


Mongolia – Building Retrofitting project



PROJECT NAME	CO ₂ MITIGATION	PROJECT DURATION	SECTOR	LOCATION
Energy Performance Contracting for Residential Retrofitting in Ulaanbaatar City	219,553 tCO ₂ e (by end of implementation)	2022 - 2027	Energy	

On behalf of



Supported by:



of the Federal Republic of Germany



The project

OBJECTIVE

The project supports large-scale energy efficient retrofits of aging apartment buildings in Ulaanbaatar to improve comfort, reduce heat loss, and strengthen building durability. Through innovative finance and policy reform, it supports Mongolia's low-carbon transition while enhancing urban living conditions.

CONTEXT

Ulaanbaatar, one of the world's coldest capitals, is home to nearly half of Mongolia's population. Around 20% of residents live in poorly insulated precast apartment blocks, which waste over 40% of heating energy and contribute significantly to urban emissions. Despite strong political commitment, the market for energy efficient retrofitting remains constrained by low energy tariffs, limited technical capacity, and fragmented institutional responsibilities.

APPROACH

The project strengthens Mongolia's residential energy efficiency (EE) sector by piloting an energy performance-based approach to retrofitting, alongside financial innovation and policy support. Together, these elements help lay the groundwork for a scalable and sustainable market for building EE.

- **Mobilising finance** Establishment of a Building Energy Efficiency Facility (BEEF) to pool public and private funds, supported by EUR 11 million in grants to de-risk investments.
- **Supporting communities** Directly benefiting 14,068 households (over 53,000 residents) in 375 precast buildings through improved indoor comfort, reduced heating bills, and enhanced building safety and value.
- **Developing capacities** Training and technical assistance for construction companies, homeowners' associations, energy service providers, and municipal authorities to plan and implement high-quality thermo-technical retrofits (TTR).
- **Strengthening policies** Assistance to the Ministry of Urban Development, Construction and Housing (MUDCH) and Municipality of Ulaanbaatar (MUB) on energy tariff reform, on-bill repayment systems, and integration of lessons into national housing policy.

THE FACTS

Project name
Mongolia – Building Retrofitting

Call
6th Call (2018/2019)

Project partners
Municipality of Ulaanbaatar;
Energy Regulatory Commission

Funding volume provided
EUR 18 million

Partner ministries
Ministry of Urban Development,
Construction and Housing; Ministry
of Environment and Tourism

Project status
Active

Project duration
2022–2027

Phase
Implementation

Leveraged funding
EUR 15.4 million (public);
EUR 5.6 million (private)

Implementation Organisations
Deutsche Gesellschaft für
Internationale Zusammenarbeit
(GIZ) GmbH

Evaluation status
Mid-term ELE 2025



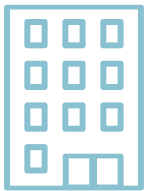
The mid-term results

The project has established the institutional and technical foundations required for performance-based residential retrofitting, positioning it for scaled implementation as financing and governance frameworks strengthen.



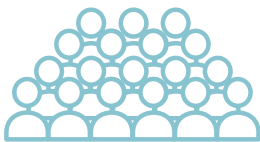
1 PILOT BUILDING COMPLETED

The first thermo-technical retrofit has been finalised, demonstrating improvements in building performance, heat retention, and indoor comfort.



45 APARTMENT BLOCKS PREPARED FOR RETROFITTING

Energy audits, feasibility studies, and technical designs have been completed for 35 buildings, and implementation has already begun following the conclusion of financing and procurement processes.



200 BUILDINGS TARGETED

The original goal of 375 blocks has been adjusted to around 200 due to inflation, cost escalation, and institutional delays – still an ambitious benchmark within Mongolia's housing sector.



358 PROFESSIONALS TRAINED

Nearly meeting the target of 350, these trainings strengthened the skills of engineers, construction managers, and public officials in energy auditing, retrofitting supervision, and project finance.



100% HOMEOWNER CONSENT IN PILOT AREAS

Securing full consent in the first 35 buildings demonstrates effective community engagement and growing trust in energy efficiency and on-bill repayment schemes.



25% ON-BILL REPAYMENT (OBR)

Introduction of the OBR scheme marks a significant shift for Mongolia, where previous retrofits were fully covered by the municipality. This new model signals evolving mindsets among households and public institutions around shared financing for EE improvements.



EUR 18 m IN FACILITY FUNDING

Provided by the Mitigation Action Facility, this support is leveraging over EUR 21 million in public and private co-financing.



1 BUILDING ENERGY EFFICIENCY FACILITY (BEEF) DESIGNED

With its institutional hosting now confirmed under the MUB, work is ongoing to finalise its design and governance arrangements before becoming fully operational.

Predicted legacy



“We were a bit skeptical at first, but now I can really feel the difference. The temperature inside is more stable, and our home stays warm always. I hope more building can be retrofitted like this – it not only improves our living conditions but also helps Mongolia reach its climate goals. Especially now, when energy is in short supply, it feels good to know we’re using less.”

Mr. Erdenbat, resident of the pilot building



“After the mineral wool insulation was installed last November, our apartment felt much warmer and cozier. Last winter was very comfortable for all the residents. I’m really happy that, along with the improved comfort, we’re also contributing to reducing Mongolia’s emissions. We’re proud to be part of this change.”

Mrs. Ulziisaikhan, resident of the pilot building

The Mongolia Building Retrofitting Project marks a turning point for the country’s residential EE sector. Through blended financing, technical capacity-building, and policy support, it is helping establish Mongolia’s first viable model for large-scale residential retrofitting.

Despite slower-than-planned implementation, the project remains the country’s most comprehensive initiative focused on creating a sustainable market for residential EE upgrades. The establishment of the Building Energy Efficiency Facility (BEEF) and the on-bill repayment system lays the foundation for replication in other districts and cities, with lessons already informing Mongolia’s housing and heat tariff policy discussions.

While challenges such as inflation, staff turnover, and procurement delays persist, the project continues to build the institutional and financial systems needed for a sustainable retrofit market. In the long term, its legacy lies in strengthened local capacity, durable governance structures, and a growing recognition that residential retrofitting delivers environmental, social, and economic benefits.



ACHIEVING TRANSFORMATIONAL CHANGE

A transformational effect of the project is likely because it is demonstrating that large-scale residential retrofitting is feasible in Mongolia, supported by strong government ownership, growing stakeholder capacity, and emerging financial structures that enable replication and long-term market development.



Preliminary learnings

The 2025 mid-term evaluation identified key lessons that have shaped the project's ongoing implementation and will support more effective future retrofitting efforts in Mongolia. The following learnings illustrate how the project team has acted on the recommendations to improve coordination, strengthen stakeholder engagement, and reinforce project delivery:

 LEARNING	RECOMMENDATION	PROJECT RESPONSE	
Learning 1: Strengthening communication and coordination to ensure stakeholder alignment	Effective and continuous communication with partners is essential in a dynamic institutional landscape. Recent changes in focal persons and limited capacity contributed to gaps in understanding of project components and decisions.	Implement a strategic communication plan with clear focal persons, structured information flows, and prepared Steering Committee meetings with clear decision-making structures. Engage senior political actors to reinforce institutional ownership.	A formalised communication structure is now in place, with dedicated focal persons and a single key expert coordinating exchanges, reinforcing stakeholder alignment, and maintaining consistent information -sharing across institutions.
Learning 2: Strengthening engagement with (sub-) districts	Local authorities are critical for mobilising households and allocating resources for retrofits.	Strengthen district-level engagement through structured communication, joint planning, and alignment of technical and financial approaches.	Districts are now formally required to support the project, with structured processes in place to coordinate household mobilisation, ensure technical consistency, and enable wider replication.
Learning 3: Coordinating with municipal government	The municipal government has prioritised large-scale retrofitting by 2028. Parallel retrofits risk undermining energy-saving outcomes if key technical measures (such as OBR, mixing loops, or automated valves risk) are missed.	Align the project's technical retrofitting pipeline with municipal plans and coordinate closely with the MUB.	All municipal retrofits are now under the project framework, jointly executed by the MUB and GIZ, with quality assurance ensuring consistent technical standards.
Learning 4: Coordinating with municipal government	Training and capacity development exceeded initial targets, showing initial indicator values underestimated the scale and importance of these activities.	Adjust training indicators in collaboration with the Mitigation Action Facility to reflect actual scope and support momentum.	Indicator adjustments are under discussion and will be reflected in the next annual report.
Learning 5: Managing project complexity	Ambitious design and external shocks created implementation challenges and delays.	Consider reducing complexity where possible, and review coordination and sequencing to simplify implementation.	The project team is identifying opportunities for simplification while maintaining transformative objectives, with lessons from this review feeding into future programme design.



MITIGATION ACTION FACILITY KNOWLEDGE & LEARNING HUB



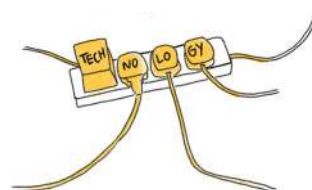
A comprehensive list of all lessons can be found in the full mid-term Evaluation & Learning Exercise (ELE) report available via the [Mitigation Action Facility website](#). Just select the filter "Report" and the country you are looking for in the pulldown menu of our digital library.

What are the ELEs?

The Mitigation Action Facility engages in a number of strategic efforts to extract lessons learnt from its project portfolio and create valuable resources for future implementations. This is part of its role as Knowledge and Learning Hub.

All projects with an overall duration of more than three years are subject to both a mid-term and a final Evaluation and Learning Exercise (ELE). These evaluations are part of the Mitigation Action Facility's approach to catalyse transformational change through continuous monitoring processes that support fearless learning. The ELEs follow a theoretical framework that combines document reviews, participatory workshops, and stakeholder interviews to collect evidence for the in-depth analysis of project results and lessons. Mid-term ELEs are conducted halfway through the project to assess early progress, while final ELEs analyse the overall impact and lessons learned at the end of the project.

All ELEs can be accessed through the [download library](#) on Mitigation Action Facility's website. This factsheet is based on the mid-term ELE of the project "[Mongolia – Building Retrofitting](#)".



CONTACT



mitigation-action.org



contact@mitigation-action.org



[Mitigation Action Facility newsletter](#)



[The Mitigation Action Facility](#)



[mitigationactionfacility](#)



[@MitActFacility](#)

IMPRINT

PUBLISHER
Mitigation Action Facility,
Technical Support Unit,
Köthener Straße 2-3,
10963 Berlin, Germany

RESPONSIBLE
Ghalia Thaeef, Ernesta Maciulyte

TEXT EDITION
Tabitha Stimpfle

© 2025
MITIGATION ACTION FACILITY
Any reproduction or duplication
of this content may only be
done with prior consent from
the Mitigation Action Facility

PHOTO CREDITS
GIZ Mongolia

DESIGN
SocialSocial

