



# ENERGY EFFICIENCY. HOMES. LIVELIHOODS.

LOW-ENERGY CONSUMPTION HOUSE PROJECT IN TAJIKISTAN

## A DECADE OF PARTNERSHIP AND INNOVATION

Geres, the Tajikistan Design and Construction Authority Loihakash, the Scientific Research Institute for Construction and Architecture SRICA, and microfinance institutions team up to provide technical support, affordable solutions, and financing for Tajik families building low-energy consumption houses, minimizing energy demand and carbon emissions while maximizing comfort.



In partnership with



# LOW ENERGY CONSUMPTION HOUSES DELIVERY MODEL

The LECH delivery model is the result of a shared vision between Geres and its partners: a sustainable and highly efficient habitat, accessible to all households both technically and financially.



## OUTREACH

Architects / banks present LECH to households planning to build a detached house.



## ALBUM DISTRIBUTION

Households buy LEC House blueprints.



## LOAN APPLICATION

Households apply for green loans.



## PREPARING FOR CONSTRUCTION

Households receive a list of approved suppliers and materials.



## CONSTRUCTION ASSISTANCE AND QUALITY CONTROL

5 on-site visits by a construction engineer.



## ENERGY AUDIT

Households can request certified energy audit.

## 3 LEVELS OF ENERGY EFFICIENCY IN LOW ENERGY CONSUMPTION HOUSES

A range of energy efficiency options ensures that every household can choose a solution adapted to its financial capacity and preferences.



### MINIMUM ENERGY EFFICIENCY

- +1.2% upfront construction cost (paid back in 4 years)
- 20% fuel savings per year
- \$ 2,300 saved over the lifetime of the LECH



### AVERAGE ENERGY EFFICIENCY

- +1.8% upfront construction cost (paid back in 4 years)
- 30% fuel savings per year
- \$ 3,600 saved over the lifetime of the LECH



### MAXIMUM ENERGY EFFICIENCY

- +4.7% upfront construction cost (paid back in 5 years)
- 60% fuel savings per year
- \$ 6,900 saved over the lifetime of the LECH



Ceiling



Double glazed window



Closed veranda



Wall



Floor insulation

## INVESTING IN ENERGY EFFICIENCY HOMES DRIVES SOCIAL AND CLIMATE GAINS



Better air quality, enhanced comfort, lower public health costs



Eases women's daily chores by improved energy efficiency



Creates jobs by training local builders in green construction



Offsets the equivalent of 6 to 18 years of an individual's carbon footprint over the building's lifetime

Supporting energy-efficient housing through policies, incentives, and public investment maximizes these benefits, creating lasting societal and climate returns while enhancing gender equity and wellbeing.



*Now my home has become very warm in the winter and cool in the summer. Last winter, heating of the winter room took only 2 bags of coal and a little dung, while my neighbours spent around 1 ton of coal. Now in the winter, my sisters come to live with me.*

**KHOLOVA**  
Zarzamin village,  
Hisor district

## LOW-ENERGY CONSUMPTION HOUSES (LECH) IN TAJIKISTAN AFFORDABLE, IMPACTFUL, AND READY TO SCALE!

**geres**  
ACTING FOR  
CLIMATE  
SOLIDARITY

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