

From Funding Instruments to Delivery Capacity: Scaling Municipal Public- Building Renovation in Ukraine

Warsaw, July 2026



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für Forschung, Technologie
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Version 1.0**Green Deal Ukraïna**

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The report was prepared as part of Green Deal Ukraïna (GDU), a German-Polish-Ukrainian project initiated by Helmholtz Zentrum Berlin. Forum Energii, a Polish energy think tank, is a partner of GDU and collaborated on the preparation of the report.



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List of Abbreviations

CMU: Cabinet of Ministers of Ukraine

DFU: Decarbonisation Fund of Ukraine

EBRD: European Bank for Reconstruction and Development

EIB: European Investment Bank

ELENA: European Local Energy Assistance (EIB facility)

EPC: energy performance contract

ESCO: energy service company

E5P: Eastern Europe Energy Efficiency and Environment Partnership

GRPU: Green Recovery Programme for Ukraine (NEFCO)

IFI: international financial institution

KfW: KfW Development Bank (Kreditanstalt für Wiederaufbau)

MEP: Municipal Energy Plan

MinDev: Ministry for Development of Communities and Territories of Ukraine

MPB: municipal public building

NEFCO: Nordic Environment Finance Corporation

NFOŚiGW: National Fund for Environmental Protection and Water Management (Poland)

NZEB: nearly zero-energy building

PSEEF: Public Sector Energy Efficiency Financing Framework (EBRD)

RLF: Resilience and Livelihoods Framework (EBRD)

SAEE: State Agency on Energy Efficiency and Energy Saving of Ukraine

TA: technical assistance

UMIP: Ukraine Municipal Infrastructure Programme (EIB)

UNDP: United Nations Development Programme

UPBEE: Ukraine Public Buildings Energy Efficiency Programme (EIB)

USIF: Ukrainian Social Investment Fund

Executive Summary: Public buildings provide essential services and, under repeated attacks on the energy system, form part of Ukraine's resilience infrastructure; thermo-modernisation strengthens this function while cutting energy consumption. Renovating the stock is also an approaching obligation, under both EU approximation and Ukraine's own 2030 targets. Before the full-scale invasion, the EIB estimated the renovation need for Ukraine's public buildings at a minimum of €2 bn.

This paper maps what exists to meet that need: roughly €190 mn in available or committed IFI lending and some €87 mn in grant and donor-channelled support for municipal public-building (MPB) energy renovation, a small fraction of even the pre-war estimate. This finance is also fragmented: only one programme (UPBEE) offers municipalities a standing open competitive call, while the rest run through narrow sub-lines, negotiated access with existing partner cities, donor-selected pipelines or project-specific lists, leaving identifiable finance concentrated in a small number of cities. Domestic channels – the state Decarbonisation Fund and an ESCO market – are operational but so far marginal for deep MPB renovation.

Finance is genuinely scarce, but the more immediate constraint, at current volumes, is that even the available finance is not being fully absorbed. The first completed UPBEE building was reported only in April 2026; five municipalities withdrew from earlier rounds. Only 69 municipalities (around 5%) have the approved Municipal Energy Plan now required for state energy-efficiency support; around 6% of documented public buildings hold an energy performance certificate; around 5% of buildings in the national database have consumption data; fewer than one in five municipalities report energy-management activity; and the regional Offices of Decarbonisation and Energy Efficiency operate in only eight oblasts. These weaknesses compound one another: weak planning reduces demand for data; incomplete data weakens energy management and pipelines; thin pipelines compound borrowing constraints; and financial constraints can push scarce funds towards emergency repair rather than deep renovation. Another instrument of the same design would likely reproduce this pattern.

What is needed is a programme-independent delivery layer, alongside de-risked finance:

- Municipalities should treat energy planning as the entry point to a project pipeline, not a compliance document, supported by an emerging regional intermediary layer.
- SAEF could define a minimum building-data package for MinDev and the IFIs to adopt as a common access condition, with financed preparation where capacity is lacking.
- Municipal councils should make energy management a permanent staffed function and adopt savings-based incentive provisions; a national model provision would let the function partly pay for itself.
- SAEF and MinDev should expand the regional support offices nationwide and attach an ELENA-style preparation window to UPBEE or Ukraine FIRST.
- IFIs, the Ministry of Finance and donors should consider credit guarantees, first-loss mechanisms, interest-rate support, longer tenors and borrowing-procedure assistance wherever loan-based renovation is expected to scale.
- Programme designers should differentiate access tracks by municipal readiness and make aggregation of similar buildings standard, making small projects bankable.

Ukraine should not create another isolated support instrument unless it addresses these systemic bottlenecks. Closing the gap will require both more finance and the delivery capacity to absorb it.

Introduction

Just like everywhere else in the world, public buildings in Ukraine – such as hospitals, educational and administrative buildings – are providers of essential public services. The current war situation is increasing their significance: under conditions of repeated attacks on the energy system, they are a vital part of Ukraine's resilience infrastructure. They fulfil this resilience function by maintaining the heat supply and essential services during supply disruptions, and by providing safer spaces for the delivery of services or support to the population in times of crisis. Furthermore, following thermo-modernisation, buildings help to reduce the strain on local energy systems through lower energy consumption.

This paper presents the current support schemes for municipal public-building (MPB) energy renovation in Ukraine and discusses the bottlenecks that prevent these instruments from becoming a scalable renovation system. The paper is built on the thesis that scaling MPB renovation is constrained on two fronts at once. Identifiable support falls well short of estimated need, so finance is genuinely scarce, but the more immediate constraint is that even the finance available today is not being fully absorbed, owing to the weakness of the delivery layer: incomplete building data, partial energy-management rollout, limited project-preparation capacity, uneven borrowing space and fragmented access routes to support instruments. The implication is not that finance does not matter, but that additional finance will not convert into completed renovations unless this delivery layer is strengthened in parallel.

1 Status quo

Ukraine's public-building renovation needs are large, while the information base for prioritising investments remains incomplete. When the European Investment Bank (EIB) signed the Ukraine Public Buildings Energy Efficiency (UPBEE) Programme in 2020, it estimated investment needs for renovation of Ukraine's public buildings at a pre-war minimum of €2 bn (EIB, 2020). Yet among the 18,268 state and municipal buildings covered by the State Agency on Energy Efficiency and Energy Saving of Ukraine (SAEE) energy-management reporting in 2025, only 1,117 had undergone energy-performance certification, or around 6.1%. Within this certified subset, 606 buildings were classified in the lowest energy-efficiency class, G (SAEE, 2026). Although this is not a comprehensive national inventory, it indicates both weak certification coverage and poor energy performance within the documented stock.

EU approximation and Ukraine's own policy targets will increase implementation pressure on municipalities:

- The revised Energy Efficiency Directive extends public-sector obligations more clearly at local, regional and national level, including a 1.9% annual public-sector energy-consumption reduction target and a 3% annual renovation obligation for all public buildings above 250 m² (European Union, 2023).
- The recast Energy Performance of Buildings Directive also requires new public buildings to be zero-emission from 2028 (European Union, 2024).

- Ukraine's Long-Term Strategy for Thermal Modernisation of Buildings until 2050 sets binding targets by 2030 including functioning energy-management systems in at least 90% of municipalities, at least 36% of residential and public buildings meeting minimum energy-efficiency requirements, and at least 10% of public buildings reaching the nearly-zero-energy buildings (NZEB) standard (CMU, 2023).

Ukraine's long-term targets also include NZEB-level public buildings, but current renovation instruments mostly appear to anchor eligibility to lower mandatory performance levels. This points to a gap between long-term ambition and the standards that are currently operationalised in mainstream support schemes.

From 1 January 2026, an approved Municipal Energy Plan (MEP) became a precondition for municipalities to access state energy-efficiency support (SAEE, 2025). This creates a useful link between public funding and local prioritisation, but uptake remains limited: as of 1 January 2026, only 69 (5%) MEPs had been approved across roughly 1,439 municipalities (SAEE, 2026).

By December 2025, 3,059 buildings had been registered in the national building database, of which 2,921 were public buildings and only 148 (4.8%) had energy-resource consumption indicators recorded (SAEE, 2026).

SAEE's energy-management reporting provides a broader but still incomplete picture. In 2025, 286 of Ukraine's 1,469 municipalities, or 19.5%, reported energy-management activity to SAEE. This reporting covered 18,268 state and municipal buildings (SAEE, 2026). Within that subset, 37.3% had approved energy-management activity plans and 36.8% had automated monitoring systems in place. Baseline energy performance had been calculated for 7,792 buildings in 18 regions, with reported annual consumption of 171 kWh per square metre and year (SAEE, 2026). Under wartime conditions, however, this consumption figure is difficult to interpret: it may reflect under-heating, partial occupancy, rationing or reduced service use rather than normal demand or adequate comfort levels.

2 Existing support schemes

Ukraine's support instruments for MPB energy-performance renovation can be grouped into three categories: (1) International Financial Institution (IFI) instruments, (2) Grant-based and donor-channelled instruments, (3) Domestic financing and market-based instruments. The three groups differ not only in financial form, but also in the access pathway they offer to Ukrainian municipalities, and in the type of project they can realistically deliver. None currently combines an open competitive access mechanism, a dedicated MPB thermo-modernisation envelope at scale, and a strong record of completed delivery across a broad municipal base.

Table 1: Support instruments and municipal delivery constraints for MPB energy renovation

Instrument	Main access route	MPB-relevant support (indicative) / scale	Main delivery/access constraint exposed
UPBEE	Open competitive municipal call	Around €100 mn EIB loan for public-building sub-projects + €14 mn grants/TA; 140+ buildings in 70+ communities	Project preparation, borrowing approval, procurement, implementation capacity
UMIP	Limited dedicated MPB pipeline within a wider municipal-infrastructure framework	At least €21.4 mn identifiable energy-efficiency disbursements	MPB renovation is a small sub-line in a wider infrastructure framework
PSEEF	EBRD framework through municipal energy-service structures / guarantees	€31 mn identifiable pre-war public-building commitments in Kremenchuk and Dnipro	Municipal guarantees and capacity to manage ESCO/EPC structures
RLF	Bilateral EBRD wartime framework with existing partner cities	€37 mn EBRD lending + ~€14 mn grants in Dnipro and Rivne	Prior IFI relationship, negotiated access, project preparation
NEFCO GRPU	Donor/project-specific windows, often preselected communities	Energy-efficiency projects in educational and healthcare buildings, around €31 mn in identifiable external financing	Donor-mediated access and selected pipelines
KfW/USIF	Project-specific implementation lists	€14.45 mn USIF VII; €13.56 mn USIF VIII, 35 healthcare facilities	Sectoral/geographic targeting, implementation intermediation
DFU	Domestic loan instrument	€120.000-90 mn loans; 74 projects, of which one MPB thermo-modernisation: €12.7 mn project cost, €3.8 mn DFU loan/leasing	Creditworthiness, own contribution, 10-year repayment horizon
ESCO	ESCO/EPC model supported by technical assistance	46 thermal-modernisation pilots €300 mn (€5.8 mn) within the 2024 wave	Baseline data, energy management, savings verification, inflation/payback risk

Notes: 1) Instruments are covered if open or under implementation between 2022 and early 2026. 2) Funding figures are identifiable and indicative rather than additive, and exclude municipalities' own contributions; UPBEE is shown at its dedicated public-building envelope, multi-sector instruments at identifiable MPB sub-project values, which are therefore lower bounds. 3) UAH converted at the National Bank of Ukraine reference rate of €51.7/UAH (June 2026).

2.1 IFI instruments

The first group is built on loans from IFIs, passed on to municipalities through different modalities, and blended with grant top-ups and technical assistance from the Eastern Europe Energy Efficiency and Environment Partnership (E5P) or the EU's Neighbourhood Investment Platform (NIP). Four instruments in this group carry meaningful MPB thermo-modernisation volumes: the EIB Ukraine

Public Buildings Energy Efficiency Programme (UPBEE), the EIB Ukraine Municipal Infrastructure Programme (UMIP), the European Bank for Reconstruction and Development (EBRD) Public Sector Energy Efficiency Financing Framework (PSEEF) and the EBRD Resilience and Livelihoods Framework (RLF).

Ukraine Public Buildings Energy Efficiency (UPBEE) is the flagship instrument for municipal public-building energy renovation and the clearest standing programme with an open competitive call for municipalities. Established in 2020 and managed by the Ministry for Development of Communities and Territories of Ukraine (MinDev), it was built around a €300 mn EIB framework loan targeting energy-efficiency improvements in around 1,000 public buildings (EIB, 2020). The loan is complemented by technical assistance and investment grants from the EU NIP and the E5P, together on the order of €14 mn (EIB, 2021; 2024). Following Russia's full-scale invasion, €200 mn of the original loan was redirected to urgent support for Ukraine, leaving around €100 mn for public-building sub-projects (MinDev, 2025). Four selection rounds have been launched since 2023, and by April 2026 the programme supported the renovation of over 140 buildings in more than 70 communities, with the first completed facility reported in April 2026 (EEAS, 2026; MinDev, 2026). The binding constraint is less the design of the instrument than the length of the delivery chain – project preparation, borrowing approval, procurement and works – that stands between available finance and a completed renovation.

Access to UPBEE is competitive but demanding. Eligible applicants are local self-government bodies, and proposed sub-projects must concern public buildings, including educational facilities, kindergartens, healthcare facilities and other public buildings. Sub-projects must involve comprehensive thermo-modernisation rather than partial measures, and must achieve a minimum energy-performance class C under Ukraine's State Building Norms (MinDev, 2026). Applicants must submit a borrowing decision, energy audit/certificate and supporting project documentation. Local budgets cover other costs not covered by the loan, while participating buildings must remain in public use for at least 20 years after implementation.

In practice, five municipalities withdrew from earlier rounds for reasons including Ministry of Finance loan-approval delays, changed budget projections and war damage to participating buildings (UDEPP, 2025). This shows that open access alone is not enough where preparation capacity, borrowing space or implementation support is lacking.

Ukraine Municipal Infrastructure Programme (UMIP) is the older EIB municipal-infrastructure framework loan, signed in 2015 with a €400 mn envelope for public infrastructure projects in Ukraine's medium and large municipalities. It is multi-sectoral by design, covering district heating, water and wastewater, solid waste, municipal lighting and energy efficiency in public buildings (EIB, 2015). Relevant public-building energy-efficiency sub-projects include schools, kindergartens and healthcare facilities across Zaporizhzhia, Kamianske, Lutsk, Sumy, Ternopil and Volyn oblast (EEAS, 2023; 2025). Publicly announced disbursements identify at least €21.4 mn for public-building energy-efficiency sub-projects, with additional mixed UMIP disbursements also including school and kindergarten upgrades in Sumy (EEAS, 2023; 2025). On this basis, the public-building component

appears to remain a relatively small part of the €400 mn framework, whose main logic is broader municipal infrastructure modernisation.

The EBRD Public Sector Energy Efficiency Financing Framework (PSEEF) was approved in December 2017 with up to €100 mn (EBRD, 2017). PSEEF used a municipal energy-service-company model: municipal energy-management companies borrowed under municipal guarantees to finance energy-saving improvements in public buildings and street-lighting infrastructure. Energy-efficiency measures under the framework were implemented through energy-performance contracts by private construction, engineering or energy-service companies selected through competitive tender (EBRD, 2017). This made PSEEF the EBRD's dedicated framework for supporting public-sector energy efficiency and developing Ukraine's ESCO market. In practice, however, its identifiable pre-war sub-projects were concentrated in Kremenchuk and Dnipro. Kremenchuk was supported with an EBRD senior loan of up to €6 mn for energy-efficiency measures in 66 public buildings, and Dnipro with a loan of up to €25 mn for 98 buildings (EBRD, 2017; 2020). In 2025, the EBRD approved a new PSEEF sub-project for public buildings in Kryvyi Rih (EBRD, 2025b), indicating that the framework remained available for new public-building sub-projects after the initial pre-war cases.

Resilience and Livelihoods Framework (RLF) is the EBRD's wartime umbrella framework, announced in 2022 and since expanded, initially covering Ukraine and 12 affected countries (EBRD, 2022). Within its Ukrainian portfolio, MPB thermo-modernisation is visible only through a small number of identifiable sub-projects. Two sub-projects are identifiable: in Dnipro, covering some 88 public buildings (EBRD, 2025a), and in Rivne, covering 24 public buildings - combining envelope retrofit with solar PV, battery storage, heat pumps and heat-recovery ventilation (EBRD, 2026). Both are in cities that were already EBRD partners, and no Ukraine-wide expression-of-interest call has been published. Together, the two identifiable sub-projects represent a combined project cost of roughly €55 mn: €37 mn in EBRD lending, around €14 mn in E5P and donor investment grants, and €3.5 mn in municipal own contributions (EBRD, 2025a; 2026).

Taken together, the four instruments point to identifiable financing of the order of €190 mn available or committed for MPB energy renovation: UPBEE's dedicated envelope plus identifiable sub-projects under the other three. This is complemented by grant and technical assistance, including some €14 mn linked to UPBEE alone. Set against a renovation need the EIB put at a minimum of €2 bn already in 2020 (EIB, 2020), the group's limited reach, not its absence, is the central constraint: identifiable finance remains concentrated in a small number of cities. Access routes differ: UPBEE's open call, UMIP's and PSEEF's narrower pipelines and RLF's bilateral negotiation with existing partners. Yet the constraints recur: project preparation, borrowing approval, municipal guarantees, procurement capacity and long implementation timelines. Embedded technical assistance partly compensates for weak preparation capacity, but it is programme-specific and does not substitute for a functioning municipal delivery layer.

2.2 Grant-based and donor-channelled instruments

The second group consists of grant-based and donor-channelled instruments that support municipal public-building energy renovation without operating as stand-alone IFI lending instruments. The

Nordic Environment Finance Corporation's (NEFCO) Green Recovery Programme for Ukraine (GRPU) and the KfW Development Bank (KfW)/Ukrainian Social Investment Fund (USIF) channel donor funding to selected public-building projects through implementing intermediaries. In contrast, Eastern Europe Energy Efficiency and Environment Partnership (E5P) functions as a cross-cutting grant-blending layer attached to IFI-led investments. For municipalities, the key distinction is the access pathway: support is typically mediated through donor priorities, programme-specific selection or an underlying IFI project package, rather than through a standing open municipal call. These instruments therefore provide important but fragmented MPB renovation support.

The NEFCO Green Recovery Programme for Ukraine (GRPU) was launched in 2022 as a post-invasion recovery instrument providing financial and technical support to municipalities and municipally owned organisations. NEFCO reports having mobilised over €400 mn for Ukraine's green recovery activities since July 2022, with some 50 projects ongoing and 30 completed since 2022 (NEFCO, 2025a). The programme brings together several channels. The post-2022 first phase is grant-based, while the planned second phase is expected to move toward blended finance combining investment loans and grants (NEFCO, 2025b). Access is not a standing open municipal call comparable to UPBEE: several NEFCO-managed actions operate through preselected communities or project-specific donor windows, which makes the access pathway less standardised and more programme-specific.

Public-building thermo-modernisation is visible across NEFCO's Ukraine portfolio, both before the full-scale invasion and under the GRPU umbrella, but it remains one component of a broader green recovery umbrella. Identifiable cases include several public-building renovation projects, although the figures are not directly comparable. The pre-war track record includes Chernivtsi's public-building energy-efficiency project, financed through a NEFCO loan and an E5P grant totalling €8.2 mn (NEFCO, 2023). Under the wartime channels, Rivne received €1.56 mn in EU grant funding for the energy-efficient modernisation of care centres (NEFCO, 2024a). In Ovruch, about €3.4 mn is expected for the renovation of a school and two city-hospital buildings (NEFCO, 2024b). Larger school-focused examples include the NZEB schools renovation in Lviv, Chortkiv and Ivankiv, with an expected budget of up to €13 mn (NEFCO, 2024c), and the Mykulychi NZEB school project, which will replace two war-damaged school buildings and is supported through Finland's €5 mn contribution to the programme (NEFCO, 2024d).

KfW Development Bank/Ukrainian Social Investment Fund (KfW/USIF). KfW channels German Government and EU-supported social-infrastructure investments through the USIF, an independent non-profit organisation that has served as KfW's project-executing agency since 2008 (KfW, n.d.). For the purposes of MPB energy renovation, the most directly relevant identifiable KfW/USIF lines are USIF VII and USIF VIII, both concentrated in healthcare facilities. USIF VII, financed by a €14.45 mn German Government grant through KfW, modernised and equipped 26 medical facilities in eastern Ukraine; 17 achieved a reported energy-saving index above 25% based on pre- and post-renovation audits (USIF, 2024). USIF VIII provides €13.56 mn in German Government/KfW grant funds for energy-efficient renovation, equipment and training in primary and secondary healthcare institutions. The current implementation list covers nine medical facilities, mainly in Dnipropetrovsk and Kharkiv oblasts, with one facility in Kyiv oblast, and the implementation period ran until 30 June 2026 (USIF,

2026). Access thus runs through project-specific implementation lists within predefined sectors and regions rather than a standing competitive call.

By providing grants and implementation intermediation, this group can lower preparation and borrowing barriers for selected municipalities and facilities. What it does not create is a broad, predictable entry point for municipalities with limited preparation capacity or borrowing space: public-building renovation remains a selected sub-line within wider donor portfolios rather than a dedicated, scalable programme envelope.

2.3 Domestic and market-based instruments

The third group relies on domestic public finance and market-based private capital rather than IFI lending. Two instruments matter for MPB thermo-modernisation: the Decarbonisation Fund of Ukraine (DFU), a domestic state-backed lender, and the energy service company (ESCO) model, a market-based mechanism in which private firms finance and implement measures against future savings. The ESCO model is domestic and market-based in nature, even though the preparation support discussed below, including audits, draft contracts and procurement assistance, is delivered through a donor-funded United Nations Development Programme (UNDP) programme rather than from domestic sources.

The Decarbonisation Fund of Ukraine (DFU) was established in 2024. The fund is financed primarily from the environmental tax on stationary CO₂ emissions, with budget appropriations of ₴1,884.3 mn for 2026 (SAEE, 2026). DFU is one of the few standing instruments that municipalities can access without an IFI gatekeeper. Eligible borrowers include local self-government bodies and municipal enterprises. Its core product is a state-supported hryvnia loan of ₴120,000 to ₴90 mn, with a fixed interest rate of 5-9% per annum, a tenor of up to 10 years, a minimum own contribution of 15%, and a grace period of up to 12 months (DFU, 2025). Eligible project types include building energy efficiency, including ESCO-based projects, defined as thermo-modernisation that increases the building's energy-efficiency class above minimum requirements (DFU, 2025).

In practice, however, DFU operates mainly as an industrial decarbonisation lender. By 2025, the fund had financed 74 projects across 17 oblasts, of which more than 94% of the portfolio was industrial decarbonisation; the remainder consisted of municipal and critical-infrastructure projects, with only one MPB thermo-modernisation project to date, a ₴12.7 mn project of which ₴3.8 mn was provided through DFU loan and leasing support (SAEE, 2026). For MPB renovation, two design features may limit uptake. First, DFU loans have a term of up to 10 years, which is likely better aligned with shorter-payback measures than with deep building-envelope renovation packages. Second, access to DFU loans is not automatic. DFU assesses the borrower's creditworthiness and may require security, including surety, pledge or mortgage. For municipalities, these requirements interact with existing local-borrowing limits and Ministry of Finance approval procedures, making the instrument harder to use for local governments with limited borrowing capacity (DFU, n.d.; Ministry of Finance of Ukraine, n.d.).

The ESCO (energy service company) model exposes a different part of the same delivery problem. In principle, under an ESCO/energy performance contracting model, a private company can implement and sometimes finance or arrange financing for energy-efficiency measures in a public

building, with repayment linked to verified or guaranteed savings (IEA, 2018). The UNDP-supported ESCO stream is technical assistance rather than finance: UNDP ran energy audits, prepared draft energy-performance contracts and tender documents, and supported procurement. Across its work it directly supported 148 ESCO pilots in public buildings, but its reach for deep renovation is modest. In the most recent 2024 wave of 95 pilots, 46 were thermal-modernisation projects for public buildings (around ₴300 mn - around €5.8 mn; reported savings 17-70%; contract terms 10-15 years), while 48 solar-PV projects drew more than twice the investment, around ₴658 mn (UNDP, 2025).

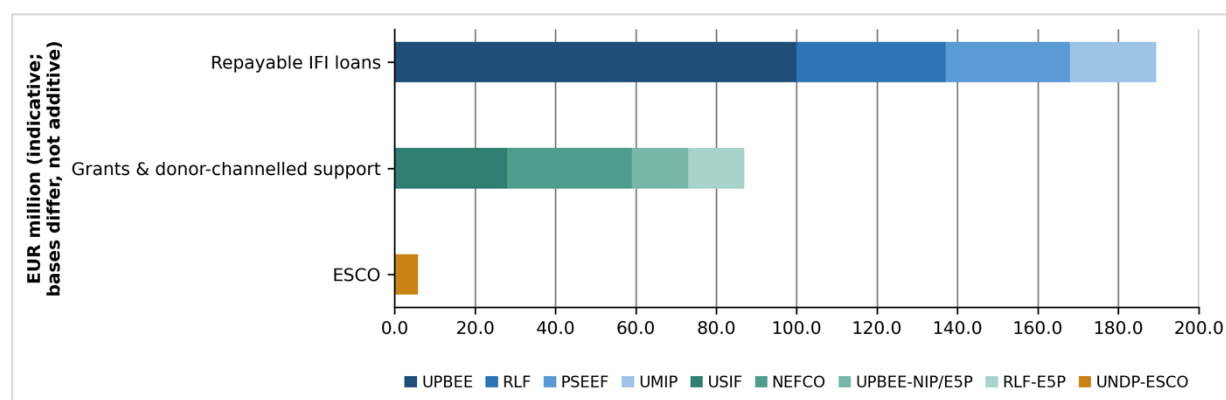
The reason is structural. ESCO solar projects have payback periods of roughly three years and stayed contractable under wartime inflation, whereas thermal-modernisation projects, with 7-8-year paybacks, became hard to contract once inflation-adjustment clauses raised costs that municipalities were unwilling to accept (UNDP, 2025). Deeper thermal-modernisation packages are therefore the hardest case for the ESCO route under current conditions.

The limitation of the domestic and market-based instruments track is therefore not formal eligibility, but the fit between instrument design and project economics: DFU requires bankable borrowers and manageable paybacks; ESCO requires contractable risks and savings that can be verified against a credible baseline, and deep MPB renovation strains both models.

This is the paper's central point: the gap is not in the number of financing channels but in the programme-independent delivery capacity needed to reach and use them. A further instrument of the same design would likely reproduce, rather than resolve, the uneven pattern these figures show.

Across all three groups, identifiable support is of the order of €190 mn in available or committed IFI lending, plus roughly €87 mn in grant and donor-channelled support and a smaller volume of ESCO investment. These figures are based on non-comparable categories and should not be added into a single total, but together they still amount to only a small fraction of even the pre-war €2 bn (EIB, 2020).

Figure 1: Identifiable MPB-relevant support instruments by financing type



Source: author's compilation (Sections 2.1-2.3). Notes: 1) Bars are not additive across categories. UPBEE is shown at its dedicated public-building envelope; all other instruments at identifiable MPB sub-project values (commitments or disbursements), which are therefore lower bounds; 2) DFU is not shown separately: its single identifiable MPB thermo-modernisation project has a total cost of ₴12.7mn (approx. €0.25mn); 3) UAH converted at the National Bank of Ukraine reference rate of ₴51.7/€ (June 2026).

3 Bottlenecks and recommendations

Support instruments can only be used effectively where municipalities have the capacity to turn renovation needs into mature, financeable and implementable projects. This requires planning capacity, baseline building data, energy-management systems, technical documentation, procurement capacity and sufficient financial standing. Where these conditions are weak, financing may exist formally but remain difficult to absorb in practice.

3.1 Municipal planning

Where MEPs exist, they can aggregate renovation needs, anchor baseline assumptions and help translate local priorities into fundable projects; where they are absent, renovation needs remain fragmented. The practical recommendation is to treat municipal planning as an entry point into a project pipeline, not as a stand-alone compliance document. This shift sits with municipalities themselves, with regional development agencies and oblast administrations emerging as a complementary intermediary layer (EECU, 2026).

3.2 Baseline data

Without a usable baseline, municipalities cannot prioritise and build credible investment cases, aggregate similar buildings to cut transaction costs, or verify achieved savings, all of which are requirements or enabling conditions under the EU acquis on buildings. Building data should become practical funding infrastructure, not a reporting exercise. Access to larger MPB instruments could be linked to a minimum data package, with programmes financing its preparation where capacity is lacking; SAEE could define the package, and MinDev and IFIs could adopt it as a common access condition.

3.3 Energy management

Partial energy-management coverage can limit not only monitoring and prioritisation, but also municipalities' ability to access state-backed support instruments (Verkhovna Rada, 2021). Municipal energy management should therefore be resourced as a permanent staffed function, not a compliance obligation. Scaling renovation requires a designated, trained energy manager who maintains baselines, tracks consumption and converts both into investment priorities. This function could sit within a municipality or be shared between smaller municipalities through oblast or intermediary structures. Incentives need the same fix: using savings to reward performance at municipal level depends on each council adopting its own provision, as Chortkiv has (UNDP, 2019); a national model provision would lower that barrier and let the function partly pay for itself.

3.4 Project preparation capacity

Project-preparation support is currently available through a limited number of programme-specific channels rather than through a nationwide system. Offices of Decarbonisation and Energy Efficiency, intended as regional support one-stop shops for municipalities, operate in only eight oblasts (SAEE, 2026). Project preparation should become a standing, programme-independent capacity rather than a feature of individual programmes. Municipalities should not be expected to arrive with mature projects before support begins.

For Ukraine, the foundations of such a layer already exist in these Offices of Decarbonisation and Energy Efficiency alongside regional development agencies and oblast administrations. SAE and MinDev should expand this network to national coverage, while the preparation-financing gap could be closed by a dedicated MPB-renovation preparation window attached to UPBEE or the Ukraine Facility for Infrastructure Reconstruction (FIRST), on the model of Poland's ELENA pilot. Poland illustrates a workable form. Since 2016, the national environmental fund NFOŚiGW has run a free, nationwide energy-advisory network through regional funds, advising municipalities on planning, preparation and financing (NFOŚiGW, n.d.); in 2026 this was complemented by an EIB ELENA competence centre preparing investment documentation - audits, feasibility studies, design and procurement - for at least 80 public-building thermo-modernisation projects, with ELENA grants typically covering up to 90% of preparation costs against a commitment to launch investments of roughly 20 times the grant value (NFOŚiGW, 2026; EIB, n.d.). Ukraine's national facilities - Ukraine FIRST and the Government Project Preparation Facility - currently prepare only centrally selected projects of national strategic interest and do not yet operate as a standing capacity to which municipalities can apply directly (EBRD, 2025c; World Bank, 2025); this is the gap such a window could fill.

3.5 Municipal financial and borrowing constraints

Municipal financial capacity is a separate delivery constraint because loan-based and blended MPB renovation instruments often require local co-financing, borrowing approval, municipal guarantees, or the ability to manage multi-year repayment obligations. Local borrowing is subject to Budget Code limits on debt stock and debt-service costs, as well as Ministry of Finance approval procedures for local borrowings and local guarantees (Ministry of Finance of Ukraine, n.d.; Decentralization.ua, 2024). In the wartime fiscal context, where Ukraine's public finances remain under significant pressure, these rules make loan-based renovation more demanding for municipalities with weaker fiscal positions or limited borrowing space (Bogdan, 2024).

Loan-based instruments need stronger de-risking and affordability support. Grants alone will not solve the absorption problem if municipalities cannot borrow or manage repayment. External credit guarantees, first-loss mechanisms, interest-rate support, longer tenors and dedicated assistance with Ministry of Finance borrowing procedures should be considered wherever loan-based renovation is expected to scale. This is a design question for the IFIs, the Ministry of Finance and donors jointly.

3.6 Absorption and access gaps

Some of the slow uptake documented in Section 2 reflects wartime reordering rather than delivery failure alone: under attack, emergency repair tends to outrank deep renovation. But the delivery constraints set out here are structural, not just problems created by the war; they will bind whenever renovation moves up the agenda, which is why they cannot simply be deferred until the war ends. Wartime conditions therefore raise, rather than lower, the importance of municipal absorption capacity.

Access tracks should be differentiated by municipal readiness. Larger cities can manage complex credit-backed deep-renovation schemes, while smaller or weaker municipalities need simpler entry

routes such as standardised audit packages, phased renovation templates, model solutions for typical building types, and stronger preparation-stage support. Differentiation should make deeper renovation reachable, not lower its ambition.

Aggregation should become a standard feature of programme design. Similar public buildings managed by one municipality, oblast or intermediary should be bundled into portfolios that cut transaction costs for audits, procurement and supervision and make small projects attractive to lenders. Aggregation is also what preparation facilities of the ELENA type presuppose: their leverage requirements favour bundled investment programmes over single buildings, which gives oblasts and regional development agencies a natural role as aggregators.

The result is an absorption problem: additional financing alone will not automatically translate into a larger number of completed renovations unless the delivery layer is strengthened in parallel. These constraints reinforce one another:

- weak municipal planning reduces demand for systematic building data;
- incomplete baseline data weakens energy management, prioritisation and savings verification; partial energy management makes it harder to prepare credible project pipelines;
- thin or poorly prepared pipelines compound financial and borrowing constraints;
- and financial constraints can push scarce funds towards emergency repair rather than deep renovation.

Existing support instruments therefore need to be assessed not only by their nominal financial envelope, but also by their access route, preparation burden and ability to compensate for uneven delivery capacity.

4 Conclusion

Ukraine's municipal public-building renovation challenge cannot be addressed by adding financing windows alone. Existing instruments, including IFI loans, donor grants, technical assistance, domestic lending and ESCO mechanisms, already provide several channels of support, but identifiable support covers only a small fraction of even the EIB's pre-war estimate of €2 bn (EIB, 2020). At current support volumes, the binding constraint is the missing middle: the delivery layer that turns available finance into completed renovations, even though the finance itself remains far below estimated need. Closing the gap to EU-aligned renovation will require both more finance and the delivery capacity to absorb it.

The overall policy implication is that Ukraine should not create another isolated support instrument unless it addresses the systemic bottlenecks identified in this paper. Without this architecture, additional funding will continue to produce fragmented results; with it, municipal public-building renovation can become a scalable element of Ukraine's resilience, EU approximation and long-term reconstruction.

References

- Association of Energy Efficient Cities of Ukraine (EECU). (2026). 'Two days in Lviv: how the region can help its communities'. <https://enefcities.org.ua/novyny/dva-dni-u-lvovi-yak-oblast-moje-dopomogty-svom-gromadam/>
- Bogdan, T. (2024). Ukraine's fiscal developments and needs for economic recovery, reconstruction and European integration. The Vienna Institute for International Economic Studies (wiiw). <https://wiiw.ac.at/ukraine-s-fiscal-developments-and-needs-for-economic-recovery-reconstruction-and-european-integration-dlp-7090.pdf>
- Cabinet of Ministers of Ukraine (CMU). (2023). On Approval of the Long-term Strategy for Thermal Modernisation of Buildings until 2050 and the Operational Action Plan for 2024–2026. <https://zakon.rada.gov.ua/laws/main/1228-2023-%D1%80?lang=en>
- Decarbonisation Fund of Ukraine (DFU). (n.d.). Lending. <https://fdi.com.ua/en/loan>
- Decarbonisation Fund of Ukraine (DFU). (2025). Report for 2024–2025. <https://res2.weblum.site/res/66baedc5c18ef546fa108bc6/694959b05f672ab1c849359a>
- Decentralization.ua. (2024). Local borrowings and local guarantees: algorithm of actions. <https://decentralization.ua/news/18170>
- EBRD. (2017). Ukraine Public Sector Energy Efficiency Framework. <https://www.ebrd.com/home/work-with-us/projects/psd/47699.html>
- EBRD. (2020). PSEEF: Dnipro Public Buildings EE. <https://www.ebrd.com/home/work-with-us/projects/psd/51563.html>
- EBRD. (2022). Resilience and Livelihoods Framework. <https://www.ebrd.com/home/work-with-us/projects/psd/53662.html>
- EBRD. (2025a). RLF – Dnipro Public Buildings EE III. <https://www.ebrd.com/home/work-with-us/projects/psd/55787.html>
- EBRD. (2025b). Minutes of the Board of Directors meeting. https://www.ebrd.com/content/dam/ebrd_dxp/assets/pdfs/strategies-and-policies/ebrd-board-activity/2025/BDSM2517w.pdf
- EBRD. (2025c). Ukraine to rebuild infrastructure with support from Ukraine FIRST initiative. <https://www.ebrd.com/home/news-and-events/news/2025/ukraine-to-rebuild-infrastructure-with-support-from-ukraine-first-initiative.html>
- EBRD. (2026). RLF – Rivne Energy Efficiency. <https://www.ebrd.com/home/work-with-us/projects/psd/56242.html>
- EEAS. (2023). EIB delivers EUR 3 million for energy-efficient upgrades in three Ukrainian cities. Delegation of the European Union to Ukraine. https://www.eeas.europa.eu/delegations/ukraine/eib-delivers-%E2%82%AC3-million-energy-efficient-upgrades-three-ukrainian-cities_en
- EEAS. (2025). EU provides over EUR 18 million to strengthen Ukraine's municipal infrastructure. Delegation of the European Union to Ukraine. https://www.eeas.europa.eu/delegations/ukraine/eu-provides-over-%E2%82%AC18-million-strengthen-ukraine%E2%80%99s-municipal-infrastructure_en
- EEAS. (2026). School in northwestern Ukraine opens following EU-supported energy efficiency upgrade. Delegation of the European Union to Ukraine. https://www.eeas.europa.eu/delegations/ukraine/school-northwestern-ukraine-opens-following-eu-supported-energy-efficiency-upgrade_en
- EIB. (n.d.). ELENA – European Local Energy Assistance. <https://www.eib.org/en/products/advisory-services/elena/index>
- EIB. (2015). Ukraine: EIB supports the upgrade of municipal infrastructure with EUR 400 million. <https://www.eib.org/en/press/all/2015-178-eib-supports-the-upgrade-of-municipal-infrastructure-in-ukraine-with-eur-400-million>
- EIB. (2020). Ukraine to Increase Energy Efficiency of Public Buildings with EUR 300 Million Loan from EIB. <https://www.eib.org/en/press/all/2020-261-ukraine-to-increase-energy-efficiency-of-public-buildings-with-eur300-million-loan-from-eib>
- EIB. (2021). The EU Neighbourhood Investment Platform and the E5P Fund join the EIB in supporting Ukraine's public buildings energy efficiency. <https://www.eib.org/en/press/all/2021-210-the-eu-nip-and-the-e5p-fund-join-the-eib-in-supporting-ukraine-s-public-buildings-energy-efficiency>

- EIB. (2024). EIB and E5P support Ukrainian hospitals through war-related emergency measures. <https://www.eib.org/en/press/all/2024-139-eib-and-e5p-support-ukrainian-hospitals-through-war-related-emergency-measures>
- European Union. (2023). Directive (EU) 2023/1791 on energy efficiency (recast). https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ%3AJOL_2023_231_R_0001
- European Union. (2024). Directive (EU) 2024/1275 on the energy performance of buildings (recast). https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L_202401275
- IEA. (2018). Energy Service Companies (ESCOs). <https://www.iea.org/reports/energy-service-companies-escos-2>
- KfW. (n.d.). Improving living conditions. KfW Development Bank. <https://www.kfw-entwicklungsbank.de/About-us/Ukraine/Sector-Information-USIF/>
- Ministry for Development of Communities and Territories of Ukraine (MinDev). (2025). Information regarding the selected Final Beneficiaries of the 'Energy Efficiency of Public Buildings in Ukraine' programme as part of the third call for applications from local authorities. <https://mindev.gov.ua/news/informatsiia-shchodo-vidibranykh-kintsevykh-benefitsiariv-prohramy-enerhoefektyvnist-hromadskykh-budivel-v-ukraini>
- Ministry for Development of Communities and Territories of Ukraine (MinDev). (2026). European Partners Provide EUR 29 Million for Thermomodernisation of Public Buildings in Ukraine. <https://mindev.gov.ua/news/yevropeiski-partnery-nadadut-29-mln-na-termomodernizatsiiu-hromadskykh-budivel-v-ukraini>
- Ministry of Finance of Ukraine. (n.d.). Local Debt and Local-guaranteed Debt. <https://mof.gov.ua/en/miscevij-borg-ta-miscevij-garantovaniy-borg-osn-inf>
- NEFCO. (2023). Nefco continues to advance green projects in Ukraine: 33 public buildings in Chernivtsi undergo energy efficiency modernisation. <https://www.nefco.int/news/nefco-continues-to-advance-green-projects-in-ukraine/>
- NEFCO. (2024a). Energy-efficiency modernisation project in Rivne improves educational environment for children with disabilities and internally displaced persons. <https://www.nefco.int/news/energy-efficiency-modernisation-project-in-rivne-improves-educational-environment-for-children/>
- NEFCO. (2024b). General Procurement Notice: Thorough Repair of Ovruch Lyceum No. 3 and Ovruch City Hospital. <https://www.nefco.int/procurements/general-procurement-notice-thorough-repair-of-ovruch-lyceum-%E2%84%963-and-ovruch-city-hospital/>
- NEFCO. (2024c). General Procurement Notice: Nearly Zero Energy Renovations of School Buildings. <https://www.nefco.int/wp-content/uploads/2025/07/gpn-nzeb-ii-final-20240711-eng-upd.pdf>
- NEFCO. (2024d). Finland and Nefco launch a nearly-zero energy building project to replace war-damaged schools close to Kyiv in Ukraine. <https://www.nefco.int/news/finland-and-nefco-launch-a-nearly-zero-energy-building-project-in-ukraine/>
- NEFCO. (2025a). Nordic countries contribute an additional EUR 95 million to green recovery activities in Ukraine through Nefco. <https://www.nefco.int/news/nordic-countries-contribute-an-additional-eur-95-million-to-green-recovery-activities-in-ukraine-through-nefco/>
- NEFCO. (2025b). Request for proposals – Technical Assistance with project selection, feasibility study and Project Implementation Unit (PIU) support under the Nefco Green Recovery Programme for Ukraine (Second phase). <https://www.nefco.int/procurements/request-for-proposals-technical-assistance-nefco-green-recovery-programme-for-ukraine-second-phase/>
- NFOŚiGW. (n.d.). Projekt Doradztwa Energetycznego. <https://doradztwo-energetyczne.gov.pl/o-projekcie/>
- NFOŚiGW. (2026). NFOŚiGW stworzy centrum kompetencji na rzecz transformacji energetycznej w ramach programu ELENA. <https://www.gov.pl/web/nfosigw/nfosigw-stworzy-centrum-kompetencji-na-rzecz-transformacji-energetycznej-w-ramach-programu-elena>
- SAEE. (2025). Local Energy Plans: a condition for access to state support for energy-efficiency measures from 1 January 2026. <https://saee.gov.ua/news/mistsevi-enerhetychni-plany-stratehiia-enerhonezalezhnosti-dlia-hromad>
- SAEE. (2026). Public Report of the Head of SAEE for 2025. <https://saee.gov.ua/static-objects/saee/sites/1/publicnii-zvit-golovi-2025-final-4-26022026.pdf>

-
- UDEPP. (2025). White Paper on Energy Efficiency in Public Buildings: Obligations under EU Directives (EED, EPBD) and the Danish Experience. <https://mindev.gov.ua/storage/app/sites/1/uploaded-files/whitepaper-on-relevant-obligations-from-eu-directives-eed-epbd-and-danish-solutions-and-cases-ua.pdf>
- UNDP. (2019). Power monitoring scheme saves Ukrainian town energy and money. <https://www.undp.org/ukraine/news/power-monitoring-scheme-saves-ukrainian-town-energy-and-money>
- UNDP. (2025). Lessons Learned Report on Energy Efficiency in Public Buildings / ESCO support in Ukraine. <https://www.undp.org/sites/g/files/zskgke326/files/2025-03/undp-ua-ee-pb-lessons-learned-report-final-signed.pdf>
- USIF. (2024). 26 medical facilities modernised: USIF completes large-scale medical project. Ukrainian Social Investment Fund. <https://usif.ua/en/news/modernizovano-26-medychnykh-zakladiv-ufsi-zavershyv-masshtabnyi-medychnyi-proiekt>
- USIF. (2026). USIF-VIII: Promotion of Social Infrastructure Development – USIF.VIII Project. Ukrainian Social Investment Fund. <https://usif.ua/en/project/20>
- Verkhovna Rada of Ukraine. (2021). Law of Ukraine 'On Energy Efficiency' No. 1818-IX. <https://zakon.rada.gov.ua/laws/show/1818-20#Text>
- World Bank. (2025). Preparation of Resilient Projects to Advance Recovery of Ukraine (PREPARE Ukraine). <https://documents1.worldbank.org/curated/en/099032625052518927/pdf/P508490-e2e7fa85-c01e-48f4-a48e-90253f83f777.pdf>