REPORT • COP31

Climate Modernisation of Housing in Kazakhstan

Potential, Systemic Barriers and Solutions for a Just Climate Transition

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Housing as the foundation of a climate-resilient city

The theme of our meeting today is sustainable cities and a just climate transition.
When we talk about the climate transition, we most often discuss energy, technology and investment. But for millions of people, it begins much closer to home – in their own homes.

How warm, safe, energy-efficient and affordable housing remains determines not only people's quality of life, but also their trust in climate policy.

That is why a climate-resilient city begins with a sustainable home. And the modernisation of housing should be viewed as both a technical and a social challenge.

The scale of the challenge and Kazakhstan's potential

Why does this matter for Kazakhstan? According to the 2025 fuel and energy balance, the housing sector accounts for 34.4 per cent of the country's final energy consumption – approximately 16.7 million tonnes of oil equivalent. Let me emphasise: we are talking about the housing sector as a whole, not just blocks of flats.

This figure illustrates the scale of the challenge: housing policy is inseparable from energy and climate policy. A building's energy efficiency depends not only on the insulation of its façade, but also on its building services, design, building management, heat supply and well-founded decisions by its owners.

The outcome cannot be measured solely by technical indicators. People must be able to see that homes have become more comfortable, costs are predictable, and decisions are clear and lawful. Otherwise, modernisation will remain a collection of disparate measures.

At the same time, it is important to emphasise that Kazakhstan is not starting this work from scratch. The country has adopted strategic documents on climate and energy. Energy-saving mechanisms are in place. Major repairs of blocks of flats and the modernisation of heat supply are under way. A housing stock management system is being developed. All of this creates the potential to improve the energy efficiency of housing and reduce energy consumption. The key question today is how to integrate existing instruments

into a single system, increase the effectiveness of public and private investment, and deliver tangible benefits for citizens.

Systemic barriers to comprehensive modernisation

Kazakhstan's key challenge today is not so much the creation of new, separate instruments as the coherence and effectiveness of existing mechanisms.

Despite the progress made, Kazakhstan has not yet established a single, replicable mechanism that would allow a block of flats to go through the full cycle of comprehensive energy-efficient modernisation – from diagnostics and design through to financing, owner participation and independent evaluation of results.

It is precisely this fragmentation that limits the ability to transform individual measures and investments into sustainable, measurable climate and social outcomes.

A full cycle requires reliable data, a technical solution that takes heat supply into account, funding and social protection, the informed consent of owners, high-quality work and independent measurement of results. When these elements are divided among different government departments and programmes, it is difficult to scale up a successful project.

It is particularly important to take into account a building's connection to the district heating system. Reducing heat demand on the consumer side must be planned in conjunction with decisions regarding heat sources and distribution networks. Without such coordination, part of the potential benefit may be lost.

Kazakhstan therefore needs to move away from isolated repairs towards comprehensive energy-efficient modernisation of buildings that delivers climate benefits, is financially affordable and involves property owners. The aim is not the number of repairs, but a managed and verifiable process.

Four criteria for a just climate transition

However, technically effective modernisation is not necessarily fair. If the financial burden becomes unaffordable, if owners do not understand the terms, or if the quality of the work is not verified, trust in the reforms diminishes.

We therefore propose evaluating modernisation against four criteria.

First – climate outcome: is energy consumption actually falling and is a measurable effect being achieved?

Second – financial affordability: are households able to participate without an excessive burden? Is targeted support provided for vulnerable groups?

Third – quality: have homes and building services become safer and more comfortable?

Fourth – participation: did property owners receive full information, and were they able to influence the decision through lawful means?

A just climate transition must be based on respect for human rights, first and foremost the right to adequate housing, including financial affordability, safety and citizens' participation in decision-making.

Citizen participation is not merely a formality at the end of a project. It must begin before a technical solution and funding arrangement are selected. Civil society organisations can help residents access information, discuss decisions and monitor their implementation. Particular attention should be paid to the inclusion of women and those households whose interests are typically under-represented.

Seven elements of the comprehensive modernisation model

We propose a model comprising seven interlinked elements. This is not an approved government programme, but a full-cycle framework. We can group these into three clusters: decision preparation, implementation and outcome verification.

The first cluster – preparing a well-founded decision. This involves reliable data on the building and a technical assessment, together with a design that takes into account the building's connection to the district heating network.

The second cluster – conditions for implementation: clear long-term financing, an assessment of payment affordability and targeted social protection.

The second cluster also includes the informed participation of property owners, with full disclosure of costs, risks and expected outcomes, as well as high-quality execution of works with professional support.

The third cluster – independent measurement of results: energy consumption, costs, housing quality and resident satisfaction. In this way, all seven elements of a single, integrated system are preserved.

These elements must operate in tandem. If funding is available but there is no reliable data, the risk of misguided investment increases. If there is a project but no consent from property owners, implementation may come to a halt. If the work has been carried out but the outcome has not been measured, the state and society cannot confidently assess the effectiveness of the support.

Full-cycle pilot and study of European experience

As part of the "ENABLE – Civil Society for a Sustainable and Energy-Efficient City" project, implemented with the support of the European Union, we studied practical experience of energy-efficient housing modernisation in Germany and Lithuania, including during study visits and training-of-trainers sessions.

This experience has enabled us to better understand the importance of a comprehensive approach: modernisation must include not only technical work, but also preliminary diagnostics, financial mechanisms, owner participation and verification of actual results.

We therefore propose piloting the full cycle in Kazakhstan – from the initial assessment and modernisation through to the independent measurement of results.

The pilot must be assessed against seven groups of indicators: energy consumption, costs, affordability, housing quality, owner participation, quality of implementation and the systemic impact on heat supply.

Decisions on scaling up, adjusting the model or not scaling it up should be made solely on the basis of verified results.

Four areas of practical solutions

How can Kazakhstan's potential be realised? We propose four areas that bring together existing instruments to achieve measurable climate and social impact. These are proposals, not an approved government programme.

First – government coordination. Housing, energy, climate and social policies must be linked by common rules and accountability for results. The role of representative bodies in budgetary and public oversight is also important. This primarily involves aligning existing mechanisms in order to increase the return on current and future investments.

Second – the financial model. It is necessary to define the functions of financial and programme support, develop affordable modernisation instruments and provide targeted support for households that are unable to bear the standard financial burden.

Third – piloting. We propose that government bodies, local authorities, financial institutions, experts and civil society organisations prepare a demonstration pilot. The site, participants, funding, protection for property owners and independent indicators need to be defined.

Fourth – involvement of property owners and civil society. The Public Foundation "Kazakhstan Parliamentary Development Fund" (KPDF) and the "State and Citizens – Together for Energy-Efficient Housing" Coalition, established as part of the "ENABLE – Civil Society for a Sustainable and Energy-Efficient City" project, implemented with the support of the European Union, can facilitate informed participation, public oversight and transparency. The Coalition is a platform for interaction between organisations, experts and partners, not the operator of a government programme. International partners could support methodologies and expertise. This experience is also useful for other countries facing similar housing challenges.

Partnership and next steps

A just climate transition begins with a specific home: with the quality of housing, affordable costs, resident participation and verifiable results. However, one successful home is not enough to bring about sustainable change.

Following COP31, we propose jointly preparing a full-cycle pilot project involving the state, financial institutions, property owners and civil society. We should identify the site, partners, funding, safeguards for property owners and independent indicators. We should not declare success in advance, but confirm it through results – and only then decide on scaling up.