

Introduction and hand over of project results

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GIZ, Project Director

1992 - 2022

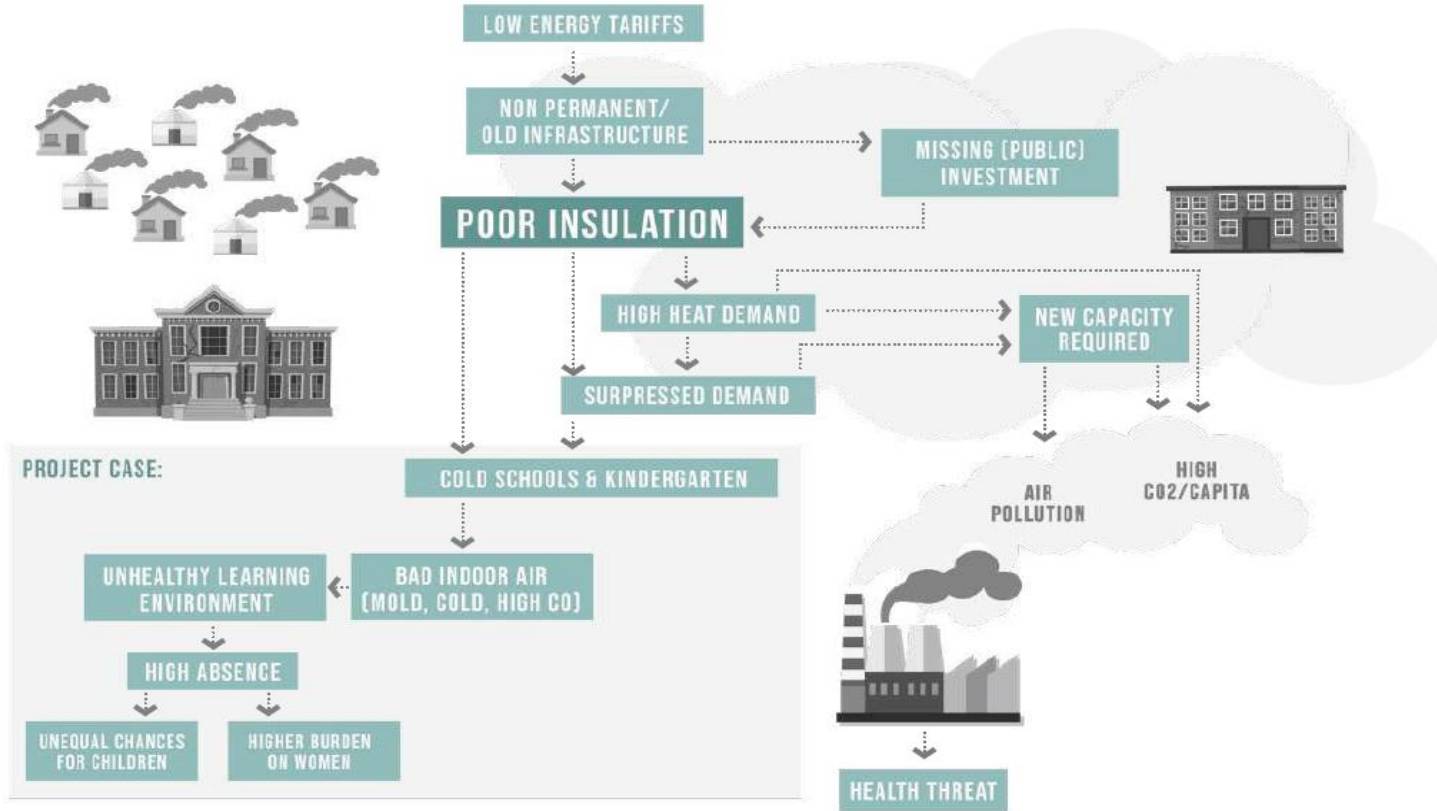


Implemented by

giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

БҮСИЙН СУРГАЛТ

Challenges in the building sector



PROJECT DETAILS

Energy Efficient Building
Refurbishment in Mongolia
Project (EEP/PIE2)

2018-2022

8.3 Mio Euro
(BMZ and SDC co-Funding)



MACRO-MESO-MICRO LINKAGES



POLICY AND PROCESS CONSULTING

Energy Conservation Law,
Financing arrangements, Tariffs



CAPACITY DEVELOPMENT

Institutions, Service providers,
Credit facilities



TECHNOLOGY TRANSFER

Piloting, Market take-up,
Replication

PROJECT GOALS



Transparent, effective and gender-sensitive public investment management (PIM) in Ulaanbaatar is introduced through the case of energy efficiency in buildings.



Local Energy Efficiency Action Plan (LEEAP) for the building sector is adopted.



Private sector's capacity for energy efficiency is improved.



Energy efficiency technologies are introduced in ger neighborhoods.

IMPLEMENTED BY





Regional
Package



LEEAP Guidebook for Mongolian Regions

“

THE PURPOSE OF LEEAP IS TO INTEGRATE ENERGY EFFICIENCY IN THE BUILDING SECTOR. WE WILL FOCUS ON IMPLEMENTING LEEAP NATIONALLY AND CREATING A COMPREHENSIVE DATABASE PLATFORM ON THE ENERGY CONSUMPTION OF BUILDINGS IN MONGOLIA.

D.Gantulga, Head of Department Coordination of implementation policy for building and construction material of Ministry of Construction and Urban Development (MCUD)



Database for transparent and effective allocation of budget for refurbishment

- ✓ Public building database
- ✓ Panel building database



Now also usable
nation wide

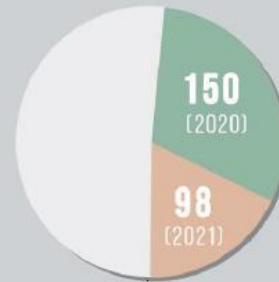
DATABASE FOR PANEL BUILDINGS

Due to the practicality of the system for public buildings, a similar one has been developed for registering panel buildings in Ulaanbaatar City.

БББХОМС (ulsanbaatar.mn)



SCHOOLS+KINDERGARTENS
509



BUDGET



BLUEPRINTS



APPLICATION



Register your building:



TRANSPARENCY



CONSTRUCTION

RANKING +
SELECTION



Parental participation methods for monitoring and evaluation developed

2018-2021:



Additional activities implemented by project schools:

Educative school gardening, implementing **recycling** strategies, building paved access roads, fences for safe playing, renovation of classrooms, creation of new spaces, organize training and advocacy activities to students, parents and other communities, **implementing knowledge in insulation in private houses and other public education buildings**

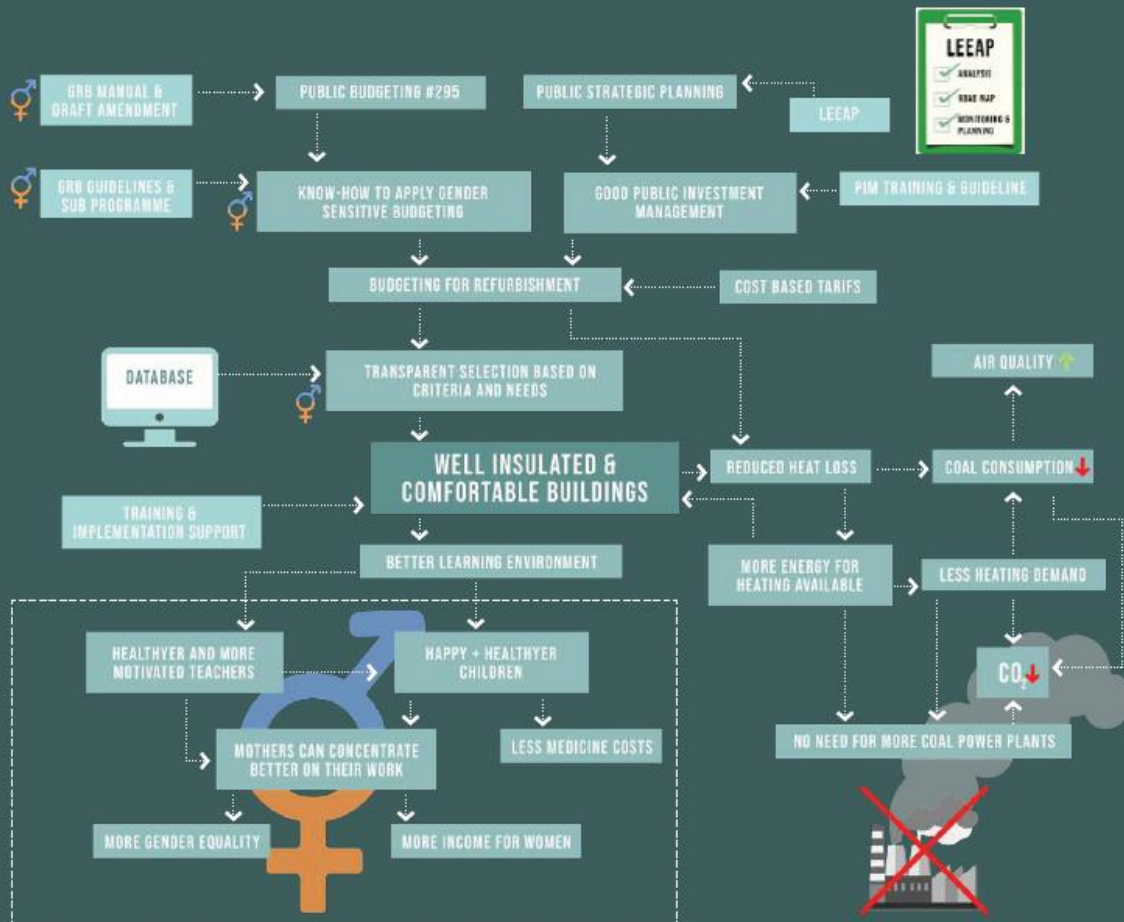
Energy efficiency is also a gender topic!

Work with MUB on Gender Sub-Program lead to involvement on national level.



Draft amendment and manual to the budget law for budget investment procedure Nr. 295

ENERGY EFFICIENCY & GENDER EQUALITY





Sustainable Capacity development

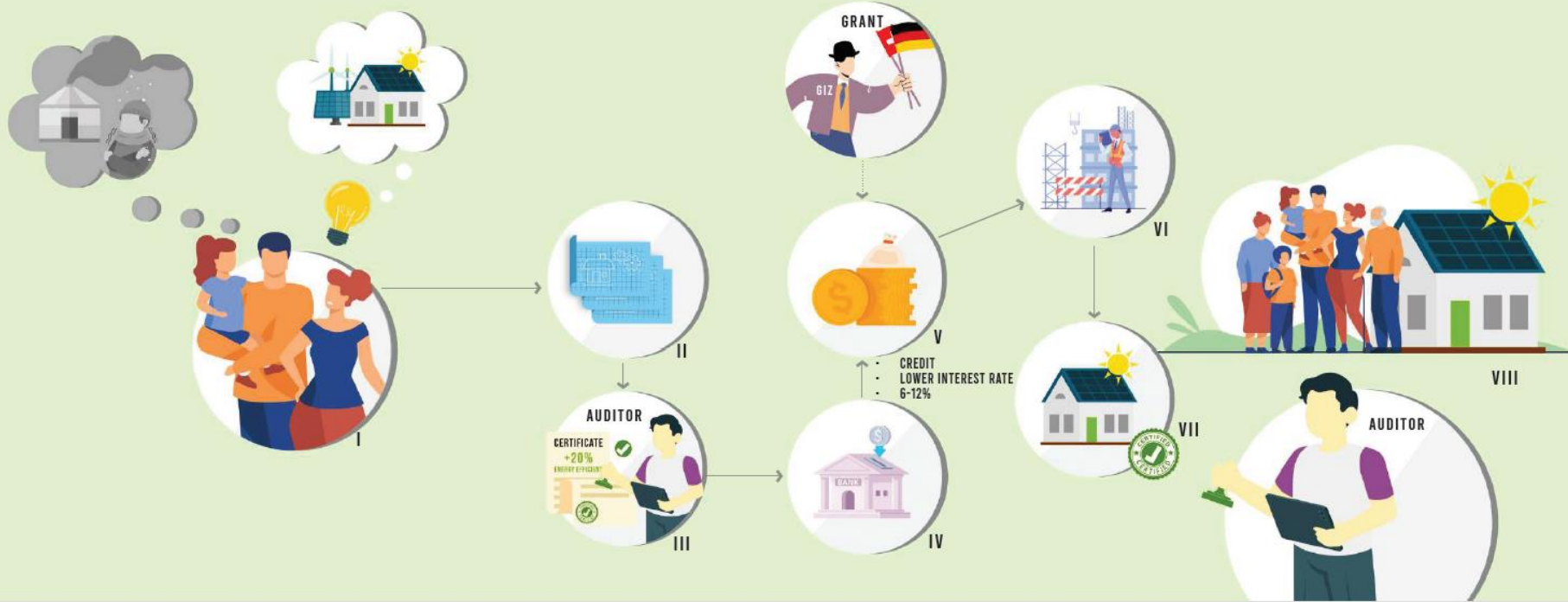
1. **Training in building energy efficiency** has become a **stand-alone training course** in the construction sector and issues 'credit hours' for specialist to obtain a professional degree
2. Training course (also as online training) is officially accepted and operated now by the **Mongolian Association of Construction Designers**
3. **Green Building Council (GBC)** is in process of establishment. MCUD intends to transfer the green building certification system to the GBC
4. First successful **EDGE green building auditing and certification** completed as demonstration for the future operation of GBC in Mongolia
5. Mongolian **Banking and Finance Academy/BFA** is now in position to provide training for financing EE buildings to the banking sector
6. **National Academy of Governance (NAOG)** is including energy Efficiency and GRB in regular courses for public servants

4.1.4.2022

Energy Efficient Building Refurbishment in Mongolia



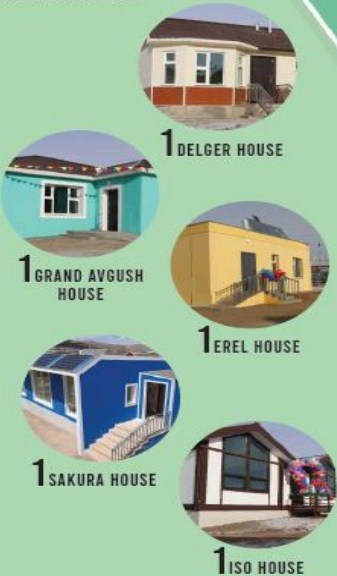
1st financing scheme and designs for Energy Efficient ger area houses



ENERGY EFFICIENT PILOT HOUSES IN ULAANBAATAR

Five EE model houses for demonstration purposes have been built by local construction companies in the premises of the Kindergarten No.188 in Khoroo 33 of Songinokhairkhan district of UB City and are accessible for public on weekends to visit. These houses built within the framework of the GIZ Building energy efficiency project have a floor area of around 50 m² and are built using different materials and efficiency solutions. They have been handed over to the kindergarten and are now being used as a kindergarten facility, and have replaced the Ger kindergarten facilities previously used.

MODEL HOUSES



1 DELGER HOUSE

1 GRAND AVGUSH HOUSE

1 EREL HOUSE

1 SAKURA HOUSE

1 ISO HOUSE



7 HYBRID HOUSES



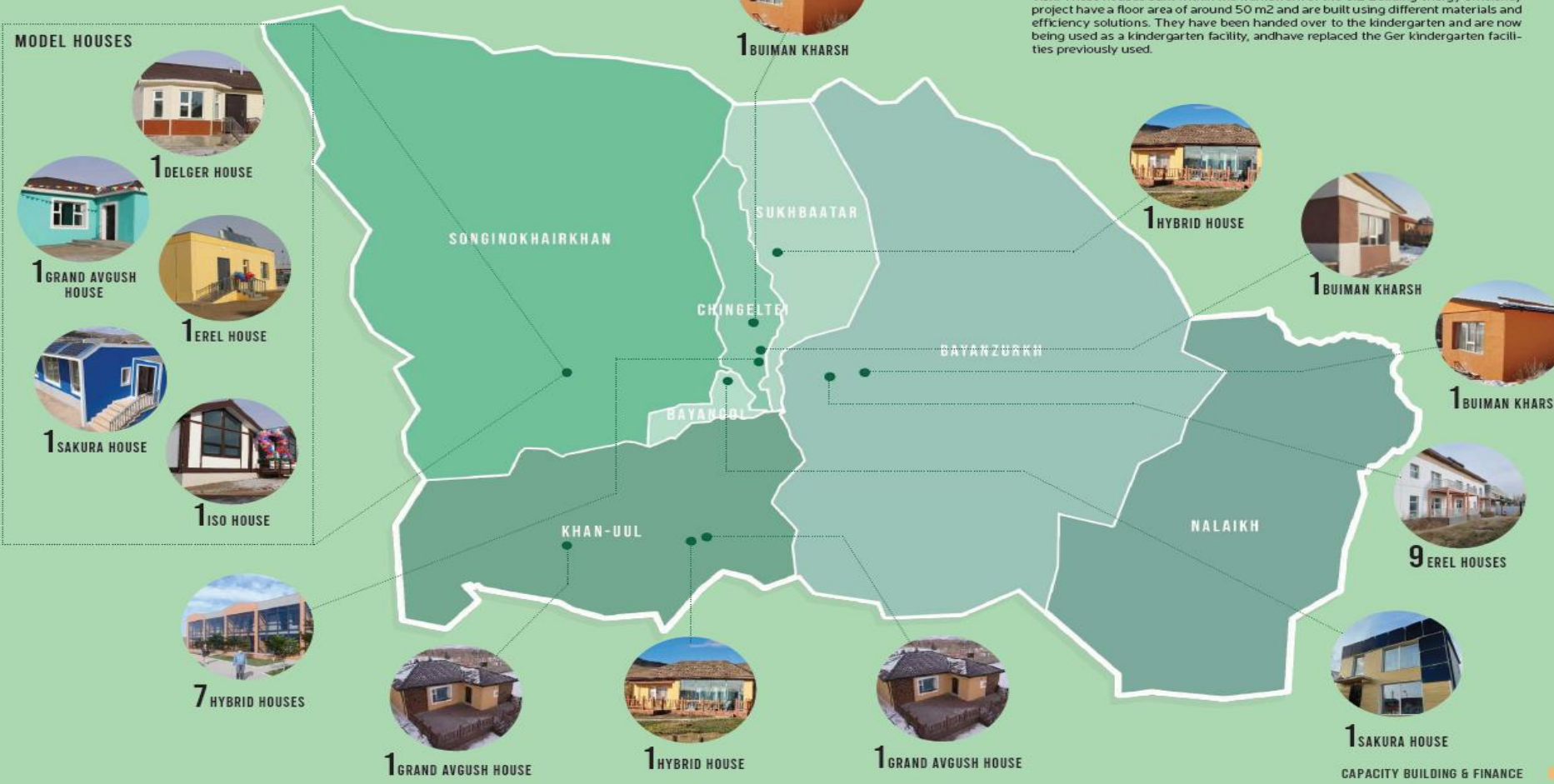
1 GRAND AVGUSH HOUSE



1 HYBRID HOUSE



1 GRAND AVGUSH HOUSE



1 BUIMAN KHARSH



1 HYBRID HOUSE



1 BUIMAN KHARSH



1 BUIMAN KHARSH



9 EREL HOUSES



1 SAKURA HOUSE

THIS CERTIFIES THAT
Sakura Property & GIZ Energy Efficiency Project Pilot House
1 Units

HAS ACHIEVED AN
EDGE ADVANCED CERTIFICATE
CERTIFICATE NUMBER
GP1-MNG-21040810105876-1

EDGE ADVANCED

Exemplifying achievement in the following areas:

57%
Energy Savings

27%
Water Savings

42%
Less Embodied
Energy in Materials

1.23 tCO₂/unit/year
Operational CO₂ Emissions
19.56 tCO₂/unit/year
Operational CO₂ Savings



DEVELOPED BY
Sakura Property Co.Ltd

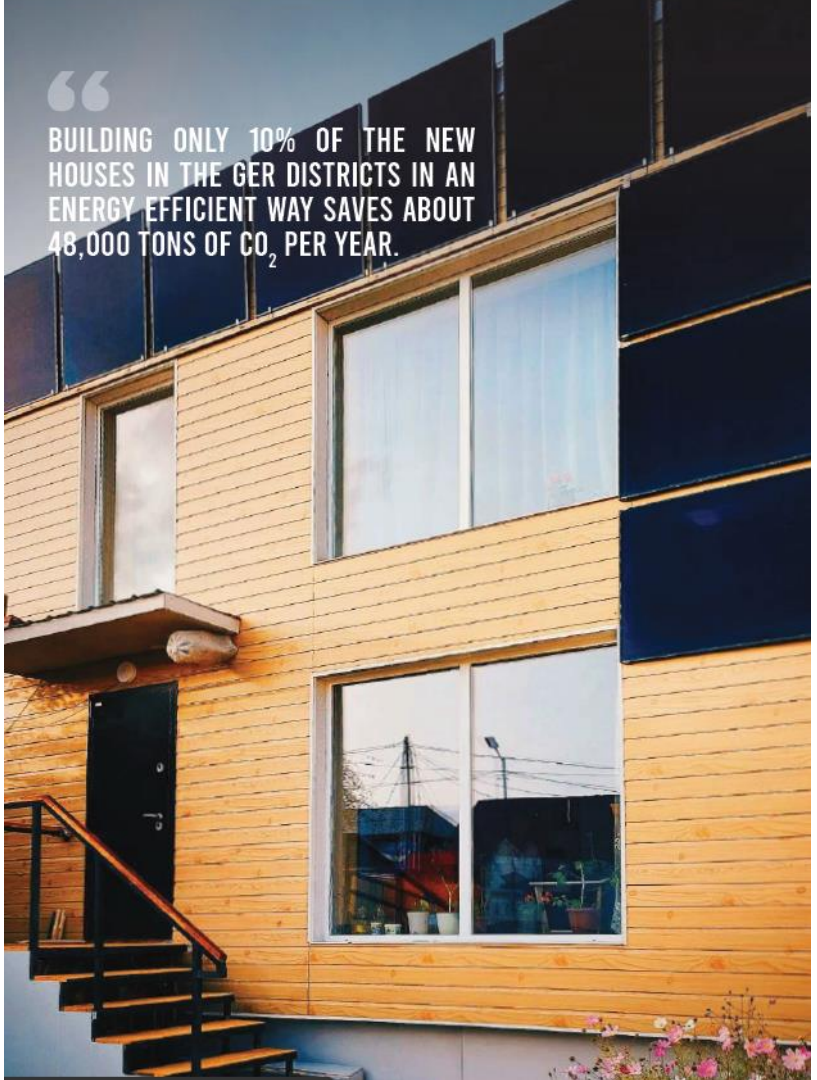
CERTIFIED BY
Sintali-SGS

A handwritten signature in black ink, appearing to read "Thomas Saunders".

Thomas Saunders, Managing Director
DATE OF ISSUE: 13-SEP-2021



**First
officially
certified
green
Building
in
Mongolia**



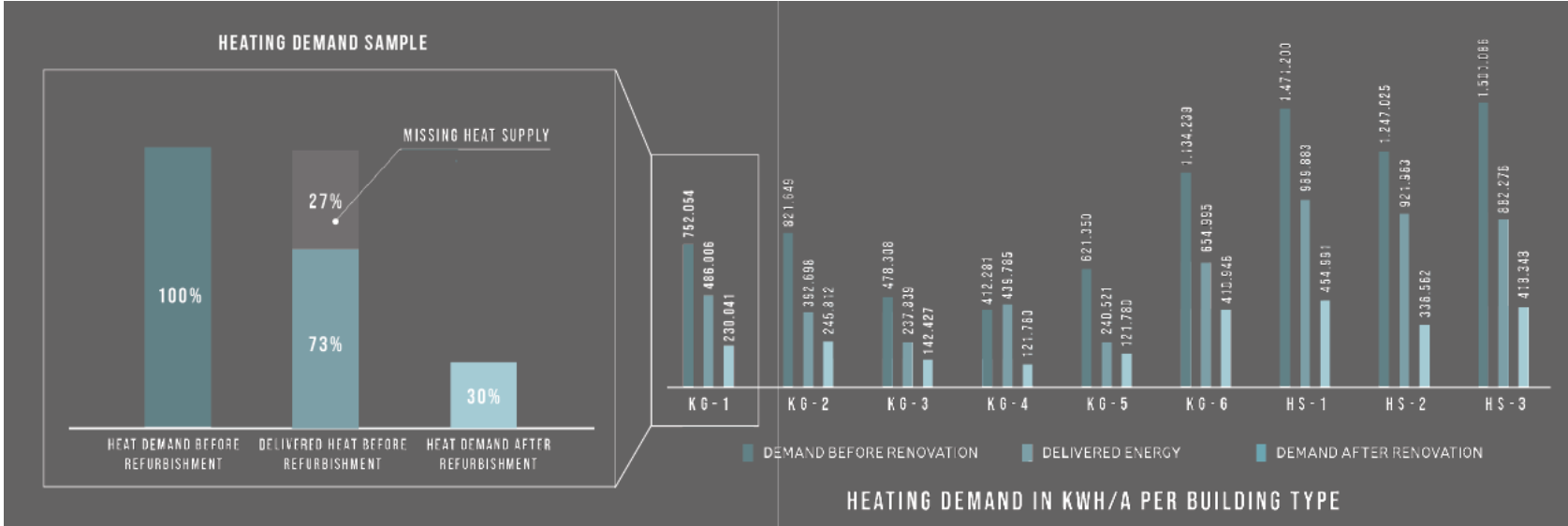
“
BUILDING ONLY 10% OF THE NEW
HOUSES IN THE GER DISTRICTS IN AN
ENERGY EFFICIENT WAY SAVES ABOUT
48,000 TONS OF CO₂ PER YEAR.
”

REFURBISHED SCHOOLS & KINDERGARTENS IN UB*



*4 more School buildings to be terminated in 2022: School Nr. 42 (2 Buildings), School Nr. 95, Amgalan School

Thermo-technical refurbishment of schools and kindergartens



Temperature improvements and energy savings
Be comfortably warm and save 40% of energy at the same time





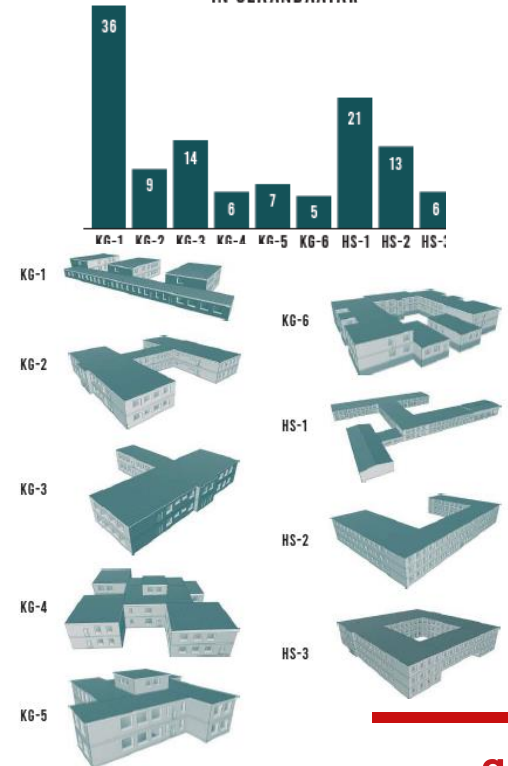
Thermo-technical refurbishment avoids investment in new power plants

Investment for
126 energy efficient schools and kindergartens
supersedes the investment in a
20 MW coal fired HOB plant!

9 Blueprints work for 117 buildings in UB

➤ **How many in your region?**

NUMBER OF BUILDINGS PER TYPE
IN ULAANBAATAR

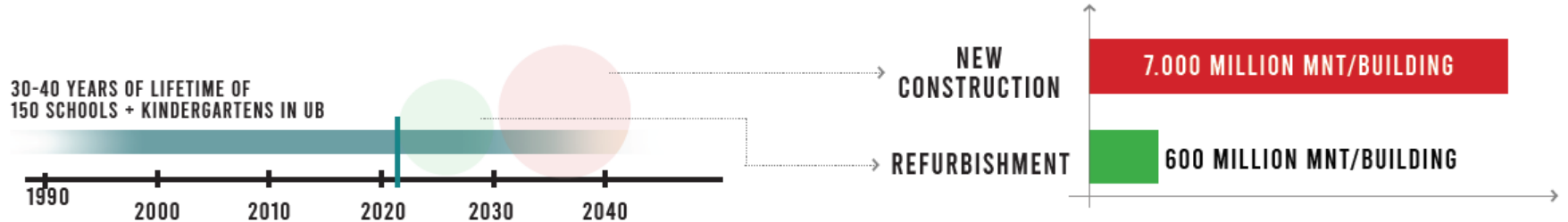


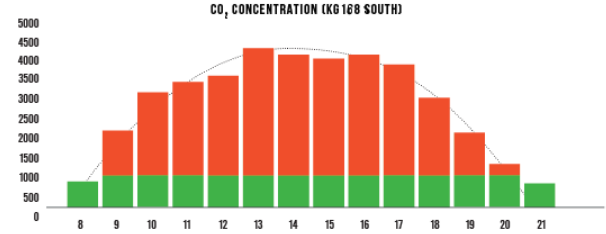
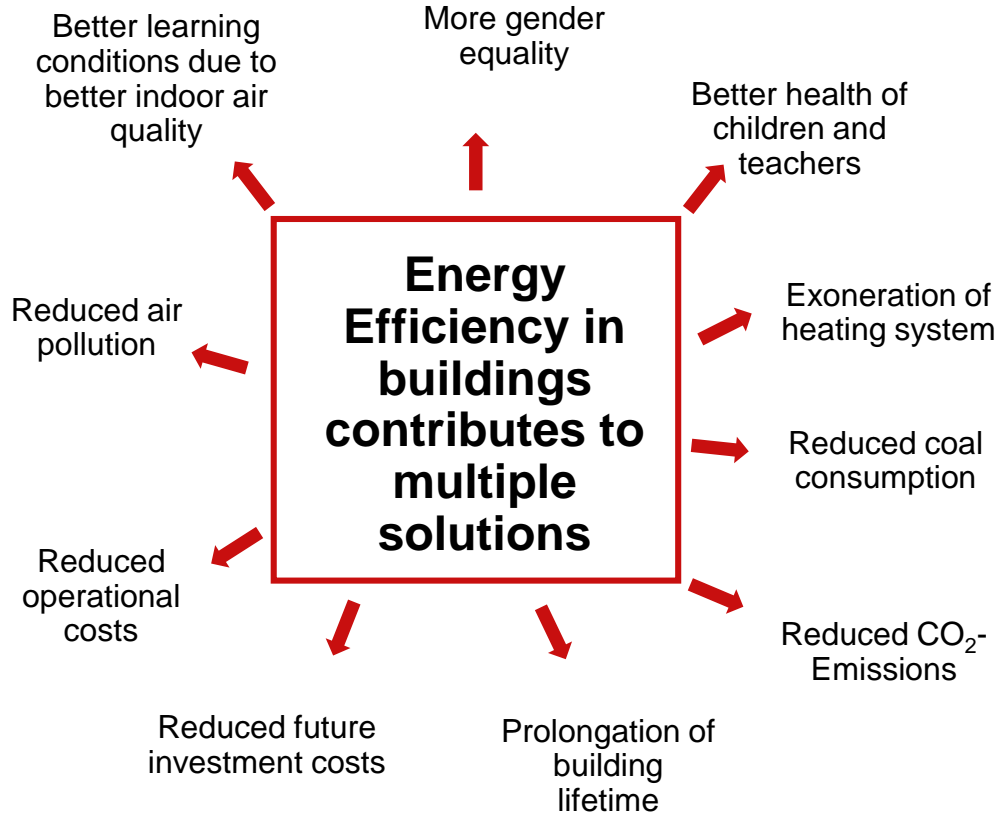
Public infrastructure needs investment

1. Many schools and kindergartens are build in the soviet and post soviet time
2. Lifetime is mainly 30-40 years
3. Decision to be taken now: **prolongue lifetime by thermo- technical refurbishment –**

- versus -

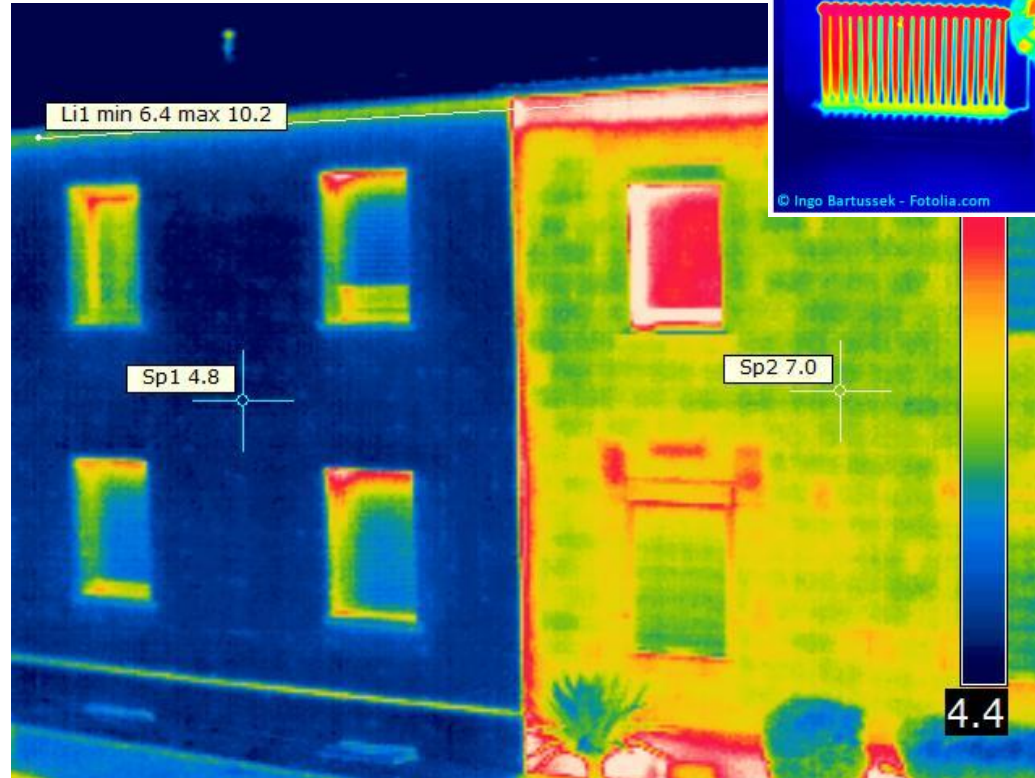
new construction in a few years





Thermal imaging camera equipment & training

Your equipment to encounter heat losses in buildings



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