Ukraine Shelter Cluster

Winterization Recommendations 2026-2027



UKRAINE SHELTER CLUSTER
Coordinating Humanitarian Shelter and Settlements

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2 Acknowledgement

This standard operating procedure (SOP) is the result of the work of the Ukraine Shelter Cluster's Technical Working Group (TWiG) on Winterization 2026-2027.

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3 Context

It is estimated that since February 2022, around 14 percent of Ukraine's housing stock has been damaged or destroyed, affecting more than three million households. According to the Fifth Rapid Damage and Needs Assessment (RDNA5), released in February 2026 and covering the period to 31 December 2025, total direct damage across all sectors has reached approximately USD 195 billion – around 11 percent higher than reported in RDNA4 – with housing remaining the single most affected sector. Housing accounts for roughly 31 percent of total damage, and more than 80 percent of that damage and destruction is concentrated in frontline and border regions.

Throughout 2025 and into early 2026, intensified attacks caused further damage to housing and civilian infrastructure across the east, south and north of the country, increasing the number of people displaced from their homes and in need of thermally insulated shelter. The security situation in Donetska, Kharkivska, Zaporizka and Dnipropetrovska oblasts continued to deteriorate, with evacuations ongoing. Since 1 June 2025, according to government figures, around 150,000 people were evacuated from frontline areas to safer regions, including approximately 18,000 children and more than 5,000 persons with limited mobility; further mandatory evacuations with children from frontline settlements in Donetska, Dnipropetrovska, Zaporizka, Kharkivska and Chernihivska oblasts were ordered in the first half of 2026.

The winter of 2025–2026 was one of the harshest in recent years and proved detrimental to internally displaced persons (IDPs), non-displaced people in war-affected areas, returnees and host communities alike. More than 3.7 million people remained internally displaced, many having been displaced multiple times. The repair and rehabilitation of collective sites are vital life-saving interventions, as the increasing number of displaced persons and repeated re-damage to previously rehabilitated sites continue to outpace available capacity.

Disruptions to centralized and electric heating systems had a profound impact on affected populations during the 2025–2026 season. Between October 2025 and February 2026, coordinated strikes reportedly caused a generation deficit of around 7 GW, and in January 2026 near-daily attacks damaged or destroyed energy assets in at least 17 regions and Kyiv city, leaving millions of people with only a few hours of electricity per day and disrupting heating and water services, particularly in multi-apartment buildings. In early October 2025, the largest attack on Ukraine's gas infrastructure since the start of the full-scale invasion took an estimated 60 percent of domestic gas production offline. District heating networks remained highly vulnerable – a single damaged facility can interrupt services for entire neighborhoods – and even where infrastructure was operational, heating often remained economically inaccessible due to rising tariffs, irregular income and depleted savings.

Based on operational experience from the 2024–2025 and 2025–2026 winter response seasons, solid fuel remained a critical heating solution in both rural and urban areas. Both in-kind distributions and cash assistance proved effective, with the choice of modality largely determined by market functionality and access constraints. In-kind support was often required in remote and frontline locations where fuel markets were disrupted, access was restricted, or insecurity prevented supplier deliveries. Damage to transport infrastructure further disrupted supply chains and increased delivery costs. Where markets are functioning, cash assistance remains the preferred modality, as it provides households with greater flexibility and dignity in meeting their heating needs. To maximize its effectiveness, cash assistance should be accompanied by clear guidance and communication about its intended purpose and appropriate messaging about

heating-related expenditures, including recommended fuel quantities and safe, efficient firewood use.

Given the consistent wintertime targeting of Ukraine's energy infrastructure and the recurring inoperability of heating systems during the coldest months, solid fuel and stoves (including fittings and installation equipment) must continue to be prioritized, irrespective of ongoing price fluctuations. Damage and lack of maintenance have affected heating systems in collective sites and in individual houses and apartments alike; in many cases, these systems – including water heaters, electrical grids, gas and hot-water pipelines, internal pipes, radiators and stoves – must be reactivated, repaired or replaced. Portable heating appliances should be provided where the heating system is dysfunctional or cannot be restored before the upcoming winter season.

One of the most important lessons from the 2025–2026 season is that timing is a core quality standard. Post-distribution monitoring consistently showed that assistance received before the heating season is markedly more effective, whereas delays in implementation and delivery, whether cash transfers or in-kind assistance, forced households to borrow fuel, reduce heating, deplete savings, or purchase at peak prices, and late funding left insufficient lead time for in-kind procurement and delivery. The 2026–2027 response should therefore aim to complete most of the registration, procurement, payments, and in-kind deliveries by October. Lessons learned also reaffirmed the importance of pre-positioning heating appliances and solid fuel in advance of peak winter months, and of giving special attention to female-headed households and elderly individuals, many of whom are unable to physically unload, store or process large firewood deliveries.

In addition to heating, essential household items such as warm winter clothing, thermal underwear and thermal blankets remain necessary for displaced individuals, returnees and others who have lost their belongings, lack access to markets, or cannot afford essential winter items. Interventions should be based on a sex- and age-disaggregated household needs assessment, in line with agreed vulnerability criteria, and may be delivered in-kind or through cash/voucher assistance, wherever feasible and appropriate, particularly for winter preparations.

Assistance continued to be guided by the principle of deduplication. The combined use of winter coordination tables and the RAIS+ platform – used by more than 78 partners – enabled coordinated assistance to over 357,000 households and prevented an estimated USD 45 million in duplicate payments during the 2025–2026 season. Accurate and timely reporting by partners into RAIS+ remains crucial for cross-checking and ensuring harmonized coverage, both within and between clusters.

This guidance is framed within the 2026 Humanitarian Needs and Response Plan (HNRP), which estimates that 10.8 million people require humanitarian assistance in 2026 and prioritizes 4.1 million of the most vulnerable. In light of the evolving context and operational lessons from 2025–2026, the Shelter and NFI Cluster has further adjusted its planning assumptions and priorities for the 2026–2027 winterization response, emphasizing early preparedness, earlier procurement and pre-positioning, stronger and earlier coordination with governmental actors at oblast and hromada levels, improved targeting and deduplication mechanisms, diversified delivery modalities tailored to market constraints, and the explicit integration of energy-shock preparedness. Contextual risks – energy infrastructure disruptions, fluctuating fuel markets and recurring displacement – should be explicitly factored into planning, including pre-positioning in high-risk areas, contingency planning for shifts between cash and in-kind modalities, and flexibility to adapt to changing market and security conditions.

4 Cluster HNRP Objective Two

The HNRP 2026 is structured around two Strategic Objectives (SOs) and four Strategic Priorities (SPs). Shelter Cluster Objective 2, including the winter- and heating-related activities covered in this document, contributes to HNRP Strategic Objective 1 (SO1).

5 Winter Objectives

Although there are dedicated winter activities, other regular cluster activities can also contribute to resilience against winter. Therefore, in this document, activities are categorized according to the following three winter objectives (WO) to clarify their winter purposes.

Winter Objective 1: **Personal Insulation**
Maintaining core body temperature through various personal non-food items, including winter clothing, NFI for winter, etc.

Winter Objective 2: **Winter Heating**
To raise and maintain core body temperature. The heating type varies by building type and location, including those using natural gas, centralized heating, electric heaters, liquefied gas, and solid fuel. Understanding the type of heating and related expenditure (utilities or solid fuel) by location, household, and market assessment is vital for identifying the most appropriate modality of assistance.

Winter Objective 3: **Shelter Insulation**
To protect from the weather elements and provide essential insulation (shelter should have at least one warm room and, depending on the number of inhabitants, heated sleeping spaces). Interventions can also aim to seal the house's thermal envelope in winter and improve substandard housing to enhance insulation and heating efficiency.

All three objectives aim to contribute to the overall thermal comfort of households, as represented in the following logical framework.

6 Activity Reports & Deduplication

6.1 Winter Duration

The duration of one winter season is the six-month period from 16 October to 15 April each year. The winter reporting period lasts from the beginning of October to the end of April.

6.2 Reporting Mechanism

The mechanism for coordination and reporting will be the following:

- Coordination at the hub level will take place through communication in the agreed-upon planning process for all winter activities.
- RAIS+ can generate and export aggregate reporting data in a format compatible with the 2026 ActivityInfo Response Monitoring database (Country Module). The organization's focal point should review and validate the exported data before importing it into ActivityInfo. Data are not transferred automatically between RAIS+ and ActivityInfo.
- For SIDAR-supported activities, reporting data can be transferred to ActivityInfo through the dedicated SIDAR functionality. The transfer is initiated by the partner; data are not submitted automatically by the system without the partner's action.

6.3 Activities Deduplication

With many actors operating in the same locations, the risk of assistance duplication – where the same households receive similar assistance from multiple organizations – can undermine equitable distribution, particularly under constrained funding. To mitigate this risk, the Shelter Cluster will continue to use RAIS+ for activity-level deduplication in the Winter 2026-2027 response, enabling cross-checks of both cash and in-kind assistance within planned activities.

Deduplication guidance will be developed and disseminated ahead of the winter response season. The guidance will cover:

- An activity-level deduplication matrix.
- Agreed common identifiers for household- and individual-level deduplication.
- Minimum data standards to support effective deduplication.
- Procedures for the timely removal of assistance deduplication records where appropriate.

All partners are expected and encouraged to use the RAIS+ deduplication functions prior to finalizing and confirming beneficiary lists. Dedicated training sessions will be organized for partners to ensure consistent application of the guidance and to build capacity in using deduplication functionalities within RAIS+.

At the hub level, Shelter Cluster partners should also ensure they use the Winterization Master Database Planning needs table.

Table 1 - Reporting

WO	Activity	Status	Ideal implementation timeline	When to report as a completed activity	Deduplication
WO1: **Personal Insulation**	1.1 Winter Clothing	Specific Winter activity	From July to October, prepare pre-identified households for winter. From October to March, to support newly displaced or evacuated persons, or the most recent victims of shelling, with basic items for maintaining core body temperature	Following the distribution and reconciliation of beneficiary lists, the deadline for submitting all April reports on winterization will fall in early May	RAIS+
	1.2 NFI for Winter	Specific Winter activity	From July to October, prepare pre-identified households for winter. From October to March, to support newly displaced or evacuated persons or recent victims of shelling with the most basic items for maintaining core body temperature	Following the distribution and reconciliation of beneficiary lists, the deadline for submitting all April reports on winterization will fall in early May.	RAIS+
	1.3 NFI for Households	Regular or Emergency Response Programming	Shelling victims were identified through a SADDD-based household needs assessment, informed by vulnerability criteria, in the Shelter Cluster Activities Handbook for newly displaced or evacuated persons.	Following the distribution and reconciliation of beneficiary lists, this activity can be reported ideally in the month following the distribution – it won't be tagged as a winterization activity outright.	RAIS+
	1.4 Donation of NFIs for Shared Use	Regular programming	Due to accommodating newly displaced persons who may arrive in winter or at any other time of the year.	Following the donation at the mentioned collective site	Shelter Cluster Deduplication Tool at CS level, donations in RAIS+

WO	Activity	Status	Ideal implementation timeline	When to report as a completed activity	Deduplication
WO2: **Winter Heating**	2.1 Winter Energy	Specific Winter Activity	July to October to prepare pre-identified households or collective sites for winter, aiming to distribute the bulk of support in September, with the latest distributions occurring in November	At the subnational level, once the initial distribution is complete. For ActivityInfo, pay close attention to the distribution date, which should align with the actual distribution date. The deadline for reporting to ActivityInfo is January, with reporting to be completed in February. Fuel distributed from March onward could be considered a failure to meet the winter energy needs of the season and may be excluded from the Cluster's reporting.	RAIS+
	2.2 Winter Cash for Utilities	Specific Winter Activity	October to April to prepare pre-identified (August – September) households for winter	April reporting during the month of May Reporting to be done according to the actual disbursement date, included in seasonal reporting. Cash assistance for utilities should be disbursed no later than the end of March, with reporting finalized in April.	RAIS+
	2.3 Heating Appliances	Specific Winter Activity	July to October to prepare pre-identified households for winter, aiming to distribute the bulk of support in September, with the latest distributions taking place in November.	For ActivityInfo, please note that the activity date aligns with the actual date of finalization for the installation or distribution. The recommended deadline for reporting to ActivityInfo is January, with reporting to be completed in February.	RAIS+

WO	Activity	Status	Ideal implementation timeline	When to report as a completed activity	Deduplication
WO3: **Shelter Insulation**	3.1 Insulation of Substandard Houses	Specific Winter activity	Year-round (May-May), with a preference for repairs to be completed in the 'off season' (May to September) in advance of the winter season.	For ActivityInfo, this activity is ideally reported in the month following the completion of the works.	SIDAR
	3.2 Category I Repairs (Light and Medium) of war-damaged housing to close the thermal envelope	Regular Programming	Year-round, with a preference for repairs to be completed in the 'off season' (May to September) in advance of the winter season.	For SIDAR, as soon as the address is enrolled in agency programming (see the SOP on emergency response for guidance on enrolment), upon completion of works, complete the checklist in SIDAR and ensure that the thermal envelope is checked for all works that complete that standard. For ActivityInfo RMM, report the activity in the month following completion of the works.	SIDAR
	3.3 Refurbishment of Collective Sites	Regular Programming including winter-related interventions	Year-round, with a preference for repairs to be completed in the 'off season' (May to September) in advance of the winter season.	Before commencing the work, inform the subnational coordinator and the CCCM Cluster which collective sites have been selected for repair. For ActivityInfo, reporting on the completion of works is ideally done in the month following repairs.	SIDAR

7 Winter Response Strategy

These recommendations should be read in conjunction with the Ukraine Winter Response Plan 2026–2027, which provides the overarching multisectoral framework, strategic priorities, geographic focus, and planning parameters for the winter response. This document translates the relevant Shelter and NFI priorities into activity-specific technical and implementation guidance for Cluster partners.

Within this broader framework, the Shelter Cluster's winterization strategy draws on operational experience from previous seasons, particularly the unusually severe winter of 2025–2026, to guide decisions on where, for whom, when, and through which modalities assistance should be delivered. The strategy is structured around four operational priorities: completing assistance before the heating season; maintaining a flexible mix of cash and in-kind modalities responsive to market functionality and household circumstances; linking winter energy assistance with shelter and thermal-envelope improvement activities where relevant; and integrating preparedness for energy shocks into planning from the outset.

For operational guidance on preparedness for and response to prolonged electricity and heating supply disruptions, including building- and facility-level interventions, technical safeguards, and inter-cluster coordination, please refer to Annex 15.11 – Response to Electricity and Heating Supply Disruptions.

7.1 Modalities of Assistance

Cash is one of several modalities through which Shelter objectives can be achieved, and shall be recommended as the preferred response option whenever feasible and aligned with beneficiary choice. Evidence from the 2025–2026 post-distribution monitoring confirmed a strong preference for cash among cash recipients (around 84 percent selected cash as the most suitable modality), while recipients of in-kind solid fuel were more evenly split, with a small majority (around 54 percent) preferring in-kind support. This reinforces that a mixed-modality approach remains necessary: cash performed very well where markets, banking, postal services and supplier networks were functional and allowed households to choose between firewood, briquettes, gas, electricity or debt clearance, whereas in-kind support remained particularly relevant in rural and frontline areas – especially for older people and people with limited mobility – and where fuel could be delivered directly to the household. Regardless of the modality selected, responsible programming requires evidence, tools, guidance, and operational capacity to achieve shelter outcomes (see the Shelter Cluster 2026 Activities Handbook and this technical guidance). Organizations should ensure that the chosen modality is assessed, utilized, and monitored effectively, and remain flexible to switch to alternative modalities if needed. This provides greater assurance that the activity achieves its desired outcome.

Depending on the context, partners should refer to the recommendations in the following ground rules:

- See the modality section per activity in the Shelter Cluster 2026 Activities Handbook and Activity Matrix.
- Use the Joint Shelter Cluster Post-Distribution Monitoring Tool 2025-2026 for evidence-based insights into the effectiveness of implementation, in particular for the Winter Energy activity.
- Use the JMMI dashboard to analyze market functionality; the dashboard is updated monthly.
- Select modalities based on household-specific vulnerability and capacity, including older persons and children, persons with disabilities, access to markets, access to banking services (e.g., digital or

mobile cash transfers), and the market's capacity to supply quality items at the correct scale and time.
- Support government programs where appropriate and feasible.
- Complement government social protection beneficiary roles through independent needs and market assessments and coordinate closely with other actors and local authorities.
- Cash is the preferred modality where local markets are functional and accessible and where the target population can access and use it effectively; it provides flexibility and choice while stimulating the local economy.
- As part of the needs assessment and household-level data collection, partners should provide potential program participants with an information leaflet explaining the relevant assistance modality, key information on the intended use of the assistance, safe heating practices, carbon monoxide awareness, and available feedback and complaints mechanisms. The Shelter/NFI Cluster template may be adapted by partners with their program-specific information and AAP contact details. Template: Beneficiary Information Leaflet – Cash Assistance for Solid Fuel.
- In-kind assistance is recommended where markets are unavailable or lack sufficient capacity, or where the target population cannot reasonably access markets due to displacement or specific vulnerabilities. These constraints are more common in frontline and remote areas but may also affect displaced households in safer or receiving hromadas.
- Establish predefined "switch triggers" for shifting from cash to in-kind (or vice versa) if market functionality, accessibility, or security conditions change significantly during implementation.
- Build multi-channel communication into program design – combining local leaders, community mobilizers, local authorities, and informal social networks – and to ensure beneficiary preferences and needs are considered throughout the response.
- Ensure Accountability to Affected People (AAP) and Communication with Communities (CwC) measures are embedded throughout the Winter Response, including clear and accessible information on available assistance, eligibility and prioritization criteria, registration and application processes, assistance modalities and timelines, referrals, complaints and feedback mechanisms, and the safe use of winter heating and energy sources.

Three cross-cutting lessons from the 2025–2026 season should shape modality planning for 2026–2027:

Timing and procurement. Late funding decisions compressed implementation timelines and pushed registrations and procurement into mid-winter, when solid fuel prices had already peaked, reducing value for money and, in some cases, delaying delivery of the full recommended quantity. Holding tenders and concluding framework agreements during the summer allowed partners to lock in solid fuel prices during the low season and protect against in-season price increases. Price monitoring indicated that solid fuel prices rise by roughly 10-20 percent from summer to early autumn, with observed winter peak-season increases of approximately 50-60 percent for briquettes and 70–80 percent for firewood compared with early-autumn levels. For planning purposes, partners should apply a seasonal contingency of approximately 20 to 30 percent when moving from early-autumn prices to average winter procurement values, and a higher risk margin where procurement or cash-value revision is exposed to winter peaks.

Logistics and quality. In frontline and hard-to-reach areas, logistics became a determining factor in its own right: carrier refusals, driver shortages, route delays, waiting time, and disrupted transport corridors affected both delivery timelines and the final quantity of fuel that households could receive within a fixed budget. Quality control and verification of the legality of firewood origin should be treated as part of assistance quality, not only procurement compliance, since lower-cost firewood may be linked to weaker documentation, informal sourcing, lower calorific value, excessive moisture, or poor species selection. Price comparisons are therefore incomplete if they do not distinguish between documented, legal supply and informal or lower-quality supply.

Strengthening accountability and community engagement across winter modalities. Experience from the previous winter response highlighted the importance of maintaining direct and consistent engagement with affected communities to complement administrative and other delivery mechanisms. Strengthened communication can support a clearer understanding of eligibility, registration, the purpose and timing of assistance, and provide opportunities for safety messaging, referrals, and accessible complaints and feedback mechanisms. Timely information sharing with local authorities is equally important for effective communication with communities. For the 2026–2027 response, AAP and CwC should therefore be embedded across all modalities and delivery mechanisms, including through multi-channel CwC materials covering eligibility, registration, payment timelines, referrals, FAQs, heating and fuel safety, and complaints and feedback mechanisms; and structured information sharing and feedback loops with local authorities. Modality planning should also consider the timing of different forms of assistance and its potential influence on beneficiary preferences, acceptance, and uptake.

7.2 Information, Education, and Communication Materials

The free Ukrainian-language online course Winter Preparation and Energy Conservation, developed by Shelter Cluster Ukraine in collaboration with UNHCR, remains available for the 2026–2027 season. It offers practical, low-cost tools to help war-affected households prepare their homes for winter, retain heat, reduce energy consumption, and improve indoor comfort, and is a valuable resource for beneficiaries planning for the winter season, especially in areas with limited access to heating solutions or construction support.

Partners are encouraged to inform affected households and local authorities about the course and to promote its use as part of winter preparedness efforts. At the same time, lessons from 2025–2026 highlight that this tool has limited accessibility for certain groups, including older persons and persons with disabilities, and that awareness of information and feedback channels was uneven more generally. Single-channel communication proved insufficient, particularly in frontline settlements with limited mobile connectivity. Partners are therefore encouraged to provide simple beneficiary-facing materials that explain the type of assistance, fuel type, quantity, measurement units, and key terminology, including the distinction between stacked and loose (non-stacked) firewood, as well as how volumes are calculated.

7.3 Cold Spot Analysis 2026/27

The key findings of REACH are as follows:

- The Cold Spot Index (CSI) for winter 2026-2027, identified Kharkivska oblast (Kharkivskyi, Bohodukhivskyi, Chuhuivskyi, Berestynskyi and Lozivskyi); Donetska oblast (Kramatorskyi); , Sumska (Sumskyi and Okhtyrskyi) and Kyivska (Kyiv city and Buchanskyi) as the raions with the highest winter-related risks due to a combination of colder winter conditions, conflict intensity, proximity to active hostilities or the Russian border, displacement, infrastructure disruption, and cumulative damage to electricity, water, and heating systems.
- New this year to the CSI is an increased focus on the impact of cumulative damage to energy and heating systems. The CSI overview highlights the vulnerability of large urban areas such as Kyiv, Kharkiv, Odesa, and Dnipro, where large pockets of the population depend on centralized electricity, heating, water, and communication systems. This highlights the need for flexibility to respond to spikes in need driven by cumulative failure of critical utilities over the winter period.
- Finally, the index notes that Khersonska, Zaporizka, and Odeska oblasts may face fewer weather-related risks but demonstrate winter-related vulnerabilities linked to conflict exposure, infrastructure disruption, and utility outages.

7.4 Targeting, Prioritization, and Vulnerabilities

Before starting any activity, partners should follow the Protection Cluster guidance on identifying vulnerability criteria and prioritizing assistance. For practical application of this guidance, partners can refer to the Shelter Cluster Activities Handbook, particularly the sections "Targeting, Prioritization and Vulnerabilities" and the subsections "Preconditions" and "Activity-specific vulnerabilities" for each activity type. These materials provide detailed instructions on assessing the most vulnerable households and individuals and can serve as a supplementary tool for implementing the Protection Cluster guidance.

Geographical prioritization should guide operational planning but should not be applied as a stand-alone eligibility or exclusion criterion. Partners should complement area-based targeting with household-level criteria, including displacement status, recency of evacuation, current housing conditions, access to state assistance, and unmet winterization needs. Recently evacuated households and other newly displaced persons should be assessed at their current place of residence, including in receiving areas outside the primary geographical priority zone, as relocation from a frontline or border area does not remove their winter-related vulnerabilities.

In preparation for and throughout the 2026-2027 winter season, Shelter Cluster partners will work both within and outside the scope of the government resolution to supplement this assistance by reaching:

- Individuals and households eligible for these state social programs but have been excluded for any reason.
- Individuals and households who are not eligible for assistance under these state social programs, including those with additional or intersecting vulnerabilities not captured by the eligibility criteria established under the Resolution, but whose assessed needs and exposure to winter conditions place them at heightened risk.
- Individuals and households outside the prescribed Resolution priority geography whose winter-related vulnerabilities remain high due to recent evacuation or displacement, including those residing in collective sites, rented accommodation, with host families, or in other temporary, overcrowded, or substandard housing in receiving areas.

Table 2 - Beneficiary selection

1. **In general, they will have their winterization needs unmet because:**

- they do not have the capacity
- not receiving winterization-related state support (state subsidies or other winterization programs)

and, at the same time,

2. **live in areas identified as priorities for winterization assistance, or have recently been evacuated or displaced from such areas and currently reside in receiving locations where their winterization needs remain unmet:**

Shelter Cluster plans in HNRP 2026 focus primarily on the Crescent zone, which is highly targeted by ongoing Russian attacks. The Crescent currently includes areas in southern, northern, and eastern oblasts, and prioritization inside this zone is for:

- areas where displaced households remain in collective sites due to a lack of access to adequate housing alternatives.
- areas with difficult access to services and markets.
- frontline and isolated areas.
- areas with a concentration of damaged houses and apartments.

- areas receiving significant numbers of evacuated populations, where winterization support is necessary to mitigate secondary displacement and avoid creating pull factors.

Or,

Apart from the risk of sudden aerial Russian attacks on civilian infrastructure, the Central oblasts are not as critical as the East Crescent zone. Activity prioritization should be considered in case of an emergency crisis for:

- areas where collective sites continue to be used as temporary shelter following sudden displacement.
- areas hosting significant numbers of IDPs with winterization needs following large-scale evacuations, including IDPs renting accommodation or staying with host families.
- areas affected by cumulative disruptions to critical utilities, including energy, heating, and water services.

and, at the same time,

3. **belong to one of the prioritized target groups:**

- recently evacuated households and newly displaced families, regardless of whether they are accommodated in collective sites, rented housing, with host families, or in other temporary arrangements.
- other internally displaced households with unmet winterization needs, particularly those living in overcrowded, inadequate, or substandard accommodation.
- non-displaced war-affected people and returnees in damaged houses.
- displaced, hosting, non-displaced, and returnee families are not able to pay utility bills or need solid fuel assistance.

and, at the same time,

4. **belong to one or more of the vulnerability groups:**

- Persons with Disabilities or Injury.
- Persons with Chronic Illness or Serious Medical Conditions.
- Older Persons: Individuals aged 60 years and above.
- Women and Girls at Risk: Including single female-headed households, women caregivers, pregnant or lactating women, adolescent or unaccompanied girls, survivors or those at risk of gender-based violence, trafficking, or exploitation, and women with compounded vulnerabilities (e.g., disability, age, no support system, or belonging to a minority group).
- Members of Minority Groups: Including Roma, Crimean Tatars, stateless persons, individuals with undetermined nationality, and LGBTIQ+ persons.
- Children at Risk: Including unaccompanied or orphaned children, those separated from parents, families with children living at the frontline*, children in state care, or living in overcrowded or unsafe conditions, and LGBTIQ+ children/adolescents, etc.
- Families with children under three years old.
- Families with three or more children (under 18 or 23 years if they are studying).
- Foster families.
- People Facing Severe Socio-Economic Hardship: Including unemployed individuals (particularly aged 40–60), families who lost their primary income earner due to conflict (death, injury, disappearance), those without access to social protection, and persons unable to meet basic needs such as food, shelter, clothing, heating, or medical care. This also includes people living in substandard housing who are at risk of displacement and lack insulation.

These vulnerability criteria are informed by the Protection Cluster's guidance "Protecting and Prioritizing People with Specific Needs in the Ukrainian Humanitarian Response", which offers a comprehensive framework for identifying households with heightened risks and unmet needs.

They may be adapted (through the addition, modification, or removal of specific elements) in line with each partner organization's internal policies, mandates, and donor requirements.

Given the evolving context, partners should equally implement periodic re-verification of vulnerability status during the winter project cycle to identify newly vulnerable households and adapt targeting accordingly.

7.5 Last-mile delivery in the near-frontline areas

In the 0–20 km zone, the security situation continues to deteriorate. Settlements and access roads are regularly exposed to shelling, including artillery and UAV attacks. There are heightened risks associated with the movement of large cargo vehicles, which may be specifically targeted. In certain locations, local authorities introduce restrictions on the movement of heavy trucks along specific routes due to security concerns. In some cases, heavy trucks can access only certain settlements, with further transportation requiring smaller vehicles. These conditions significantly constrain logistics operations and suppliers' ability to ensure last-mile delivery of aid to vulnerable people in frontline and near-frontline areas.

The current security and access constraints create risks to convert financial assistance into actual access to solid fuel during the heating period:

- Suppliers of solid fuel may be unable or unwilling to arrange delivery to hard-to-reach or high-risk areas due to security concerns.
- Logistics limitations may prevent beneficiaries from receiving purchased solid fuel at their addresses.
- Vulnerable groups, particularly elderly people, people with disabilities, and low-mobility individuals, may face additional barriers in organizing door-to-door delivery independently.

7.5.1 Advocacy points

Recognition of last-mile delivery gap

Humanitarian actors and stakeholders are encouraged to acknowledge that cash assistance alone may not ensure access to solid fuel in hard-to-reach frontline areas without complementary delivery support.

Support for last-mile delivery services

Partners are encouraged to support the provision of last-mile delivery services in hard-to-reach areas, particularly where:

- Commercial delivery is not available or is limited.
- Security risks restrict access for suppliers.
- Vulnerable groups of beneficiaries lack the capacity to organize delivery independently.

7.5.2 Possible solutions

A complementary approach could include:

- Last-mile delivery by humanitarian actors.

Beneficiaries use cash assistance to procure solid fuel from available suppliers, and humanitarian partners with transport capacity facilitate last-mile delivery from accessible drop-off points to beneficiaries' homes.

- Contracting local delivery providers.

Engaging local contractors capable of door-to-door delivery and unloading at the hromada level has proven effective. These providers often have better knowledge of local routes and restrictions,

improving delivery efficiency and access. Good practices:

- Provision of visibility items.

Providing local contractors with visibility items (e.g., vests, temporary ID badges) to clearly indicate affiliation with humanitarian operations.

- Official accompanying letters from humanitarian organizations.

Significantly facilitating checkpoint passage for local contractors can be achieved by providing them with accompanying letters confirming that they are delivering humanitarian assistance.

- Delivery model

For heavy cargo such as solid fuel, a two-stage delivery approach might be recommended. Large trucks deliver solid fuel to a central, accessible location (e.g., administrative center of a starostat), after which smaller vehicles distribute assistance directly to households.

- Local procurement and community-based transport

When procuring solid fuel locally (e.g., from local forestry enterprises), delivery can be coordinated with local authorities using locally available transport means such as tractors, small trucks (5–6 tons), loaders, or even animal-drawn transport where feasible.

7.5.3 Coordination with local authorities

Strong coordination with local authorities is critical for successful last-mile delivery. Partners are recommended to maintain close communication with local authorities' representatives, including hromada and starostat-level authorities, to:

- obtain up-to-date information on road conditions, safe routes, and access constraints.
- regularly validate routes and adjust delivery plans based on the evolving security situation.
- whenever feasible, conduct route verification visits in advance and align delivery plans with local authorities.

Close collaboration with local authorities is important for identifying the needs of vulnerable households that require last-mile delivery support and for ensuring referrals to humanitarian partners with the capacity to provide such support.

7.5.4 Recommendations for humanitarian organizations

- Consider complementing cash assistance with last-mile delivery solutions to mitigate access barriers to solid fuel support in frontline areas.
- Prioritize deliveries to the most remote and hard-to-reach locations at the early stages of last-mile delivery.
- Integrate flexible delivery planning that allows adaptation to rapidly changing access and security conditions.
- Strengthen cooperation with local authorities to enhance referrals, access to hard-to-reach areas, and operational efficiency.
- Consider contracting local service providers for last-mile delivery where feasible.
- Apply a context-specific combination of delivery modalities to ensure last-mile delivery of assistance.

8. Winterization Objective One:
Personal insulation - maintaining core body temperature

The feasibility of local markets must be systematically assessed to inform the appropriate modality for winter NFI support, whether in-kind or cash-based assistance. This approach not only ensures responsiveness to evolving market dynamics but also upholds the preferences of affected populations regarding how they receive help.

Considering the extensive distribution of NFI kits during the initial 4.5 years of the response, the Shelter Cluster emphasizes the importance of conducting market functionality and household-level needs assessments disaggregated by sex, age, and disability. These assessments ensure winterization assistance is evidence-based, tailored to actual needs, and delivered in a way that promotes dignity and efficiency.

Items referenced in sections 8.1 and 8.2 should not be treated, procured, or reported as a fixed kit. For the 2026–2027 winterization season, the primary recipients of these items are expected to be individuals who have been recently displaced, evacuated, or affected by shelling. In such contexts, it is strongly encouraged to tailor assistance to each household's actual needs, avoiding unnecessary items and the accumulation of solid waste in areas with already constrained waste management services.

Partners should use the RAIS+ deduplication and reporting tools to ensure distributions of non-food items are appropriately contextualized and aligned with each beneficiary's specific needs. Where households have experienced repeated displacement or have been newly affected by shelling, replenishment or replacement assistance may be provided based on identified needs and the household's specific context.

Quality Control for In-Kind Assistance

Each participating organization must adhere to its internal quality control procedures, which cover various aspects of aid provision. This comprehensive approach not only upholds the dignity of beneficiaries but also fosters their well-being while maintaining harmony with aid efforts from other organizations. To reinforce this commitment, the Cluster technical coordination serves as a resource for partners who require additional guidance. This collaborative framework supports seamless coordination and aid delivery, reinforcing the cluster's overarching goal of providing effective and dignified support to those in need.

Note:

Partners implementing activities related to Personal Insulation should look beyond the immediate need for winter NFIs and identify underlying factors contributing to winter vulnerability. Where partners identify inadequate housing conditions, insufficient heating solutions, or other shelter-related needs, they are encouraged to address them through their own interventions or refer households to the cluster/other organizations. Similarly, partners implementing other shelter or winter support activities should assess whether households have unmet Personal Insulation needs and provide or facilitate access to appropriate assistance.

8.1 NFI for Winter (SN202A)

This activity supports the provision of individual non-food items for winter preparedness, to ensure thermal comfort and dignity during the cold season. Typical items include:

Table 3 – NFIs for winter

NFIs for Winter* Recommended items and indicative prices 2026-2027			
Item	**Cost**	**Item**	**Cost**
Mattress	35 USD	Power bank	25 USD
Sleeping bag	20.5 USD	Thermos flask	11.5 USD
High thermal blanket	17 USD	Portable stove + dry fuel (or candles)**	17 USD
Rescue foil blanket[1]	5 USD	Rechargeable flashlight	25 USD
Hot-water bottle	5 USD	USB-powered heated blanket***	18 USD
Hand warmer	4 USD		

*Quantity of each item is 1 piece for 1 person as appropriate.

**Or portable single-burner gas cooking stove using gas cylinders (butane or propane-butane gas). For portable stoves, the recommended quantity is 1 piece per 1 household.

***Or USB-powered heated mattress pad is recommended to be provided together with a power bank to ensure functionality during power outages.

Please see the pictures (examples) of recommended items in Annex 15.1. Suggested minimum parameters for NFI for Winter can be found HERE.

When market conditions and beneficiary profiles permit, distributing cash or vouchers is recommended to provide beneficiaries with greater freedom of choice and stimulate local economies. However, in-kind distribution remains highly valuable and is prioritized in locations where markets are non-functional or inaccessible, particularly in frontline and border areas.

Where appropriate, different modalities may be used in a complementary manner to address distinct winter-specific gaps. The composition of assistance and the modality used for each component should be tailored to the assessed needs and preferences of the household or individual, market conditions, and the operational context, and should not be based on a fixed or standardized kit.

Where pre-positioning is operationally required, partners may pre-position commonly needed winter-specific items to support a timely response. Pre-positioning should not result in a fixed kit or standardized package. Final assistance should be determined through a needs assessment and adapted to the context, season, household composition, living arrangements, and operational environment. Depending on the identified gaps, a household or individual may require a limited winter top-up or a more comprehensive combination of items.

The examples below group items according to the winter-specific functions they are intended to support. They are operational planning examples rather than fixed kits and should not be treated as standardized entitlements or reporting packages. Items intended primarily to restore

[1] Items like rescue blankets should be accompanied by a user manual that clearly explains how to use them for the intended beneficiaries.

regular household functions should be addressed under NFI for Households (SN102B), while clothing and footwear should be addressed under Winter Clothing (SN202B).

Table 4 – Examples of functional areas for NFI for Winter assistance

Functional area	Purpose / context	Examples of possible items
Personal Thermal Comfort	Winter-specific support required to improve personal thermal comfort and basic protection from cold conditions	High-thermal blankets, rescue blanket foils, thermos flasks
Sleeping Conditions	Additional winter-specific support where a household or individual lacks adequate sleeping conditions during the cold season	Sleeping bags, mattresses
Basic Protection Against Winter Exposure	Additional support required to address assessed exposure to cold in inadequate living conditions	Portable stoves using dry fuel or candles
Other Assessed Winter-Specific Needs	Additional winter-specific support required based on the needs assessment, household composition, living arrangements, and operational context	Other items consistent with the purpose and scope of SN202A

Assistance may be reported under SN202A only where a needs assessment confirms that the support provided closes the household's or individual's remaining winter-specific gap. The assessment should take into account usable and sufficient items already owned, purchased, or previously received from other organizations; such items should not be replaced or duplicated solely to complete a standard package. Where existing items already address part of the need, partners may provide a targeted top-up limited to items that are missing, insufficient in quantity, unsuitable, damaged, or no longer functional. Reporting under SN202A is appropriate only where the top-up, when considered together with the usable items already available, is sufficient to support personal thermal comfort, provide adequate sleeping conditions, or provide basic protection against winter exposure. Assistance that leaves the identified functional gap unresolved should not be reported as completed under SN202A. Partners should use RAIS+ to check previously provided assistance and are encouraged to consult the Shelter/NFI Cluster on proposed NFI compositions during the planning stage.

Additional recommendations for partners:

- Assess market functionality to determine the most appropriate delivery modality.
- Conduct household- or individual-level needs assessments using sex-, age-, and disability-disaggregated data (SADDD).
- Avoid stock-driven programming and ensure that the selection of items responds to assessed winter-specific needs.

8.2 Winter Clothing (SN202B)

(Distribution of warm clothes to increase individual thermal comfort)

The Shelter Cluster anticipates that, since winterization clothing was distributed to war-affected populations, including displaced persons and residents of frontline or border areas, in the first years of the crisis, the primary people needing this assistance will be newly displaced and evacuated individuals, as well as new victims of shelling. The selection of persons for this type of assistance should be informed by a household needs assessment using the vulnerability criteria outlined in the Shelter Cluster 2026 Activities Handbook.

Given the specificity of this activity, including size, gender, and personal preferences, partners are encouraged to prioritize cash and voucher modalities for clothing support where market conditions, operational feasibility, and recipient capacity allow. In-kind clothing assistance may be appropriate where cash and voucher assistance cannot be delivered safely or effectively, for example, due to limited market functionality, frontline proximity, operational or logistical constraints, or other context-specific factors. In such cases, partners should follow the good practice principles outlined below to ensure that assistance remains relevant, appropriate, and responsive to identified needs:

Good Practices for In-kind Winter Clothing Assistance

The following examples illustrate practical measures that may support the dignified and person-centered delivery of in-kind winter clothing assistance. They are not intended as a mandatory checklist or step-by-step implementation guide. Partners should determine which measures are appropriate based on the operational context, feasibility, and available resources.

- Where feasible, establish a process that allows beneficiaries to exchange clothing items that are the wrong size or fit.
- Collect relevant sizing information during registration or pre-registration to support the provision of appropriately sized clothing. Where brands or manufacturers apply different sizing systems, verify beneficiaries' measurements against the sizing charts for the items being procured.
- Where beneficiaries are unable to view or select clothing before distribution, provide visual information in advance, such as photographs or videos of the available items. This can support informed decision-making and help manage expectations.

Table 5 - Recommended winter clothing items

Recommended Winter Clothing Items* (indicative prices) 2026-2027					
Item	**Cost**		**Item**	**Cost**	
for children					
Winter jacket	59	USD	Winter hat	7	USD
Winter boots	58	USD	Winter scarf	7	USD
Thick socks	4	USD	Thermal underwear	21	USD
Winter gloves	7	USD			

Recommended Winter Clothing Items* (indicative prices) 2026-2027					
Item	**Cost**		**Item**	**Cost**	
for adults					
Winter jacket	88	USD	Winter hat	8	USD
Winter boots (for older persons - Velcro shoes)	84	USD	Winter scarf	8	USD
Thick socks	4	USD	Thermal underwear	27	USD
Winter gloves	8	USD			

* As a general principle, one item should be provided per person for each identified need. For items subject to faster wear, such as socks and thermal underwear, the assessment may justify providing more than one pair or set.

Recommended minimum winter clothes parameters can be found HERE.

Items listed in this section are not to be considered, procured, or reported as pre-packaged kits. Instead, partners are encouraged to tailor distributions based on assessed household or individual needs. At the same time, the Shelter/NFI Cluster does not recommend partial or symbolic assistance – that is, distributions should aim to fully address the identified needs of each household member, rather than being limited by the available warehouse stock.

This approach promotes dignity, relevance, and efficient use of resources, while also reducing the risk of unmet essential needs and the unnecessary accumulation of unused items.

8.3 Support to Invincibility Points (SN102A)

Support to Invincibility Points should follow a needs- and function-based approach rather than a predefined kit composition. The type and quantity of items should be determined according to assessed needs, existing equipment, and the verified capacity and operational gaps of each facility. The recommended items are presented in Annex 15.2.

Shared-use items should be planned and reported under **SN102A "Donation of NFIs for Shared Use."**

8.3.1 Fuel Vouchers for Invincibility Points

Fuel vouchers may be provided to ensure the uninterrupted operation of Invincibility Points during electricity outages. This assistance is intended to cover fuel required for generators supplying essential services, including lighting, heating-related electrical equipment, communication, and charging facilities.

Planning and implementation recommendations:

- **Needs assessment:** Partners should verify existing generators, their rated capacity (kW), expected electrical load, anticipated operating hours, and available fuel support from other sources.
- **Fuel consumption:** For preliminary planning, an average specific fuel consumption of **0.3 liters per kilowatt-hour (L/kWh)** is recommended as a reference value for diesel generators. Actual consumption may vary depending on generator type, efficiency, technical condition, and operating load. For petrol generators, partners should use manufacturer-specific consumption data.

- **Voucher value:** The required fuel quantity should be calculated based on estimated electricity generation (kWh), specific fuel consumption (L/kWh), anticipated operating period, and local fuel prices.
- **Electricity metering:** Partners should ensure that generators are equipped with **electric energy meters (kWh meters)** to measure actual electricity generation. Where suitable metering is not available, partners should provide the necessary meters together with fuel voucher assistance or ensure their installation. Existing built-in meters may be used if their measurements are reliable.
- **Mandatory monitoring and reporting:** All partners providing fuel vouchers must report **Electricity generated (kWh)** separately for each supported Invincibility Point. Reporting should also include the quantity of fuel redeemed (liters), generator operating hours, and the reporting period. Electricity generation must be verified through meter readings recorded at the beginning and end of each reporting period. Where actual fuel consumption can be verified, partners should additionally report specific fuel consumption (L/kWh). The number or value of redeemed vouchers alone is not sufficient to demonstrate the results of assistance.
- **Coordination and safety:** Assistance should be coordinated with local authorities to avoid duplication. Generator operation, refueling, and fuel storage must comply with applicable fire and electrical safety requirements. Electricity meters should be appropriately selected and installed by qualified personnel.

Fuel voucher assistance should address verified operational gaps and complement existing government arrangements for maintaining Invincibility Points.

9 Winterization Objective Two:
Winter Heating: Raising and Maintaining Core Body Temperature

9.1 Winter Heating Appliances (SN201C)

(Distribution of heaters to increase thermal comfort)

Home heating appliances include solid fuel stoves, electric heaters, gas heaters, and other heating appliances[2]:

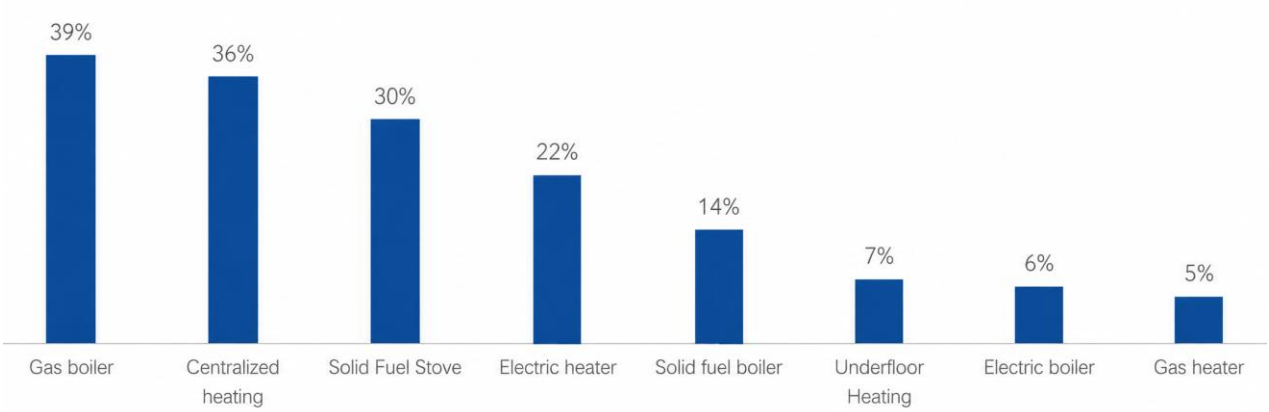


Figure 1 - Proportion of individuals reporting heating types available in their current residence

Urban areas predominantly use centralized heating (86%), while rural areas rely more on wood-burning stoves (63%) and gas boilers (45%).
Frontline communities show relatively high usage of centralized heating (40%) but lower access to modern heating alternatives.

Solid fuel heaters

Due to power outages, the Shelter Cluster will prioritize solid-fuel heaters (instead of electric ones) this winter season. Solid fuel stoves are energy-efficient and economical, making them a viable option during power outages and gas disruptions. This type of appliance requires regular manual loading of firewood, which can be labor-intensive and challenging for older persons or individuals with limited mobility, especially women. A dry location for storing solid fuel is also required. These appliances are less safe than other options because of the risk of fire, the risk of Carbon Monoxide (CO) poisoning (see Annex 15.3), and the risk to child safety.

Note: The Shelter Cluster recommends providing solid fuel stoves as a kit, complete with accessories and installation services.

Stove heating is permitted in residential buildings with no more than two floors (excluding basements)[3], due to safety concerns associated with storing solid fuel, among other factors.

[2] Winterization in Ukraine: housing, utilities, mobility, and needs. IOM DTM. December 2024
[3] Table P.1 of Annex T in DBN V.2.5-67:2013 "Heating, ventilation and air conditioning"

Table 6 - Solid fuel heater kit

Solid fuel heater - Home kit Recommended quantities (per household) and indicative prices 2025-2026				
Item	**Qty**	**Unit cost**	**Subtotal**	**Specifications**
OPTION 1 Solid fuel heater - Burzhuika stove	1 pc	230-460* USD	230-460 USD	Material: cast iron or steel. Heating area = up to 35 m^2 Applicable solid fuel: firewood and briquettes (not coal-based)
OPTION 2 Solid fuel heater - Buleryan stove	1 pc	460 USD	460 USD	Material: steel. Heating area = 40 m^2 Some types have a cooking surface. Applicable solid fuel: firewood and briquettes. **For coal or coal-based briquettes, the stove could require a special design and furnace material**
Chimney with accessories	1 set	290 USD	290** USD	Double-walled pipe in galvanized steel casing (diameter 120***/180 mm, thickness – 0.5/0.55 mm). Material: main pipe - stainless steel (e.g., AISI 304). Casing - galvanized steel. Thermal insulation: basalt fiber/wool. Length of the vertical chimney – min 5 m ([4]). For all accessories, see Annex 15.4. **Important: The use of stainless-steel chimneys for coal-burning stoves is not permitted[5].**
Stainless steel sheet	1 pc	23 USD	23 USD	1,18m x 0.85m x 0.5mm With crimped or hemmed edges (prefabricated or custom-made)
Basalt heat-insulating cardboard	1 pc	21.8 USD	21.8 USD	Size: 1180x850 mm (1 sheet) 10 mm thickness
Foiled polyethylene foam canvas	4 m^2	6.3 USD	25.2 USD	Reflector for internal wall and/or ceiling. 8 mm thickness (+screws +batons)
Windows acrylic sealant	3 pcs	4.6 USD	13.8 USD	300 ml tube with operating temperature range: -20 °C...+75 °C
CO detector	1 pc	46 USD	46 USD	Portable CO detector with instructions for use
TOTAL FOR OPTION 1**			**879.8**	**USD**

*A specific type of Burzhuika is suitable for enclosed spaces and can be used for cooking. We recommend these for smaller enclosed housing units. The latest reported price is around $230. The $460 Burzhuika is better suited to larger areas and open spaces.
**Without installation (labor) cost.

[4] Section 6.8.11 DBN V.2.5-67:2013 "Heating, ventilation and air conditioning"
[5] Section 6.8.12 DBN V.2.5-67:2013 "Heating, ventilation and air conditioning"

***Depends on the type of stove. See section 6.8.9 DBN V.2.5-67:2013 "Heating, ventilation and air conditioning" for recommendations on chimney diameter selection based on stove heat power (kW).
****The cost of the solid fuel heater was assumed to be USD 460.

As per the past years' experience with winterization support, the provision of solid fuel stoves, like the locally manufactured *Burzhuika*[6] or the popular product *Buleryan (a type of Burzhuika)*— proves to be an adequate response in case of disruption of gas and electricity supplies, as is often the case in the aftermath of damage to civilian infrastructure.

The distribution of solid fuel heaters should be limited to areas where the purchase and delivery of coal, firewood, pellets, and other similar solid fuels are feasible and practical. They should always be complemented by providing the recommended amount of solid fuel.

Electric heaters are safe and easy to use, making them a preferable option to solid fuel heaters, especially for older persons and persons with disabilities. Please note that one downside of this type of heating appliance is the risk of power outages during winter.

Table 7 - Electric heater with accessories

Electric heater with accessories Recommended quantities (per household) and indicative prices 2025-2026				
Item	**Qty**	**Unit cost**	**Subtotal**	**Specifications**
Electric heater - convector or Oil-filled radiator	1 pc	115 USD	115 USD	Power: 1.5 kW* **Heating area = 15 m²** Wall-mounted and self-standing. Option A: Convector with steel or ceramic surface **Or** Option B: Oil-filled radiator
Thermal fuse (cut-off)	1 pc	3.5 USD	3.5 USD	16A. Option
Cable	5 m	1.0 USD	5.0 USD	5 meters of cable (3 x 2.5 mm)
Foamed polyethylene canvas with a foil film	10 m²	3.5 USD	35.0 USD	Reflector. Thickness: 4 mm (min)
Mounting foam	1 pc	8.4 USD	8.4 USD	750 ml tube
Windows acrylic sealant	3 pcs	3.5 USD	10.5 USD	300 ml tube Operating temperature range: -20 °C / +75 °C
		TOTAL	**177.4 USD**	

*This is only the recommendation.

However, as highlighted by local administrations during coordination meetings, humanitarian agencies planning large-scale distribution of electric heaters in multi-apartment buildings must ensure that the building's electrical capacity is technically assessed in advance. Upgrading internal wiring or increasing load capacity may be costly and time-consuming; therefore, the

[6] For instructions and the safety manual, please refer to the safety manual prepared by PIN via this LINK.

recommendation is to adhere to the Shelter Cluster principle of targeted winterization assistance, based on feasibility and safety.

LPG (liquefied propane-butane gas) heater kits are considered an effective alternative to electric and solid fuel heating options.

There are two main types of gas heaters: open-type and closed-type. Open-type gas heaters have an exposed flame and draw air from the surrounding environment, making them less safe for indoor use due to potential Carbon Monoxide buildup. Catalytic heaters are a safer version of open-type heaters. For open-type heaters, adequate natural or mechanical ventilation of the rooms is required, with additional CO control in the heated space. When distributing gas heaters and gas cylinders, agencies should include CO detectors and IEC materials to inform householders about the need for ventilation.

Closed-type gas heaters have a sealed combustion chamber and vent exhaust gases to the outside (via a chimney), making them safer and more efficient for indoor heating.

Important[7]:

- Shelter Cluster recommends LPG heaters **only for private (detached) houses**, given the limitations of existing regulations due to the strict storage standards for gas cylinders and installation of gas-using equipment.
- The installation of gas cylinders in living rooms **is not permitted**. Exceptions can only be made on a case-by-case basis, subject to appropriate technical justification and compliance with all safety standards.
- Gas cylinders must be stored in rooms with proper ventilation and an alarm system that warns of dangerous gas concentrations.
- Cylinders are subject to periodic technical inspection to ensure their safety. Cylinders with corrosive gases (such as butane-propane and propane-butane) are inspected at least once every two years.

Table 8 - Gas heater with accessories

Gas heater with accessories Recommended quantities (per household) and indicative prices 2025-2026				
Item	**Qty**	**Unit cost**	**Subtotal**	**Specifications**
Autonomous catalytic **open-type** gas heater	1 pc	170 USD	170 USD	Maximum power: 4.2 kW Minimum power: 1.7 kW Gas type: liquefied butane-propane or propane-butane. Gas consumption at maximum power: 0.305 kg/h. Heating area = 40 m^2 Built-in gas control system
Gas reducer	1 pc	11.5 USD	11.5 USD	The reducer connects gas appliances, heaters, and stoves. Its outlet gas pressure can be manually adjusted from 22 to 70 bar.

[7] See sections 9 and 12 of DBN B.2.5-20:2018 "Gas supply (with amendment #1)"

Gas heater with accessories Recommended quantities (per household) and indicative prices 2025-2026				
Item	**Qty**	**Unit cost**	**Subtotal**	**Specifications**
				Gas inlet pressure: 0.3 - 7.5 bar. The kit includes a wrench for installing and removing the gearbox.
Gas cylinder	2 pcs	82 USD	164 USD	Volume: 27 liters with a valve and the possibility of connecting a reducer. Material: steel
Worm-drive clamp, perforated W1	6 pcs	1.27 USD	7.62 USD	Material: rubber Diameter: ½ inch
Gasket	6 pcs	0.12 USD	0.73 USD	Material: rubber Diameter: ½ inch
Gas rubber hose	1 pc	1.75 USD	1.75 USD	Length: 2 meters Material: rubber Diameter: ½ inch
CO detector	1 pc	46.0 USD	46.0 USD	Portable CO detector with IEC materials
Basalt heat-insulating cardboard with foil	1 pc	26.0 USD	26.0 USD	Size: 1180x850 mm (1 sheet). 5 mm thickness
		TOTAL	**427.60 USD**	

The distributing partner must ensure that the client is aware of and instructed in the safe use of the gas heater kit, including its limitations, operating procedures, and refueling instructions. Refueling services should be provided to people with disabilities, older persons, and those who are not capable of doing it on their own. Before distributing gas heater kits, it is recommended to check the availability of gas stations in the area of intervention or other gas providers.

9.2 Winter Energy (SN201B)

(Distribution of heating sources: solid fuel and liquefied gas)

Winter energy assistance through solid fuel (firewood, coal, briquettes, or pellets) and liquefied gas remains a critical component of the Shelter Cluster's seasonal response, particularly in rural and conflict-affected areas where centralized heating infrastructure is absent or non-functional. Solid fuel is often the only viable and sustainable heating source for vulnerable households living in damaged or poorly insulated homes. At the same time, it presents distinct technical, logistical, and protection-related challenges that require context-specific planning, clear operational guidance, and strong coordination with Cluster coordinators and local authorities. The current chapter outlines key considerations for activity implementation, including modality selection, accountability requirements, and coordination mechanisms.

Wherever feasible and contextually appropriate, cash-based assistance for the purchase of solid fuel should be prioritized. Cash enables greater beneficiary choice, supports local markets, and can reduce logistical constraints when markets are functional and accessible. However, its effectiveness depends on the availability of solid fuel at reasonable prices, the safety and reliability of supply chains, suppliers' ability to provide last-mile delivery, and beneficiaries' ability to access vendors.

To ensure eligibility for tax exemption and demonstrate the purposeful use of funds, households are expected to provide vendor-issued receipts, bank/mobile money transaction confirmations, distribution records, home-visit verification forms, and other relevant supporting documentation. In addition to verifying expenditure, partners should monitor whether assistance was sufficient to maintain adequate indoor warmth. This can be measured through indoor temperature checks, self-reported comfort levels, and tracking changes in fuel consumption. This approach strengthens program accountability and ensures alignment with regulatory requirements.

In contexts where markets are disrupted, inaccessible, or unable to supply sufficient quantities of solid fuel in a timely manner, in-kind distribution may be considered as a preferred option. Decisions on modality must be grounded in a market assessment, supplier capacity, displacement risk, and security risks, and coordinated with local authorities to ensure responsiveness to regional dynamics and household-specific vulnerabilities.

In-kind support is recommended for households with reduced mobility and those in rural or hard-to-reach areas, and for people with limited ability to reach suppliers and organize the delivery of solid fuel for themselves, particularly when partners can ensure delivery of in-kind assistance.

Partners should take into account that the cash assistance amount of 19,400 UAH[8] is not equivalent to the recommended quantity of solid fuel that may be provided through the in-kind modality. Based on market prices and seasonal increases, the indicative cost of providing the recommended quantity of solid fuel is approximately 33,250 UAH per household (excluding transportation costs), though the actual cost may vary by solid fuel type, quality, location, and delivery costs. It is important to clearly communicate to beneficiaries the differences between

[8] For the 2026/27 heating season, Resolution 1084 establishes a standardized payment of UAH 19,400 per eligible household under the Government-coordinated Winter Support mechanism. Despite the difference between this transfer value and current market prices, humanitarian organizations participating in the mechanism are required to apply the UAH 19,400 transfer value and the eligibility provisions established under Resolution 1084.

modalities, including the value of cash assistance and the quantity of in-kind support they may receive as winter assistance.

Shelter Cluster partners are strongly encouraged to engage proactively with Oblast administrations and relevant government actors to clarify procurement roles, monitor regional availability, and coordinate delivery timelines. Hub Coordinators will facilitate these discussions to promote coherent planning and avoid duplication. Please note that market conditions, stock levels, and pricing may fluctuate significantly by oblast and throughout the winter season.

When planning budgets for solid fuel procurement, it is recommended to consider: inflationary pressures; the impact of fuel prices as a key input to logistics and operational costs; seasonal spikes in winter demand; security risks – such as damage to infrastructure, supply disruptions, or loss of stored fuel – as factors that increase prices.

Recommendations to partners:

- to conduct monitoring of market prices for solid fuel ahead of budget planning for winter energy
- to establish framework agreements with suppliers and, where feasible, to fix fuel prices, as well as to incorporate contractual provisions that regulate seasonal price increases
- to plan procurement of solid fuel (in-kind) earlier, before peak winter prices and seasonal access constraints.

Note: The Shelter Cluster strongly recommends:

- Partners to arrange solid fuel delivery directly to beneficiaries' homes.
- Combining the activity “Insulation of Substandard Houses” with «Winter Energy» for a greater impact.

9.2.1 Reference amount of heat required for the heating of a household:

According to Resolution 1169, “On providing additional support to the population for the purchase of solid fuel during the heating season” (October 15, 2024), the minimum amount of heat for one winter season for one household is **14,367,096 kcal (14.37 Gcal)**. *“One winter season”* refers to the heating season, a six-month period from October 16 to April 15.

Note: The Shelter Cluster calculation is based on the pre-calculated minimum heat requirement.

There are additional ways to calculate the actual amount of heat required for individual households, including context-specific heating based on each household's needs. As an example, the partners can focus on the housing type, size of the living rooms, the number of household members in the house, and the ability of the house to heat only a small area suitable for critical functionalities (cooking, sleeping, etc.), in addition to the type of energy-efficient windows and doors, ceiling/attic insulation, etc. Furthermore, for households that have not made any repairs, the model should account for potential heating losses if the thermal envelope is not sealed.

The table “Heating sources” compares the costs of different heating sources and provides guidance for choosing the type of intervention. The suggested quantity is the minimum required for each source type to produce 14.37 gigacalories (Gcal) of heating for the average household.

9.2.2 Calculation of solid fuel reference amount:

Table 9, "Heating sources," contains a **precalculated reference** amount of high-quality solid fuel. The approach for calculating the amount of solid fuel for **your particular case** is the following:

1) Check the supplier certificate (test report) for information on the working (lower) mass of solid fuel. Not applicable for firewood.

If the certificate is not provided, request that the supplier provide valid information on the type of solid fuel (including firewood species and type, coal type, etc.) and its moisture content. Refer to the "Criteria for Quality Assessment" for instructions on determining the moisture content. By using these and other parameters, you can identify the working (lower) volumetric calorific value. For instructions, see Annex 15.5.

2) Based on the recommended amount of heat (14.37 Gcal), calculate the reference amount of solid fuel for one winter season. For example:

$$Amount\ of\ firewood\ (m^3) = \frac{Amount\ of\ heat\ for\ the\ season\ (Gcal)}{Working\ (lower)\ volumetric\ calorific\ value\ \left(\frac{Gcal}{m^3}\right)}$$

Before making any calculations, make sure that the correct units of measurement are being used.

If relevant, use the precalculated working volumetric calorific values from the table in Annex 15.5.

3) For firewood, the calculated amount is presented in cubic meters. Virtually all suppliers measure firewood in stacked m^3 or loose m^3. To simplify the approach, Shelter Cluster recommends partners use an average conversion factor. The formula for the conversion from **stacked cubic meters to** solid (dense) cubic meters is as follows:

The formula for the conversion from **loose cubic meters** to solid (dense) cubic meters is as follows:

Accordingly, to determine the volume in stacked or loose cubic meters, the conversion factor must be inverted. For more details, see Annex 15.6.

The **Solid Fuel Calculator** (+Ukrainian version) calculates firewood calorific value by wood species and moisture content, and estimates the required quantities of firewood, briquettes, pellets, or coal per household based on the applicable seasonal heat requirement.
Important: Before using the calculator, **download the Excel file to your computer and open it locally** to ensure that all formulas and functions operate correctly.

*Table 9 - Heating sources **(EXAMPLES)***

Heating sources - Equivalence table Quantities for one household for one **winter season (6 months)** and indicative prices* 2026-2027								
Heat amount for the winter season:	**Type**	**Lower (working) calorific value**	**Reference amount**		**Unit price** (UAH)	**Unit price** (USD)	**Tot cost** (USD/ season)	**Notes**
			Unit	**Qty****				
14.37 Gcal	**Firewood**	2.73 Gcal/m^3	m^3 stacked m^3 ***	5.26 **7.51**	- **4,428**	- **99**	- **745**	**Hardwood species** (in this case, oak) are chopped into logs****. Wood moisture content is 20%.
	Briquettes	4.18 Gcal/ton	MT (metric ton)	3.44	15,042	336	**1,156**	High-quality wood briquettes, group I DSTU 8358:2015 (in this case, RUF type). The fragility of the briquettes should be taken into account during transportation and loading/unloading. Easier to handle than firewood. **Special stoves are required for coal briquettes.**
	Pellets	4.18 Gcal/ton	MT	3.44	18,170	406	**1,397**	High-quality wood pellets, group I (in this case, oak-based). **Requires a special stove or a loading device for the existing stove.**
	Coal	5.7 Gcal/ton	MT	2.52	16,390	366	**923**	High-quality coal (in this case, gas coal grade "H"). Total moisture – 14%. **Requires special stoves**.
	LPG	-	L	483.00	43.7	0.98	**473.3**	Liquefied propane-butane gas.

*Unit price DOES NOT include the transportation cost, unloading, and stacking in the yard.
****Quantity depends on a particular fuel type's calorific value and quality.** Generally, the calorific value per unit is **listed on the certificate (test report)**.
***The conversion factor of stacked wood to solid content was assumed to be 0.7. **Stacked m^3 = m^3 / 0.7.** For the details of the approach, see Annex 15.6.
****In this table, the calculation focuses on the chopped wood, as most of the assistance is provided in chopped form. For information about round logs VS chopped logs, please refer to the State Agency "Forest Resources of Ukraine" website. LINK

Unified cash for solid fuel transfer value is UAH 19,400* for one winter (6 months)

*The firewood was chosen as the most commonly used type of solid fuel by households in Ukraine, taking into account social cohesion and factors beyond humanitarian assistance.

9.2.3 Quality control of solid fuel

To ensure quality, firewood, briquettes, pellets, and coal must be sourced from certified suppliers. It is important that these materials are accompanied by a certificate (test report) from the supplier, whether it is a state forestry enterprise or a private organization.

Note: The Shelter Cluster strongly recommends that the following standards guide the distribution and quality control of solid fuel:

Firewood:

- DSTU EN 15234-5:2018 (EN 15234-5:2012, IDT) "Solid biofuels – Fuel quality assurance – Part 5: Firewood for non-industrial use"
- TU U 16.1-00994207-005:2018 "Firewood. Classification, accounting, technical requirements"

Briquettes (wood):

- DSTU 8358:2015 "Fuel briquettes and pellets from wood raw materials. Technical specifications."

Pellets (wood):

- DSTU EN 15234-2:2013 (EN 15234-2:2012, IDT) "Solid biofuels – Fuel quality assurance – Part 2: Wood pellets for non-industrial use" or ISO 17225-2 "Solid biofuels – Fuel specifications and classes. Part 2: Graded wood pellets."

Coal:

- DSTU 7146:2010 "Bituminous coal and anthracite for domestic use. Technical conditions."

9.2.4 Criteria for quality assessment

Calorific value: Please ensure that the supplier provides you with the appropriate certificate/test report (not applicable for the firewood), which contains information on the calorific value determined in accordance with DSTU ISO 1928:2006.

Moisture Content: For optimal burning efficiency, firewood should have a moisture content of 25% or less. Test method: Use a moisture meter to check the moisture content. The probe should be inserted into the log at various points to get an average reading.

Dimensions: Logs and chopped wood should conform to standard dimensions or the specification in the contract (if in-kind modality).

Defects: Firewood should be free from excessive rot, mold, and insect infestation. Visual inspection is used to check for visual signs of defects.

9.2.5 Verification of the legality of the firewood origin

There are numerous cases where some suppliers engage in illegal and uncontrolled logging for the sake of excessive profits. Therefore, partners should ensure that their contracted suppliers use wood of legal origin.

For this purpose, it is recommended to check whether the supplier has TTN-lis (for logs) and 1-TN (for chopped firewood) consignment notes, guaranteeing that the timber is harvested in compliance with environmental and legal standards. Templates of consignment notes are presented HERE. The video instruction for using the service to verify the legality of wood origin is available on the website of the State Enterprise "Forestry Innovation and Analytical Center" at the LINK.

TTN-lis (as well as a photo of the cargo) is stored in an open electronic database and, among other things, confirms the volume of wood (logs) in the consignment. 1-TNs do not have an electronic version and do not confirm the volume of wood (chopped firewood) in the consignment. However, in this case, it is possible to request a TTN-lis from the supplier, according to which the supplier purchased the logs before chopping.

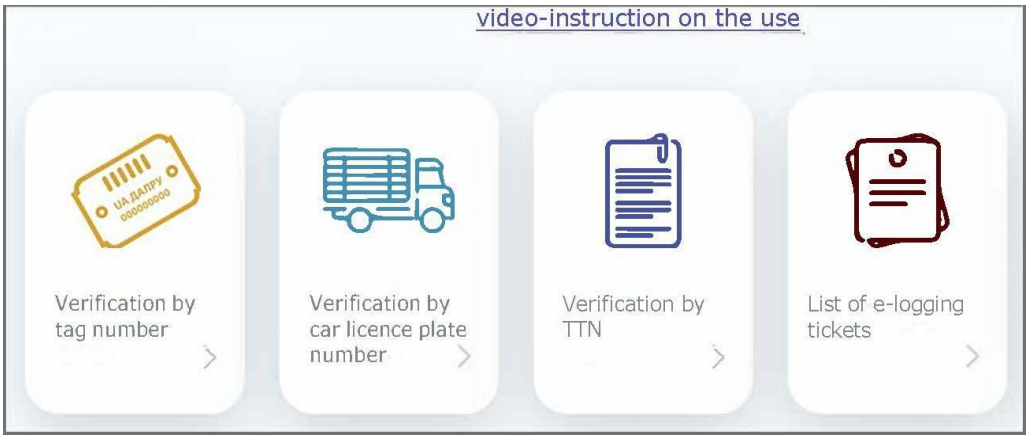


Figure 2 – Electronic database interface

The availability of a special permit for the use of forest resources (e-logging ticket) for a particular forestry enterprise can be checked by the LINK.

9.2.6 Delivery and packaging

Delivery schedules should include advance notice to beneficiaries, allowing for proper preparation for unloading and storage, especially during adverse weather conditions.

When selecting the packaging modality for firewood distributions, it is essential to ensure consistency (e.g., big bags or crates/pallets) across locations to avoid perceptions of inequality and minimize tension or stress within the affected communities.

To address recurring discrepancies in the actual quantity of delivered firewood due to differences between **stacked** and **loose** measurements (see Annex 15.6), the following guidance is provided:

For in-kind modality:

- Partners shall procure, where possible, the **stacked firewood** (in crates / on pallets) to ensure consistency in volume measurement and delivery verification.
- Tender documentation must clearly specify **packaging requirements**, i.e., firewood must be delivered **pre-stacked** on pallets or in crates.
- Prior to contracting, a basic **capacity check of suppliers and logistics partners** should be conducted to verify their ability to deliver pre-stacked firewood on a scale.



Figure 3 – The firewood stacked in the crate (on a pallet)

Briquettes may be available in various packaging formats (e.g., 10 kg blocks, 35 kg or 40 kg bags), which should be considered when planning procurement and delivery. Pellets are typically packaged in 1-ton big bags or 15 kg bags.

For cash modality:

When assistance is provided via cash or voucher, the following recommendations should be communicated to beneficiaries:

- **Inform on estimation algorithms**: Beneficiaries should be referred to a reliable method for calculating firewood needs based on:
  - Required energy output for winter (14.37 Gcal per household).
  - Type of wood species.
  - Moisture content.
  - Combustion efficiency.

  For the calculation of the solid fuel amount for firewood and briquettes/pellets/coal, see Annex 15.7 or use **Solid Fuel Calculator** (+Ukrainian version).
- **Clarify firewood volume types**: Suppliers frequently advertise prices per 1 m^3 without specifying the unit (loose or stacked). Beneficiaries must be informed that loose firewood delivered in a truck's body or trailer can result in receiving less volume than the calculated stacked m^3 volume, as determined by the formula (see Annex 15.7).
- **Highlight volume differences**:
  Beneficiaries should be informed about:
  - The difference between stacked vs. loose firewood (common in private suppliers' settings).
  - The difference between stacked vs. solid/dense volume (common in state forestry enterprises).
  - Risks of under-delivery due to a lack of standard packaging (in crates / on pallets).
- Partners should also consider conducting randomized quality checks of fuel purchased by beneficiaries to ensure it meets minimum efficiency and safety standards.

9.2.7 Recommendations on storage

Proper storage of firewood is essential to ensure it remains dry and ready for use. Firewood should be stacked off the ground on pallets or a similar base to prevent moisture absorption from the soil. It's essential to cover the top of the stack with a tarp or roof, while leaving the sides exposed to ensure adequate air circulation. The firewood should be stored in a well-ventilated area, away from residential buildings, to minimize the risk of pest infestations and fire hazards.
Moreover:

- Firewood dries significantly faster when stored in sunny positions, especially if split and without bark. In such conditions, drying can be completed in less than six months.
- Firewood stored in shaded areas is prone to fungal infestation and retains high moisture content (over 35%) even after one year.
- Weather exposure, especially in uncovered piles, has a significant impact. During rainy seasons, the moisture content increased to over 40%.



Figure 4 – The most highly recommended method of storing and drying firewood

9.2.8 Solid Fuel for collective sites and transit centers

The calculation of the solid fuel amount is presented in Annex 15.8. In addition to the standardized formula provided in the methodology, partners recommend incorporating site-specific technical assessments to determine solid-fuel needs. These assessments should consider the technical specifications of the heating system (e.g., boiler efficiency, fuel consumption), the level of building insulation, and the type of building. It is recommended that the calculation be complemented with a flexible, context-sensitive approach. This should include a contingency buffer to accommodate potential underestimation or increased demand during the winter season, particularly during periods of prolonged low temperatures.

Finally, advocacy with local authorities needs to be strengthened to ensure that adequate quantities of fuel are budgeted and delivered for collective sites that rely on individual boiler rooms as their primary source of heating. This is essential for sustaining safe and dignified living conditions for displaced populations throughout the cold season.

9.3 Winter Cash for Utilities (SN201A)

This activity provides financial support to help cover heating utility bills during the winter season for vulnerable households living in dwellings with utility-based heating systems. It is particularly relevant in urban areas in multi-apartment buildings, where centralized/district heating[9], individual gas boilers or electric systems are the primary heating sources[10].

In private (detached) houses, especially in peri-urban or semi-rural areas, natural gas remains a common primary heating source. However, some may retain solid fuel stoves as a reserve (backup) or secondary option.

To ensure eligibility for tax exemption and to demonstrate the purposeful use of funds, households are expected to provide utility payment receipts, utility company confirmation, digital payment trace, meter reading records, or other relevant supporting documentation. In addition to verifying expenditure, partners should monitor whether assistance was sufficient to maintain adequate indoor warmth. This can be measured through indoor temperature checks, self-reported comfort levels, and tracking changes in utility consumption. This approach strengthens program accountability and ensures alignment with regulatory requirements. In some cases, the households are dealing with utility debts from the previous year. In highly vulnerable situations, the Shelter Cluster recommends covering the debts as part of this activity.

The indicative seasonal consumption volumes and average prices for different utility-based heating types are summarized in the table below.

Table 10 – Heating utility bills

Heating utility bills Quantities for one household for one season and indicative prices 2026-2027*				
Type	**Reference amount**		**Unit price** (USD)	**Notes**
	Unit	**Qty[11]**		
Centralized/ district heating	Gcal	8.27	40.22	UAH 1,800 per 1 Gcal[12]. For multi-apartment buildings.
Natural gas	m^3	1,960[13]	0.21	UAH 9.60 per 1 m^3 of natural gas
Electricity[14]	kWh	6,480	0.06	UAH 2.64 per 1 kWh (for consumption up to 2,000 kWh/month) for: 1) Electricity as a primary heating source (buildings with electric heating systems[15]). 2) Electricity as a reserve heating source (mobile electric heaters) when the

[9] Law on Heat Supply
[10] A limited number of low-rise multi-apartment buildings (2–5 storeys) may still rely on solid fuel as a primary heating source. In such cases, this activity does not refer to centralized boiler-room heating, but rather to individual stoves or furnaces operated at the residential unit level.
[11] For electric and centralized heating, amounts are based on the social norms for heating in Resolution 409, dated August 2014, and humanitarian living area standards (36 m^2).
[12] https://index.minfin.com.ua/ua/tariff/heating/
[13] Based on the natural gas calorific value and the amount of heat needed for one winter season (14.37 Gcal).
[14] Prices based on the approach of Resolution No. 483 dated June 2019 (adjustment in Resolution 1479 dated December 2024) for the last winter season. Fixed prices by the end of October 2025.
[15] List of heating systems here:
https://www.ez.rv.ua/docs/public/Dodatok_do_Protokolu_Alhorytm_dii_dlia_pobutovykh_spozhyvachiv.pdf

Heating utility bills Quantities for one household for one season and indicative prices 2026-2027*				
Type	**Reference amount**		**Unit price** (USD)	**Notes**
	Unit	**Qty**[11]		
				primary source (e.g., centralized heating) is dysfunctional.

While the reference values in the table above reflect the estimated seasonal costs for each utility type, the final transfer value for this activity was recommended through a harmonization process conducted by the TWiG. The outcome of this process, summarized below, establishes a unified transfer amount to be applied across both Winter Cash for Utilities and Winter Energy activities.

Unified cash for utilities (heating) transfer value is UAH 19,400 for one winter (6 months)

9.4 Interlinkage of Activities

In response to the challenges faced by households during the winter months, the following interlinked activities have been established to provide targeted support for winterization needs:

- Cash modality for Winter Energy: Provided to households to cover the cost of solid fuels required for heating during the winter months.
- Winter Cash for Utilities (heating): Provided to assist households with their winter utility expenses: natural gas, electricity, or centralized heating bills.

Important:

- The abovementioned initiatives are specifically developed to address winter heating requirements. Cash for winter energy and cash for utilities (heating) activities require an assessment of households' fuel/energy types, needs, and confirmation of the availability of solid fuels in the local market.
- These activities are designed as targeted interventions to address specific winter heating needs. While not intended to cover broader sector-specific or multi-sectoral needs, they can be complemented by other forms of assistance, including Unified Cash Transfers (UCTs) or MPCA, which focus on covering basic needs.
- While the purpose of activities remains the same, the TWiG recommended the harmonization of transfer values for the 2025-26 winter season – **UAH 19,400 for each activity.**
- Each household may receive only **one type of support** – either Cash for Winter Energy, Winter Cash for Utilities (heating), or in-kind solid fuel assistance. This is to ensure that **a single heating need is not covered more than once** through different modalities.

10 Winterization Objective Three: Shelter Insulation – Repairs were done to secure the thermal envelope of residential units where people reside

10.1 Refurbishment of Collective Sites (SN302A)

The main principle of this activity is to prepare existing collective sites for the winter season through technically justified works that directly improve the thermal comfort of IDPs and help bring the living spaces and common areas to the minimum standards established by Resolution No. 930 for thermal comfort.

Winter-related interventions should be based on a site-specific technical assessment and should primarily address defects that cause heat loss, water ingress, insufficient heating, excessive humidity, or inadequate ventilation. Eligible works may include, for example, the repair or replacement of windows and doors, roof repairs, repair or replacement of internal heat-supply networks, and installation of heat-recovery ventilation units or other ventilation improvements.

Priority should be given to restoring the functionality of existing building elements and engineering systems. Insulation of attic floors, roofs, or external walls is not considered a priority.

10.2 Insulation of Substandard Houses (SN203A)

Definition of "Substandard House"

For the purpose of this SOP, a "substandard" house refers to a dwelling that:

- **is not damaged by war,**
- **has inadequate thermal performance** due to deficiencies in design, construction quality, age-related deterioration, and/or lack of maintenance, resulting in poor heat retention, making it difficult to maintain adequate indoor temperatures during winter (see Annex 15.9).

Works under this activity do not constitute "regular" emergency repairs but rather energy-efficiency upgrades. These include the attic's floor thermal insulation and the replacement of old windows and entrance doors with energy-efficient ones. These interventions aim to improve the building's energy efficiency by reducing heat loss but must be reported as "insulation" only when implemented in non-war-damaged houses.

If thermal insulation is carried out in conjunction with repairs of war-related damage, the entire intervention (including insulation measures) must be reported under Humanitarian Repairs (SN301B) activity, as per the Activities Handbook 2026. This ensures clarity in classification and prevents duplication in reporting.

In rare cases, localized roof works may be included where technically required to prevent water ingress and protect the attic insulation, provided that the house is not war-damaged. Such works are exceptional, are not included in the standard reference cost, and should be added to the household BoQ only if the technical assessment deems them necessary. However, insulation of external and internal walls is not recommended under SN203A.

Where additional measures are technically justified, the indicative list of recommended works provided in Table 14, "Recommended roofing works in exceptional cases," may be considered for application in exceptional cases, based on the findings of the technical assessment.

Whenever feasible, partners should integrate winter energy assistance (solid fuel, utilities) with basic thermal envelope measures, such as replacing old windows and entrance doors with energy-efficient ones and installing insulation on the attic floor. This combination can reduce

heating costs, reduce fuel consumption, and improve indoor thermal comfort. Monitoring should assess these combined effects.

Target Population

This activity is intended for households residing in substandard, non-war-damaged houses and includes:

a) Houses newly allocated to displaced families, which were not included in any previous state or donor-supported thermal rehabilitation activities and therefore require complementary energy-efficiency interventions to ensure minimum habitable conditions during the winter season.

In such cases, occupancy should be secure for at least 6 months to avoid the risk of eviction or misuse of assistance.

b) Substandard houses where host families accommodate IDPs.

Shelter Cluster partners have observed that IDPs in such housing often lack formal tenure arrangements, exposing them to eviction risks, particularly when housing improvements increase the perceived value of the property. Moreover, programming is further complicated by property owners' reluctance to allow structural improvements to the houses they rent out. In several cases, homeowners have actively blocked insulation work to avoid creating conditions that would facilitate long-term tenant occupancy or to maintain eligibility for state compensation mechanisms related to war-affected property. Partners are encouraged to coordinate closely with HLP and Protection actors to mitigate these risks and promote sustainability.

c) Substandard houses inhabited by vulnerable non-displaced owners.

Thermal Insulation Recommendations

The Shelter Cluster applies a "one warm room" approach, meaning a continuously heated and occupied area sufficient to support essential daily activities during winter. Depending on the actual heating arrangement and household use, this zone may include a living/sleeping room, kitchen, and toilet/bathroom, as determined through the technical assessment. This approach does not imply that the entire heated area of the house should be insulated by default. Coverage beyond the identified warm zone should be based on assessed technical need and justified within the project-level planning parameters.

Reference quantities and costs in Table 11 are intended for project-level planning. The actual scope and cost of works for each household shall be determined through a technical assessment and a needs-based BoQ and may therefore be lower or higher than the reference values. At project level, partners should aim to maintain the applicable average reference quantity and cost across the assisted caseload.

Table 11 – Recommended scope of works and average costs for thermal insulation of substandard houses

Number of people in HH	1-3	4-5	6+
Area of attic, m^2	36	48	60
External door replacement, pcs	1	1	1
Window replacement, m^2	6	6	6
Cost per household, USD	3,320	3,557	3,794

Note: 1. For households where more than three persons reside, it is recommended to obtain a certificate from the local authorities confirming the actual number of individuals living at the address.

2. Individual household quantities may be above or below the reference values based on assessed technical needs.
3. Existing energy-efficient windows or doors should not be replaced solely to match the reference package.

Table 12 - House attic floor insulation

Attic floor insulation for household with up to 3 people Quantities for one household and indicative prices 2026-2027 (including labor cost)						
Item	**Qty**	**Unit cost**		**Subtotal**		**Specifications**
Basalt wool panels or rolls	36 m^2	15.50	USD	558	USD	Thickness: 100 mm. Density: 30 kg/m^3 or more. Dimensions: depend on the type (plates/rolls)
Vapor barrier film	36 m^2	0.9	USD	33.1	USD	Installation under the insulation panels. Material: polyethylene or other materials. Density: 100 g/m^2 or more. Water vapor diffusion resistance: 5 m or more. Operating temperature: from -30 °C to +70 °C. Roll 1.5 x 50 m.
Waterproof breathable membrane	36 m^2	0.58	USD	20.9	USD	Installation on top of the insulation panels. Material: polypropylene or others. Density: 96 g/m^2 or more Operating temperature: from -40 °C to +80 °C.
Insulation foam	1 pc	10.0	USD	10.0	USD	750 ml tube
Attic cleaning*	1 pc	30.0	USD	30.0	USD	Remove debris, stored items, and other obstructions, ensuring safe access and enabling the installation of insulation.
Other complementary materials				58.0	USD	Screws, lath, staples, and other complementary materials
TOTAL for attic insulation				**710.0**	**USD**	

*Applied only in cases where beneficiaries cannot do this by themselves.

Table 13 - Windows and entrance door replacement

Windows and entrance door replacement Quantities for one household and indicative prices 2026-2027 (including labor cost)				
Item	**Qty**	**Unit cost**	**Subtotal**	**Specifications**
Prefabricated metal-plastic (PVC) windows*	up to 4 pcs (**not 4 m²**)	282.5 USD	1,130 USD	Prefab window unit (**double-glazed with one chamber**)[16]. One unit contains the frame, glazing, and internal and external windowsills. Glass thickness: no less than 4 mm. Class of glazing[17] at least M1. Inter-pane spacing: no less than 16 mm. The chamber is filled with air or inert gas. The profile width of the PVC window frame: not less than 60 mm (4 chambers).
For internal and external use				
Plaster for slopes	250 kg			Type: cement-limestone base Operating temperature: from -30 °C to +70 °C Crack resistance: certified for cracks with a total layer thickness of 20 mm. **To be carried out in dry weather and within the application temperature range specified by the manufacturer; recommended for completion before the heating season.**
Extruded polystyrene foam panels for slope insulation	8 m²			Thickness: 10 mm Density: 30 kg/m³ or more For external use, a higher thickness is required
Insulation foam	3 pcs	16.3 USD	49.0 USD	750 ml tube

[16] Based on DBN V.2.6-31:2021 "Thermal Insulation and Energy Efficiency of Buildings." The norms on minimum requirements for energy efficiency of buildings do not apply to construction works on the restoration of individual building structures in order to eliminate the consequences of emergencies (clause 1.4, section "Scope of use"). In this case, these are the requirements for the thermal resistance coefficient of translucent enclosing structures.

[17] DSTU 2.7-122:2009 Sheet glass - Technical specifications (link [UA]); DSTU 2.7-107:2008 Glass packages (link [UA]).

Windows and entrance door replacement Quantities for one household and indicative prices 2026-2027 (including labor cost)					
Item	**Qty**	**Unit cost**	**Subtotal**		**Specifications**
Windows acrylic sealant	1 pc	61.0 USD	61.0	USD	7 kg pack. Exterior window joint sealant. Operating temperature: from -10 °C to +40 °C
Plastic slopes	16 Lm	40.0 USD	640	USD	Width up to 0.5 m Sandwich panels with F-shaped PVC profile.
For internal use only					
Plasterboard (drywall) slopes	8 m^2				Type: moisture-resistant. Thickness: 12.5 mm Size: 1200 x 2500 mm (1 sheet)
TOTAL for Windows			**1,880**	**USD**	
Steel entrance door***	1 pc	730 USD	730	USD	**Material – steel.** Standard size 2000×900 mm, frame depth 90 mm, door leaf 52 mm. Leaf made of cold-rolled steel (≥1.3 mm), insulated with mineral wool. MDF panels inside and powder coating outside. Equipped with locks, hinges, and a handle.
PVC entrance door unit***	1 pc				**Material – PVC.** Profile installation width ≥70 mm, 5-chamber PVC profile with galvanized steel reinforcement. Insulated sandwich panel ≥24 mm. Equipped with reinforced anti-corrosion hardware and PVC threshold.
TOTAL for Windows and Door			**2,610**	**USD**	

*For the window size: width - 1,0 m; height - 1,5 m.

**To ensure accessibility for households including persons with disabilities, wider (non-standard) doors should be used, with a minimum clear opening width of 0.9 meters.

**** A PVC entrance door may be considered an alternative when a steel door is more expensive because it requires non-standard sizes.

The quantity of 6 m^2 windows is a planning reference. Replacement should target energy-inefficient windows identified through the technical assessment and should not be applied where existing windows already provide adequate thermal performance.

Table 14 – Recommended roofing works in exceptional cases

Recommended Roofing Works in Exceptional Cases		
Item	**Unit**	**Specifications**
Replacement of deteriorated roofing	m^2	Type: Corrugated asbestos-free roofing sheets (8-wave)*. Dimensions: 1,750 × 1,130 mm. Thickness: ≥ 5.2 mm. Weight: ≥ 23 kg per sheet. Effective coverage area: ≥ 1.57 m² per sheet. Frost resistance: ≥ F25. Requirements: Watertight and compliant with applicable standards.
Installation/replacement of roof flashings and ridge elements	Lm	Type: Roofing flashing (ridge cap). Material: Galvanized steel, with or without polymer coating. Steel thickness: ≥ 0.45 mm. Overall width: 250–300 mm. Length: ≥ 2,000 mm. Requirements: Corrosion-resistant and weather-resistant.
Sealing of metal roofing with sealing tape	Lm	Type: Self-adhesive sealing tape. Backing: Reinforced polymer film or aluminum foil. Adhesive: Self-adhesive bitumen-polymer (butyl rubber). Width: ≥ 100 mm. Thickness: ≥ 1.0 mm. Properties: UV-resistant and weather-resistant. Operating temperature range: At least -20°C to +80°C.

*Corrugated roofing sheets are used only as an example.

Partners should record the actual quantities implemented in SIDAR, including attic insulation area (m²), window replacement area (m²), door replacement, and roof repair quantities, where applicable.

10.3 Rental Support (SN303A)

(Provision of grants to cover rental costs)

The winter component of the broader Rental Market Initiative (RMI) aims to support access to safe, adequate, and dignified private accommodation for displaced households, especially during periods of increased vulnerability such as the onset of winter or the start of the school year. This activity helps reduce overcrowding in collective sites and provides an alternative solution for those facing eviction, unaffordable rent, or unsafe living conditions.

For full details, see the Rental Assistance Recommendations and Guidelines for Ukraine.

11 Legal aspects of providing cash assistance

In the context of winterization, where cash-based support for heating utilities and solid fuel is increasingly used as a dignified and flexible modality, humanitarian actors must remain vigilant in complying with Ukrainian legal requirements. Cash for Winter Energy (SN201B) and Winter Cash for Utilities (SN201A) fall under **charitable assistance** as defined in the Law of Ukraine "On Charitable Activities and Charitable Organizations," and must comply with the Tax Code of Ukraine, data protection regulations, and related legislation.

The Cash Working Group's Legal Task Force has issued practical resources to support legal compliance:

- Legal Guidance on Taxation for humanitarian cash assistance (ENG/UKR).
- Self-Assessment Tool for organizations.
- Animated video on taxation.

Key considerations for partners implementing cash modality:

- **Restricted *(purposeful)* charitable assistance**: Winter-related cash assistance should be categorized as restricted charitable assistance, with clear documentation of purpose (e.g., fiscal receipt/expenditure invoice for solid fuel and heating appliances). These documents are critical for tax exemption purposes. This is essentially critical during a period when the MOSPFU adopted a vulnerability-based approach to the program. Households should be aware that the purpose of the cash assistance is for winter heating-related needs.
- **Eligible channels for tax exemption**: To qualify for tax exemption, cash assistance must be delivered by a registered charitable organization, a humanitarian actor listed in the Unified Register of Recipients of Humanitarian Aid, or via official budgetary mechanisms. Beneficiary eligibility for exemption must be substantiated through documentation.
- **Beneficiary status verification:** During martial law, tax-exempt status applies to individuals affected by the armed conflict, including IDPs, residents of active hostilities areas, and other categories listed in the Tax Code. Providers are responsible for verifying status via internal procedures or supporting documentation (e.g., IDP certificates, local council letters, and damage assessments).

Important: In the absence of a government-approved verification procedure, the tax authorities have issued a clarification confirming that, temporarily during martial law, **charitable organizations may independently determine the eligibility status of beneficiaries** for the purpose of tax exemption. This is established in paragraph 25 of Subsection 1 of Section XX 'Transitional Provisions' of the Tax Code.

- **Reporting obligations**: Organizations must report charitable cash transfers to individuals through the unified monthly Form 4DF ("Information on the amounts of accrued income, withheld and paid personal income tax and military levy"), in accordance with **Article 170.7.9** of the Tax Code of Ukraine. Disbursements must be designed and documented to comply with the exemption criteria outlined in subparagraphs 165.1.54, 170.7.2, and 170.7.4 to ensure tax-free status for eligible beneficiaries.
  Errors or lack of reporting may result in revocation of non-profit status or financial penalties, including PIT reassessments.
- **Data protection**: Beneficiary information must be handled in full compliance with Ukraine's Law "On the Protection of Personal Data."

12 Engagement with MoSPFU under Resolution No. 1084

12.1 Resolution No. 1084 Implementation Pathways

Effective winterization programming requires continued strategic and operational coordination with relevant state institutions at national and subnational levels. As part of the broader transition toward stronger government leadership and closer interlinkages with national Social Protection systems, the Cabinet of Ministers of Ukraine adopted **Resolution No. 1084 of 3 September 2026**, *"Certain Issues Regarding the Provision of Assistance to the Population During the 2026/27 Heating Season Using Funds from the Account for the Provision of Humanitarian and Other Assistance[18] to the Civilian Population under Martial Law in Ukraine and Funds of International and National Organizations."* The Resolution establishes two separate procedures for providing one-time "Winter Support" cash assistance of UAH 19,400 per household for the 2026/27 heating season.

Under **Procedure A**, the State Budget special fund finances assistance through contributions from UNICEF and the Ukrainian Red Cross Society, transferred through the humanitarian assistance account opened for MoSPFU. The mechanism supports highly conflict-affected areas, including hromadas with settlements located within approximately 0–20 km of the frontline, while the legally applicable geographic scope (118 hromadas) is defined by the specific list of territorial communities included in Annex 1 to the Procedure. The Pension Fund of Ukraine processes applications, determines eligibility, and makes payments. Temporarily occupied territories are excluded.

Under **Procedure B**, participating international and national humanitarian organizations, including the UN Refugee Agency (UNHCR), provide and pay for assistance directly. The mechanism supports highly conflict-affected areas, including hromadas with settlements located within approximately 21-50 km of the frontline, while the legally applicable geographic scope (106 hromadas) is defined by the specific list of territorial communities included in Annex 1 to the Procedure. Applications are submitted to local authorities, consolidated through the relevant Oblast administrations, and verified by the Pension Fund, including through **RAIS+** to identify assistance already received under either procedure. Participating organizations subsequently apply the prioritization rules established by the Resolution and make payments within available funding. Assistance under this Procedure is implemented based on a Memorandum of Understanding with the relevant Oblast administration/military administration or its structural unit.

Under both procedures, applicants may submit applications from **1 September to 30 October 2026**. Eligibility is based on the social assistance and vulnerability categories specified in Resolution No. 1084, including **the status-based eligibility** for persons with disabilities, large families, and single persons of pension age who are incapable of work and can document the relevant status even where the corresponding payment is not currently received. Annex 15.10 summarizes the two procedures.

The Resolution and its annexes remain an authoritative reference for the full procedural requirements. This section is intended to help partners understand the operational arrangements and support a coherent, complementary response. It does not create additional legal obligations or replace partners' own donor, safeguarding, data protection and accountability requirements.

The transfer value for winter heating support under both pathways is UAH 19,400 per household. This applies to winter energy assistance and winter cash for utilities, consistent with

[18] The Humanitarian Coordination Team has welcomed the initiative of the Humanitarian Response and Resilience Account (HRA)

the previous winter response and the harmonized approach adopted across Ministry and humanitarian delivery modalities.

The Ministry has requested humanitarian partners to support implementation under Procedure B. Partners that are able and willing to do so are kindly requested to align their support with the applicable Procedure B, including the MoU, PFU verification, and reporting arrangements.

The Ministry and humanitarian partners are expected to progress their respective pathways in parallel. This is intended to support timely assistance, enable complementary planning, and reduce potential overlap.

12.2 Targeting and Eligibility

The Resolution No. 1084 identifies the following categories of recipients of State social support:

- persons receiving a disability pension.
- recipients of housing subsidies for housing and utility services.
- recipients of housing subsidies for the purchase of liquefied gas and solid or liquid household fuel.
- non-working persons who reached the general pension age but did not acquire entitlement to a pension and receive temporary State social assistance.
- recipients of allowances for children of single mothers.
- recipients of childbirth allowance under CMU Resolution No. 1751.
- recipients of childbirth allowance under CMU Resolution No. 1805.
- recipients of allowances for children being raised in large families.
- persons with disabilities from childhood and children with disabilities receiving State social assistance.
- persons not entitled to a pension and persons with disabilities receiving State social assistance, as well as recipients of State social assistance for care.
- recipients of care allowances for persons with Group I disabilities, certain single persons with Group II or III disabilities, and certain single recipients of old-age or long-service pensions requiring permanent third-party care, under CMU Resolution No. 654.
- internally displaced persons receiving IDP living assistance.
- orphaned children, children deprived of parental care, and eligible persons from among them, including persons with disabilities, placed in family-type children's homes.
- orphaned children, children deprived of parental care, and eligible persons from among them, including persons with disabilities, placed in foster families.
- children placed with patronage caregivers for whom social assistance for maintenance is provided.

In addition, persons who are not receiving the relevant payment at the date of application may apply based on their documented status if they: (i) have a legally established disability; (ii) belong to a large family; or (iii) are single persons of pension age who are incapable of work, provided they declare this in the application and submit the required supporting documents.

Partners are encouraged to familiarise themselves with the Ministry's targeting framework and, where feasible, support implementation through the Resolution procedure B. Where partners provide complementary assistance, they are encouraged to reflect relevant Ministry

eligibility criteria in their assessment questionnaires and organizational assessment protocols, alongside their own targeting criteria. This helps reduce repeated assessment and registration, minimize fatigue among vulnerable households, and support coherent referral and complementary assistance arrangements.

12.3 Coordination, Planning and Data-Sharing Arrangements

Actors	Key role for Procedure B and coordination
OVAs and Hromada authorities	Receive and process applications, consolidate and transmit lists, manage corrections, and coordinate with organizations. OVAs are the primary operational interface for list flow and payment reporting.
MoSP and PFU	Provide Government oversight and verification. PFU processes consolidated lists, checks relevant eligibility and prior Winter Support through RAIS+, and returns processed lists through OVAs.
Shelter Cluster	Provides coordination, technical guidance, RAIS+ support, data-quality support, deconfliction and referral coordination.
Humanitarian partners	May support Procedure B where they have an appropriate MoU/data arrangement and capacity; review processed lists, undertake required partner assessment, make payment decisions within available funding, and report payments.

Partners are kindly requested to submit and regularly update winter response plans through the Winter Coordination Tables. This will support inter-agency planning, response mapping, gap analysis, and coordination with Government counterparts.

The Ministry is expected to establish regular coordination meetings that bring together UN agencies, the Shelter Cluster, humanitarian partners, relevant line ministries, and Oblast Military Administrations. These meetings will support implementation follow-up, funding-gap analysis, and operational problem-solving.

The Cluster, supported by UNHCR, is also working with OVAs on MoU and Data Sharing Agreement arrangements to support implementation at oblast and Hromada level. Subject to finalized agreements and access permissions, the Cluster may receive agreed household winter needs information through RAIS+, and partners may be able to access relevant lists for further review, assessment, and feasible assistance.

Inclusion on the Resolution list does not automatically guarantee assistance from a particular humanitarian partner. Partners remain responsible for determining whether they can support a household, based on available funding, operational capacity, internal agency procedures and prioritization criteria.

12.4 RAIS+, Sequencing and Avoidance of Duplication

RAIS+ remains the primary platform for visibility, planning and household-level deduplication under the Winter Response 2026/27.

Under the Ministry-led Pathway A in the 0-20 km zone, PFU payment progress information is expected to be shared through agreed MoSP, UNICEF and Ukrainian Red Cross Society arrangements to support RAIS+ visibility and deduplication. This is expected to take place

progressively during or following the Government payment process and will support post-payment visibility and complementary humanitarian planning.

Under Procedure B, PFU will use RAIS+ to verify household members' receipt of Winter Support under the international and national organization procedure and the State-funded procedure.

For humanitarian winter heating assistance provided outside, alongside, or complementary to these procedures, partners are requested to upload confirmed planned assistance to RAIS+ promptly and update completed, canceled, or amended assistance. If a possible overlap, data error, or incomplete record is identified, partners are requested to coordinate with the relevant Shelter Cluster Hub Coordinator, partner, and, where relevant, the OVA before proceeding.

Timely humanitarian partner planning and deduplication are particularly important in the 0-20 km zone to avoid overlap with households already planned for, or assisted through, Government support.

12.5 In-kind and Complementary Assistance in 0-20 km Hromadas

Recognizing that the Ministry-led pathway provides winter heating assistance primarily through cash transfers, partners planning in-kind winter assistance in 0–20 km hromadas are encouraged to assess the local context carefully before proceeding.

Where delays could compromise timely winter preparedness, safe access to assistance, or protection outcomes, partners may assess the context, apply do-no-harm principles, and discuss the proposed operational approach with the Shelter Cluster Coordination Team. This will help maintain coordination, complementarity, and visibility across the response.

Partners should also note that, due to the Ministry's legal and accountability obligations, households receiving in-kind assistance may subsequently receive winter heating cash support through Ministry-led Pathway A. This possibility should be considered in program design, community communication, and post-distribution monitoring.

The Ministry has indicated its intention to lead the winter heating response in the 0-20 km zone. MoSP has further clarified that, once eligibility has been confirmed and households have been formally registered, legal and accountability requirements may limit the ability to remove households from PFU Government lists, including where humanitarian assistance may already have been provided. Partners should also note that the payment cycle under the Ministry-led Pathway A is expected to be completed by 30 November 2026.

Therefore, partners planning to support households residing in hromadas under Ministry-led Pathway A are encouraged to familiarise themselves with the Ministry's targeting framework and, where feasible, support implementation through the Resolution Procedure B. Where partners provide complementary assistance, they are encouraged to reflect relevant Ministry eligibility criteria in their assessment questionnaires and organizational assessment protocols, alongside their own targeting criteria. This will help reduce repeated assessment and registration, minimize fatigue among vulnerable households, prevent duplication, and support coherent referral and complementary assistance arrangements.

Humanitarian assistance may still be necessary for households meeting humanitarian vulnerability criteria. This includes newly or informally displaced people, host households, people with functional limitations, chronic illness or care needs without formal disability status, low-income households not receiving subsidies, solid-fuel users in areas affected by hostilities, and people living in unsafe, damaged or informal accommodation. It also includes people facing

protection risks or discrimination, and households affected by administrative barriers, including missing documentation, inability to complete the application process, or pending, delayed or unresolved applications.

12.6 Reporting, Referrals and Accountability to Affected People

The application window under both procedures is open from 1 September to 30 October 2026.

International and national organizations providing Procedure B assistance are required under the Resolution to report payments to the relevant OVA in the Resolution Annex 3 format by the 15th day of the month following payment. The OVA then transmits the information to PFU within the applicable timeframe.

The Ministry has requested humanitarian partners, where relevant, to help identify and refer eligible households not currently enrolled in State social-protection systems. Where feasible, partners are encouraged to refer such households for assessment and possible inclusion. Referrals do not guarantee eligibility for Government assistance, as households must meet the applicable criteria and complete the required verification process.

Given the coexistence of Ministry and humanitarian pathways, partners are encouraged to provide clear, accessible communication to affected communities on:

- eligibility criteria and application channels.
- timelines and sequencing of assistance.
- the purpose and intended use of winter heating assistance.
- fuel requirements and expected consumption needs.
- safety considerations associated with solid fuel, gas, electricity and centralized heating.
- complaints and feedback mechanisms.
- referral pathways into Government and humanitarian systems.

12.7 Suggested Partner Actions

Partners are kindly requested to:

- confirm the applicable pathway, location and coordination arrangements.
- ensure that the necessary MoU or DSA, secure data route and authorized contacts are in place.
- submit and regularly update winter response plans through the Winter Coordination Tables.
- use RAIS+ to support planning, visibility, deduplication and reporting.
- promptly flag possible overlaps, data-quality concerns, access constraints and critical unmet needs.
- report Procedure B payments to the relevant OVA in the required Annex 3 format.
- provide clear information to households on eligibility, timelines, referral options, complaints and feedback mechanisms.
- refer eligible households outside State social-protection systems, where feasible and appropriate, for assessment and possible inclusion in Government support.

The Shelter Cluster will continue to work with MoSP, PFU, OVAs and partners to review implementation challenges and refine operational arrangements where required. The shared

objective is to ensure that Resolution No. 1084 strengthens the overall winter response while maintaining the flexibility needed to reach households with urgent and unmet needs.

Therefore, the Shelter Cluster is recommending the following next steps for supporting transitional measures in the short-term:

- For organizations operating in the areas covered by the Resolution, it is also advisable to assess whether the household is receiving any of the existing 15 subsidies and whether the household is applying to self-declare under one of the 3 self-declarable categories, to avoid duplication with the Humanitarian account.
- Ensure deduplication through the RAIS+ platform to avoid duplication with other humanitarian organizations and with assistance provided under Procedures A and B of Resolution No. 1084. Under Procedure B, PFU uses RAIS+ as part of its weekly verification process to check assistance received under both procedures.
- As an additional operational arrangement, UNICEF and the Ukrainian Red Cross Society upload MoSPFU payment data to RAIS+ on a weekly basis to support humanitarian deduplication. Organizations should note that these data are updated on a rolling basis and may not fully reflect the final caseload under Procedure A until the payment cycle is completed by 30 November 2026.
- Where feasible, accompany cash assistance with an assessment of household heating systems and housing conditions to identify complementary needs, including personal insulation, shelter insulation, or other winterization support.
- Support complementary Protection activities that help households obtain or restore documentation needed to demonstrate eligibility under the Resolution or access relevant social-protection mechanisms, including appropriate legal assistance and other protection support.
- Support referral mechanisms so that households identified as potentially eligible under the Resolution can access the appropriate assistance pathway, and regularly review relevant RAIS+ records, including deletions, to identify households that may have been excluded from one assistance stream but remain in need of support.

13 Accountability to Affected Populations

To ensure adequate support and respect for the impacted population, several key principles and practices are outlined below:

1. Providing consultations: conduct initial meetings, surveys, or focus groups before the intervention to gather input and understand the concerns, needs, and expectations of the affected populations.
2. Transparent communication and information sharing: providing clear and accessible information about the selection criteria, nature of the assistance, timelines, potential disruptions, and required documentation. This can be achieved through community meetings, flyer distribution, noticeboards, and other means.
3. Feedback mechanisms: establishing channels for beneficiaries to voice their concerns, such as suggestion boxes, hotline phone numbers, and email addresses, and dedicated meetings. Ensuring beneficiaries know how to access these channels.
4. Considering diverse needs: ensuring that communication and engagement methods are accessible to all beneficiaries, including those with disabilities and language barriers. This may involve providing materials in multiple languages or using visual aids.

14 Winterization Post-Distribution Monitoring

It is strongly recommended that all agencies include a post-distribution monitoring (PDM) component in their winterization program implementation cycles.

Central to the winter response plan is the consistent, coordinated consideration of these complex needs across age, gender, and disability. Data disaggregated by gender, age, and disability will be collected, analyzed, and reported on to inform evidence-based vulnerability targeting, tailored assistance, and monitoring.

We recommend that winter assistance monitoring move beyond satisfaction and coverage-based indicators to include measures that assess actual improvements in household thermal comfort and energy efficiency. This should encompass tracking indicators related to the building's thermal envelope, such as adequate indoor warmth during peak winter periods or self-reported comfort improvements, as well as changes in fuel or utility consumption, along with other relevant measures of heating effectiveness and energy performance. These indicators should be collected alongside satisfaction metrics to provide a more comprehensive picture of the program's impact.

The Shelter Cluster promoted compiling a shared list of questions that all Cluster partners agreed to include in their PDM questionnaire. Please use the PDM Questionnaire Template[19] with the instructions (+Ukrainian). Adopting a shared list of core questions among all partners will harmonize data and feedback collection on the quality, effectiveness, and appreciation of the winterization response. This will ensure consistent, standardized information is gathered and shared among all stakeholders.

Lastly, where feasible, partners should conduct follow-up monitoring after the winter season to assess the sustained benefits of assistance, particularly for households that have received thermal envelope improvements.

[19] Please also find

15 ANNEXES

15.1 Recommended NFIs for Winter (EXAMPLES)



Figure A1 – Visual examples of NFIs

15.2 The Recommended Items for Invincibility Points

This table is provided solely as guidance and a suggested reference for organizations planning to support Invincibility Points.

Table A1 – Recommended Items for Invincibility Point

Invincibility Point Kit (for 20 individuals)							
No	**Item**	**Qty**	**Size**	**Technical Specifications**	**Comments**	**Unit cost**	**Subtotal cost**
1	Insulating floor mat	20	1.8m x 0.9m	Three layers:1 - on the ground side, a plastic mat, double weave. 2 - an aluminized canvas, aluminum face upward. 3 - on the upper side, a fleece blanket.	Bedding	33 USD	660 USD
2	Mattress	4	0.9m x 1.9m 0.15m	One-piece, high-density polyurethane foam with no glued joints. 35kg/m³ +/- 5%.	Bedding	51 USD	204 USD
3	Sleeping bags	20	0.7 x 1.9m	A thick, non-woven synthetic material is covered with a synthetic/cotton sheet on both sides. 100% synthetic filling. Inner and outer lining: minimum cotton/polyester mix, 100g/m². Filling: 100% polyester fibers	Bedding	39 USD	780 USD
4	Folding chairs/benches	20				20 USD	400 USD
5	Jerrycan (optional)	2	10 L	Type: Complete with screw cap and a molded carry handle at least 9 cm long. The inner diameter of the cap is a minimum of 30 mm. Drop test: can withstand a drop of 2,5 m at total capacity. Material: Non-collapsible Polyethylene plastic. Though flexible, it is food-grade low-density polyethylene (LDPE) and UV-stabilized, with no sharp edges. Size: 10 L Weight: 455 grams minimum Color: Light color (yellow, white)	Water storage	5.5 USD	11 USD
6	Bucket	4	10 L	Metal bucket Outer diameter (up) 298 mm Outer diameter (down) 275 mm Inner diameter (up) 286 mm Inner diameter (down) 263 mm Height 371 mm Empty weight 1,5 kg	Water storage	4.4 USD	17.6 USD
7	Power bank lamps	4		Lamps do not necessarily need to be "solar lamps." The importance of the "power bank" function is instead confirmed as essential	A source of light and charging the phone	26.5 USD	106 USD
8	Emergency generator*	1	4-5kW	4 KW is preferable (a typical socket can take up to 16 amps, which translates to 4,000 W)		663 USD	663 USD
9	Fuel Storage	2		Steel 2x20 liters jerrycan	Generator fuel storage	22 USD	44 USD
10	Kettle	2	1.2 L			16.5 USD	33 USD
12	Water Storage			2x100 liter drums + 2x10 liters Jerrycans	Water storage	77+6 USD	150 USD
13	Kitchen set	5	20 ppl			22 USD	110 USD
14	Fire extinguisher	1	9 L	Foam or powder		39 USD	39 USD
Total cost							3218 USD

* Emergency generators are intended to maintain critical functions of Invincibility Points during power outages. Generator capacity should be selected based on the assessed electrical load, including starting loads, rather than the size of the premises. Before connection to an existing electrical system, partners should consult a qualified electrician to confirm compatibility, grounding, protection and safe changeover arrangements. Generators must be operated in accordance with applicable safety requirements, with exhaust gases kept away from occupied spaces and building openings.

15.3 Awareness of Carbon Monoxide Poisoning

Carbon Monoxide is a gas produced whenever a material is burned. During winter, beneficiaries must recognize the risk that they and their households could become exposed to carbon monoxide poisoning. Houses with functioning chimneys are better able to mitigate this risk. In contrast, those who do not have chimneys should be encouraged to regulate and ventilate their homes (opening windows and other openings to allow fresh air. The risk of carbon monoxide poisoning is high without adequate ventilation, as the gas is odorless and invisible. Symptoms are like the flu. Beneficiaries should also have proper information about the physical symptoms of carbon monoxide poisoning, including headaches, weakness, skin appearing 'cherry red', dizziness, nausea or vomiting, shortness of breath, blurred vision, or loss of consciousness.

During the needs assessment, partners should provide beneficiaries with the information leaflet, which includes key guidance on safe heating practices, carbon monoxide awareness, and available feedback and complaints mechanisms (Leaflet Template).

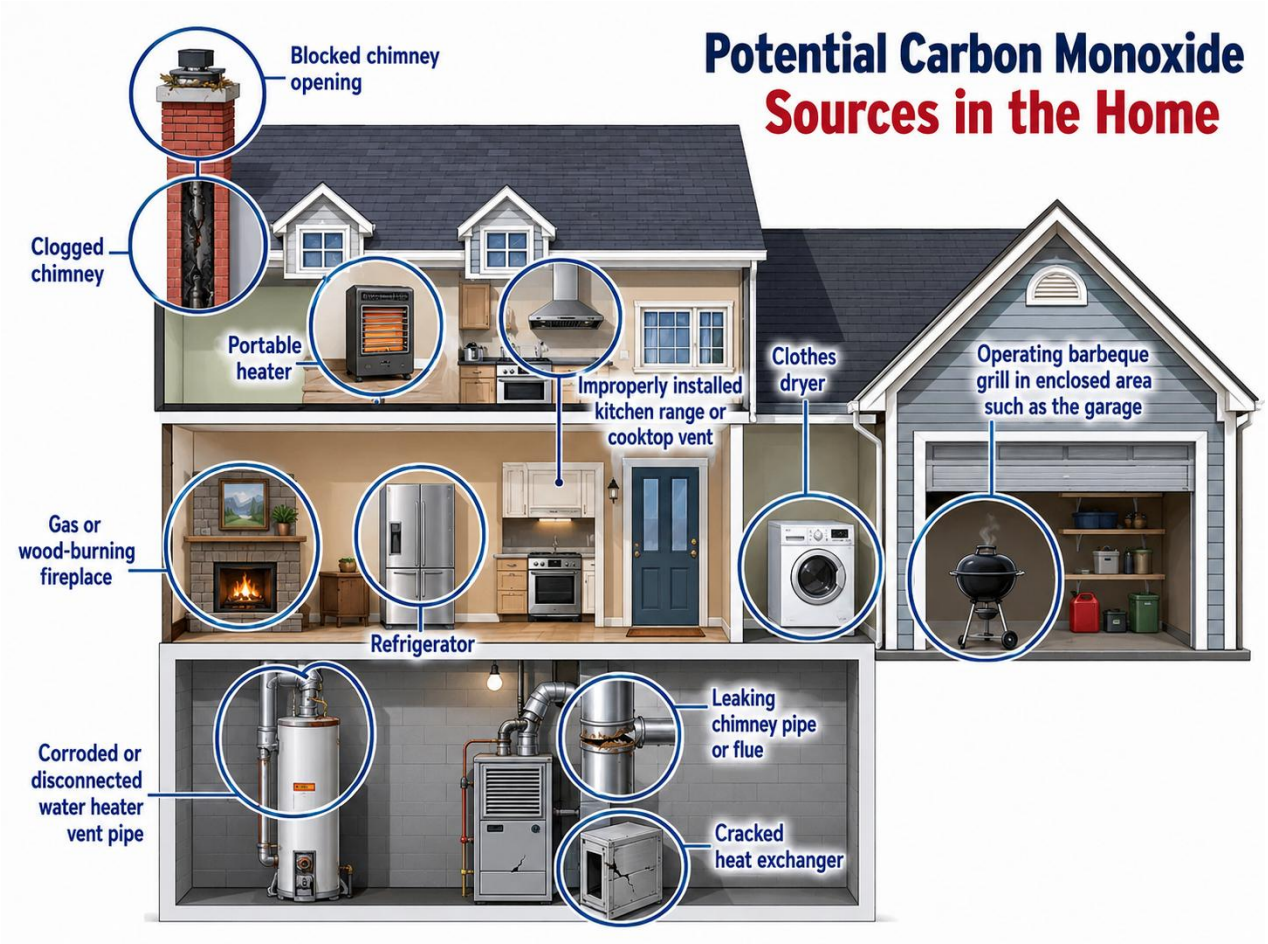


Figure A2 - Potential Carbon Monoxide Hazards in Residential Settings

15.4 Typical Set of Chimney Components for Solid Fuel Stove (Example Configuration)

Table A2 – Chimney set

	Chimney item	Specifications	1 set	Picture
1	Double-walled chimney pipe made of stainless steel in a casing made of galvanized steel 120/180, 0.5 mm	Material: AISI 304 stainless steel / galvanized steel Length, m: 1 Diameter, mm: 120/180 Steel thickness, mm: 0.5 Thermal insulation: basalt fiber	5 pcs	
2	Double-walled stainless steel chimney tee in galvanized steel casing 120/180, 0.5 mm	Material: AISI 304 stainless steel / galvanized steel Angle, degrees: 85…90 Diameter, mm: 120/180 Steel thickness, mm: 0.5 Thermal insulation: basalt fiber	1 pc	
3	Stainless steel unloading platform for double-walled chimney, diam. 120/180	Material: AISI 304 stainless steel / galvanized steel Diameter, mm: 120/180 Steel thickness, mm: 0.5	1 pc	
4	Stainless steel chimney condensation drain diam. 180 mm, 0.5 mm	Material: AISI 304 stainless steel / galvanized steel Diameter, mm: 120/180 Steel thickness, mm: 0.5	1 pc	
5	Stainless steel chimney bracket 400 mm thick 2 mm	Material: AISI 304 stainless steel Length, m: 0.4 Steel thickness, mm: 2	1 pc	
6	Stainless steel chimney cap for the insulated pipe 120/180, 0.5 mm	Material: AISI 304 stainless steel Diameter, mm: 120/180 Steel thickness, mm: 0.5	1 pc	
7	Wall clamp for stainless steel chimney diam. 180 mm offset 0 - 100 mm thickness 0.5 mm.	Material: AISI 304 stainless steel Diameter, mm: 180 Steel thickness, mm: 0.5	1 pc	
8	Stainless steel chimney bracket diam. 180 mm, thickness 0.5 mm	Material: AISI 304 stainless steel Diameter, mm: 180 Steel thickness, mm: 0.5	5 pcs	

15.5 Solid Fuel Calorific Values

Important note: First, please check the solid fuel's calorific value in the supplier's certificate (test report). Not applicable for firewood.

Firewood: Manufacturers of modern heating equipment recommend using air-dried wood with a moisture content of no more than 25% as a solid fuel for heating. The ideal option for wood heating is to use firewood in a room-dry state (moisture 7-18 %). Such firewood gives the maximum amount of heat. However, since drying wood to this state involves additional energy costs, the best option for heating is to use air-dry wood (moisture 20-30 %). It is relatively easy to make firewood air-dry. For this purpose, it is enough to prepare them in advance and store them outdoors.

Nadezhdin's formula determines the working (lower) mass calorific value Q and is dependent on the moisture content of firewood:

for room-dry wood, moisture 7...18%

Q = 4600 – 50 x W = 4600 – 50 x (7...18) = 4,250...3,700 kcal/kg

for air-dried wood, moisture 20...30%

Q = 4370 – 50 x W = 4370 – 50 x (20...30) = 3,370...2,870 kcal/kg

for freshly cut wood, moisture 50…70%

Q = 3870 – 45 x W = 3870 – 45 x (50…70) = 1,620…720 kcal/kg

where W – is the relative wood moisture content in percent.

4600, 4370, 3870 – values of absolute (higher) calorific value of wood, calculated individually for each sample, based on the percentage ratio of absolutely dry wood substance and moisture contained in it.

The working (lower) volumetric calorific value of wood is calculated as the product of the mass calorific value of wood and its density.

For example, for ash (moisture 12 %): 4000 kcal/kg x 0.750 kg/dm^3 = 3,000 kcal/dm^3 = **3.0 Gcal/m^3**

Table A3[20] – Specific calorific value of different wood species ***(12% and 20% - moisture content)***

Wood species	Absolute (higher) calorific value, kcal/kg	Working (lower) mass calorific value Q, kcal/kg		Working (lower) volumetric calorific value, Gcal/m^3		Wood density, kg/dm^3	Wood density limit, kg/dm^3
		12%	20%	12%	20%		
Hardwood							
Oak	4,753	**4,000**	**3,370**	**3.240**	**2.730**	0.810	0.690-1.030
Ash	”	”	”	**3.000**	**2.528**	0.750	0.520-0.950
Beech	”	”	”	**2.720**	**2.292**	0.680	0.620-0.820
Birch	”	”	”	**2.600**	**2.191**	0.650	0.510-0.770
Alder	”	”	”	**2.000**	**1.685**	0.500	0.470-0.580

[20] http://www.biowatt.com.ua/informatsiya/harakteristika-ta-osoblivosti-drov-yak-paliva/

Wood species	Absolute (higher) calorific value, kcal/kg	Working (lower) mass calorific value Q, kcal/kg		Working (lower) volumetric calorific value, Gcal/m³		Wood density, kg/dm³	Wood density limit, kg/dm³
		12%	20%	12%	20%		
Softwood/Coniferous							
Pine	4,753	**4,000**	**3,370**	**2.080**	**1.752**	0.520	0.310-0.760
Aspen	”	”	”	**1.880**	**1.583**	0.470	0.460-0.550
Spruce	”	”	”	**1.800**	**1.517**	0.450	0.370-0.750
Fir	”	”	”	**1.640**	**1.382**	0.410	0.350-0.600
Poplar	”	”	”	**1.600**	**1.348**	0.400	0.390-0.590

The formula for determining the amount of firewood in m³ for one winter season is:

$$Amount\ of\ firewood\ (m^3) = \frac{Amount\ of\ heat\ for\ the\ season\ (Gcal)}{Working\ (lower)\ volumetric\ calorific\ value\ (\frac{Gcal}{m^3})}$$

Briquettes and pellets:

For the lower calorific value of the working mass, please use values for quality groups in DSTU 8358:2015 “Fuel briquettes and pellets from wood raw materials. Technical specifications.”
Conversion from MJ/kg to Gcal/ton is needed: 1 MJ/kg = 0.239 Gcal/ton

Coal:

For the lower calorific value of the working mass, please use values in Table 1 of DSTU 7146:2010 “Bituminous coal and anthracite for domestic use. Technical conditions.”
Conversion from kcal/kg to Gcal/ton is needed: 1 kcal/kg = 0.001 Gcal/ton

15.6 Conversion Factors

The **stacked cubic meter** is an intermediate auxiliary unit of measurement that is elevated to the status of a central unit of measurement when accounting for the volume of firewood.

Firewood is usually not accounted for by the piece, but in stacks made during the harvesting period, and is accounted for in m^3 with bark. A stacked m^3 is determined by multiplying the length (L) of the stack by its height (H) and width (W). The width of the stack is the length of the logs. The density of the stack depends on the wood species (hardwood or softwood/coniferous), the type and shape of the logs (round or chopped), as well as their length and thickness (thick, medium, or thin). Since a stack always has voids, the stacked m^3 is multiplied by the full-wood conversion factor **to convert the stacked wood to a solid-content** (**dense**) measure.

According to the current recommendations, the average conversion factor is assumed to be 0.7.
For example: 1 stacked m^3 x 0.7 = 0.7 (solid) m^3



Firewood
stack 1 m x 1 m x 1 m
(1 stacked m^3)





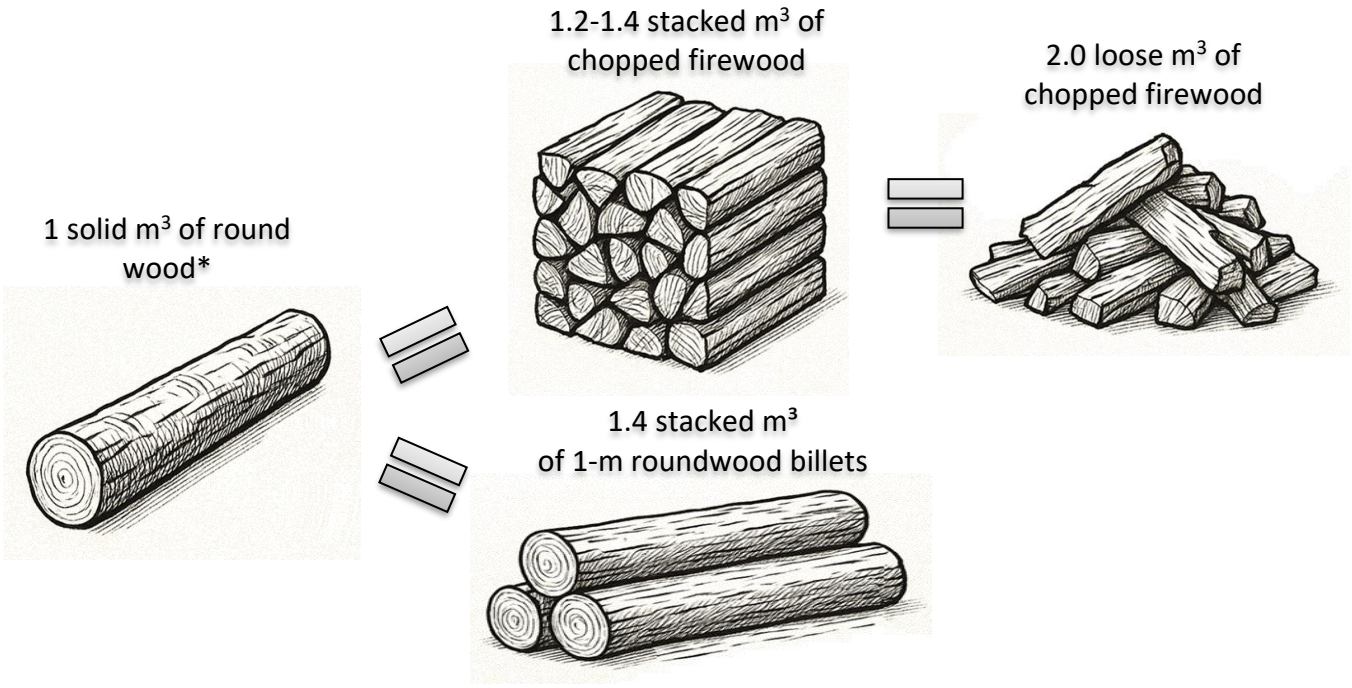
Solid measure

Please watch the video made by the State Agency “Forest Resources of Ukraine” on measuring and converting a stack of wood: LINK.

For comprehensive instructions on conversion factors from stacked to solid volume for logged (roundwood) firewood and chopped (split) firewood, please refer to drovae.gov.ua.

It is important to distinguish between stacked and loose firewood. This distinction is easily visible in the truck body. Stacked firewood is tightly arranged (including delivery in crates – on pallets), while loose firewood is randomly piled, resulting in noticeable gaps and an uneven surface.

Note:
When drafting a contract with a vendor/supplier, partners must clearly define the conversion factor from stacked or loose m^3 to solid m^3. This ensures uniformity and clarity in measurement standards, thereby preventing potential disputes and misunderstandings related to quantity and volume throughout the contract's execution.



**as a reference standard – single log with length and diameter forming exactly 1 m³ of solid volume*

Table A4 – Volume conversion factors for firewood assortments[21]: solid m³ ↔ stacked m³ ↔ loose m³

Assortments	Round wood (solid), solid m³	Stacked logs (length 1 m, billets), stacked m³	Chopped (split) firewood	
			stacked m³	loose m³
1 solid m³ of round wood	**1**	1.4	1.2-1.4	2.0
1 stacked m³ of 1-m roundwood billets	0.7	**1**	0.85	1.25
1 stacked m³ of chopped firewood	0.7-0.8	1.2	**1**	1.43
1 loose m³ of chopped firewood	0.5	0.8	0.7	**1**



Figure A2 – Types of delivery in the truck body: loose chopped firewood (on the left) and tightly stacked chopped firewood (on the right)

[21] Wood Fuels Handbook, FAO, 2015

15.7 Example of Calculation of Solid Fuel Amount for Heating the Household

3 steps for firewood

I.



Firewood species



Moisture content

Table[22] - Specific calorific value of different wood species (**12% and 20% - moisture content**)

Wood species	Absolute (higher) calorific value, kcal/kg	Working (lower) mass calorific value Q, kcal/kg		Working (lower) volumetric calorific value, Gcal/m³		Wood density, kg/dm³	Wood density limit, kg/dm³
		12%	20%	12%	20%		
Hardwood							
Oak	4,753	**4,000**	**3,370**	**3.240**	**2.730**	0.810	0.690-1.030
Ash	"	"	"	**3.000**	**2.528**	0.750	0.520-0.950
Beech	"	"	"	**2.720**	**2.292**	0.680	0.620-0.820
Birch	"	"	"	**2.600**	**2.191**	0.650	0.510-0.770
Alder	"	"	"	**2.000**	**1.685**	0.500	0.470-0.580
Softwood							
Pine	4,753	**4,000**	**3,370**	**2.080**	**1.752**	0.520	0.310-0.760
Aspen	"	"	"	**1.880**	**1.583**	0.470	0.460-0.550
Spruce	"	"	"	**1.800**	**1.517**	0.450	0.370-0.750
Fir	"	"	"	**1.640**	**1.382**	0.410	0.350-0.600
Poplar	"	"	"	**1.600**	**1.348**	0.400	0.390-0.590

III.



Firewood stack 1 m x 1 m x 1 m (1 stacked m³)

=



Solid measure

4,79 solid m³/ 0.7 = 6.84 stacked m³

II. **The formula for determining the amount of firewood in m³ for one winter season:**

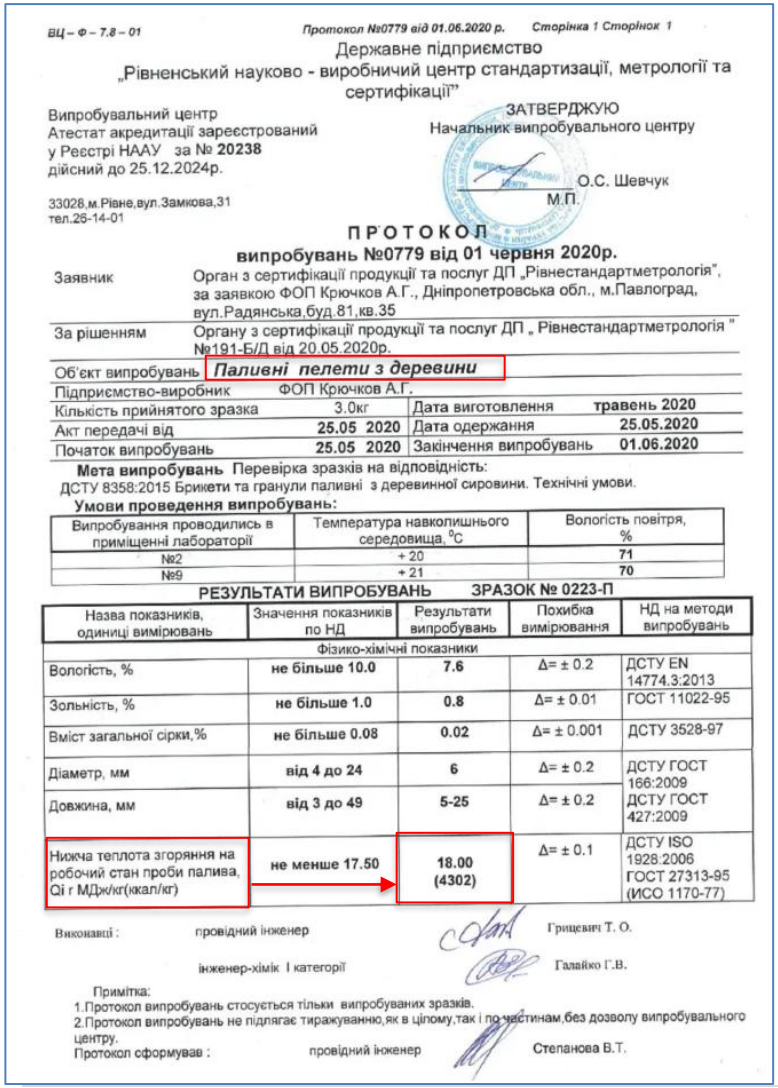
$$Amount\ of\ firewood\ (m^3) = \frac{Amount\ of\ heat\ for\ the\ season\ (Gcal)}{Working\ (lower)\ volumetric\ calorific\ value\ \left(\frac{Gcal}{m^3}\right)}$$

$$\frac{14.37\ Gcal}{3.0\ Gcal/m^3} = 4.79\ solid\ m^3$$

14,37 Gcal – minimum recommended amount of heat for one winter season for one household

3 steps for briquettes/pellets/coal

I. Find the calorific value in quality test protocol (example from DSTU 8358-2015):



ВЦ – Ф – 7.8 – 01 Протокол №0779 від 01.06.2020 р. Сторінка 1 Сторінок 1

Державне підприємство
„Рівненський науково - виробничий центр стандартизації, метрології та сертифікації"

Випробувальний центр
Атестат акредитації зареєстрований у Реєстрі НААУ за № 20238 дійсний до 25.12.2024р.

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Начальник випробувального центру
О.С. Шевчук
М.П.

33028,м.Рівне,вул.Замкова,31
тел.26-14-01

ПРОТОКОЛ
випробувань №0779 від 01 червня 2020р.

Заявник	Орган з сертифікації продукції та послуг ДП „Рівнестандартметрологія", за заявкою ФОП Крючков А.Г., Дніпропетровська обл., м.Павлоград, вул.Радянська,буд.81,кв.35
За рішенням	Органу з сертифікації продукції та послуг ДП „ Рівнестандартметрологія " №191-Б/Д від 20.05.2020р.
Об'єкт випробувань	***Паливні пелети з деревини***
Підприємство-виробник	ФОП Крючков А.Г.

Кількість прийнятого зразка	3.0кг	Дата виготовлення	травень 2020
Акт передачі від	25.05 2020	Дата одержання	25.05.2020
Початок випробувань	25.05 2020	Закінчення випробувань	01.06.2020

Мета випробувань Перевірка зразків на відповідність:
ДСТУ 8358:2015 Брикети та гранули паливні з деревинної сировини. Технічні умови.

Умови проведення випробувань:

Випробування проводились в приміщенні лабораторії	Температура навколишнього середовища, °С	Вологість повітря, %
№2	+ 20	71
№9	+ 21	70

РЕЗУЛЬТАТИ ВИПРОБУВАНЬ ЗРАЗОК № 0223-П

Назва показників, одиниці вимірювань	Значення показників по НД	Результати випробувань	Похибка вимірювання	НД на методи випробувань
Фізико-хімічні показники				
Вологість, %	не більше 10.0	7.6	Δ= ± 0.2	ДСТУ EN 14774.3:2013
Зольність, %	не більше 1.0	0.8	Δ= ± 0.01	ГОСТ 11022-95
Вміст загальної сірки,%	не більше 0.08	0.02	Δ= ± 0.001	ДСТУ 3528-97
Діаметр, мм	від 4 до 24	6	Δ= ± 0.2	ДСТУ ГОСТ 166:2009
Довжина, мм	від 3 до 49	5-25	Δ= ± 0.2	ДСТУ ГОСТ 427:2009
Нижча теплота згоряння на робочий стан проби палива, Qi r МДж/кг(ккал/кг)	не менше 17.50	18.00 (4302)	Δ= ± 0.1	ДСТУ ISO 1928:2006 ГОСТ 27313-95 (ИСО 1170-77)

Виконавці : провідний інженер Грицевич Т. О.
інженер-хімік I категорії Галайко Г.В.

Примітка:
1.Протокол випробувань стосується тільки випробуваних зразків.
2.Протокол випробувань не підлягає тиражуванню,як в цілому,так і по частинам,без дозволу випробувального центру.
Протокол сформував : провідний інженер Степанова В.Т.

III. The formula for determining the amount of solid fuel in metric tons for one winter season:

$$\frac{14.37\ Gcal}{4.3\ Gcal/ton} = 3.34\ tons$$

14,37 Gcal – minimum recommended amount of heat for one winter season for one household

II. **Measurement units need to be converted:**

1 MJ/kg = 0.239 Gcal/ton

1 kcal/kg = 0.001 Gcal/ton

For this case: 18.00 MJ/kg x 0.239 = 4.3 Gcal/ton

15.8 Example of Calculation of Solid Fuel Amount for Heating Collective Site

The approach below provides a standard method to estimate the amount of solid fuel required to heat collective sites during the winter season.

Core formula:

$$M = \frac{(S + S_{cs}) \times Q \times t \times D \times C}{q_{fw} \times \eta}$$

Symbol	Description	Value
M	Solid fuel mass, kg	–
Q	Specific heat loss of the building, W/m²	**40-120***
t	Boiler operating time per day, hours	**24**
S	Heated living spaces floor area, m²	**Actual number of IDPs' sleeping places x 6 m²**
S_{cs}	Common spaces heated floor area, m²	**Kitchens, toilets, showers, etc. area**
D	Duration of heating season, days	**180** (from mid-Oct to mid-April)
q_{fw}	Solid fuel calorific value, kcal/kg (firewood and coal) and kWh/kg (briquettes and pellets)	**Depends on the solid fuel type (tree species if firewood), and moisture content**
η	Boiler efficiency	**0.70-0.90** (70-90%)
C	Conversion factor for firewood and coal: W → kcal/h for briquettes and pellets: W → kWh	 **0.860** (firewood, coal) **0.001** (briquettes, pellets)

***** Building with good thermal insulation: 40-50 W/m².
Building with energy-efficient windows and doors: 60-70 W/m².
Substandard building: 100-120 W/m².

Calculation example:

Collective site with 510 m² heated area (85 IDPs sleeping places x 6 m^2 = 510 m^2), heated common spaces floor area of 300 m^2, solid fuel boiler with η = 0.80.
Solid fuel type – hardwood species (dry oak with 20% moisture content, density 810 kg/m^3).
Solid fuel mass calculation:

$$M = \frac{(510 + 300) \times 70 \times 24 \times 180 \times 0.860}{3{,}370 \times 0.8} = 78{,}135\ kg$$

Solid fuel volume calculation: $V = \frac{M}{\rho}$

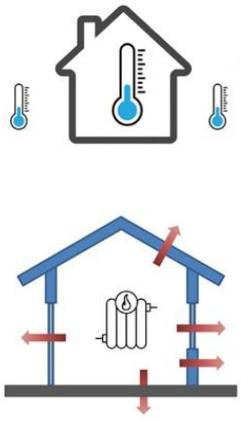
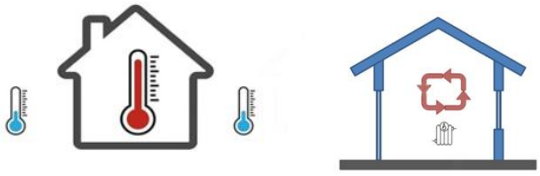
Symbol	Description
V	Volume of firewood in solid m^3
M	Solid fuel mass, kg
ρ	Wood density, kg/m^3 (1 kg/m^3 = 1,000 kg/dm^3)

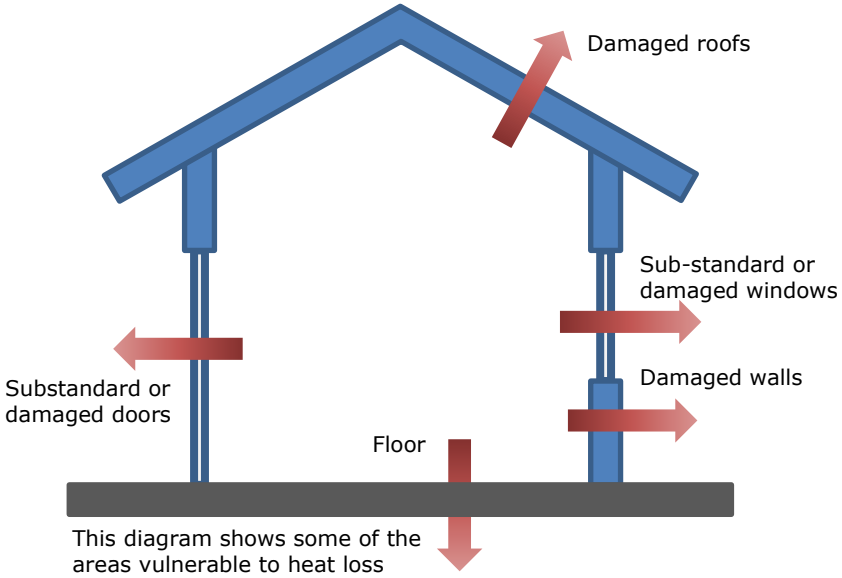
$$V = \frac{78{,}135}{810} = 96.46\ solid\ m^3$$

For calorific values and wood density values, see Annex 15.5.

For conversion factors from solid m^3 to stacked m^3 or loose m^3, please see Annex 15.6.

15.9 The Thermal Envelope Definition

What is the building envelope?	What is the thermal envelope?
Includes all building components that separate the inside from the outside. The building envelope comprises the external walls, foundations, roof, windows, and doors. The building envelope should keep out the following: • moisture, in vapor or liquid form • dust • wind • heat 	Refers to the minimum boundary or enclosure within a shelter that helps regulate heat transfer between the interior and exterior environments. It is a critical aspect of the shelter cluster's response, particularly during emergency responses in winter when people need protection from extreme cold. The thermal envelope is designed to minimize heat exchange and maintain a comfortable and safe living environment inside the shelter. The components that form the thermal envelope are: • walls and roofs and their insulation. • doors and windows 



This diagram shows some of the areas vulnerable to heat loss

15.10 Comparison table of the two components of the MoSPFU Winter Resolution

Aspect	Procedure A: State-budget / Humanitarian Account mechanism	Procedure B: International and National Organizations
Funding source	State Budget special fund, financed by UNICEF and Ukrainian Red Cross contributions transferred through the Humanitarian Account opened for MoSPFU at the NBU under Resolution No. 220.	Funds of the UNHCR Representation in Ukraine and other humanitarian organizations; participating international and national organizations make payments directly.
Amount	UAH 19,400 per household, one-time for the 2026/27 heating season	Same: UAH 19,400 per household; subject to available funding
Eligible categories	Please refer to the 'Targeting and Eligibility' section of Chapter 12.	
Application channel	Directly to the Pension Fund, or through CNAP/local authority using the PFU web portal; paper transmission is possible where electronic transmission is unavailable	Paper application to the relevant local government body / military administration
Application window	1 Sep – 30 Oct 2026	1 Sep – 30 Oct 2026
Local review	Local authority/CNAP forwards the application; eligibility decision is made by PFU	Local authority reviews within 3 working days; lists are submitted weekly to the Oblast administration, which consolidates and forwards them to PFU
Verification	PFU verifies applications weekly against eligibility data from the Unified Information System of the Social Sphere and PFU information systems, with additional checks through state registers for status-based cases.	PFU verifies eligibility weekly and uses RAIS+ to check assistance received under both Procedure A and Procedure B.
Payment mechanism	PFU: IBAN or cash through the pension/benefit delivery network	International/national organization: IBAN or Western Union
Payment deadline	By **30 Nov 2026**	Throughout the 2026/27 heating season; no fixed deadline. Payment reports go to the oblast administration by the 15th of the following month.
Prioritization if funding is limited	No separate ranking mechanism specified	First: households whose members fall within the greatest number of listed categories; second, subject to funding: households with at least one category. Ties and status-based cases are determined by the organization
Geographic scope	Procedure A's Annex 1: 123 hromadas; temporarily occupied territories excluded	Procedure B's Annex 1: 106 hromadas; temporarily occupied territories excluded
Duplication safeguard	No standalone RAIS+ verification step is specified in Procedure A; however, payments under Procedure A are among those checked through RAIS+ when PFU processes Procedure B lists	PFU uses RAIS+ to check whether household members have already received assistance under either mechanism
MoU requirement	Not applicable under the Procedure	Assistance is provided under an MoU between participating organizations and the relevant Oblast administration/military administration or its structural unit

15.11 Response to Electricity and Heating Supply Disruptions

This Annex provides operational guidance for Shelter/NFI partners responding to electricity and heating supply disruptions. It should be read alongside the full Winter SOP and associated recommendations for the 2026/27 winter response. Further technical specifications, costing and intervention design will be developed through the TWIG for subsequent inclusion in the HNRP 2027 and future planning processes.

Scope and Operating Principles

Prolonged electricity and heating disruptions can rapidly affect the habitability of residential buildings, collective sites, and social facilities, while also interrupting access to essential community services. The Shelter/NFI Cluster response to extended blackouts should therefore focus primarily on building- and facility-level measures that maintain safe occupancy, thermal comfort, access to shared essential services, and community resilience, rather than on energy infrastructure.

The response should remain complementary to Government-led systems and time-bound humanitarian assistance, activated when local capacities are overstretched, when restoration cannot be achieved within a reasonable timeframe, and when no adequate alternative exists. The Shelter Cluster response to power (electricity) and heating supply disruptions focuses on maintaining the habitability and functionality of multi-apartment buildings, collective sites, points of invincibility, and selected critical social facilities through appropriate building- and facility-level heating, backup power, thermal efficiency, and energy resilience measures.

Before approving support, partners should document the relevant authority/operator capacity gap, undertake and document a proportionate coordination check of available or planned Government, humanitarian and development-sector support within the required response timeframe, and demonstrate that the unresolved gap is likely to result in a material humanitarian consequence for building habitability, safe occupancy, or continuity of essential shelter-related services. Pending financing or support decisions should not automatically delay urgent assistance addressing a verified gap.

A practical phased approach is recommended:

- **Preparedness / anticipatory mitigation – before disruption:** In locations with a high and foreseeable risk of prolonged electricity or heating disruption, partners should pre-identify priority buildings and facilities, assess critical loads and existing backup gaps, prepare technically feasible response options, coordinate with relevant Government and humanitarian actors, and establish procurement, prepositioning and handover arrangements.

- **Immediate disruption – 0–72 hours:** continue regular Shelter/NFI emergency mechanisms, including NFIs for Winter. Blackout-specific facility interventions would normally not be activated unless specifically requested through the relevant coordination mechanism or an assessment confirms an immediate life safety or habitability risk and local capacity is insufficient.

- **Extended disruption – more than 3 days:** consider surge support to points of invincibility, temporary heating points, and collective sites where the responsible authority confirms a capacity gap.
- **Prolonged disruption – more than 14 days:** activate pre-planned measures or contingency interventions at facility-level resilience measures, including backup power, battery or hybrid systems, and other building-level resilience upgrades, where the capacity gap has been confirmed, and the intervention remains technically justified and sustainable.

These timeframes are indicative Shelter/NFI planning scenarios, not mandatory waiting periods. Interventions may be initiated earlier where the assessed or anticipated humanitarian impact justifies action.

Selection should prioritize facilities that provide critical services, serve a large catchment population, lack functional or adequately sized backup power, have a high proportion of vulnerable users, have limited access to alternative services, and demonstrate clear potential for sustainable operation.

Priority Intervention Areas

Multi-Apartment Residential Buildings

For multi-apartment buildings, the primary Shelter/NFI objective is to maintain essential shared building functions during power or heating supply disruptions rather than providing individual household generators or separate household-level backup energy systems. Priority may be given to buildings that depend heavily on electricity for heating, have no functional backup capacity, or experience frequent or prolonged power or heating supply disruptions.

Eligible building-level interventions may include:

- inverters and battery storage systems.
- appropriately sized generators where battery or hybrid solutions are not feasible.
- hybrid solar-battery systems where technically and economically justified.
- backup power for internal heating circulation/control equipment and other essential common-building systems.
- common-area and emergency lighting.
- charging, communication, automation and voltage-stabilization equipment.
- associated electrical works, installation and system integration.

All energy-related interventions must comply with the Minimum Technical Approval and Completion Checklist in Table A5. Interventions must be supported by a verified technical assessment and professional installation, with all applicable safety, operation, maintenance, and handover requirements confirmed before approval. For heating-related interventions in buildings dependent on an upstream heat supply, the technical assessment should confirm that the heat supply remains available and that backup electricity will restore or maintain the intended heating function. Where the upstream heat supply is unavailable, appropriate alternative heating, temporary warming, or accommodation measures should be considered. Approval should confirm the responsible operator, maintenance arrangements, availability of spare parts and consumables,

and a realistic plan for fuel, servicing and recurrent operating costs. Equipment should not be installed where these minimum conditions cannot be met.

Equipment delivery alone should not be considered a completed Shelter/NFI intervention unless safe installation and operational use are assured.

Table A5 - Minimum Technical Approval and Completion Checklist for Shelter/NFI Facility-Level Energy Interventions

Stage	Requirement	Minimum confirmation/evidence[22]
Before approval	Verified need and intended function	The building/facility-level need, intended function of the intervention, and expected users are clearly identified and documented.
	Capacity gap and coordination check	The relevant authority/operator capacity gap is documented. A proportionate check of available or planned Government, humanitarian and development-sector support within the required response timeframe has been undertaken. Pending support decisions should not automatically delay urgent assistance addressing a verified gap.
	Critical-load assessment	The systems and services that must remain operational during an outage are identified, and the required electrical load, including relevant start-up demand, has been assessed.
	Technical feasibility and sizing	The proposed equipment and works are technically suitable and appropriately sized for the assessed load, intended operating conditions and required function.
	Heating-system functionality, where applicable	For buildings dependent on upstream heat supply, the assessment confirms that heat supply remains available and that backup electricity will restore or maintain the intended heating function. Where upstream heat is unavailable, an appropriate alternative response has been considered.
	Installation and system-integration pathway	Responsibility, arrangements and sufficient resources for installation, connection, system integration, testing and commissioning are confirmed before equipment is procured or delivered.

[22] This checklist sets out the minimum requirements for approval, implementation and completion of Shelter/NFI-supported facility-level energy interventions. It applies, as relevant, to multi-apartment residential buildings, collective sites, temporary accommodation facilities, invincibility points and other social facilities.

The implementing partner should document all applicable requirements. Items that are not relevant to the proposed intervention may be recorded as *Not Applicable*, with a brief justification. Support should not be approved where critical safety, technical feasibility, installation, operation, or sustainability requirements remain unresolved.

Stage	Requirement	Minimum confirmation/evidence[22]
	Electrical and operational safety	Safe cabling, earthing, electrical protection, equipment placement, ventilation and emergency isolation arrangements are confirmed as applicable.
	Fire, carbon monoxide, fuel and battery safety	Relevant fire and CO risks, fuel storage and refueling arrangements, battery safety and other technology-specific hazards have been assessed and mitigated.
	Accessibility	The intervention considers assessed accessibility needs and does not create new barriers to safe access or use. Accessibility systems supported under the intervention are technically feasible and sustainable to operate.
	Responsible operator	A clearly identified building/facility operator or responsible entity is confirmed to take operational responsibility for the supported system.
	Operation and maintenance	Maintenance arrangements, servicing responsibilities, availability of spare parts and consumables, and recurrent operating requirements are identified.
	Recurrent resources	A realistic arrangement exists for fuel, electricity, subscriptions, consumables, maintenance or other recurrent costs required for continued operation.
	Implementation and handover arrangements	Roles and responsibilities for implementation, ownership, operation, maintenance and final handover are documented.
During implementation	Professional installation	Appropriately qualified personnel carry out installation and associated works in accordance with applicable technical and safety requirements.
	Changes to the approved solution	Material changes to equipment, capacity, design or intended function are technically reviewed and documented before implementation.
Before completion/closure	Testing and commissioning	The installed system has been tested and commissioned, and the agreed critical functions have been demonstrated to operate as intended.
	User/operator training	The responsible operator and relevant users have received appropriate instructions or training on safe operation, basic troubleshooting and emergency procedures.
	Handover	Equipment, relevant documentation, warranties, operating instructions and responsibilities have been formally handed over to the responsible entity.

Stage	Requirement	Minimum confirmation/evidence[22]
	Post-implementation verification	Verification confirms that the agreed intervention has been completed, the supported systems are functional and safely operational, and intended building-level services can be accessed by the expected users. Where relevant, expected operating autonomy should also be verified.
	Follow-up of operational gaps	Any unresolved operational, technical, or accessibility gaps identified during verification are documented and assigned to a responsible party for appropriate follow-up.

The Winter GCT approach provides a useful model for delivering this type of assistance through OSBBs and other building management structures. It is explicitly designed around building-level energy resilience, with tailored combinations of inverters, batteries, generators, charging stations, automation kits, voltage stabilizers, and installation works rather than a standardized equipment package.

Government programs should serve as benchmarks and reference points for coordination. In particular, the SvitloDim model provides differentiated building-level support based on building characteristics.[23] These amounts should be treated as reference benchmarks rather than humanitarian entitlements or automatic transfer values; interventions should remain needs-based and technically justified.

Where Government assistance is available, humanitarian assistance should complement, not duplicate, it. Partners should verify whether the proposed intervention overlaps with existing support; previous assistance to the same building should not automatically exclude complementary support for a different verified gap. Where a municipal or public building management entity cannot directly receive humanitarian cash, a GCT may be implemented through an eligible CSO, CBO, or other non-profit entity working with the building management structure, with clear accountability, procurement, and monitoring arrangements.

The GCT should cover a pre-agreed, technically assessed building-level intervention, with the grant used exclusively for the approved purpose and budget, as specified in the agreement with the recipient, and subject to proportionate reporting, monitoring, and post-implementation verification. Post-implementation verification should confirm that the agreed intervention has been completed, the supported systems are functional and safely operational, and the intended building-level services can be accessed by the expected users. Any identified operational gaps should be documented and assigned for appropriate follow-up.

[23] Source: Government of Ukraine, SvitloDim Program, verified on 15 September 2026. As of this date, the applicable support amounts are: UAH 100,000 for buildings with 1–6 floors; UAH 200,000 for buildings with 7–16 floors; UAH 300,000 for buildings with 17 or more floors; UAH 300,000 for buildings with attached, built-in or rooftop boiler rooms; and UAH 300,000 for buildings with 4–16 floors (inclusive) and three or more entrances. Program conditions and support amounts may be amended; partners should verify the current Government terms before using these figures for coordination or benchmarking.

In exceptional cases, where a household depends on electricity for life-sustaining medical equipment or essential mobility support, partners should coordinate an individual assessment and referral with Health and Protection actors. This does not establish household-level power station units, batteries, or generators as a standard Shelter/NFI modality.

Social Infrastructure and Points of Invincibility

Shelter/NFI support for social infrastructure should link to the facility's physical functioning during an outage and its role as a community resilience, warming, or temporary-stay facility. This may include administrative or social service centers, schools, and other buildings formally designated or activated as points of invincibility or community warming facilities. Schools may serve this function independently of, or during temporary suspension of, their normal educational function. For schools, health facilities, and other facilities covered by another sectoral mandate, support for their core education or health functions should be coordinated with, or referred to, the respective lead Cluster. Where the same facility is formally used as a point of invincibility, community warming facility, or temporary-stay facility, Shelter/NFI support may focus on the building-level measures required for that function.

For formally established points of invincibility, humanitarian support should be aligned with CMU Resolution No. 1401, as amended. The Government framework provides for stationary and mobile points of invincibility and, where disruption of life-support systems exceeds 48 hours, allows stationary points of invincibility in cities to function as hub points of invincibility on a 24-hour basis, providing temporary accommodation for people, including persons with limited mobility, and additional sleeping facilities.

The Government's indicative equipment requirements include:

- generators with appropriately rated cables and sufficient electrical extensions.
- interior and exterior lighting.
- autonomous heating appliances.
- internet connectivity.

The Government framework further requires reserves of fuel, other material resources, and drinking water sufficient for at least three days of autonomous operation. For prolonged outages, support may also include additional sleeping equipment and accessibility adaptations appropriate to the facility's expected capacity. For temporary heating points, Table A6 provides an illustrative list of equipment and associated operational and safety conditions.

Shelter/NFI support should primarily fill identified gaps in this Government-defined baseline rather than create a parallel model of invincibility points. Supported invincibility points and other warming or temporary-stay facilities should clearly communicate operating hours, available services, and access arrangements; provide appropriate accessibility support for users requiring additional assistance; and ensure access to an appropriate feedback and complaints mechanism.

Table A6 - Illustrative equipment for temporary heating points

Function	Illustrative items[24]	Key conditions
Backup power and charging	Appropriately sized generator, inverter/battery storage, portable power stations, compatible portable solar panels, charging hubs, power strips, extensions, additional battery storage.	Size to the verified critical load and start-up demand. Portable power stations are generally for lighting, charging, and communications, not space heating or other high-load appliances.
Lighting and electrical safety	LED lighting for communal areas, surge protection, fuses, cable covers/management, weatherproof cables, emergency isolation switch.	Professional installation and commissioning required. Cables must not create fire, trip or water exposure risks.
Thermal comfort	Safe autonomous heating appliances with limited supplementary electric heating where technically feasible, winter clothing, NFIs including mats, blankets and sleeping equipment for overnight use.	Heating type must reflect ventilation, flue/chimney, fire clearance, fuel availability and safe installation. Electric heaters may be used only where a load assessment confirms suitability.
Fuel and operations	Fuel reserve, approved fuel storage, refueling equipment, spare parts and consumables.	Define the quantity and minimum operating autonomy, confirm a safe resupply route and a responsible operator.
Connectivity and site management	Internet/connectivity equipment where required, charging points, signage, storage boxes, tables, chairs and basic shared NFIs.	Confirm subscription/recurrent costs, power requirements, operator responsibility and safe installation.
Fire, health and accessibility safeguards	Fire extinguishers, first aid kit, carbon-monoxide detector where combustion heating is used, accessible charging/lighting, mobility and accessibility adaptations.	Required according to assessed risks and users, particularly older persons, persons with disabilities, children and people with limited mobility.

[24] Based on a verified site assessment, partners may combine equipment for backup power, charging, lighting, heating, connectivity, and temporary stay. The package in the table is illustrative only and does not constitute a standard kit, fixed quantity, or entitlement. Equipment selection and quantities must be based on the assessed critical load, expected occupancy, operating hours, available fuel/recharge options, and the responsible operator's capacity to operate and maintain the system safely.

Collective Sites and Temporary Accommodation Facilities

For collective sites and other temporary accommodation facilities, the main objective is to maintain safe, dignified habitability and prevent secondary displacement during prolonged outages. Where safe occupancy cannot be maintained or restored within the required timeframe, partners should promptly coordinate with local authorities and relevant Clusters to identify appropriate temporary accommodation or relocation options, including accessible arrangements for people requiring additional support. These facilities are particularly vulnerable because heating, lighting, kitchens, and other common services often depend on the main electricity grid. Potential Shelter/NFI interventions include:

- backup power.
- battery storage, generators or hybrid systems sized to the assessed critical load.
- repair or replacement of internal heating distribution components, including radiators, pipes, fittings, etc.
- improvement of windows, doors, roofs and other relevant elements required to maintain habitable winter conditions.
- renewable or hybrid energy solutions.
- replacement of unsafe or inefficient heating appliances where technically justified.
- NFI for shared use in common areas.
- accessibility measures required to maintain safe access and use of the facility during outages, including backup power for existing lifts and repair or restoration of existing accessibility systems, based on assessed accessibility needs, technical feasibility, and sustainable operation.

Shelter/WASH Boundary and Technical Safeguards

The distinction between Shelter/NFI and WASH interventions is particularly important because prolonged blackouts affect both building habitability and the operation of district heating (DH), water supply, and wastewater systems.

This delineation should be read alongside the WASH Cluster's Guidance on Renewable Energy for WASH in Ukraine and Strategic Guidance Note: District Heating Response and Preparedness 2026–2027, which provide the corresponding technical and strategic framework for energy resilience of WASH utilities and district heating systems.

Under the WASH Cluster strategic framework, WASH responsibility extends beyond water and wastewater utilities to district heating service providers and the infrastructure required to generate, distribute, and maintain heat supply. This includes, as applicable, boiler houses, combined heat and power plants, main heating pipelines, pumping stations, modular boiler houses and other decentralized heating assets, as well as backup and stabilization systems required for their continued operation. WASH support may therefore include generators, cogeneration units, battery storage, renewable energy systems, and associated equipment such as voltage stabilizers, soft starters, and variable-frequency drives, where these serve the district-heating system's functionality.

Accordingly, the Shelter/WASH division should be applied primarily according to the function and system served, rather than simply according to whether equipment is physically located inside or outside a building:

- **WASH Cluster:** municipal or utility-level district heating generation and distribution infrastructure; district-heating pumping and control systems; boiler houses and CHPs; main heating networks; modular or decentralized heat-generation units serving the DH system; and backup energy required to maintain these systems. Municipal/community water-supply and wastewater infrastructure, including pumping, treatment and associated backup energy, also remains under WASH.
- **Shelter/NFI Cluster:** measures required to maintain the habitability and safe use of the individual residential or accommodation building, including internal building heating distribution, building-level electrical and heating systems serving common areas or residential spaces, thermal improvements to the building, temporary or supplementary heating, common-area blackout resilience measures, and accessibility adaptations.
- **Interface equipment:** individual heating substations, building heat exchangers and similar equipment at the interface between the district-heating network and the building require case-by-case coordination. The DH Guidance recognizes consumer-side infrastructure, including individual heating substations, as relevant to the overall performance of the DH system. Where such equipment forms part of the DH operator's system or is required to restore or maintain district-heating service, WASH should coordinate the intervention. Internal heating distribution downstream of that interface remains a Shelter-related intervention.

For collective sites and other social facilities, this distinction means that Shelter partners may support internal heating distribution, common-area heating, building-level backup systems, and other measures necessary to maintain habitable conditions. Where the underlying problem is failure of the municipal district-heating system or a DH operator asset serving the facility, the upstream intervention should be referred to and coordinated with the WASH Cluster.

Where Shelter- and WASH-related works are implemented at the same facility, they may be planned as one integrated intervention where operationally appropriate; however, Shelter and WASH components should be separately costed in the BoQ and reported separately under the respective Cluster activities, indicators, and reporting lines.

Importantly, inter-cluster coordination should not begin only after a blackout occurs. The DH Guidance identifies the inter-heating season as the critical period for moving from reactive emergency response to proactive preparedness, including technical assessments, strengthening backup capacity, pre-positioning critical equipment and materials, and preparing for potential large-scale disruptions in urban centers. Shelter and WASH partners should therefore coordinate in advance in locations where prolonged disruption is foreseeable, particularly where the same collective sites, social facilities, or multi-apartment buildings depend on vulnerable district-heating systems.

All Shelter-supported facility-level energy interventions must comply with the minimum technical approval and completion requirements set out in Table A5, together with any facility-specific safeguards identified in the relevant sections of this guidance.

16 Revision History

Version	Status	Date	Description	Comments
1.0	Published	21.09.2026	Approved by the Strategic Advisory Group (SAG)	
1.1	Published	24.11.2026		• Annex 15.11 (approved by SAG) has been added. • The hyperlink to the updated PDM Questionnaire Template has been added to Chapter 14. • The recommendations on fuel vouchers for invincibility points have been added to Section 8.3.