

**8 June 2018**

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# Consideration of funding proposals – Addendum XXI

## Funding proposal package for SAP003

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### **Summary**

This addendum contains the following six parts:

- a) A funding proposal summary titled “Energy Efficient Consumption Loan Programme” submitted by XacBank LLC;
- b) No-objection letter issued by the national designated authorities or focal points;
- c) Environmental and social report(s) disclosure;
- d) Independent Technical Advisory Panel’s assessments of funding proposal;
- e) Response from the accredited entity to the independent Technical Advisory Panel assessments of funding proposal; and
- f) Gender documentation of funding proposal.

These documents are presented as submitted by the accredited entity and the national designated authority(ies) or focal point(s), respectively. Pursuant to the Comprehensive Information Disclosure Policy of the Fund, the funding proposal titled “Energy Efficient Consumption Loan Programme” submitted by XacBank LLC is being circulated on a limited distribution basis only to Board Members and Alternate Board Members to ensure confidentiality of certain proprietary, legally privileged or commercially sensitive information of the entity.

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Funding proposal submitted by the accredited entity

No-objection letter issued by the national designated authorities or focal points

Environmental and social report(s) disclosure

Independent Technical Advisory Panel's assessments

Response from the accredited entity to the independent Technical Advisory Panel assessments of funding proposal

Gender documents

# Simplified Approval Process Funding Proposal

Project/Programme title:	Energy Efficient Consumption Loan Programme
Country(ies):	Mongolia
National Designated Authority(ies):	Environment and Climate Fund, Ministry of Environment, Green Development, and Tourism
Accredited Entity:	XacBank
Date of first submission:	2018/03/30
Date of current submission/ version number	2018/06/06
If available, indicate GCF code:	



## Contents

### Section A **PROJECT / PROGRAMME SUMMARY**

This section highlights some of the project's or programme's information for ease of access and concise explanation of the funding proposal.

### Section B **PROJECT / PROGRAMME DETAILS**

This section focuses on describing the context of the project/programme, providing details of the project/programme including components, outputs and activities, and implementation arrangements.

### Section C **FINANCING INFORMATION**

This section explains the financial instrument(s) and amount of funding requested from the GCF as well as co-financing leveraged for the project/programme. It also includes justification for requesting GCF funding and exit strategy.

### Section D **LOGIC FRAMEWORK, AND MONITORING, REPORTING AND EVALUATION**

This section includes the logic framework for the project/programme in accordance with the GCF Results Management Framework and Performance Measurement Framework, and gives an overview of the monitoring, reporting and evaluation arrangements for the proposed project/programme.

### Section E **EXPECTED PERFORMANCE AGAINST INVESTMENT CRITERIA**

This section provides an overview of the expected alignment of the projects/programme with the GCF investment criteria: impact potential, paradigm shift, sustainable development, needs of recipients, country ownership, and efficiency and effectiveness.

### Section F **ANNEXES**

This section provides a list of mandatory documents that should be submitted with the funding proposal as well as optional documents and references as deemed necessary to supplement the information provided in the funding proposal.

**Note to accredited entities on the use of the SAP funding proposal template**

- The Simplified Approval Process Pilot Scheme (SAP) supports projects and programmes with a GCF contribution of up to USD 10 million with minimal to no environmental and social risks. Projects and programmes are eligible for SAP if they are ready for scaling up and have the potential for transformation, promoting a paradigm shift to low-emission and climate-resilient development.
- This template is for the SAP funding proposals and is different from the funding proposal template under the standard project and programme cycle. Distinctive features of the SAP funding proposal template are:
  - *Simpler documents*: key documents have been simplified, and presented in a single, up-front list;
  - *Fewer pages*: A shorter form with significantly fewer pages. The total length of funding proposals should **not exceed 20 pages**;
  - *Easier form-filling*: fewer questions and clearer guidance allows more concise and succinct responses for each sub-section, avoiding duplication of information.
- Accredited entities can either directly incorporate information into this proposal, or provide summary information in the proposal with cross-reference to other funding proposal documents such as project appraisal document, pre-feasibility studies, term sheet, legal due diligence report, etc.
- Submitted SAP Pilot Scheme funding proposals will be disclosed simultaneously with submission to the Board, subject to the redaction of any information which may not be disclosed pursuant to the [GCF Information Disclosure Policy](#).

**Please submit the completed form to:**

[fundingproposal@gcfund.org](mailto:fundingproposal@gcfund.org)

**Please use the following name convention for the file name:**

“SAP-FP-[Accredited Entity Short Name]-[yyymmdd]”

A. PROJECT/PROGRAMME SUMMARY			
<b>A.1. Has this FP been submitted as a SAP CN before?</b>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
<b>A.2. Is the Environmental and Social Safeguards Category C or I-3?</b>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
<b>A.3. Project or programme</b>	<input type="checkbox"/> Project <input checked="" type="checkbox"/> Programme	<b>A.4. Public or private sector</b>	<input type="checkbox"/> Public sector <input checked="" type="checkbox"/> Private sector
<b>A.5. Result area(s)</b>	<u>Mitigation:</u> Reduced emissions from: <input checked="" type="checkbox"/> Energy access and power generation <input checked="" type="checkbox"/> Buildings, cities and industries and appliances		
<b>A.6. Total investment (GCF + co-finance)</b>	21.5 (million USD)	<b>A.7. Total GCF funding requested</b>	10 (million USD)
<b>A.8. Type of financial instrument requested for the GCF funding</b>	<input checked="" type="checkbox"/> Grant <input checked="" type="checkbox"/> Loan <sup>1</sup> <input type="checkbox"/> Equity <input type="checkbox"/> Guarantees <input type="checkbox"/> Others:		
<b>A.9. Division of GCF funding by thematic funding window (if applicable)</b>	<u>10 million</u> USD or <u>100</u> % Mitigation <u>0</u> USD or <u>0%</u> Adaptation		
<b>A.10. Implementation period</b>	Start (Effective date of Funded Activity Agreement): <u>01/01/2019</u> End (Completion Date): <u>01/01/2029</u>		
<b>A.11. Total project/programme lifespan</b>	10 years	<b>A.12. Expected date of internal approval</b>	N/A (no need to be approved by XacBank Board)
<b>A.13. Executing Entity information</b>	N/A – Executing Entity is the same as the Accredited Entity		
<b>A.14. Scalability and potential for transformation (Eligibility for SAP, max. 50 words)</b>			
The EE Consumption Loan Programme (the “Programme”) is the first EE heating appliance and EE housing lending programme to be implemented at scale in Mongolia. Building on XacBank’s prior experience, the Programme will finance heating and housing solutions with reduced emissions and improved environmental and health co-benefits.			
<b>A.15. Project/Programme rationale, objectives and approach (max. 250 words)</b>			
<p>One-half of Mongolia’s population lives in Ulaanbaatar, where more than 60% of residents live in the surrounding <i>ger</i> (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.</p> <p>XacBank proposes a US\$ 21.5 million programme to support household EE lending, comprised of a US\$ 18 million facility with concessional loans to consumers purchasing EE Heating appliances (US\$ 3 million of the facility) and EE Housing solutions (US\$ 15 million of the facility) which includes EE Housing insulation retrofits and EE Housing construction. The facility will be co-financed by XacBank and the GCF (each committing US\$ 9 million), with US\$ 1 million in grant financing from the GCF to match the US\$ 2.5 million in grant co-financing from Groupe Energies Renouvelables, Environnement et Solidarités (GERES) – a French NGO developing an EE housing project to support new EE housing and retrofitting, and a programme partner. The GCF grant financing will contribute to disposal management of old heating appliances, EE housing evaluation costs, awareness raising, and capacity building efforts. GCF loan concessionality will alleviate existing household EE financing barriers, enabling a degree of scale more aligned with the financing needs of the affected populations.</p> <p>The Programme will impact an estimated 15,278 direct beneficiaries and drive an estimated CO<sub>2</sub> emissions reduction of 469,574 tCO<sub>2</sub>e over its 10-year lifetime, contributing to Mongolia’s 2030 targets of a 14% reduction in national GHG emissions and a 40% reduction in building heat loss.</p>			

<sup>1</sup> Senior loans

## B. PROJECT/PROGRAMME DETAILS

### B.1. Context and baseline (max. 500 words)

Over 60 years, the average annual temperature in Mongolia has increased by 2.14 degrees Celsius at a rate more than twice the global average.<sup>2,3</sup> Impacts include high rates of desertification, rapid declines in biodiversity, rangeland biomass, and wooded land area, increased frequency of winter *dzuds* (natural disasters marked by mass livestock die-offs), strained water supplies, and increased wildfire and dust storm frequency. The Climate Vulnerability Index (CVI) has evaluated changing vulnerability to water stress under climate change. Ulaanbaatar’s CVI assessment estimates a 5 to 10% increase in vulnerability in 2030 – an unfortunate outcome with over fifty percent of Mongolia’s population living in Ulaanbaatar. In 2004, Mongolia emitted 3.42 metric tons of CO<sub>2</sub> per capita. By 2014, this had more than doubled to 7.12 metric tons per capita. Of “lower middle income” countries, this ranked Mongolia as 49<sup>th</sup> (of 52) and 50<sup>th</sup> (of 50) in 2004 and 2014, respectively.<sup>4</sup> Excluding the inherently fuel-intensive energy sector, the residential sector drives over 15% of CO<sub>2</sub> emissions from solid fuel combustion in Mongolia.<sup>5</sup> 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.<sup>6</sup> 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. As demonstrated in Section E.4, existing market interventions and alternatives for EE financing have been insufficient to meet the needs of the target population, leading to inefficient baselines shown in Table B.1. XacBank’s Programme will provide financing to these qualitative outcomes, which are elaborated quantitatively in Section D.

**Table B.1 – EE Consumption Loan Programme component baselines**

Component	Baseline scenario	Qualitative outcome
EE heating appliances	An average of 4.6mT/year/house of coal is used to heat homes. <sup>7</sup> “Traditional” (low-efficiency) and “efficient” coal- and wood-burning stoves drive approximately 21.6 and 10.01 tons of CO <sub>2</sub> annually, respectively.	Concessional loans for non-coal heating alternatives will reduce (and in some cases entirely eliminate) consumption of coal for household heating purposes, driving a drastic reduction in annual CO <sub>2</sub> emissions associated with space heating.
EE housing	The specific energy consumption of typical ger-area gers and detached houses are approximately 550 kWh/m <sup>2</sup> /year and 393 kWh/m <sup>2</sup> /year, indicating low thermal quality and low-efficiency of heat transfer to heated spaces. <sup>8</sup>	Insulation retrofits and improved EE housing construction of new detached houses – and particularly EE row houses – will reduce specific energy consumption, fuel usage, and GHGs.

### B.2. Project/programme description (max. 1,000 words)

The EE Consumption Loan Programme will improve access to financing for Mongolian consumers seeking to purchase two types of energy efficient (EE) products, outlined below. XacBank plans to blend GCF funding with the XacBank commercial fund to achieve lower loan interest rates and lengthened loan terms, with the financing facility structured as indicated in Section B.1. Of the total US\$ 21.5 million EE Consumption Loan Programme, US\$ 18 million will be a financing facility (with US\$ 3 million and \$15 million directed to the EE heating appliance and EE

<sup>2</sup> Source: [Climate Change in Mongolia: Outputs from GCM](#), p.5

<sup>3</sup> Source: [NASA Global Land-Ocean Temperature Index](#)

<sup>4</sup> Source: [World Bank](#)

<sup>5</sup> Source: [Mongolia’s National Inventory Report – 2017 Annex to Initial Biennial Update Report to UNFCCC](#), p.31-34

<sup>6</sup> Note: the TNA was done in 2013 by the United Nations Environment Programme (UNEP) and the UNEP-Rise Centre in collaboration with the Regional Centre Asian Institute of Technology

<sup>7</sup> Source: GERES SWITCH Asia II – Promoting Sustainable Consumption and Production ANNEX A.2, p.5

<sup>8</sup> Source: Frankfurt School report via Climate and Clean Air Coalition (CCAC)

housing components, respectively) and US\$ 3.5 million will be a grant. With this new loan Programme, XacBank can expand its existing EE product loan portfolio and support additional EE product purchases by offering concessional rates to consumers. The concessional rates will help the Bank promote EE uptake at the consumer level and create a strong ecosystem for EE products in Mongolia, specifically in the capital city, Ulaanbaatar, where the programme will be focused. The grant financing will support complementary efforts that maximize the loan facility's impact, such as old unit disposal and household energy usage evaluations.

**a) Component 1: Financing Facility of EE Consumption Loan Programme**

**Sub-component 1.1: EE heating appliances** – XacBank has conducted a feasibility study in partnership with the Climate and Clean Air Coalition (CCAC) and the Frankfurt School to determine technologically feasible and cost-effective solution for replacing energy inefficient coal stoves. The study results indicate a viable market for these products. XacBank has designed its Programme based on the study's results.

**Sub-component 1.2: EE Housing** – XacBank offers mortgage loans for EE housing through the Mortgage Loan for GHG Emissions Reduction Programme. The Programme has not been utilized to-date due the GoM's subsidized apartment mortgage programme which is now under strict budgetary limitations. XacBank has a robust pipeline of EE housing options to serve the growing market for EE mortgages. Furthermore, investment in a housing retrofit will be required for those investing in EE heating appliances (in specific scenarios) to ensure the building envelope is improved enough to sufficiently retain heat from the improved heating technologies and drive emissions downwards. GCF financing would enable XacBank to enlarge this loan facility with more attractive interest rate terms for residents investing in the following, paired with additional supplementary investments in pit latrines and air purifiers as explained in Annex 13.

a. **EE housing insulation retrofit:** this includes those living non-insulated detached housing who wish to implement insulation retrofits on their existing dwellings, under various scenarios outlined in Annex 13. This is a unique solution targeted towards ger-area households who are unable to receive financing for building or moving into an entirely new apartment or house but who would like to improve their housing situation.

**EE housing construction:** this includes those seeking to purchase a newly constructed EE dwelling being built as part of the pre-qualified EE housing programs noted in the eligibility requirements in Annex 13.

b) **Component 2: Grant activities:** The GCF grant financing will contribute to disposal management of old heating appliances, EE housing evaluation costs, awareness raising, and capacity building efforts, as described hereafter.

To understand why XacBank has chosen to focus on the two sub-components of Component 1, an overview of the current context and key challenges facing each Component 1 sub-component is included in Table B.2.

**Table B.2 – Programme context by EE product sub-component**

Component	Current context	Summary
EE heating appliances	<ul style="list-style-type: none"> <li>a) Coal is the predominant fuel used for household heating.</li> <li>b) High upfront costs and lack of market awareness discourage new purchases.</li> <li>c) Aggregate heating needs are expected to increase.</li> <li>d) There is an excess of electricity supply during nighttime hours</li> </ul>	<ul style="list-style-type: none"> <li>a) Without district heating, ger-area households use roughly 4-6 tons of coal per year to cope with minus-40 degrees Celsius winter temperatures.<sup>9</sup> Particulate emission from household coal combustion drives Ulaanbaatar's particulate matter levels to 75 times higher than the World Health Organization's average daily exposure guidelines.<sup>10</sup></li> <li>b) Switching consumer behavior is challenging when non-coal-based heating technologies are more expensive because almost 30% of the population lives below the poverty line (UNDP).<sup>11</sup></li> <li>c) Aggregate heating needs for single-family dwellings in Ulaanbaatar is projected to increase by 97% by 2050.<sup>12</sup></li> <li>d) The excess of electricity generated at night by Ulaanbaatar's CHPs is exported to Russia at extremely low rates. Most ger-area households are connected to the electricity grid and can use electric heaters instead of coal, thereby utilizing this excess electricity without driving increased CHP electricity generation. The GoM incentivized this behavior by lowering electricity prices during nighttime hours – in some cases making it free.</li> </ul>
EE housing	<ul style="list-style-type: none"> <li>a) The housing market is oversupplied (but it is not "green" housing).</li> <li>b) The GoM's subsidized mortgage loan is being phased out.</li> <li>c) Green housing is less affordable for end-users.</li> <li>d) Green building standards / requirements and awareness of EE housing construction best practices are all lacking.</li> <li>e) Difficulty clearing the land for construction.</li> <li>f) There is an untapped opportunity to reduce GHG emissions through EE housing</li> </ul>	<ul style="list-style-type: none"> <li>a) The Ministry of Construction and Urban Development recorded an actual supply of 41.7 thousand housing units, compared to roughly 4,000 new mortgage loans granted by commercial banks in 2017.<sup>13</sup></li> <li>b) Beginning in 2013, the GoM transferred funds to commercial banks to disburse mortgages at an 8% interest rate (in MNT) to customers. In October 2016, the GoM implemented the first series of reforms to remove the BoM from the subsidized Housing Mortgage Loan Programme's operations, which has caused lagging in disbursements and a decline in of total mortgages issued.</li> <li>c) Ger-area households that would most benefit from EE improvements (because of their subpar construction characteristics) tend to simultaneously be in middle-to-low income brackets, making it challenging to move to EE houses that present higher costs.</li> <li>d) Current building codes and requisite standards do not cover individual housing or low-rise construction. Even if they did, ger area residents lack adequate training in modern construction techniques. As a result, inferior quality construction with poor thermal performance is common in ger areas.</li> <li>e) It is difficult for ger-area households to manage relocation costs during larger-scale housing infrastructure projects. EE housing retrofits or new-home construction are more conducive to allowing residents to remain on their land plots while the upgrades are put in place. Also, ger areas households find it costly to relocate or to abandon their lands.<sup>14</sup></li> <li>f) If all detached houses in the ger district adopted insulation retrofit measures, carbon emissions would be reduced by over 500,000 tons.<sup>15</sup></li> </ul>

In general, households' options for beneficial loan terms – be they mortgages, or household appliances – are currently limited, meaning non-EE products will be purchased as demand for goods is pushed upwards in the

<sup>9</sup> Source: Climate and Clean Air Coalition (CCAC) report, assuming 8-month heating season

<sup>10</sup> Source: [Air pollution levels rising in many of the world's poorest cities \(World Health Organization\) 2016](#)

<sup>11</sup> Source: Mongolia Human Development Report 2016: Building a Better Tomorrow: Including Youth in the Development of Mongolia, 2016. Web: <http://www.mn.undp.org>. Accessed February 23<sup>rd</sup>, 2018.

<sup>12</sup> Source: Energy Master Plan of Ulaanbaatar, Interim Report (September 2017)

<sup>13</sup> Source: Internal XacBank analysis

<sup>14</sup> Source: Mongolia: Heating in Poor, Peri-urban Ger Areas of Ulaanbaatar. The World Bank

<sup>15</sup> Source: Tong J C, Tse J M, Jones P J (2018) Development of thermal evaluation tool for detached houses in Mongolia, 2018. Energy and Buildings 173: 89

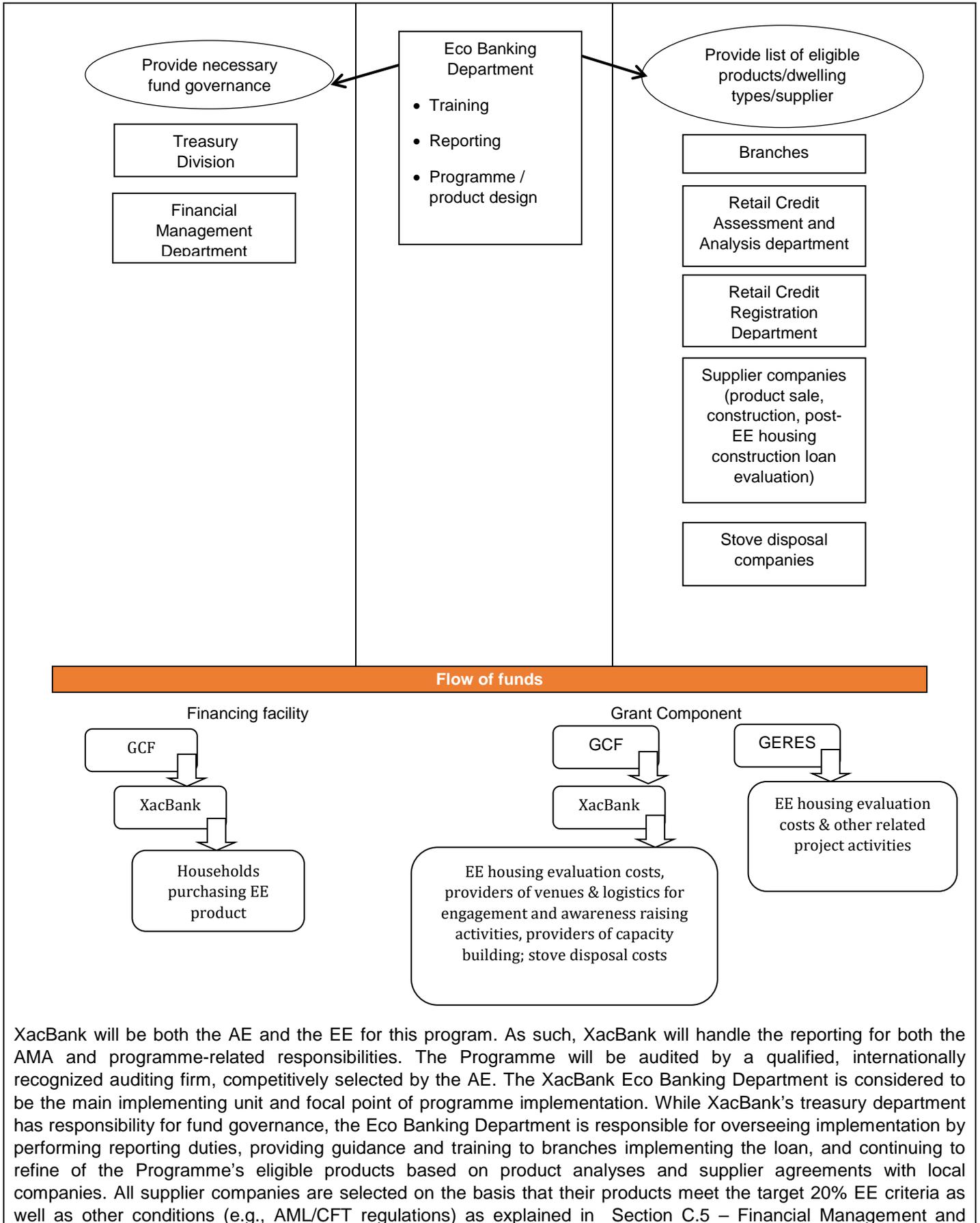
recovering economy. This would be detrimental to CO<sub>2</sub> emissions impacts. Discussion of households' need for EE financing has increased in recent years, but options for obtaining financing remain severely limited. Thus, XacBank's Programme presents an opportunity to realign market incentives with EE investments and fill the void of consumer-level EE product financing.

**B.3. Implementation / institutional arrangements (max. 750 words)**

Under the EE Consumption Loan Programme, the Bank receive loans from the GCF and on-lend to the final borrowers (all final borrowers are individual consumers). The Bank will match the GCF's facility with domestic funding, to be 50% co-financiers of the program. For this programme, XacBank's portion of the financing will be derived from the same funds as its current consumption loans. The sub-loans (except insulation retrofits) will be structured similar to a lease-to-own contract, so the Bank will need Cooperation Agreements from sellers and distributors of eligible EE products to prevent loan misuse. Eligibility criteria for the products is such that a 20% reduction in energy usage or 20% reduction in GHG emissions will be achieved; the EE heating appliances will be selected from a eligible products list, and the EE housing projects will be based on pre- and post-loan assessments in order to satisfy the eligibility criteria. The pre-loan eligibility criteria vary for each subcomponent and have been designed based on programme feasibility studies (as explained in the stakeholder engagement section of Annexes 2 and the pre-loan eligibility tables of Annex 13). Post-EE housing loan monitoring will be performed by GERES and BEEC, using grant money, or by project developers, as detailed for each subcomponent in Annex 13 Table 1. Sub-loans will be distributed through traditional channels at XacBank branches upon receiving the facility. Further details about XacBank's loan disbursement processes can be provided if necessary. Key implementation entities are shown in an organigram in Figure B.3.

**Figure B.3 – Organigram of EE Consumption Loan Programme**





XacBank will be both the AE and the EE for this program. As such, XacBank will handle the reporting for both the AMA and programme-related responsibilities. The Programme will be audited by a qualified, internationally recognized auditing firm, competitively selected by the AE. The XacBank Eco Banking Department is considered to be the main implementing unit and focal point of programme implementation. While XacBank's treasury department has responsibility for fund governance, the Eco Banking Department is responsible for overseeing implementation by performing reporting duties, providing guidance and training to branches implementing the loan, and continuing to refine of the Programme's eligible products based on product analyses and supplier agreements with local companies. All supplier companies are selected on the basis that their products meet the target 20% EE criteria as well as other conditions (e.g., AML/CFT regulations) as explained in Section C.5 – Financial Management and

Procurement and in Annex 2 Section 3 – Stakeholder Engagement. The list of specific supplier companies meeting at least the EE criteria (with whom XacBank could establish a supplier agreement and whose products would then be eligible under the programme) is available in the eligibility criteria of each loan type in Annex 13. More detail of supplier selection processes/due diligence, AML/CFT, and KYC is available in Annex 6 and Annex 13.

The Bank has implementation arrangements with GERES. XacBank has established MOU with GERES, which will serve as basis for the implementation arrangement for EE insulation retrofit loan. The exact details of the GERES-XacBank collaboration are available in the Memorandum of Understanding.

Activities funded by GCF's grant co-financing will be wholly implemented by XacBank. As Figure B.3 indicates, that includes funds for energy auditors for the EE housing retrofit evaluations and funds for awareness raising, community engagement, and capacity building. See Annex 3 for the breakdown. The GERES grant cofinancing will be utilized by GERES to carry out its projects activities, particularly the insulation market and product assessments and energy usage evaluations to be utilized in the EE housing insulation retrofit component of the Programme.

**Programme Implementation Schedule:** The EE Consumption Loan Programme will continue for a period of 10 years after disbursement from the GCF, from early 2019 to Q1 2029.

C. FINANCING INFORMATION							
<b>C.1. Total financing</b>							
<b>(a) Requested GCF funding (i + ii + iii + iv + v + vi)</b>		10,000,000		USD			
<b>GCF Financial Instrument</b>		<b>Amount</b>	<b>Currency</b>	<b>Tenor</b>	<b>Pricing</b>		
(i)	Senior loans	9,000,000	USD	10 years	N/A		
(vi)	Grants	1,000,000	USD				
<b>(b) Co-financing information</b>		<b>Total amount</b>		<b>Currency</b>			
		11,500,000		USD			
<b>Name of institution</b>		<b>Financial instrument</b>	<b>Amount</b>	<b>Currency</b>	<b>Tenor</b>	<b>Pricing</b>	<b>Seniority</b>
XacBank		Senior loans	9,000,000	USD	10 years	N/A	Pari passu
Groupe Energies Renouvelables, Environnement et Solidarités		Grants	2,500,000	USD	N/A	N/A	N/A
<b>(c) Total investment (c) = (a)+(b)</b>		<b>Amount</b>		<b>Currency</b>			
		21,500,000		USD			
<b>(d) Co-financing ratio (d) = (b)/(a)</b>		1.15					
<b>(e) Other financing</b>		Guarantees (e.g. sovereign guarantees, MIGA guarantee, etc.) are not necessary					

<p><b>arrangements for the project/programme (max ½ page)</b></p>	<p>for this programme.</p>
<p>Please refer to the attached Annex 9B financial model for more detailed information regarding pricing and projections.</p>	
<p><b>C.2. Financing by component</b></p>	
<p>Detailed information on the costs of activities is provided in Annex 3 (budget). See the “flow of funds” portion of Figure B.4 for a diagrammatic overview of the proposed financing structure with information on how funds are to be directed. XacBank also plans to support capacity building for local stakeholders.</p>	
<p><b>C.3. Justification for GCF funding request (max. 500 words)</b></p>	
<p>Economic and financial barriers to household level EE technology uptake has been outlined in Table B.2. The concessionality enabled by GCF co-financing will be passed down to end-beneficiaries in the form of reduced pricing compared to that which is available thus far. The provision of reduced pricing is the most crucial element in attracting consumers to utilize EE solutions. Currently, many Mongolian individuals operate heavily under the short-term cost savings method, and as such, usually opt to purchase or implement the cheapest possible solution, while not giving much thought to the long-term cost potential of these cheaper, sub-par products or the cost saving potential of high quality, EE or RE solutions. To compound this problem, the Mongolian market has extremely high financing costs, which come with relatively short loan tenors, and other mitigating factors such as grace periods, guarantees, and equity investments are not adequately available. The lack of available and accessible commercial finance on offer by local banks impedes the ability of Mongolians to invest in EE solutions. As it stands, the concessional funds pulled down by the Bank to date have been used to fund the Bank’s business loan activities, whereas consumption loans are financed by short term domestic funds (current account, demand deposits, and timed deposits), which bear a high cost for the Bank, which in turn lead to high interest rate loans for the consumer. Other private or public sector debt would not be suitable in achieving the level of concessionality needed in this program, which is discussed further in Section E.6. International institutions tend to invest in business loans rather than smaller-scale consumption level loans.</p>	
<p><b>C.4. Exit strategy and sustainability (max. 250 words)</b></p>	
<p>The Fund's support is initially required to provide a more affordable source of financing to consumers, with an emphasis on women-led households. XacBank will report on the facility disbursement to the GCF periodically to describe how funding is being used, including financial statements (balance sheet, income statement), GCF loan portfolio quality report, and emission reduction report together with GCF loan portfolio.</p> <p>The GCF’s exit strategy is simple, as XacBank will be paying the GCF back directly, based upon the terms that the GCF is able to offer. The Bank will take on 100% of the sub-loan risks, with no risk to the GCF. Exit risk is minimal. After the Programme’s end (GCF exit), XacBank will not be able to independently replicate the programme’s concessionality and impacts. Future projections of EE heating and housing markets are heavily dependent on the success of the proposed Programme. Furthermore, the awareness building campaign and the changing of consumer purchasing habits through this programme’s implementation will further contribute to its sustainability.</p>	
<p><b>C.5. Financial management/procurement (max. 300 words)</b></p>	
<p>XacBank is able to implement variable frequencies of reporting to ensure transparent, effective, and appropriate fund usage. Reporting to the GCF will be provided semi-annually, as is standard. If more frequent (or another interval) of financial reporting is necessary, this will be subject to negotiations of the relevant funding agreement signing. All entities (including suppliers) collaborating with XacBank on the programme are subject to AML/CFT due-diligence and are required to adhere to the Bank’s AML/CFT regulations. The bank clients are subject to KYC due-diligence and compliance. The overview of Bank’s AML/CFT and KYC processes are provided under Annex 6 and Annex 13.</p>	

XacBank has implemented a robust Financial Data Management System with world-class certified data-secure IT infrastructure. The Bank is fully audited by internationally recognized auditing firms such as Deloitte and Ernst & Young, in accordance with International Standards on Auditing. Financial management of the Programme will be guided by XacBank’s accounting policies and procedures and financial and operational project management administration. For financing drawn down from other financial institutions, the Bank’s financial and operational procedures can be found within its Funding Management Strategy.

GCF funds will be registered following XacBank’s “chart of accounts”, which is a legal document registered with and approved by the central bank of Mongolia laying out all of XacBank’s accounts, under the relevant “GL” (General Ledger) account, which will be opened specifically for GCF-related activities; separate from the Bank’s other sources of funding, as with previous funds transferred by the GCF to XacBank. A new account will be opened for this programme’s funding to be placed into. XacBank will be the Executing entity of this programme and conduct disbursement in accordance with the Credit Risk Management Policy (CRMP), Bank’s internal General Loan Risk Management Procedure, Lending Procedure, Retail Loan Standard and Collateral Appraisal Standard and General Condition of Loan Products. These procedures also defined the monitoring methods on loan disbursement and credit monitoring.

XacBank has its own Internal Audit Division (IAD), whose mission it is to add value through an independent appraisal of all of XacBank’s operations and activities and governance. The result of such appraisal is improved operational efficiency, risk analysis and management, and internal control systems so as to aid XacBank in achieving its corporate objectives. Beyond the Internal Audit functions, the regular and on-demand monitoring function also serves as an Internal Control check at both the branch and headquarters level. The IAD adheres to risk-based internal audit principle and implements “international standards for the professional practice of internal auditing”, developed by Institute of Internal Auditors. In order to comply with risk-based internal auditing, the IAD applies an activity risk evaluation method for the Bank’s head office units and branches with an audit sampling method that aims to select a sufficient and appropriate sample size, which is then approved by the Board Of Directors’ (BOD) Audit committee. Moreover, By request of the funder, audits can be done on specific programs at the Bank. The request must be made by the funder well enough in advance (beginning of year) for it to be included in the Bank’s auditing plans for the upcoming year.

For the grant component of this program, the Bank shall use its procurement procedure. Procurement details are provided in Annex 8. All sales and purchases are done in accordance with International and Mongolian procurement standards and meet all Mongolian government and international agencies’ legal tender requirements. XacBank’s procurement guidelines and contracts are fully audited and approved through internal audit and its Executive Board Officers. Procedures are defined in greater detail in the Bank’s Tender for Purchase and Sales document, with explanation of the review system during the process. Quarterly audit findings and procurement audit reports are provided to outline procurement oversight and audit reports.

**D. LOGIC FRAMEWORK AND MONITORING, REPORTING AND EVALUATION**

*This section refers to the project/programme’s logic framework in accordance with the GCF’s [Performance Measurement Framework](#) under the [Results Management Framework](#) to which the project/programme contributes as a whole, including in respect of any co-financing. This is different from the project/programme-level log frame (as there may be other impact measures for example that go beyond those defined by the GCF). A project-level logical framework, with specific indicators, baselines and targets, means of verification and assumptions should be provided as part of Annex 2.*

**D.1. Paradigm shift objectives**

<p><i>Shift to low-emission sustainable development pathways</i></p>	<p>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 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 home environments, enable EE producers and suppliers to jumpstart their growth</p>
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	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.
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## D.2. Impacts measured by GCF indicators

A detailed logic framework is included in Annex 2.

Expected Result	Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions
				Mid-term (if applicable)	Final	
	<b>Tonnes of carbon dioxide equivalent (t CO<sub>2</sub>eq) reduced as a result of Fund-funded projects/ programmes</b>	XacBank programme monitoring reports	0	234,787	469,574	See M1.0 and M3.0 for breakdown by component. <sup>16</sup>
	<b>Cost per t CO<sub>2</sub>eq decreased for all Fund-funded mitigation projects/ programmes</b>	XacBank programme monitoring reports	0	N/A	38.33	Size of financing facility (US\$ 18 million) / t CO <sub>2</sub> eq reduced
	<b>Volume of finance leveraged by Fund funding</b>	XacBank programme monitoring reports	0	US\$ 11.5 million	US\$ 11.5 million	
<i>M1.0 Reduced emissions through increased low-emission energy access and power generation</i>	Tonnes of carbon dioxide equivalent (t CO <sub>2</sub> eq) reduced or avoided	XacBank programme monitoring reports	0	156,832 tCO <sub>2</sub> eq	313,664 tCO <sub>2</sub> eq	Assumes the household's baseline stove is no longer used in any capacity. This is a conservative CO <sub>2</sub> emission reduction estimate because the benefits noted here are driven by the electricity grid's current CO <sub>2</sub> emissions factor. As renewable energy generation increases in Mongolia's total energy production, these households using EE heating appliances would be able to utilize increasingly low-emission electricity for their heating, meaning the lifetime CO <sub>2</sub> savings of each EE heating appliance will rise to an amount not quantified here. The

<sup>16</sup> XacBank will contribute to development of EE building code standards in collaboration with the Ministries, Mongolia's NAMA building project, and other stakeholders with EE housing-related projects (e.g., the ADB).

						CO <sub>2</sub> savings from scenarios in which an EE heating appliance is paired with an EE housing insulation retrofit are counted in M3.0, not here.
<i>M3.0 Reduced emissions from buildings, cities, industries and appliances</i>	Tonnes of carbon dioxide equivalent (t CO <sub>2</sub> eq) reduced or avoided	XacBank programme monitoring reports	0	77,955 tCO <sub>2</sub> eq	155,910 tCO <sub>2</sub> eq	Approximately 43% and 57% of the emissions reduction will be driven by EE housing insulation retrofits and EE housing construction, respectively.  See Annex 9B for a breakdown of the CO <sub>2</sub> emissions reduction by EE housing type (and associated unit costs).
					469,574	tCO <sub>2</sub> eq

**D.3. Outcomes measured by GCF indicators**

Expected Outcomes	Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions
				Mid-term (if applicable)	Final	
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	XacBank programme monitoring reports	0	2,420 households	2,420 households	Represents incremental number of households with access to lower-emission heating via the electricity grid.
M7.0 Lower energy intensity of buildings, cities, industries and appliances	7.1 Energy intensity / improved efficiency of buildings, cities, industries and appliances	XacBank programme monitoring reports	460.9 kW/m <sup>2</sup> /year	N/A	157.6 kW/m <sup>2</sup> /year	Represents the weighted-average specific energy consumption of households participating in the EE housing component (i.e., the metric is weighted by the proportion of the loan facility's loans projected to be used for each baseline and target building type).

#### D.4. Arrangements for Monitoring, Reporting and Evaluation (max. 300 words)

Retail lending processes need to be simple and fast to attract and retain customers. Evaluating the energy and CO<sub>2</sub> impact of proposed loan purchases on a case-by-case loan basis as customers approach XacBank, or visiting each borrower in person after the fact to confirm purchase of the correct products, would add undue time, cost, and administrative burden to XacBank's loan process. Considering this, the Eco Banking Department (EBD) has developed a streamlined pre- and post-loan evaluation plan structured around pre-assessment and pre-approval of specific EE products to ensure that loan money is spent on the correct items guaranteed to drive the targeted energy and CO<sub>2</sub> reduction. This accelerates the pre-loan evaluation process and renders on-the-ground post-loan monitoring unnecessary for each individual product, with the exception of EE housing insulation retrofit loans and EE housing construction loans, as described in Annex 13. Rather, post-loan evaluation will occur at the loan portfolio level. By adopting this methodology, XacBank can ensure loan misuse does not occur, the projected CO<sub>2</sub> savings are realized, and customer satisfaction is maintained.

A summary of the key pre-loan evaluation requirements is included in Annex 13. For avoidance of doubt, XacBank is the entity responsible for monitoring and bears the cost of monitoring and verifying emissions savings, as well as keeping evidence/invoices. XacBank calculates final savings on a total portfolio basis, and the product owner will be the owner of reduced GHGs. Internally, reports will be conducted on a quarterly basis. These reports will be conducted based upon internal processes. XacBank will report to the GCF on a periodic basis as agreed with the GCF, on the status of GCF funded activities throughout the relevant reporting period. These reports will include the disbursements made during the relevant period, the implementation status of the Programme, and the monitoring of results and impacts of sub-loans. Reporting will be done in accordance to the AMA and respective FAA for this project. An overview of the expected milestone and reporting is included in the term sheet.

#### E. EXPECTED PERFORMANCE AGAINST INVESTMENT CRITERIA

##### E.1. Impact potential (max. 300 words)

E.1.1. Expected tons of carbon dioxide equivalent (t CO <sub>2</sub> eq) to be reduced or avoided (Mitigation only)	Annual	46,957 tCO <sub>2</sub> eq
	Lifetime	469,574 tCO <sub>2</sub> eq
E.1.2. Expected total number of direct and indirect beneficiaries, disaggregated by gender	Direct	15,278 <sup>17</sup> At least 30% of which female
	Indirect	1,400,000 <sup>18</sup> 50.8% of which female
	<i>*For both, Specify the % of female against the total number.</i>	
E.1.3. Number of beneficiaries relative to total population <sup>19</sup>	Direct	0.5%
	Indirect	46.4%

Mongolia's target is a 7.3 million tCO<sub>2</sub>e emission reduction per year in 2030 compared to a business-as-usual scenario. XacBank's proposed programme would drive approximately 34,900 tCO<sub>2</sub>e reduction in 2030 – about 0.25% of the target.

<sup>17</sup> Note: Assumes 3.6 persons per household and avoids double counting of beneficiaries when EE heating appliance loans are required to be paired with EE housing retrofit loan to achieve the desired EE outcome (dependent on the type of baseline stove being replaced). Of the 2,420 EE heating appliance loans, 363 are assumed to fall under this scenario, so for avoidance of doubt the total direct beneficiaries is equal to 2,420 EE heating appliance loans plus 2,187 EE housing loans minus 363 overlap times 3.6.

<sup>18</sup> Note: This reflects the fact that all Ulaanbaatar residents will benefit from reduced particulate matter air pollution

<sup>19</sup> Note: Assumes total population of 3.02 million for Mongolia

*Explanation of method of calculation:* For EE heating appliance loans, XacBank used the Frankfurt School's analysis (see Annex 2) to arrive at the per-loan CO<sub>2</sub> emission reduction value for each EE heating appliance loan scenario (i.e., depending on the type of the baseline stove) and extended these per-loan estimates the EE heating appliance portion of the proposed facility (based on the weighted average cost of various EE heating appliances, again provided by the Frankfurt School). XacBank will require EE heating appliance loans to sometimes be paired with simultaneous EE housing insulation retrofit activities (depending on the scenario). The CO<sub>2</sub> emission reduction and beneficiaries occurring in this scenario were counted in the EE housing loan CO<sub>2</sub> emission reduction and beneficiaries and were not double counted in the EE heating appliance loan projection. For EE housing loans, XacBank used dwelling type specific energy consumption values (in kW/m<sup>2</sup>/year) provided by the latest Frankfurt School report and the pre-approved EE row house product studies to determine the percent reduction in specific energy consumption and the subsequent reduction in thermal heating demand and associated emissions. In all cases, the loan value (and subsequently the number of loans able to be served by the facility and the associated CO<sub>2</sub> emission impacts) assumes a 20% borrower down payment.

## **E.2. Paradigm shift potential (max. 300 words)**

A theory of change is included in Figure E.1.

**Figure E.1 – Theory of change for programme's contribution to the creation of an enabling environment**

**Programme context:**

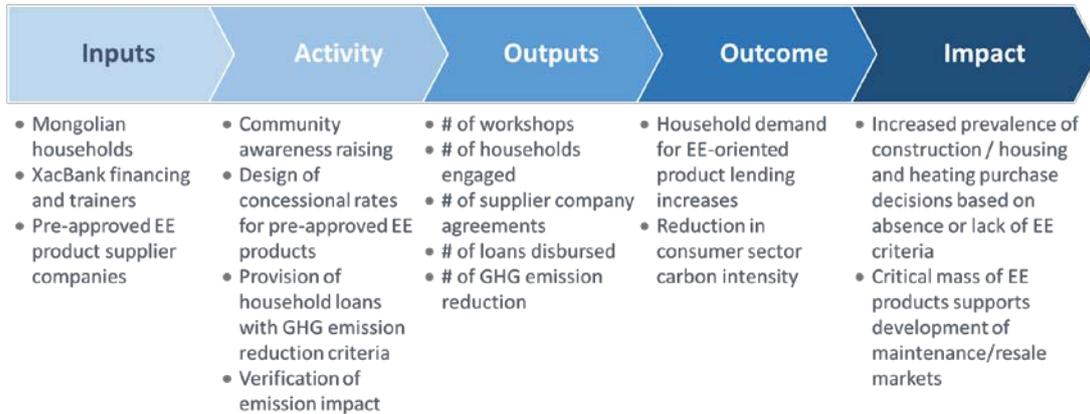
EE heating: reliance on coal-based heating with a regulatory push for non-coal alternatives but lack of affordability for non-coal alternatives due to high upfront costs

EE housing: oversupply of high-end, apartment-based housing but lack of affordable housing for ger-area residents to transition out of low-efficient buildings characterized by low thermal efficiency

**Desired vision:**

EE heating: increasing financial viability of non-coal heating alternatives and driving their uptake

EE housing: dissemination of EE housing best practice information and increase of affordable EE housing with quantified emission impacts



The EE Consumption Loan Programme would strengthen household knowledge about EE investments, thereby supporting a shift in consumer behavior towards adoption of EE technologies. To create an enabling environment in which there is no information gap about EE housing products and households do not bear the burden of assessing EE product efficiency, participating households will be limited to pre-approved products and best-practices when accessing the financing facility. Households will benefit from analyses of their home's energy usage and areas of improvement, aided by information dissemination and community-level workshops XacBank will facilitate (see description of Grant activities in section B.2 and in the programme budget of Annex 3). Regardless of whether these households end up qualifying for a loan or not, the promotion of such monitoring activities in households has significant paradigm shift potential for best practices in EE processes. Currently, XacBank has roughly 705,000 unique household-level clients at hand.<sup>20</sup> As a result of the EE Consumption Loan Programme's marketing, public awareness-raising events, and workshops, households, both existing clients and new alike, will be better equipped to make EE-related decisions in the future.

**Scale-up potential:** In terms of geographic scalability, each EE component can achieve the same CO<sub>2</sub> emissions reduction impacts in any location in Mongolia where the baseline (i.e., the existing stove or dwelling type) is the same. This presents an opportunity to scale to Mongolia's other largest urban centers, Erdenet and Darkhan. XacBank has the geographic know-how and experience to expand the Programme. Geographic scaling would enable XacBank's Programme to reach an additional 7,333 beneficiaries, representing a nearly 50% extension of the initial Programme impact.<sup>21</sup> In terms of product scalability, the Programme is based on a database of heating and housing products and investment measures with verified emissions reduction impacts. The nature of the Programme is such that the eligible product list can be expanded as the market for EE products and services evolves.

**Regulatory:** By spurring demand for EE products, the Programme puts pressure on the Ministry of Environment and Tourism to complete its development of a standardized national EE labelling system for consumer goods. An established labelling system could encourage suppliers and distributors to invest in manufacturing and distributing larger volumes of low-emission products.

<sup>20</sup> Note: this is the total number of XacBank's household clients. The geographic breakdown is not known (i.e., whether the households live in the ger area or not).

<sup>21</sup> Note: XacBank estimates the direct beneficiaries of the programme's activities in Ulaanbaatar to amount to approximately 1.06% of the urban population. This factor was applied to the urban population of all other aimags (based on National Statistics Office data) to arrive at the number of additional beneficiaries to be impacted during geographic scaling.

### E.3. Sustainable development (max. 300 words)

**Environmental:** Mongolia's high GHG emissions per capita were noted in Section B.1. The Programme will reduce coal combustion and drive aggregate CO<sub>2</sub> emission reductions of 469,574 tonnes over the lifetime (or about 34,900 in 2030 alone, or 0.25% of Mongolia's CO<sub>2</sub> emission reduction objective for 2030). Other local environmental benefits include reduced emission of black carbon and reduced demand for wood for heating purposes.

**Social:** Energy-inefficient products (e.g., aging cook stoves relying on coal combustion) pose health risks to their immediate users including burns and direct inhalation of toxic PM 2.5 particles. Thus, in the short term, on a household user health level, investment in higher-efficiency new appliances will improve the health and safety of family members. At a broader level, any reduction in household-level particulate matter emission contributes to community-wide health benefits. The paradigm shift initiated by household EE investments has potential to significantly reduce the health risk of living in Ulaanbaatar, ultimately lowering health care costs and driving improved socioeconomic outcomes for direct beneficiaries.

**Economic:** As discussed elsewhere, poor air quality presents a significant economic burden in terms of direct health care costs, hospital days, and outpatient consultations. The surge of ill children has prompted the Ulaanbaatar municipality to request government support to construct new hospitals. Improving air quality via proliferation of non-coal heating solutions paired with EE housing has potential to reduce these direct health care and facility construction costs, thereby increasing discretionary income levels and ultimately provide a boon to consumption and GDP. The EE heating appliances financed by the Programme will also drive household coal expense savings, approximated at US\$ 300 per year. The new electric heating appliances will have near-zero operational costs because of the lowered nighttime electricity tariff.

**Gender considerations:** By reducing particulate matter emissions both indoors and on an aggregate level, the health conditions for these vulnerable population groups will be improved. As such, XacBank intends to provide at least 30% of EE housing loans and 10% of EE heating appliance loans disbursed through the EE Consumption Loan facility to women. Gender-disaggregated data will be assessed against the appropriate indicator to measure enhanced access for women to loans. The programme-level Gender Assessment and Gender Action Plan are included in Annex 4.

### E.4. Needs of recipient (max. 300 words)

While Mongolia's socioeconomic indicators have improved (e.g., growth in GNI per capita to US\$ 3,590), the needs of ger-area residents have not been sufficiently met. Movement of herders into the city and associated ger-area challenges have been noted. In 2017, Ulaanbaatar's annual average for particulate matter (PM) 2.5 sometimes reached 133 times the recommended average 24-hour exposure.<sup>22</sup> One out of ten deaths in the city is directly attributable to poor air quality.<sup>23</sup> While 2018 projections of GDP growth are around 5%, consumers remain focused on purchases that keep costs low in the short term, preventing proliferation of EE technologies with higher upfront costs despite their health and environmental benefits. The typical 18-25% loan interest rate is somewhat reduced under existing market interventions, as shown in Table E.2. On the whole, existing interventions have not achieved impact at the scale needed to meet the target population group's financing needs, due to lack of beneficial financial terms, lack of scale, slow product development processes, or changing market and regulatory contexts.

The EE Consumption Loan Programme is well-suited to meet this population's financing needs. The Programme aims to reduce solid fuel consumption by 1) improving EE characteristics of ger-area housing, and 2) replacing coal-fired stoves with non-coal solutions. The proposed Programme will offer technical and financial support to residents seeking to purchase EE products through workshops and engagement of energy advisor professionals.

As it can be seen from Table E.2, the proposed Programme is differentiated from previous interventions in the market, both in the types of loans it is financing and in the geographic scope of the target market. The Programme will complement the apartment block, subcenter-focused project of the ADB as well as the GoM's apartment-focused subsidized mortgages with affordable financing solutions for the middle-income segment desiring to stay in the ger area. This will serve to increase the marketability of EE products and, together with existing public programmes, shall

<sup>22</sup> Source: [Mongolia's Air Pollution Crisis: A call to action to protect children's health, UNICEF, February 2018](#)

<sup>23</sup> Source: World Health Organization, as of 2018

contribute to a nation-wide shift in consumer behavior.

### E.5. Country ownership (max. 500 words)

The EE Consumption Loan Programme is in line with Mongolia's Intended National Determined Contribution (INDC) outlining a target 14% reduction in national GHG emissions. Further, in 2016, the Mongolian government approved the Green Development Policy, which aims to leverage tax, credit, and incentive mechanisms to finance a green economy. Alignment with other climate priorities includes:

- **EE heating appliances:** the GoM has introduced a measure to significantly discount the nighttime electricity tariff to incentivize electric heating. The GoM has also announced a ruling to cease transport of all raw coal products into Ulaanbaatar city beginning in April 2019. Starting in 2020, this will be extended to a complete ban on all raw coal combustion within the city limits.
- **EE housing:** the INDC and the Green Development Policy State Policy on Energy NAMA Construction (2016) target a 20% reduction in building heat loss by 2020 (40% by 2030).<sup>24</sup> Furthermore, the Ulaanbaatar City Master Plan identifies a need for individual-level solutions and land readjustment projects in the aspirational "improved" ger area.

XacBank, the AE and EE, is the market leader in providing business loans for EE/RE solutions with a SME portfolio of about US\$ 15 million and a proven capability to work with the private sector to reduce CO<sub>2</sub> emissions in Mongolia. Related to EE heating appliances, XacBank started in 2009 to distribute EE products under the "Energy Efficient Product Distribution Program" which enabled ger-area residents to purchase energy efficient coal stoves, ger blankets, and vestibules with an 80-90% subsidy (via the Millennium Challenge Account – Mongolia or "MCA-M", the World Bank's "Clean Air Project", and the government of Mongolia's special "Clean Air Fund"). By programme termination in 2015 this had measurably reduced particulate matter pollution and led to a 320,000 tCO<sub>2</sub>eq emission reduction. Related to EE housing, between 2010 and 2012, XacBank granted 103 EE housing loans under a United Nations Development Program (UNDP) Building Energy Efficiency Project (BEEP).<sup>25</sup> These subsidized mortgages for EE houses targeted clients living in Ulaanbaatar's ger districts. Projects included newly-built EE houses and EE housing retrofits. In each case, XacBank provided a loan of up to MNT 20 million (\$14,535 in 2012) and the MCA-M provided a subsidy. The total disbursement was approximately 220 million MNT (US\$ 158,000 at the time) and a lifetime emission reduction impact of 150,400 tCO<sub>2</sub>eq was achieved.

XacBank has undertaken stakeholder engagement and has plans for stakeholder activities to be implemented, as detailed in Annex 2.

### E.6. Efficiency and effectiveness (max. 1 page)

E.6.1. Estimated cost per t CO <sub>2</sub> eq, defined as total investment cost / expected lifetime	(a) Total project financing (excluding grant component)	US\$ 18,000,000
	(b) Requested GCF amount (excluding grant component)	US\$ 9,000,000

<sup>24</sup> Note: compared to 2014 levels

<sup>25</sup> Note: BEEP has since become an independent lab referred to as BEEC, the Building Energy Efficiency Center, under a local university).

emission reductions (Mitigation only)	(c) Expected lifetime emission reductions	469,574 tCO <sub>2</sub> eq
	<b>(d) Estimated cost per tCO<sub>2</sub>eq (d = a / c)</b>	<b>US\$ 38.33 / tCO<sub>2</sub>eq</b>
	<b>(e) Estimated GCF cost per tCO<sub>2</sub>eq removed (e = b / c)</b>	<b>US\$ 19.17 / tCO<sub>2</sub>eq</b>
E.6.2. Expected volume of finance to be leveraged by the proposed project/programme and as a result of the Fund's financing, disaggregated by public and private sources (Mitigation only)	(f) Total finance leveraged	US\$ 11,500,000
	(g) Public source finance leveraged	
	(h) Private source finance leveraged	US\$ 11,500,000
	<b>(i) Total Leverage ratio (i = f / b)</b>	<b>1.15<sup>26</sup></b>
	(j) Public source leverage ratio (j = g / b)	0
	(k) Private source leverage ratio (k = h / b)	1.15
<p>The Bank uses the various deposits from its clients to determine the cost for its various products by matching the term of the source of funding to the offered product. For this consumption loan program, the XacBank portion of the financing will be derived from the same funds as its current consumption loans. As for the EE housing product, the only product with a long enough term to match the product is the children's' savings account, which has a much longer term than regular savings accounts. Although interest rates will not be the lowest available on the market (as shown in Section E.4) – thereby preventing a market distortion – GCF support will provide adequate concessions to shift consumer behavior towards purchasing EE products over less efficient alternatives.</p> <p>Given historic market demand for such loans, XacBank believes the total proposed GCF facility size (US\$ 9 million) and tenor (10 years) is reasonable. Distribution targets over the life of the loan facility are within historical averages. On the project level, XacBank will be using the funds to finance projects with loans only. No equity investments will be made for any projects under the program.</p> <p>Since the total investment needs for EE housing retrofits are estimated at approximately US\$ 96 million – far higher than this facility will be able to provide – there would be no crowding out of private or other public investment. As highlighted throughout this document, the main challenges to fully leveraging the market demand are the current ger-area medium-income households, rather than prohibitively high product costs.</p> <p>The US\$ 2.5 million grant co-financing enabled by programme partner GERES (Group for the Environment, Renewable Energy, and Solidarity) – approximately 25% of the GCF project facility – would increase programme access thanks to engagement of energy advisors to confirm the emissions outcome of the housing retrofits. The GERES SWITCH Asia II project (defined earlier) is scheduled to be implemented for four years, so the insulation retrofit evaluation activity of the grant component requested from the GCF is earmarked to be used for retrofits not covered by the GERES programme. The additional activities enabled by the GCF TA enable an integrated approach to behavior change, ranging from building consumer (and women-centric) awareness of availability of EE financing, increasing consumer capacity to identify EE opportunities in their household and institutional (internal and external) capacity to facilitate EE product financing, deploying best-available EE technologies via-pre approved supplier list, and permanently removing old, non-EE products from the market. These activities facilitate long-lasting behavioral shifts towards EE behaviors.</p> <p>Please see the attached projection (Annex 9B) for more detailed analysis. The financial and economic analysis provided in Annex 9 details the rationale of requested concessionality, the methodology and assumptions used to define it, its justification, the benefits of said concessionality, and consideration of technical efficiency given best available technologies and practices.</p>		

<sup>26</sup> Note: The total leverage ratio of 1.15 has been calculated to account for the total requested GCF amount of USD 10,000,000 (including USD 1,000,000 grant component), as the expected volume of finance to be leveraged by the programme includes both the loan and the grant amount as outlined under section C1. If we exclude the GCF grant component, then the leverage ratio is 1.28.

## F. ANNEXES

### F.1. Mandatory annexes

- x Annex 1 [NDA No-objection Letter\(s\)](#)
- x Annex 2 [Pre-feasibility study \(including Theory of Change, project/programme-level log frame, timetable, map, and summary of stakeholder consultation and engagement plan\)](#)
- x Annex 3 [Budget plan that provides breakdown by type of expense \(Template in excel sheet\)](#)
- x Annex 4 [Gender assessment and action plan \(Template\)](#)
- x Annex 5 [Co-financing commitment letter](#)
- x Annex 6 [Term sheet](#)
- x Annex 7 [Risk assessment and management \(Template\)](#)
- x Annex 8 [Procurement plan \(Template\)](#)

### F.2. Other annexes to be submitted when applicable/requested

- x Annex 9 [Economic and/or financial analysis](#)  
(mandatory for private-sector proposals)
- Annex 10 Legal due diligence (regulation, taxation and insurance)
- Annex 11 Appraisal, due diligence or evaluation report for proposals based on up-scaling or replicating a pilot project
- x Annex 12 [Environmental and Social Action Plan \(ESAP\) and Environmental and Social Safeguards risk screening if changed from Part A and B of the concept note submitted.](#)
- x Annex 13 [Eligibility requirements and monitoring by component](#)

*\* Please note that a funding proposal will be considered complete only upon receipt of all the applicable supporting documents.*

**Annex 1: NDA No-objection Letter**

  
**MINISTRY OF ENVIRONMENT  
AND TOURISM OF  
MONGOLIA**

15/80 Government building 2, United Nation's street 5/2,  
Chingelhai district, Ulaanbaatar, MONGOLIA  
Tel: (976-11) 26 28 30, 26 61 71. Fax: (976-11) 32 09 43,  
E-mail: contact@mnc.gov.mn, http://www.mnc.mn

Date: 15 Aug, 2016  
Ref: 19/202

To: The Green Climate Fund ("GCF")

Re: Funding proposal for the GCF by XacBank regarding the Energy Efficient Consumption Loan Programme

Dear Madam or Sir,

We refer to the Energy Efficient Consumption Loan Programme in Mongolia as included in the funding proposal submitted by XacBank to us on August 8, 2016.

The undersigned is the duly authorized representative of the Ministry of Environment and Tourism, the National Designated Authority/focal point of Mongolia.

Pursuant to GCF decision B.08/10, the content of which we acknowledge to have reviewed, we hereby communicate our no-objection to the programme as included in the funding proposal.

By communicating our no-objection, it is implied that:

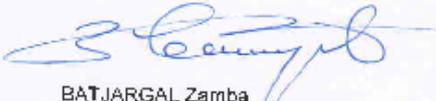
- (a) The government of Mongolia has no-objection to the programme as included in the funding proposal;
- (b) The programme as included in the funding proposal is in conformity with Mongolia's national priorities, strategies and plans;
- (c) In accordance with the GCF's environmental and social safeguards, the programme as included in the funding proposal is in conformity with relevant national laws and regulations.

We also confirm that our national process for ascertaining no-objection to the programme as included in the funding proposal has been duly followed.

We also confirm that our no-objection applies to all projects or activities to be implemented within the scope of the programme.

We acknowledge that this letter will be made publicly available on the GCF website.

Kind regards,



BATJARGAL Zamba  
National Focal Point for UNFCCC and GCF in Mongolia

**Annex 2: Pre-feasibility study (including Theory of Change, project/programme-level log frame, timetable, map, and summary of stakeholder consultation and engagement plan)**

See “Annex 2 - 06072018.docx” file for other relevant information other than the below component feasibility/market studies

**Annex 3: Budget plan that provides breakdown by type of expense (Template in excel sheet)**

See “Annex 3 XacBank detailed budget\_EE consumption loan programme - 06062018.xlsx” file

**Annex 4: Gender assessment and action plan**

See “Annex 4 Gender Action Plan - XacBank EE Consumption Loan Programme - 06062018.docx” file

**Annex 5: Co-financing commitment letters**

**Annex 6: Term sheet and evidence of internal approval**

See “XacBank EE Consumption Loan Program\_Term Sheet - 06072018 ” file

**Annex 7: Risk assessment and management**

See “Annex 7 Risk assessment and management - 06072018.docx” file

**Annex 8: Procurement plan (Template)**

See “Annex 8 XacBank Procurement Plan\_EE consumption loan programme - 060618.xlsx” file

**Annex 9: Economic and financial analysis**

See “Annex 9A Economic and financial analysis - 06072018.docx” file

See “Annex 9B Annex 9B XacBank Loan Projection - 06062018.xlsx” file

**Annex 12: Environmental and Social Action Plan (ESAP) and Environmental and Social Safeguards risk screening if changed from Part A and B of the concept note submitted.**

See “Annex 12 ESS - EE Consumption Loan Programme - 06072018.docx” file

**Annex 13: Eligibility requirements and monitoring by component**

See “Eligibility requirements and monitoring by component - 06072018.docx” file

## Environmental and social report(s) disclosure

Basic project/programme information	
Project/programme title	Energy Efficient Consumption Loan Programme
Accredited entity	XacBank LLC
Environmental and social safeguards (ESS) category	Intermediation 3 (I3)
	<i>Note: Environmental and social report disclosure not required for Category C and Intermediation 3 projects and programmes.</i>

Environmental and social report disclosure information	
Description of report/disclosure	N/A
Date of disclosure on accredited entity's website	N/A
Language(s) of disclosure	N/A
Link to disclosure	
Other link(s)	

## Independent Technical Advisory Panel's review of SAP003

Proposal name:	<u>Energy Efficient Consumption Loan Programme</u>
Accredited entity:	<u>XacBank LLC</u>
Project/programme size:	<u>Small</u>

### I. Assessment of the independent Technical Advisory Panel

#### 1.1 Impact potential

*Scale: N/A*

1. Mongolia has one of the highest levels of carbon dioxide (CO<sub>2</sub>) emissions per capita in the world, at 4.996 tonnes, almost three times the world average in 2013. This is largely driven by the nation's long and extremely cold winters, excessive reliance on coal-based power and heat generation, and dated and inefficient industrial facilities and equipment.
2. The government commits a 7.3 million tones of carbon dioxide equivalent (tCO<sub>2</sub> eq) emission reduction per year in 2030 compared to a business-as-usual scenario. The government targets a 14 per cent reduction in national greenhouse gas (GHG) emissions and a 40 per cent reduction in building heat loss by 2030. Except the energy sector, its residential sector drives over 15 per cent of CO<sub>2</sub> emissions from solid fuel combustion in Mongolia.
3. The population of Ulaanbaatar, the capital city, rose from 773,000 in 2000 to 1,380,792 in 2016, at an annual average increase of 3.1 per cent. This growth was contributed by large in-migration from rural areas as a result of a series of climate change related extreme events, and the transition to a market economy and economic opportunities emerged in Ulaanbaatar. The ger areas were home to about 774,000 residents in 2016, which is 60 per cent of Ulaanbaatar's population and 30 per cent of the country's population.
4. A Technology Needs Assessment (2013) carried out by the United Nations Environment Program (UNEP) and the UNEP-Risoe Center identified lighting and improvement of insulation of residences as priority climate change mitigation measures for the residential sector. A lack of proper financial incentives, financial resources, and high upfront costs are assessed as financial barriers. A lack of product awareness and consistency in product quality were referred as non-financial barriers.
5. The proposed Energy Efficient Consumption Loan Programme (the Programme) is a USD 21.5 million programme to support the energy efficiency lending by the accredited entity (AE) to households. The Programme is comprised of Component 1, a USD 18 million concessional loan facility, and Component 2, USD 3.5 million grant activities. The concessional loan facility is structured to support consumers purchasing energy efficient heating appliances (sub-component 1.1: USD 3 million), and energy efficient housing solutions (sub-component 1.2: USD 15 million).
6. GCF is requested to provide USD 9 million for Component 1 to be cofinanced equally by Xacbank, the AE. The grant activities are financed by GCF (USD 1 million) and Groupe Energies Renouvelables, Environnement et Solidarités (GERES), the AE programme partner

(USD 2.5 million). The GERES is a French nongovernmental organization developing an energy efficient housing project to support new energy efficient housing and retrofitting.

7. The support for energy efficient heating appliances (sub-component 1: USD 3 million) aims to achieve a minimum CO<sub>2</sub> reduction of 40 per cent by promoting electric heating stoves together with insulation retrofit. The appliances to be eligible for funding by the Programme have been selected based on a study conducted by Frankfurt School FS-UNEP Collaborating Center. They include infrared heaters and convection heaters as well as night storage radiators for households to take advantage of low electricity tariffs set by the government at nighttime. Old stoves replaced with electric heating appliances financed by the Programme will be collected and disposed.

8. Given the low efficiency of power and heat generation capacity, largely dominated by coal fired facilities, in Ulaanbaatar, a mere replacement of low efficiency stoves with efficient electric heating appliances may not lead to tangible reduction of CO<sub>2</sub> emissions. Therefore, the AE includes insulation retrofit as an additional measure to ensure the CO<sub>2</sub> reduction of 40 per cent is attainable, if needed. The Programme aims to disburse 2,420 loans of an average loan size of USD 1,240.

9. The energy efficient housing solutions (sub-component 2: USD 15 million) consist of (i) energy efficient housing insulation retrofit, and (ii) energy efficient housing construction. The (i) energy efficient housing insulation retrofit (USD 3.4 million) supports households to reduce heat loss and increase energy efficiency by enhancing insulation of walls, roof, and foundation, and replacing windows of the current dwelling. The Programme supports for 1,400 households at an average loan size of USD 2,400.

10. The Programme's financial support for (ii) energy efficient housing construction (USD 11.6 million) assists households who currently reside in gers or non-insulated houses but wish to construct insulated energy efficient houses with eligible contractors pre-selected by the AE.

11. Under a cooperation agreement with the AE, the eligible contractors guarantee to pay the AE a sum equal to the difference of interest payments between the AE standard housing mortgage loan available for non-energy efficient houses and the proposed energy efficient housing loans if the houses they constructed do not achieve energy efficiency as agreed with the AE. Then, in the future, a construction contract with such contractors will no longer be considered eligible for concessionally priced loan available from the Programme. The AE estimates to have 787 loans for energy efficient housing construction at the average loan size of USD 14,740.

12. The GCF grant of USD 1 million will contribute to disposal management of old heating appliances, energy efficient housing insulation retrofit evaluation costs, awareness raising, and capacity building efforts.

13. Over its 10-year lifetime, the AE presents that the Programme delivers CO<sub>2</sub> emissions reduction of 469,574 tonnes of carbon dioxide equivalent (tCO<sub>2</sub> eq) with 15,278 direct beneficiaries at least 30 per cent of which are female. It is noted that 67 per cent of the total estimated CO<sub>2</sub> reduction (313,664 tCO<sub>2</sub> eq), and 48 per cent of the total direct beneficiaries (7,405 beneficiaries) are expected to be generated by a USD 3 million loan facility to finance purchasing energy efficient heating appliances (sub-component 1).

14. The Programme impact potential is reasonable taking into account its 10-year term.

## 1.2 Paradigm shift potential

*Scale: N/A*

15. The Programme is expected to support a shift in household behavior towards adoption of energy efficient technologies by improving access to finance and energy efficient solutions. Households will benefit from analyses of their home's energy consumption and areas of improvement through information dissemination and community-level workshops to be financed by GCF grant.

16. The AE expects the Programme to help accelerate development of a standardized national energy efficient labeling system for consumer goods by the Ministry of Environment and Tourism. An established labeling system will encourage manufactures and distributors to invest in developing and producing energy efficient products suitable to Mongolia.

17. The Programme will support development of financial products for energy efficient solutions in the financial sector in Mongolia as knowledge and expertise accumulated during the Programme implementation will be disseminated through the Mongolian Bankers Association.

18. The independent Technical Advisory Panel (TAP) confirms that the Programme's paradigm shift potential exists but could be enhanced if formal dialogue with the government offices is established and carried out periodically during the implementation to share lessons learned and to help integrate the Programme's initiative and achievement in the government climate change strategy.

## 1.3 Sustainable development potential

*Scale: N/A*

19. The Programme will contribute to ease air pollution in Ulaanbaatar, where air pollution levels are among the highest in the world during the long cold season. The presence of particulate matter 2.5 (PM 2.5) is the result of coal-fired power plants and individual coal-fired stoves used to heat homes. The city air pollution is the major contributor to 10 per cent of deaths in the city.<sup>1</sup> The Programme has the potential for social development improvements in terms of health and safety as well as for broad economic development.

20. The Programme promotes private sector development and access to finance. Energy efficient equipment suppliers and housing contractors are primarily private sector entities, which can be benefitted by new business opportunities to be generated by the Programme. Their technical and financial capacity is expected to be enhanced as energy efficient appliances and housing are promoted in Mongolia. The Programme further enables households to have access to concessionally priced financing to purchase energy efficient appliances and construct energy efficient houses in Mongolia. The AE aims to provide 30 per cent of energy efficient housing loans disbursed to women households.

21. The independent TAP views that the Programme will contribute to sustainable development in Mongolia.

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<sup>1</sup> Allen, R.W., Gombojav, E., Barkhasragchaa, B. et al. Air Qual Atmos Health (2013) 6: 137. doi:10.1007/s11869-011-0154-3

## 1.4 Needs of the recipient

*Scale: N/A*

### **Financial, economic, social and institutional needs**

22. Air pollution levels in Ulaanbaatar are among the highest in the world during the long cold season, causing 10 per cent of deaths in the city. Coal-fired power plants and individual coal-fired stoves used to heat homes are the emitters of PM 2.5. By improving energy efficiency of heating appliances and houses, the Programme will contribute to ease air pollution in Ulaanbaatar.

23. Commercial bank loans in Mongolia carry high interest rates and are of a short tenor. Consumers do not afford energy efficient products and technologies with higher upfront costs despite their health and environment benefits in the long run. Therefore consumers remain focused on purchases that keep costs low in the short term. With concessionally priced loans, the Programme will incentivize households to afford and purchase energy efficient appliances and construct energy efficient houses. The Programme will also offer households workshops and technical advisory to enhance awareness and disseminate knowledge of energy efficient products and technologies.

### **Absence of alternative sources of financing**

24. There are financial products offered by private sector banks in Mongolia targeting energy efficient measures including heating, insulation and wastewater products. In addition, Mongolian Green Financing Corporation, a private finance institution, is being established to supply concessional financing for energy efficient heating and housing products to businesses and households served by commercial banks.

25. The concessionality enabled by GCF financing will reduce pricing to be offered to households availed to the Programme compared to that currently available in the market. In Mongolia, consumers loans carry high interest rates and come with relatively short tenor. With limited knowledge and access to energy efficient solutions, households give little consideration to the long term cost saving potential and health and environmental benefits of energy efficient solutions when they purchase appliances or construct houses. According to the AE assessment, the Programme, with GCF concessional loan, will incentivize households to consider and prefer energy efficient heating appliances and houses to those conventional and cheap but of low efficiency.

26. The Programme aims to promote energy efficiency in heating appliances and housing to support the Government efforts to reduce GHG emission as committed in its intended national determined contribution (INDC) and ease severe air pollution in Ulaanbaatar. A lack of proper financial incentives, financial resources, and high upfront costs are assessed as financial barriers in enhancing energy efficiency in the residential sector. Although similar financial products exists in Mongolia, they carry a market based interest rate, which is insufficient to incentivize financially householders to purchase energy efficient appliances or construct energy efficient houses. Accordingly, the independent TAP views that the needs of recipient for the Programme is certain.

## 1.5 Country ownership

Scale: *N/A*

### **Existence of a national climate strategy and coherence with existing plans and policies**

27. The Programme supports Mongolia's INDC outlining a target of 14 per cent reduction in national GHG emissions. To achieve the target, INDC indicates a reduction of building heat loss by 20 per cent and 40 per cent against 2014 levels by 2020 and 2030 respectively. Furthermore, the Ulaanbaatar City Master Plan identifies a need for individual-level solutions and land readjustment projects in the aspirational "improved" ger area.

### **Capacity of accredited entities and executing entities to deliver**

28. The AE, concurrently the executing entity, provides business loans for energy efficiency and renewable energy solutions with a SME portfolio of about USD 15 million. The AE also participated in the "Energy Efficient Product Distribution Program", which enabled ger-area residents to purchase energy efficient coal stoves, ger blankets, and vestibules with an 80-90 per cent subsidy.

29. In 2010-2012, the AE extended 103 energy efficient housing loans under a United Nations Development Program (UNDP) Building Energy Efficiency Project. The mortgages are subsidized and extended to energy efficient houses targeted households living in ger districts of Ulaanbaatar. The project supported newly built energy efficient houses and energy efficient housing retrofits. The total disbursement reached around USD 158,000 with a lifetime emission reduction of 150,400 tCO<sub>2</sub>eq.

### **Engagement with national designated authorities, civil society organizations and other relevant stakeholders**

30. The AE has undertaken stakeholder engagement in preparing the Programme. The stakeholders include the government agencies including the Ministry of Environment and Tourism (the National Designated Authority), Energy Regulatory Committee, and Ulaanbaatar Municipal Government. Community awareness raising events will be organized to disseminate knowledge about energy efficient appliances and housing solutions during the Programme implementation. A no-objection letter is issued by the national designated authority and attached to the funding proposal.

31. The independent TAP acknowledges the country ownership of the Programme.

## 1.6 Efficiency and effectiveness

Scale: *N/A*

### **Cofinancing, leveraging and mobilized long-term investments**

32. The GCF loan of USD 9 million is cofinanced equally by the AE with the same tenor of 10 years. In addition to USD 1 million grant from GCF, a USD 2.5 million grant is provided by GERES, the AE programme partner. Accordingly, GCF funding of USD 10 million in total is expected to achieve a cofinancing ratio of 1 to 1.15, which is moderate but justifiable given the nature and size of the Programme intervention.

### **Application of best practices**

33. The GERES, in a partnership with the AE, will engage in energy efficient housing insulation retrofit activities. The GERES has initiated the SWITCH ASIA II project in Ulaanbaatar to alleviate air pollution caused by unsustainable housing and heating. The GERES will provide technical advisors to perform pre- and post-insulation retrofit energy usage monitoring to verify project impacts for the first four years of the Programme. The AE will be responsible for the subsequent monitoring and verification during the Programme life.

34. The AE believes that a similar initiative can not be implemented unless concessional funding is available after the Programme. However the Programme will generate knowledge and awareness of energy efficient solutions in Mongolia.

### **Financial viability**

35. The AE assumes credit risks of household borrowers of the Programme. It is the contractual obligation of the AE to repay the GCF concessional loan in accordance with funded activity agreement. Nevertheless, the AE confirmed that the Programme will be financially viable and sustainable with GCF concessional funding.

### **Cost effectiveness and efficiency**

36. As per the AE, the Programme delivers CO<sub>2</sub> emissions reduction of 469,574 tCO<sub>2</sub>eq with 15,278 direct beneficiaries in its 10-year program life. Estimated cost per tCO<sub>2</sub>eq to be removed with the total amount of the Programme is presented as USD 38.33 while that of GCF contribution is USD 19.17. Both estimations do not include grant component.

37. With respect to each sub-component, estimated cost per tCO<sub>2</sub>eq varies significantly among activities. Financial assistance for energy efficient heating appliances is estimated to achieve the lowest cost per tCO<sub>2</sub>eq at USD 9.56 (and USD 4.78 for the GCF contribution). The cost of the energy efficient housing insulation retrofit is estimated moderately at USD 50.38. However that of energy efficient housing construction is as high as USD 130.46.

38. Overall, the independent TAP views the Programme's effectiveness and efficiency as "moderate".

## **II. Overall remarks from the independent Technical Advisory Panel**

39. The Programme includes financial assistance for households (i) purchasing energy efficient appliances, (ii) implementing energy efficient housing insulation retrofit, and (iii) constructing energy efficient houses. It is in line with Mongolia's INDC, which includes a reduction of building heat loss by 20 per cent (by 2020) and 40 per cent (by 2030) against 2014 levels. By improving energy efficiency of heating appliances and houses, the Programme will contribute to ease air pollution in Ulaanbaatar, where air pollution levels are among the highest in the world during the long cold season. A Technology Needs Assessment (2013) identified a lack of proper financial incentives, financial resources, and high upfront costs as financial barriers for improvement of insulation of residences.

40. The Programme enables households to have access to concessionally priced financing to purchase energy efficient appliances and construct energy efficient houses in Mongolia. It will also support development of financial products for energy efficient solutions in the financial sector in Mongolia. The AE aims to provide 30 per cent of energy efficient housing loans disbursed to women households. As per AE estimation, the Programme will be financially viable and sustainable with GCF concessional funding.
41. Provision of concessionally priced loans to energy efficient housing construction represents 68 per cent of the total Programme except grants. Two local construction contractors are shortlisted by the AE to be eligible based on their track record in energy efficient housing in Mongolia. Their track record remains recent, however. A contractual structure to ensure the contractors is incentivized to construct and deliver houses of the agreed energy efficient performance is essential. It is a norm to hold retention money to be released to the contractor subject to the third party independent assessment. Proper financial protection (or legal remedy) should be provided to house owner as well to compensate its loss in the long term if houses constructed do not deliver energy efficiency to the extend as contracted.
42. Accordingly, the independent TAP recommends the Board to consider the proposed Programme as presented with the following conditions:
- (a) Prior to the first disbursement, the AE engages an independent technical advisor to undertake and submit to the GCF a feasibility study of the Programme's assistance for the implementation of sub-component 1.2 (EE housing). The study shall include: the assessment and confirmation of the technical capacity of the construction contractors to be eligible under the Programme. Such assessment shall include the contractors' track records in designing and constructing EE houses, an analysis of price competitiveness of the EE houses built by the contractor against ordinary houses widely built (presumably non EE) in the market to ensure the price of EE houses are reasonable and competitive, and a methodology for quality control adopted by the contractor including procedure and steps to be followed during and post construction;
  - (b) Within one month after the first cooperation agreement is signed, the AE submits:
    - (i) A copy of the agreement;
    - (ii) A legal opinion by AE legal office confirming that the cooperation agreement(s) between the AE and the eligible contractor(s) is/are effective and legally binding. Such agreement(s) shall include the right of the AE to receive an indemnification from the contractor(s) equivalent to the balance between the interest rate applied by the AE in its ordinary mortgage loan for non EE housing construction and the interest rate of the proposed concessionally priced loan for EE housing construction;
    - (iii) A confirmation that the beneficiaries (house owners) are financially protected and compensated under the Programme in case the house constructed by the contractor does not deliver energy saving to the level agreed by the contractor and AE (i.e. 40 per cent); and
  - (c) Before the second disbursement, the AE submits the GCF a plan indicating the necessary arrangements to be undertaken by the AE with the governmental authorities to the creation and implementation of an effective system to measure the Programme's aggregated impacts, which shall be added to the Nationally Appropriate Mitigation Actions.

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## Reply to the Independent Technical Advisory Panel assessment findings (SP003)

Proposal name: Energy Efficient Consumption Loan Programme

Accredited entity: XacBank LLC

<b>Impact potential</b>
Thank you for the comments. We are in agreement and have no suggested edits or clarifications.
<b>Paradigm shift potential</b>
Thank you for the comments. We are in agreement and have no suggested edits or clarifications.
<b>Sustainable development potential</b>
Thank you for the comments. We are in agreement and have no suggested edits or clarifications.
<b>Needs of the recipient</b>
Thank you for the comments. We are in agreement and have no suggested edits or clarifications.
<b>Country ownership</b>
Thank you for the comments. We are in agreement and have no suggested edits or clarifications.
<b>Efficiency and effectiveness</b>
Thank you for the comments. We are in agreement and have no suggested edits or clarifications.
<b>Overall remarks from the independent Technical Advisory Panel:</b> Thank you for the comments. We are in agreement and have no suggested edits or clarifications.

## XacBank

### Mongolia: Energy Efficient Consumption Loan Programme

#### Gender Assessment

##### I. Introduction

This assessment aims to provide an overview of the gender situation in Mongolia, identify gender issues that are relevant to the program, and examine potential gender mainstreaming opportunities given the scope of the program. The assessment was based on available data from studies conducted by various international organizations, all of which are cited in the relevant text. The full text of these studies can be provided upon request.

##### II. Existing Gender Inequality

Numerous comprehensive studies on the state of gender inequality in Mongolia have been conducted. In 2017, the World Economic Forum's Global Gender Gap Index ranked Mongolia 53 out of 145 nations for its gender gap (a higher ranking represents a lower gap between men and women in that country). The ranking takes into account economic, political, educational, and health factors. Significantly for this proposal, Mongolia ranked 20<sup>th</sup> in terms of economic participation and opportunity for women. Mongolia also ranked alongside other nations as first for having no gap in the health and safety of women. Mongolia, however, ranked lower on educational attainment (65<sup>th</sup>) and was particularly low in the category of political empowerment (107<sup>th</sup>). While these rankings are relationally useful, they do not provide full details of the Mongolian gender context.

The Swiss Agency for Development and Cooperation conducted a Gender Overview of Mongolia in 2014. This report provides more details about the Mongolian gender context. The major findings of this report are as follows:

###### a) Regulations

- Mongolia's regulatory framework for gender equality is relatively strong. Mongolia fully supports international human rights standards and is a signatory to all major international instruments pertaining to women's rights and gender equality. National legislation is comparatively comprehensive.

###### b) Labor

- Pronounced gender bias exists in the division of labor between men and women, and the labor market is highly occupationally segmented by gender. Although women play a major role in the economy, they continue to lag behind in labor relations. The most feminized employment sectors are those that are typically paid through state budgets and have the lowest salaries. Female employees are concentrated in sectors that are economically static and low paid, such as education, health care, social services and culture.
- The factors that restrict women from participation in economic activities or restrict women to employment in static and low paid work include: high enrolment rates of female students in tertiary education, larger numbers of women engaged in household activities and childcare, and the fact that women retire earlier than men (UNDP, 2014) (i.e. at the age of 55 in contrast to 60 for men). Another factor contributing to the labor force participation gap is the differences in self-employment opportunities for men and women, with the only alternative occupation open to women being wage work whereas men are twice as likely to be self-employed, and thus accrue additional financial mobility.

- In addition to these factors which restrict sector mobility, women's household responsibilities restrict participation in paid, economic activities. Unpaid care work, a lack of childcare facilities and other social rights may play a significant role in women's non-participation in the labor force and in their employment patterns. Free or affordable childcare is limited in Mongolia given an insufficient number of state-owned kindergartens nationwide. To some extent, this limits women's opportunities to re-enter the labor market after having children, as they must stay at home to care for the child.
- Another factor is the lack of legal support for paternity leave. There is no legislation in Mongolia that allows for paternity leave and requires employers to pay wages for paternity leave (IFC-World Bank, 2013). While jobs in mining and construction are high-paying, the lack of enforcement of labor standards and safety measures has resulted in high levels of workplace deaths and accidents, increasing the number of males who are long-term unemployed due to disability. This has increased the number of female-headed households and women's economic burden, compelling both women and children to accept exploitative and high-risk forms of employment (Purevjav, 2010).
- There are gender remuneration gaps in Mongolia. There are persistent patterns of direct and indirect discriminatory practices against women in regard to recruitment and equal pay.
- According to the World Bank Qualitative Study of Constraints Underlying Gender Disparities in Mongolia's Labor Market, "the perception that employers' attitude is that people over 40 are "too old" to be employed causes pessimism among jobless women and men and impacts their willingness to do job seeking. The perception that without outside support they may have no chance to get a real job causes them to ask whether the government might be able to help them out. Here, many men as well as women request financial support programs that enable them to start their own small businesses. Many women want to have their own shops where they can sell products, especially those they have tailored or made on their own or that have been made by other women in the neighborhood. They like the idea of being linked with other women to help one another. Men tend to focus on farming and planting vegetables or owning handcraft services. While they too often want to have their own small businesses, they sometimes tend to hesitate to cooperate with others."

c) Decision-making

- Political empowerment remains one of the weakest indices of Mongolia in terms of gender equality. Women continue to be underrepresented at political decision-making levels. In 2017, only 17.1 percent of parliamentary seats are held by women. Gender stereotypes are common among the general public in Mongolia.
- The participation of women in decision making also lags in non-political and non-urban settings. Male preference is still common among herders, strongly influencing their behavior, as revealed in a small-scale gender assessment conducted by MCA-Mongolia. According to the qualitative study findings, when it comes to the selection of group leaders, it was common among both male and female herders to believe that men were stronger than women both mentally and physically, and that men had a greater capacity to improve people's livelihoods than women. Men were the heads of households and thus could function as political leaders; both male and female herders believed that men were better mentally suited and possessed more knowledge than women; and being a leader was a job better suited to man (MCA-Mongolia; Begzsuren, Tsolmon 2013d).
- The Swiss Agency's report concludes that "In the public or private sphere, from the highest government decision-making levels to households, both rural and urban women continue to be denied equal opportunities to participate in the decisions that affect their

lives (United Nations 2013).“

d) Domestic Violence

- Domestic violence is a serious problem for women in Mongolia. The National Center against Violence estimated in 2010 that one in three women in Mongolia was a victim of domestic violence and one in 10 was a victim of battery. High rates of alcoholism and unemployment amongst middle aged men are cited as a contributing factor of this epidemic.

e) Education

- Gender equality in education attainment is Mongolia's highest indicator. According to the latest gender gap index report, Mongolia's index for women's and men's access to education was 0.995. (World Economic Forum 2013, 285). Unlike other Asian countries, girls in Mongolia are far more likely to attend school, particularly among older age groups (Coulombe and Altankhuyag 2012).
- Indeed the commonly held beliefs are in favor of educating girls. Mongolians believe that men can, in the worst case scenario, make a living through physical labor and herding. But women must have an education to rely on in difficult times. Therefore, in the case of limited resources, the commonly held beliefs/rationale favor educating women over men.
- However, there are considerable differences related to educational attainment and quality depending on the level of education (primary, secondary, tertiary), age group, geographical location, and social group (such as people with disabilities, herders, minorities). Tables 11 and 12, extracted from the Swiss Agency report, illustrate the female-to-male ratio in primary, secondary and tertiary education, as well as the percentage of school attendance among different age groups.

f) Culture

- “Mongolian culture exhibits collectivistic cultural characteristics: it is family-oriented with a strong cultural identity and cohesiveness. Women have been participating in all activities related to this way of life as well as in taking decisions about family businesses. Today, family ties still play a significant role. Many of the businesses are established as family businesses or with the support of family members. Even if a woman is not an owner, she nevertheless takes an active part in key family decisions
- Another factor that has played a role in the high social status of women in Mongolia is the equality in education and social rights granted to women during the communist era from 1924 to 1990. After the collapse of the communist system, Mongolia witnessed a rise in women's social status as many of women started their own businesses and now perform the same jobs men do.

Table 1: Gender Gap sub-index - Educational attainment<sup>1</sup>

	Rank	Score	Sample average	Female	Male	Female-to-male ratio
Educational Attainment .....	49	0.995	0.934			
Literacy rate .....	1	1.00	0.87	98	97	1.01
Enrolment in primary education.....	89	0.99	0.92	98	99	0.99
Enrolment in secondary education.....	1	1.00	0.60	79	74	1.06
Enrolment in tertiary education.....	1	1.00	0.87	69	46	1.49

Table 2: Girls and Boys Ratio<sup>2</sup>

Indicator	National Average		
	Male	Female	Total
School Attendance among the 6 to 9 age group (in %)	97.0	97.6	97.3
School Attendance among the 10 to 14 age group (in %)	96.0	97.7	96.8
School Attendance among the 15 to 19 age group (in %)	75.3	83.6	79.3
School Attendance among the 20 to 29 age group (in %)	14.3	17.3	15.8

As summarized in the 2008 Global Monitoring Report, the gender differences in education can be attributed to several factors. The most severe challenges include (Steiner-Khamsi and Gerelmaa 2009, 409): Poverty; Internal migration from rural to urban areas; Neglect of students with special needs; Inverse gender gap (since 1995, more girls than boys are enrolled at all educational levels); Swift decline of vocational and technical education; Rapid expansion of higher education

g) Data Availability

- There is insufficient gender-disaggregated data at the national level in various sectors. According to a UNIFEM assessment conducted in 2006, Ministries do not disaggregate sectoral data by gender. In addition, gender dimensions are overlooked in the area of infrastructure in both the public and private sectors. Gender-based analysis and gender-impact assessments thus cannot be properly conducted in any sectors, resulting in ignorance of the gender gaps and constraints at the policy-making level.

### III. Legal and Administrative Framework Protecting and Promoting Gender Equality

<sup>1</sup> Source: The Global Gender Gap Report 2013, p. 285

<sup>2</sup> Source: Coulombe and Althankhuyag

Women's economic empowerment is supported by a favorable legal and regulatory environment in Mongolia, on both an international and national legislative level. A number of legal documents contain more specific provisions on gender equality. Legal documents particularly relevant with regard to gender and the labor market include the Law on Promotion of Gender Equality (passed in 2011), the Labor Law of 1999, the Employment Promotion Law (2011, amended 2016), the Law on Education (2002, amended 2006), the Law on Pre-school Education (2008, amended 2016), the Law on Social Welfare (2012), and the Law on Child Care Services (approved in 2015 but not yet implemented).

On an international level, Mongolia is signatory to international instruments pertaining to women's rights and gender equality, including the following:

- Universal Declaration of Human Rights
- International Covenant on Economic, Social and Cultural Rights
- International Covenant on Civil and Political Rights
- Convention on the Political Rights of Women
- Convention on the Elimination of All Forms of Discrimination Against Women
- Convention on the Elimination of All Forms of Racial Discrimination
- Convention on Improvement of the Situation of Women in Rural Areas
- Convention on the Rights of the Child
- United Nations Convention against Transnational Organized Crime and its Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children
- ILO conventions on equal remuneration and discrimination with respect to employment and occupation
- Convention on the Rights of Persons with Disabilities
- Convention Against Discrimination in Education
- Maternity Protection of ILO Convention 103
- Worst Forms of Child Labor Convention 182 and Recommendation 190
- Optional Protocol to the Convention on the Rights of the Child on the Sale of Children, Child Prostitution and Child Pornography
- Equal Remuneration Convention

Mongolia's Constitution enshrines basic principles of gender equality and prohibits gender-based discrimination. According to the Law on Promotion of Gender Equality, Article 16 it stipulates that "men and women have equal rights in the political, economic, social, and cultural life and family relations." Furthermore, Article 14 stipulates that "everyone shall be free from any type of discrimination based on his/her ethnicity, language, race, age, sex, social status, wealth, employment, position, religious belief, viewpoints and education level." In addition, civil law guarantees women's labor rights and women's right to property ownership and inheritance. This legal framework creates an enabling environment not only for women as individuals but also for women-led enterprises. As the Swiss Development Agency report writes, "the regulatory framework for gender equality is relatively strong in Mongolia. Gender equality, protection from any violation of rights, equal and fair participation, and social justice for women, men, girls and boys have been enshrined in the National laws" A summary of these national laws can be found in Addendum 1.

#### **IV. Women and access to finance**

Access to finance for starting a business, or taking out loans from financial institutions depends on the availability of appropriate collateral, and in Mongolia for a long time only real estate was

accepted as collateral by financial institutions (although recently some financial institutions have begun to accept certain movable assets as well). However many unemployed men and women often lack collateral. In the focus groups conducted by the World Bank, some women explained that the only time they had to accrue any savings was when they were young and could go abroad or take every job they were offered because they had no family and no family duties. Because of long-term unemployment or certain periods women have to drop out of the labor market because of child care, some families have to live from their savings and have no chance to start their own business.<sup>3</sup>

Lack of access to finance and other barriers when starting their own businesses, or taking out any type of loan is the primary constraint for women. Women in particular tend to worry about the financial security in the future and sometimes to a large extent rely on financial support in the form of social welfare from the government. “The government’s most important program for financial support in the form of social welfare is the Child Money Program. Until recently, Mongolia was one of the few developing countries in the world with a universal and relatively generous child allowance, the Child Money Program. For every child below age 18, the family was entitled to an allowance of 20,000 MNT per month. Recently, eligibility for the Child Money Program was reduced to the lower 12 out of 20 economic welfare categories (each of which capture 5 percent of the population as determined by Mongolia’s implementation of the proxy means methodology described for instance in Onishi and Chuluun, 2013). In other words, only 60 percent of children (and around 50 percent of households) are now eligible for the Child Money Program. Many of those who received the Child Money Program up until now said they have been saving this money for the purpose of getting their children a good education. Based on this experience, the new regulations regarding eligibility for the Child Money Program were by some discussed as being advantageous only for the “really poor people” but not for those middle-class families that are also struggling to make ends meet.”<sup>4</sup>

According to the World Bank Report, Female led households often run the risk of ending in poverty, that is, they not only have to endure bad living conditions and lack of financial options, but they also suffer from social withdrawal because they are socially excluded from the society due to the burden of caring for the children. “Work therefore not only has a financial dimension for this group but also a socially integrative one. To get them permanent jobs will require employers who understand the different obligations single mothers have and the limited social networks they are part of. Affordable and good-quality childcare institutions, not only for smaller children but also for children attending schools, seems to be absolutely necessary to give those women the possibility of work full-time and satisfying employer demands.”

## **V. Women and Health**

In recent years, there has been rise in respiratory disease among the urban population. The impact of air pollution on vulnerable groups calls for urgent action to prevent and treat health problems among women, children and the elderly to reduce the extremely high levels of toxic air. Not only does the pollution affect the vulnerable groups, but it has severe consequences to the young and unborn children. According to the research conducted by UNICEF in February 2018 Mongolia’s Air Pollution Crisis, “Air pollution has become a child health crisis in Ulaanbaatar, putting every child and pregnancy at risk. The risks include but are not limited to stillbirth, preterm birth, lower birth weight, pneumonia, bronchitis, asthma and death. There is also emerging

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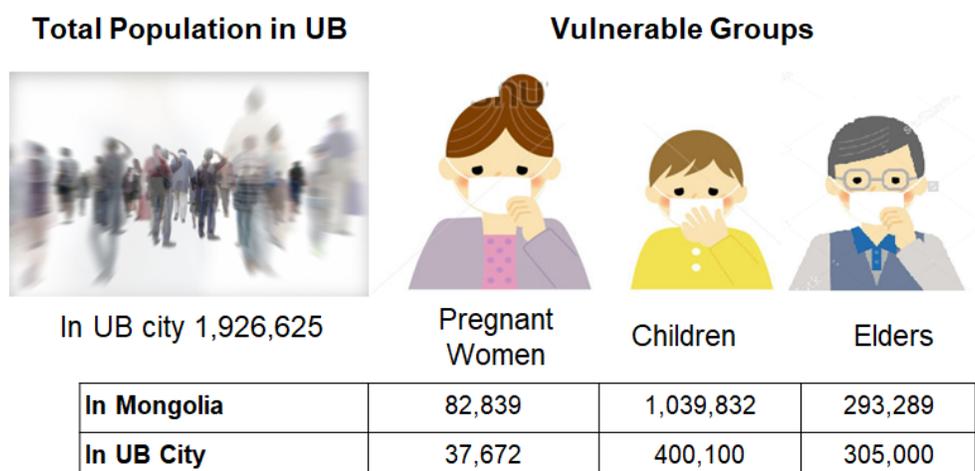
<sup>3</sup> Source: Perceptions of Precariousness: A qualitative study of constraints underlying gender disparities in Mongolia’s labour market.

<sup>4</sup> Source: Perceptions of Precariousness: A qualitative study of constraints underlying gender disparities in Mongolia’s labour market.

evidence that air pollution is linked to impaired cognitive development, already occurring during pregnancy and a child’s early years. Furthermore, these children will be at higher risk from chronic health problems later in life”.

Various surveys conducted by the government show that since 2005 incidences of respiratory and cardio-vascular diseases, particularly for senior citizens and children living in the ger districts where levels of pollution are at the highest, have increased. This implies a link with the increasing severity of urban pollution. In 2005 there were 697 registered incidences of respiratory diseases per 10,000 population, increasing to 1,730 in 2014, a multiple of 2.4. In 2005, there were 494 incidences of cardiovascular diseases per 10,000 population, which by 2014 had doubled to 980. Excessive air pollution is also known to have adverse impacts on pregnant women and in recent years there has been an increase in fetal oxygen deficiency, miscarriage, stillbirth and low-weight new born babies. Young children are particularly vulnerable to the many adverse effects of toxic air pollutants. In fact, exposure to air pollution during the pregnancy is associated with ‘low or reduced birth weight, small size for gestational age, preterm and stillbirth. Research suggests that prenatal exposure to high levels of air pollution affects childhood mental health. This can increase the risk of such conditions as attention deficit hyperactivity disorder, symptoms of anxiety, depression and inattention, and behavioral disorders. Studies show that these conditions inhibit the development of a child’s self-regulating behaviors and social competency. Levels of air pollution in Ulaanbaatar are likely to be causing significant health complications for pregnant mothers and, especially, children in the prenatal and neonatal stages. While EE Consumption Loan Programme is targeted mainly at reducing carbon emission, an important co-benefit is the potential to improve both indoor and outdoor air quality via the reduced usage of household coal stoves and the option to include air purifier packages to supplement the primary loan purchase. This will directly benefit vulnerable population living in ger area and indirectly influence overall population of Ulaanbaatar city.

Figure 1: Air pollution in Ulaanbaatar: vulnerable population



If no immediate action is taken to reduce the levels of air pollution, the direct financial cost of treating air pollution attributable diseases in children is expected to increase considerably. Based on the estimates made by the authors of this report, the impacts are as follows: “inaction would lead to an increase in the costs of treating air pollution-induced diseases in children of 33% between 2017 and 2025, costing health providers at least MNT 4.8 billion [US\$ 2 million] extra per annum by 2025. This means that the costs of not reducing air pollution levels to the National Programme for Reducing Air and Environmental Pollution (NPRAEP) target levels would amount to a total of MNT 24.5 billion [US\$ 10.2 million] over the 2017–2025 period to the Ulaanbaatar City health system alone. In nonmonetary terms, inaction against air pollution translates into an additional burden to the health sector of an estimated 1.2 million hospital days and 145,000 outpatient consultations among children alone over the period 2017-2025 – all for air pollution-attributable diseases and impaired development. When indirect costs are considered, estimates escalate significantly. In addition to estimating direct costs, this study also estimates the value of lost productivity of parents caring for sick children. When taking this variable into account, the estimated projected cost of inaction increases to MNT 43.3 billion [US\$ 18 million] for the period 2017–2025.”<sup>6</sup>

The proposed Programme’s focus on decreasing air pollution will lead to improving living condition especially households living in ger area. In addition, this will also result living condition improvement for households living outside of ger area due to city-wide air quality improvement. During the winter months the outdoor temperature outdoor is regularly below minus-20 degrees Celsius, requiring household coal stoves to be fired continuously (due to poor building envelopes which leads to immediate temperature drops when the stove is turned off) and cold nighttime conditions for families when the stove burns out. Especially vulnerable population groups include pregnant women, newborns and infants, children, and the elderly, who all tend to experience increase health complications due to pollution. Switching from a coal-fired stove to an electric heater will enable households to achieve constant warm indoor temperatures during heating season without having to inhale indoor particulate matter.

UNICEF has determined that the three diseases that resulted in the most lost life years in 2013 were directly related to air pollution, leading to it being the driver of 10% of mortality in the city. The health impacts are most prevalent in vulnerable populations, namely the young, the elderly, and pregnant women. It is estimated that 435 children under five years of age die annually from Acute Lower Respiratory Infections (ALRI) caused by pollution, while more than 12,000 annual adult deaths are attributable to such illnesses associated with exposure to PM<sub>2.5</sub>. Other impacts include neurodevelopmental disorders among children.<sup>7</sup> The paradigm shift initiated by household EE investments has potential to significantly reduce to health risk of living in Ulaanbaatar, ultimately lowering health care costs and driving improved socioeconomic outcomes for direct beneficiaries.

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<sup>6</sup> Source: “Mongolia’s air pollution crisis: A call to action to protect children’s health”, UNICEF, February 2018

<sup>7</sup> Source: Jadambaa, Amarzaya , BSc, MPH; Jeffery Spickett, MSc, PhD; Burmaajav Badrakh, PhD, DSc; and Rosana E. Norman, PhD. “The Impact of the Environment on Health in Mongolia .” *Asia Pacific Journal of Public Health* 27.1 (2014): 45-75. p.47.

## ***Air pollution vulnerability***

According to the World Health Organization (WHO), in 2016 Ulaanbaatar surpassed both Beijing and New Delhi as the capital with the highest levels of air pollution in the world.<sup>8</sup> The city is the main location of the EE Consumption Loan Programme and is home to half of Mongolia's population. Numerous studies have linked air pollution to numerous health and environmental issues. In Ulaanbaatar, children and pregnant women's health risks have almost reached a crisis level due to air pollution. In 2017, Ulaanbaatar's annual average for particulate matter (PM) 2.5 was significantly higher than WHO guidelines for average annual exposure, sometimes reaching 133 times the recommended average 24-hour exposure level.<sup>9</sup> Approximately 9%, 12%, 24%, and 60% of Ulaanbaatar's NO<sub>2</sub>, PM<sub>10</sub>, SO<sub>2</sub>, and CO<sub>2</sub> emissions, respectively, stem from the city's ger area.<sup>10</sup> Thus, the health impacts of air pollutant exposure (e.g., cancer, lung disease, mental deficiencies, and high mortality rates due to cardiovascular conditions) can be reasonably expected to be concentrated in at-risk population groups (e.g., young children, pregnant women, and the elderly) in the ger area itself.<sup>11</sup> Studies indicate one out of every ten deaths in the city is directly attributable to poor air quality.<sup>12</sup>

In last 10 years, incidences of respiratory diseases in Ulaanbaatar have increased dramatically. Cases of respiratory infections have nearly tripled and pneumonia is now the second leading cause of death for children under five years old. Children living in the highly polluted district of central Ulaanbaatar were found to have 40 per cent lower lung function than children living in rural areas. In addition to health issues, emerging evidence suggests that breathing in particulate air pollution can damage brain tissue and undermine cognitive development in babies and young children – leading to lifelong implications and setbacks. “Reducing air pollution levels is the only long term sustainable solution to protecting children's health. In the meantime, thousands of children will continue to suffer unless urgent action is taken. We need urgent investment in cleaner and more efficient energy, immediate reduction in children's exposure, better treatment to children affected by diseases, and support children's overall health to reduce their vulnerability to air pollution“.

Air pollution is not only a major problem to individual children and their families, but to the country as a whole, threatening Mongolia's human capital and the future economy. Children and pregnant women living in the ger area are the most exposed to the highest level of air pollution because most of the pollution is generated from using solid fuels used to heat the dwellings. Their overall health condition is often relatively low, making them more vulnerable to air pollution.<sup>13</sup> Their access to good and affordable health care is often limited. Based on the estimates made by UNICEF Mongolia, the financial cost of treating air pollution attributable diseases in children will increase by 33% between 2017 and 2025, amounting to MNT 4.8 billion (US\$ 2 million) extra per annum by 2025. This means MNT 24.5 billion (US\$ 10.2 million) will be spent in next seven years. When indirect costs are considered including the value of productivity

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<sup>8</sup> Source: [Mongolia's Air Pollution Crisis: A call to action to protect children's health, UNICEF, February 2018](#)

<sup>9</sup> Source: [Mongolia's Air Pollution Crisis: A call to action to protect children's health, UNICEF, February 2018](#)

<sup>10</sup> Source: Green Development Strategic Action Plan for Ulaanbaatar 2020

<sup>11</sup> Jadambaa, Amarzaya, et. al., "The Impact of the Environment on Health in Mongolia." *Asia Pacific Journal of Public Health* 27.1 (2014): 45-75. Table 3.

<sup>12</sup> Source: RW, Allen, et. Al., "An assessment of air pollution and its attributable mortality in Ulaanbaatar, Mongolia." *Air Quality, Atmosphere, and Health* (2013)

<sup>13</sup> Mongolia's air pollution crisis: A call to action to protect children's health, UNICEF Mongolia, 2018, Ulaanbaatar

loss of parents caring for sick children, the cost of not reducing air pollution estimated to be MNT 43.3 billion (US\$ 18 million) between 2017 and 2025.

Per the UNDP's 2016 Human Development Report, Mongolia has made significant and steady progress in human development in recent years.<sup>14</sup> However, the share of the bottom 20% of the consumption distribution in the population has not changed over the last 20 years. Thus, while the economy is growing, inequality has not narrowed. More than one fifth of Mongolians continue to live below the poverty line. Life expectancy at birth is low at 69.8 relative to its level of economic development compared to other Asian countries such as China (75.99) and Japan (83.84).<sup>15</sup> However, women and men in Mongolia generally enjoy equitable access to health care and education, but children, pregnant women, and the elderly remain more vulnerable to Ulaanbaatar's health consequences and underserved in terms of options to reduce their vulnerability – a problem XacBank's programme seeks to alleviate.

Mongolia has a significant need of mobilizing resources to finance the adoption of air pollution interventions in a sustainable manner. The EE Consumption Loan Programme is well-suited for this need. Our programme aims to reduce solid fuel consumption by 1) making detached houses energy efficient, 2) replacing coal-fired stoves with EE heating solutions, and 3) encouraging people to buy hybrid vehicles over conventional vehicles. Making stand-alone houses energy efficient includes financing EE housing insulation retrofits as well as construction of EE housing.

The EE Consumption Loan Programme aims to promote gender-equitable funding access by ensuring pregnant women, children, and the elderly are core beneficiaries of the EE housing loan activity focus. By reducing particulate matter emissions both indoors and on an aggregate level, the health conditions for these vulnerable population groups will be improved. As such, XacBank intends to provide at least 30% of EE housing loans disbursed through the EE Consumption Loan facility to women-led households and at least 10% of the EE heating technology component loan portfolio will be targeted to women-led households. For this, gender disaggregated data will be assessed against the appropriate indicator to measure enhanced access for women to loans.

## **VI. XacBank's Gender Inclusion Practices**

XacBank promotes gender equality in two ways: in internal employment practices, and in external customer service.

- With regards to internal gender policy, XacBank is an equal opportunity employer as the bank currently employs 1,322 full-time employees, of which 850 are women (64.3%). On an executive level, 6 members of the 13 person executive management team are women. Moreover, across the organization, 47% of all managers at XacBank are women as of December 31<sup>st</sup>, 2017.
- In terms of external client-facing practices 55.7% of the banks clients were women/ women led enterprises as of December 31<sup>st</sup>, 2017.

In terms of external client-facing practices, in 2014 XacBank engaged IFC to conduct a review of XacBank's lending practices through a gender lens. The AE aims to ensure that the funding

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<sup>14</sup> Sinha, Saurabh, Enkhjargal Khorloo, and Gereltuya Altankhuyag. Mongolia Human Development Report 2016. Rep. Ulaanbaatar: United Nations Development Programme in Mongolia, 2016. Table 2.1, p. 37.

<sup>15</sup> Source: Mongolia Human Development Report 2016. [www.mn.undp.org](http://www.mn.undp.org)

proposal is in line with the GCF's Gender Policy and Action Plan by way of ensuring that women and men equally contribute to and benefit from activities supported by the funding proposal.

XacBank promotes lending to women entrepreneurs through thought leadership and social engagements, including:

- XacBank is a member of the Women's World Banking Network (WWB) and pledges to support the empowerment of women by delivering financial products and services. The WWB supports the empowerment of women by helping them access financial services, knowledge and markets through its expanding economic assets, participation and power of low income women.
- XacBank joined the Global Banking Alliance for Women in 2016. The alliance promotes the delivery of sustainable development for unserved people, communities, and the environment. The Global Banking Alliance for Women supports partners' joint mission of sustainable social and environmental change, and thought leadership and advocacy for social innovation in the financial sector.
- XacBank activated its Women Leadership club in 2016 with the aim to create a supporting environment to learn and connect with successful female leaders from various industries, inspire and motivate XacBank's female managers, build confidence, share knowledge and extend support. The club runs monthly events to continuously support women in managerial roles at XacBank, comprising 46% of total managers at the bank.
- XacBank has cooperated with the Asia Foundation Women in Business Center, Lean In Mongolia, and Women for change in 2017. The Eco Banking team had participated in trainings and seminars organized by Lean In Mongolia and to further increase women economic empowerment. Furthermore engagement activities are being planned with government gender-equity concerned entities, as well as other NGOs. In these meetings we would advertise our MSME Business Loan Program for GHG Emission Reduction and advise new prospective clients on how to become eligible to be a woman led enterprise.

XacBank's FP028, MSME Business Loan Programme for GHG Emissions Reduction aimed to promote gender equality in the implementation of the program as The GCF's Gender Policy and Action Plans ultimate goal was to ensure that women and men equally contributed to and benefited from activities supported by the fund. Gender disaggregated data has been assessed against the appropriate indicator to measure enhanced access for women to loans. The primary tenets of the Gender action plan were summarized as follows:

1. More than 50% of participatory MSMEs must be women-led from 3 years into the program until program completion
2. An SME qualifies as women-led if it fulfils one of the three below definitions:
  - a. Greater than 50% women's ownership
  - b. At least 30% of women in the Board of Director or in senior management positions
  - c. At least 40% of employees are women

## **VII. Recommendations**

In authoring this document, XacBank recognizes the particular gender environment in which this program is operating. Numerous recommendations are necessary given the above described gender context in order for XacBank's here proposed program to successfully reduce some of

these existing inequalities and comply with all national and international gender-related regulations. For information regarding the specific actions XacBank plans to take given the context, refer to the Gender Action Plan below, enclosed together with this gender assessment.

## XacBank

### Mongolia: Energy Efficient Consumption Loan Programme

#### Gender Action Plan

Activities	Indicators: Targets	Timeline*	Responsibilities	Budget
<p><b>Impact Statement:</b> Increased resilience of vulnerable communities including women, children and the elderly to the negative impacts of air pollution/climate change.</p> <p><b>Outcome Statement:</b> 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.</p>				
<b>Output 1: 30% of EE housing loans disbursed through the EE Consumption Loan facility to women-led households</b>				
<p>Develop outreach programs targeting women and women-led households with the cooperation of, including but not limited to, the following partner organizations:</p> <ul style="list-style-type: none"> <li>• Lean in Mongolia</li> <li>• Women's business center</li> <li>• Mongolian Women's Fund</li> </ul> <p>(ii) Implement knowledge-sharing and client recommendation practices with local women's economic empowerment NGOs</p>	<p>Loan data of clients disaggregated by gender.</p> <p>30% of EE housing loans disbursed through the EE Consumption Loan facility to women-led households</p> <p>XacBank will verify women-led households with a 2 step verification method:</p> <ol style="list-style-type: none"> <li>1) The applicant will fill in information on current family members in our loan application.</li> <li>2) A reference from the local government office (this is usually the state authority, where the person is registered by residency) is required to prove the above stated information is true.</li> </ol>	<p>Gender ratio achieved by 5<sup>th</sup> year of program operation and until program completion</p>	<ul style="list-style-type: none"> <li>• XacBank branch offices</li> <li>• Marketing department of XacBank</li> <li>• Lean in Mongolia</li> <li>• Women's business center</li> <li>• Mongolian Women's Fund</li> </ul>	N/A
<b>Output 2: Developing energy efficiency training/demonstrations for male and female-led households.</b>				
<p>The Bank will sponsor meetings/workshops and potentially, the supplier companies and NGOs working in ger area development. These workshops will target ger-area households on how to identify strategies to improve their dwelling's EE characteristics, with an emphasis on products eligible under the EE Consumption Loan Programme, specifically retrofitting</p>	<p>Total of 50 households participate in meetings &amp; workshops per year. Promoting gender equality by ensuring 50% of the participants are women-led households through gender disaggregated data</p>	<p>Gender ratio achieved by 5<sup>th</sup> year of program operation and until program completion</p>	<ul style="list-style-type: none"> <li>• GERES NGO</li> <li>• Basaltwool LLC</li> </ul>	<p>Detailed budget is incorporated in annex 3, Component 2, Output 2.1, Activity 2.1.2</p>

<p>best practices. This could include simple-to-use drawings and educational packets to enable households to make independent choices about dwelling improvements and EE investments.</p> <p><u>Total estimated households reached over programme lifetime:</u></p> <p>By mid-term (2023): Total of 250 households By project completion (2028): Total of 500 households</p>	<p><u>By mid-term (2023):</u> 125 women-led households (out of total 250 households) <u>By project completion (2028):</u> 250 women-led households (out of total 500 households)</p>			
<p><b>Output 3: Raising awareness for men and women-led households by creating case of EE Consumption Loan Programme clients</b></p>				
<p>Spread awareness on the gender diversity dimensions of the project, empowering both men and women through marketing and publicity strategies by developing case studies of clients that successfully acquired loans from the EE Consumption Loan Programme.</p>	<p>1 case study per year until programme completion.</p> <p>Ensure equal participation of men and women. Meaning at least 50% of the total case studies will be based on women-led households</p>	<p>1 case study each year until program completion (total of 10 case studies)</p>	<ul style="list-style-type: none"> <li>Marketing department of XacBank</li> </ul>	<p>Detailed budget is incorporated in annex 2, Component 2, Output 2.2 Activity 2.2.4</p>
<p><b>Output 4: Beneficiaries with improved access to low-emission energy efficient heating technologies.</b></p>				
<p>Improve access to low-emission energy efficient heating technologies to women-led household beneficiaries based on sex-disaggregated targets to demonstrate gender-related results from the project.</p> <p><u>Total number of loans designated for EE heating technology component:</u></p> <p>By mid-term (2023): Total of 1210 households By project completion (2028): Total of 2420 households</p>	<p>Loan data of clients disaggregated by gender.</p> <p>10%- of the EE heating technology component loan portfolio will be targeted to women-led households</p> <p><u>By mid-term (2023):</u> At least 121 women-led households <u>By project completion (2028):</u> At least 242 women-led households</p>	<p>Gender ratio achieved by 5<sup>th</sup> year of program operation and until program completion</p>	<ul style="list-style-type: none"> <li>XacBank branch offices</li> </ul>	<p>N/A</p>

Addendum 1: **Summary of National Laws Containing Gender-Equality Provisions**  
(extracted from the Swiss Development Agency report “Gender Overview – Mongolia, 2014  
which can be found in original form at  
<https://www.eda.admin.ch/content/dam/countries/countries-content/mongolia/en/SDC-Gender-%20Overview-Mongolia-%202014-EN.pdf> )

#	Name of legislation	How it addresses gender issues
1	Constitution of Mongolia (1992)	<p>Social reforms underway since 1990 have consolidated the rights of women, enshrined in the 1992 Constitution (MCA–Mongolia; ESOC 2011, 6). Article 16 of the Constitution of Mongolia institutes gender equality, stating:</p> <p style="text-align: center;"><i>Men and women have equal rights in the political, economic, social, cultural life and family relations.</i></p> <p>And it is stipulated in Article 14 that:</p> <p style="text-align: center;"><i>Everyone shall be free from any types of discrimination based on his/her ethnicity, language, race, age, sex, social status, wealth, employment, position, religious belief, viewpoints and education level.</i></p>
2	Law on Promotion of Gender Equality (2011)	This law specifically ensures gender equality in political, legal, economic, social, cultural and family relations, and regulates relations related to their implementation. It spells out the responsibilities of specific public agencies to ensure gender equality (Khan and Aslam 2013).
3	Criminal Code (as amended in 2008)	The Criminal Code contains several provisions to prevent crimes violating women’s rights. The Code’s “amendment which included a full definition of trafficking according to international standards is another milestone in the area of gender equality and protection of women’s rights” (Purevjav 2010, 203). Article 126 of the Code states that rape is illegal in Mongolia (The Advocates for Human Rights 2013).
4	Civil Code (2002)	Civil law contains a concentration of legal principles concerned with the regulation of civil life -affairs between private individuals and transactions undertaken between a public body and an individual are governed by civil law (Tseveen and Garbold 2006). It specifies that the “Citizens of Mongolia shall equally enjoy a civil law capacity equally, i.e. capacity to have the rights and duties of citizens” (Civil Code of Mongolia 2006). To illustrate, the law ensures that:

		<ul style="list-style-type: none"> <li>• Sons and daughters have equal inheritance rights to property - Civil Code, Art. 520</li> <li>• Female and male surviving spouses have equal inheritance rights to property - Civil Code, Art. 520</li> <li>• Unmarried men and unmarried women have equal ownership rights to property - Civil Code, Arts. 101.1 and 127.2</li> <li>• Married men and married women have equal ownership rights to property - Civil Code, Arts. 127.2 and 128.1</li> <li>• The law provides for the valuation of non-monetary contributions during marriage - Civil Code, Art. 126.4</li> </ul>
5	Labour Law (1999)	<p>The Law prohibits gender-based discrimination in employment and contains some sections protecting the rights of pregnant and nursing women. For instance:</p> <ul style="list-style-type: none"> <li>• Sections 7.4 and 7.5 - It is illegal for an employer to ask about family status during a job interview,</li> <li>• Section 100 -Penalises and prevents the dismissal of pregnant women.</li> <li>• Section 106 - Employers must give employees an equivalent position when they return from maternity leave .</li> <li>• Section 103 – Employers are required to provide break times for nursing mothers.</li> </ul> <p>However, the law does not allow non-pregnant and non-nursing women to undertake the same jobs as men (Labour Law, Sections 101 and 108), and does not mandate equal remuneration for men and women for work of equal value (Labour Law, Section 49).</p>
6	Law on Domestic Violence (2005)	<p>“The purpose of the law is to regulate all matters pertaining to protection against human rights violations, ensuring victims’ safety, holding perpetrators accountable, and regulating the participation of government and NGOs, citizens, economic entities and authorities in combating and preventing domestic violence”(Law on Domestic Violence 2005).</p> <p>The enactment of the law was a significant step forward in strengthening women’s rights and efforts to reduce violence against women (Purevjav 2010). However, “human rights activists and organisations in Mongolia are concerned that the law needs to be further strengthened to provide adequate protection to victims of domestic violence. Since the law was enacted, only 41 protective restraining orders have been issued, and none have been enforced by a court”(Chuhumbaatar 2013).</p>
7	Law on Health (2011)	<p>The Health Law provides the right to primary health care, maternal and child care and some public health services regardless of socio-economic status and health insurance coverage .</p>
8	Law on Education (2002, amended in 2006)	<p>The law reflects the principle of equality in education: Every citizen has an equal right to receive an education regardless of race, ethnicity, nationality, sex, religion, disability, social status and economic condition (UNESCO 2008). The amendment of the law in 2006 introduced such changes as:</p> <ul style="list-style-type: none"> <li>- Educational settings will be free from discrimination and any form of emotional or physical punishment.</li> </ul>

		<p>- All forms of abuse, violence and corporal punishment will be prohibited in education settings (CRIN 2006).</p>
9	Law on Combating Trafficking in Persons (2012)	<p>The law was passed in 2012 by the Parliament of Mongolia; it stipulates ‘the duties of law-enforcement organisations in relation to combating human trafficking - a crime which predominantly involves women and children. The law also stipulates measures for the protection of victims’ rights and the upholding of their dignity’ (SD C-Mongolia 2012). For example, Article 113 of the law articulates prosecuting internal trafficking, child prostitution cases and sexual exploitation.</p> <p>Although the Law on Trafficking in Persons is relatively new in Mongolia (Avkhia, Munkhbat and Theunissen 2014), a recent report reiterates the need for the government to recognise forced labour as a problem (US Department of State 2013, 267).</p>
10	Law on Social Welfare (2012)	<p>The law defines the age at which a woman can retire and receive full benefits as 55 and for man as 60 (Article 12.1.1). It also specifies that women aged below 45 and men aged below 50 who have more than four children under the age of 18 and who are the ‘single head of household’<sup>24</sup> are entitled to social welfare payments (Article 12.1.5).</p>
11	Law on Allocation of Land to Mongolian Citizens for Ownership	<p>The Government of Mongolia attaches particular importance to ensuring gender equality, in particular in relation to improving both men and women’s access to land and promoting the land-ownership process to implement the Law on Privatising Land for every citizen. An historic decision to privatise land only for citizens of Mongolia was made in 2002. A lot has been achieved in advancing the land ownership rights of women since the adoption of the aforementioned law. However, the rapid and intensive changes taking place in the country require amendments and improvements in the legislative framework (MCA-Mongolia 2013 d).</p>
12	Law on Parliament Election	<p>The Law on Parliamentary Election enacted in 2011, following Provision 7.2.2 of the Gender Equality Law states: “... determining the number of seats or implementing other such quotas aimed at equalising the representation of men or women at political and decision-making levels”.</p> <p>However, there are still a number of areas that need to be addressed. There are a few clauses that have not yet been enforced and hence require a greater effort to ensure the law is fully realised, including: “7.2.3. Special measures to eliminate gender imbalances in certain sectors or setting up discounts, incentives or benefits to improve imbalanced gender representation in a trade or occupation; 11.4.1. Incorporate in organisation’s internal procedures specific norms for prevention of sexual harassment in a workplace and the redress of such complaints; 14.6. The value of unpaid labour for household work, family business, childcare or care for elderly devoted by a spouse since marriage shall be considered as his or her contribution to social wealth and family economy.”</p>
13	Law on Family (1999)	<p>The purpose of the law is to regulate domestic law related to marriage, divorce, divorce settlement procedures, property and non-property relations of family members, adoption and child custody, and granting the same responsibilities and rights in marriage to both husbands and wives. In the article covering divorce, it stipulates that if the wife is pregnant and a child is under one year of age, it is forbidden to dissolve the marriage. During the dissolution process, spouses can agree on child custody and maintenance</p>

		(MCA–Mongolia; ESOC 2011, 7).
<b>14</b>	Law on political parties (2005)	The purpose of this law is the regulation of the registration of political parties, setting out the legal basis for their establishment, structures, and the conditions under which party activities may be suspended. This law used to have an article stipulating that 30 percent of total party members must be women (MCA–Mongolia; ESOC 2011, 7).