

# Preparing for Cold Months: Winterisation response from local perspectives

November 2023

Ukraine

## KEY MESSAGES

- Key lessons from the 2022/23 winterisation response, as reported by KIs, include the need for flexible, rapid responses to emergency outages to prevent further heat and water network failures; the importance of close communication between humanitarian actors and local actors; the swift deployment of heating points; and transitioning to decentralised heat and power sources where appropriate.
- A majority of key informants (KIs), 18 out of 25, estimated that over 70% of residents experienced prolonged disruptions in essential power services during the previous winter season. The sectors most severely impacted by power outages during the 2022/23 winter in assessed raions were energy and utilities (12/25 KIs), water & sewage (11/25 KIs) and communication technology (8/25 KIs).
- As of beginning of September, while 11 out of 25 key informants (KIs) reported not having received winterisation assistance for the upcoming winter season, most of them were in negotiations with aid providers.
- Key informants anticipated the main challenges for winter 2023/24 to include scheduled and emergency power outages (12 KIs), the threat of shelling (10 KIs), fuel shortages (4 KIs) and other issues such as damage to power/heating systems and a lack of qualified workforce to perform rapid repair.
- The most common unmet needs for the 2023/24 winter season, as indicated by KIs, include construction and repair materials, equipment and tools, financial resources, and solid fuel.
- The allocation and prioritisation of winterisation resources should consider the varying winter-related vulnerabilities across the country. "Cold spots" such as Bakhmutskyi, Kramatorskyi and Pokrovskyi raions in Donetsk oblast, Okhtyrskyi and Sumskyi in Sumsk oblast, and Kharkivskyi and Vinnytskyi raions in Kharkivska and Vinnytska oblasts, may require special attention.

## BACKGROUND & OBJECTIVES

The 2022/23 winter in Ukraine unfolded in a challenging context characterised by a combination of factors, including airstrikes on energy infrastructures resulting in cumulative damage of more than 50% of the hard-to-replace high-voltage transforming substations and 100% of thermal power plant generation;<sup>1</sup> destruction of residential and public service infrastructure;<sup>2</sup> overall high levels of humanitarian needs caused by 19 months of protracted conflict;<sup>3</sup> and large-scale displacement, with an estimated 3.7 million of internally displaced people (IDPs) as of September 2023.<sup>4</sup>

While warmer than normal weather conditions are predicted in winter 2023/24, the late winter months are expected to be colder than usual.<sup>5</sup> Cumulative damage to energy and other critical infrastructures since February 2022 has resulted in reduced resilience of power systems, increasing the probability of frequent brownouts and blackouts.<sup>6</sup> This situation could deteriorate further in the event of the Russian Federation conducting another campaign of strikes on energy infrastructure.<sup>7</sup> Moreover, active attacks close to the front line may cause additional damage to residential buildings and public service infrastructure, likely resulting in population displacements.

To help guide humanitarian actors' winterisation response in Ukraine, OCHA's Winter Response Plan emphasizes the importance of supporting front line communities and areas hosting a high number of IDPs, especially those in collective centres.<sup>8</sup> Of the 18 million people in need across Ukraine, 1.7 million are targeted for winter activities, including 1.6 million for shelter and NFI assistance, 0.8 million for WASH assistance, and 0.15 million for food security and livelihoods-related assistance.<sup>9</sup> A winterisation response funding gap of 300 million USD<sup>10</sup> means that an evidence-based, targeted allocation of resources is essential to ensure priority needs are addressed this winter.

This assessment aims to contribute to the evidence-based prioritisation of resources within the humanitarian community. To this end, in September 2023, REACH published a [Cold Spots analysis](#) to identify raions with the highest level of compound winter-related risk. This product complements the Cold Spots geo-spatial analysis by drawing lessons learned from last winter's response and the challenge expected for these Cold Spots, from the perspective of local actors in the areas identified as most vulnerable.

## METHODOLOGY OVERVIEW

This analysis is based on 25 key informant interviews (KIIs) conducted in seven raions identified as Cold Spots.\* Primary data was collected between 23 August and 5 September 2023 through semi-structured interviews with KIs representing local administration (LA), local self-government (LSG), and local utility companies (LUC). The latter group included representatives of power, heat, and water generation, distribution and supply companies that have been operating in their respective areas for several years. These KIs were selected based on their ability to share lessons learned from last year's winterisation efforts and expected challenges for the 2023/24 winter. In total, most of the 25 KIs were representatives of LSGs at the hromada level (10) and LAs at the raion level (6), while 2 to 4 KI in each raion represented electricity, heat, and water LUC.

\* Cold Spots are raions where cold winter temperatures coincide with local vulnerabilities. These areas were identified by aggregating data from official sources, reports from international organizations, remotely sensed data, and information from previous REACH assessments, resulting in a Cold Spot Index (CSI) allowing for the ranking of 109 raions under control of the Government of Ukraine (GoU) as of July 2023.<sup>11</sup> Refer to [REACH's Cold Spots Risk Assessment](#) for more details.<sup>12</sup>

## WINTERISATION RESPONSE 2022/23: A RETROSPECTIVE OUTLOOK ON BEST PRACTICES, CHALLENGES AND LESSONS LEARNED

The 2022/23 winterisation response took place in complex and challenging circumstances characterised by air strikes on energy infrastructure, ongoing military activities, population displacements, and high levels of humanitarian needs. The below section presents lessons learned from last year's winterisation response according to local actors in the identified Cold Spots.



### POSITIVE OUTCOMES

Key informants identified several successful aspects of the 2022/23 winterisation response, including:

- The wide availability of international assistance (6 KIs);
- Winterisation actors' rapid response to emerging challenges (4 KIs);
- The procurement and distribution of solid fuel to local populations (4 KIs).



*"The state program aiming at supplying fuel to residents was implemented - each household without gas supply that uses solid fuel to heat their house received 4 cubic meters of wood." - LSG KI, Sumskyi raion*

*"Then, points of invincibility were opened in our hromada, where people could warm up, have meals, rest or charge their phones." - LUC KI, Pokrovskyi raion*

*"Water delivery was provided, and people could collect it by themselves at distribution points." - LSG KI, Kramatorskyi raion*



### CHALLENGES

Despite positive outcomes, the 2022/23 winter was reportedly characterised by significant challenges, mostly related to disruptions in the supply of basic goods and services, including:

- Planned and emergency power outages (16 KIs);
- Insufficient water supply and/or non-operational sewage systems (11 KIs);
- Disconnection from heating networks (8 KIs);
- Proximity to the front line (6 KIs);
- Destruction of critical infrastructure (5 KIs).

Aside from disruptions to the supply of basic goods and services, at least 2 KIs identified each of the following challenges:

- Purchase and need to use emergency power sources;
- Lack of financial resources for sustainable operations of LUC;
- Population displacement resulting in decreased subscribers to LUCs;
- Lack of gas supply;
- Not operational sewage system.

Several of the identified challenges may continue to cause difficulties during the upcoming winter season. At the household level, disruption to sewage system in winter due to the power outages reportedly pushed people to use latrines installed outside, putting them at risk of health issues. In terms of service provision, a shortage of qualified personnel resulting from major population displacement and subscription may hinder stable provision of utilities along with the need of the installment of new types of power equipment. Both pose long-term challenges for Cold Spots' areas and beyond.

“The main challenge that we have faced is a lack of fuel and oil resources, in particular, briquettes, wood, petrol, diesel and coal.” - LA KI, Bakhmutskyi raion

“There is no gas supply in our raion since May 25, 2022.” - LA KI, Bakhmutskyi raion\*

“We had a shortage of personnel to maintain the functionality of heat and water supply.” - LUC KI responsible for heat supply, Pokrovskyi raion

\* As of 28 February 2023, it was reported about no gas supply in Bakhmut and Soledar since late May 2022. <sup>13</sup>



## SECTORS IMPACTED BY DISRUPTIONS TO ENERGY INFRASTRUCTURE

KIs reported the following sectors as being the most impacted by power, gas and heating outages during the 2022/23 winter:

- Energy and utilities (12 KIs);
- Water & sewage (11 KIs);
- Information and communication technology (8 KIs).

In addition, 8 KIs indicated that in their area, all sectors\*\* were impacted. Other sectors mentioned by 5 KIs or more included medical services, retail, and education.

Among the consequences of service disruptions, KIs discussed the following:

- Residents experiencing disruptions to supply of basic services (9 KIs);
- Reduced working hours and/or decreased range of services provided (7 KIs);
- Financial losses for business/service providers (7 KIs);
- Disruption to provision of education services, population displacement (5 KIs).

\*\* All sectors include: Energy and utilities, Food production, Transportation, Government, Information and communication technology, Water & sewage, Safety, Medical services, Education and Retail.

A closer look at the availability of information and communication services in Cold Spots is required to assess residents' access to up-to-date information, especially close to the front line. Spreading the access to information could allow for more individuals and groups to develop strategies to mitigate winter-related challenges as well as seek shelter during air raid alerts.

“People relocated from the city in large numbers due to lack of proper living conditions.” - LSG KI, Bakhmutskyi raion

“The educational program was not fully implemented.” - LSG KI, Kharkivskyi raion

“Industrial enterprises incurred financial losses and were unable to function properly.” - LUC KI, Sumskyi raion

“Transportation company suffered from a lack of profits, while residents did not get a proper quality of service” - LSG KI, Vinnytskyi raion

Overall, over two thirds of KIs (18 out of 25) estimated that more than 70% of residents suffered from power (heat energy and/or electricity) disruptions during the last winter season, while a further 5 KIs estimated the level of affected population in their area between 40 and 60%.

There was substantial variation when reporting on the longest duration for residents who remained without access to basic services: 9 KIs reported from 6 hours to 1 day, and 7 KIs indicated a duration of more than two weeks. Donetsk oblast seems to have experienced the longest disruptions, with KIs reporting disruptions lasting more than two weeks in Bakhmutskyi raion (located close to the front line), and the part of Kramatorskyi raion that was beyond the control of the GoU until autumn 2022.



## HUMANITARIAN AID

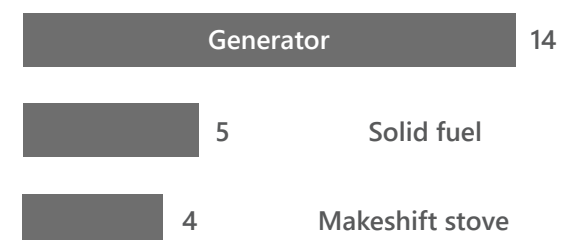
A large majority of KIs (19 out of 25) indicated that their hromada, raion or organisation received at least some humanitarian aid during last winter season. While 10 KIs reported that the aid provided was not sufficient to address local needs, 8 reported that it was sufficient and 1 KI reported it as significant. Moreover, 5 KIs reported that they did not receive any support to respond to winterisation challenges (with 2 of those mentioning that support was not needed). The level of support provided by humanitarian actors varied substantially based on the security situation and intensity of hostilities, as highlighted by a KI in Bakhmutskyi raion.

“Yes, we received support. It was helpful, but the scope of shelling and heating network damages were much larger compared to the aid that was provided. It was not sufficient.” - LUC KI, Sumskyi raion

“We bought coal, wood, makeshift and Bullerjan stoves at the expense of the local budget and distributed them among the local residents.” - LSG KI, Bakhmutskyi raion

“We received winter sets, plaids, power banks, flashlights and generators. The support was sufficient.” - LSG KI, Bakhmutskyi raion

Top 3 items most frequently reported by KIs in received humanitarian aid in winter 2022/23







## BEST PRACTICES

KIs also discussed successful coping strategies and measures taken during last winter season. The most frequently mentioned ones were the use of generators and charging stations. However, despite the popularity of generators as a backup power source, KIs reported some drawbacks, including high prices for powerful generators, high fuel requirements, and the need to turn generators off occasionally. At the same time, the share of key infrastructure equipped with more sustainable backup power sources, such as photovoltaic stations and heat pumps, has been gradually increasing thanks to international support.<sup>14</sup>

Other implemented effective winterisation response practices during mentioned by few KIs include:

### Electricity

- Use of power banks and flashlights;
- Alternative power supply sources;
- Energy saving measures (e.g., installation of efficient heating systems; and wall, roof, and window insulation).



**Image 1:** People charging their phones and laptops at the city's heating point (December 2022). Source: Radio Free Europe/Radio Liberty.<sup>15</sup>

### Heating

- Use of solid fuels;
- Diversifying fuel sources at the household level to avoid dependency on only one fuel source;
- Individual stove for heating (e.g., makeshift stoves);
- Backup power supply for centralised heating systems;
- Use of latches in district heating network to redistribute heat energy across the city;
- Preparation of heating network and facilities in advance (i.e. the reconstruction or repair of pipelines and drilling of boreholes);
- Establishing heating points and points of invincibility.\*

### Water supply and sewage

- Using autonomous water supply systems;
- Installing treatment plants;
- Repair of damage to and restoration of water supply system relying on decentralised power sources, such as generators.

### Information and communication technology

- Connecting cell phone towers to backup power sources.

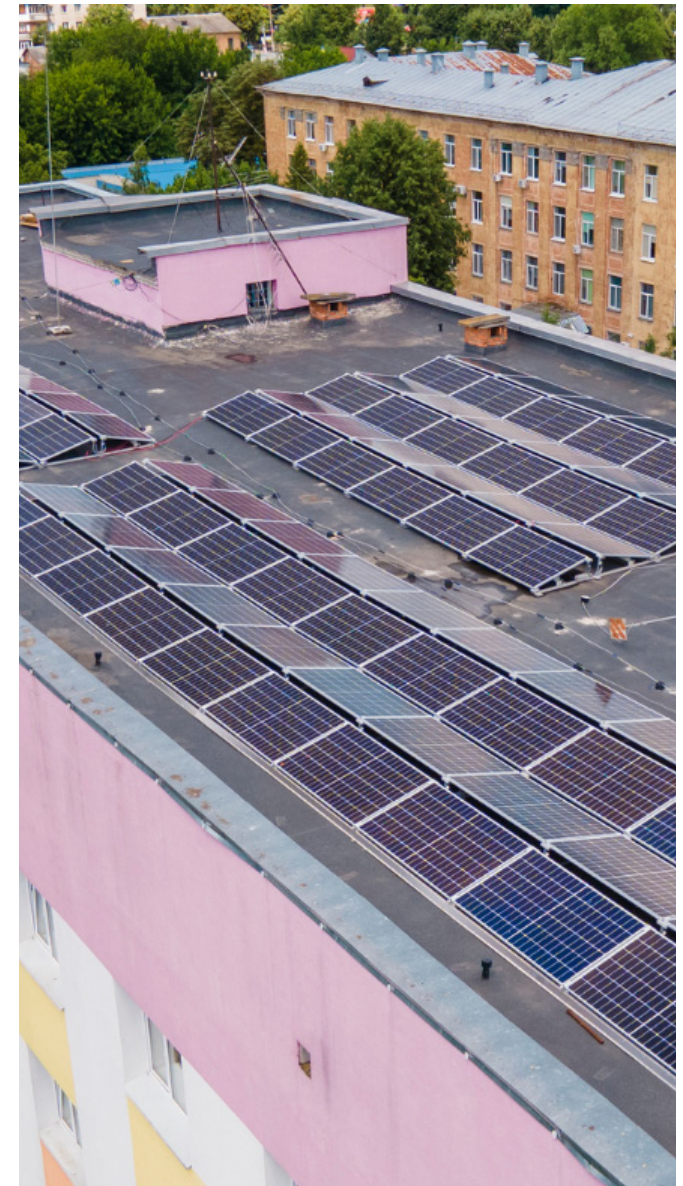
### Security

- Additional physical protection measures against shelling and air strikes (e.g., containers with sand or concrete blocks around transformers).

### Other measures

- Adapting individual routines to manage outages;
- Repairing damages as quickly as possible;
- Development of cooperation mechanisms with the Ministry of Energy;
- Rapid response by emergency, municipal and specialised services.

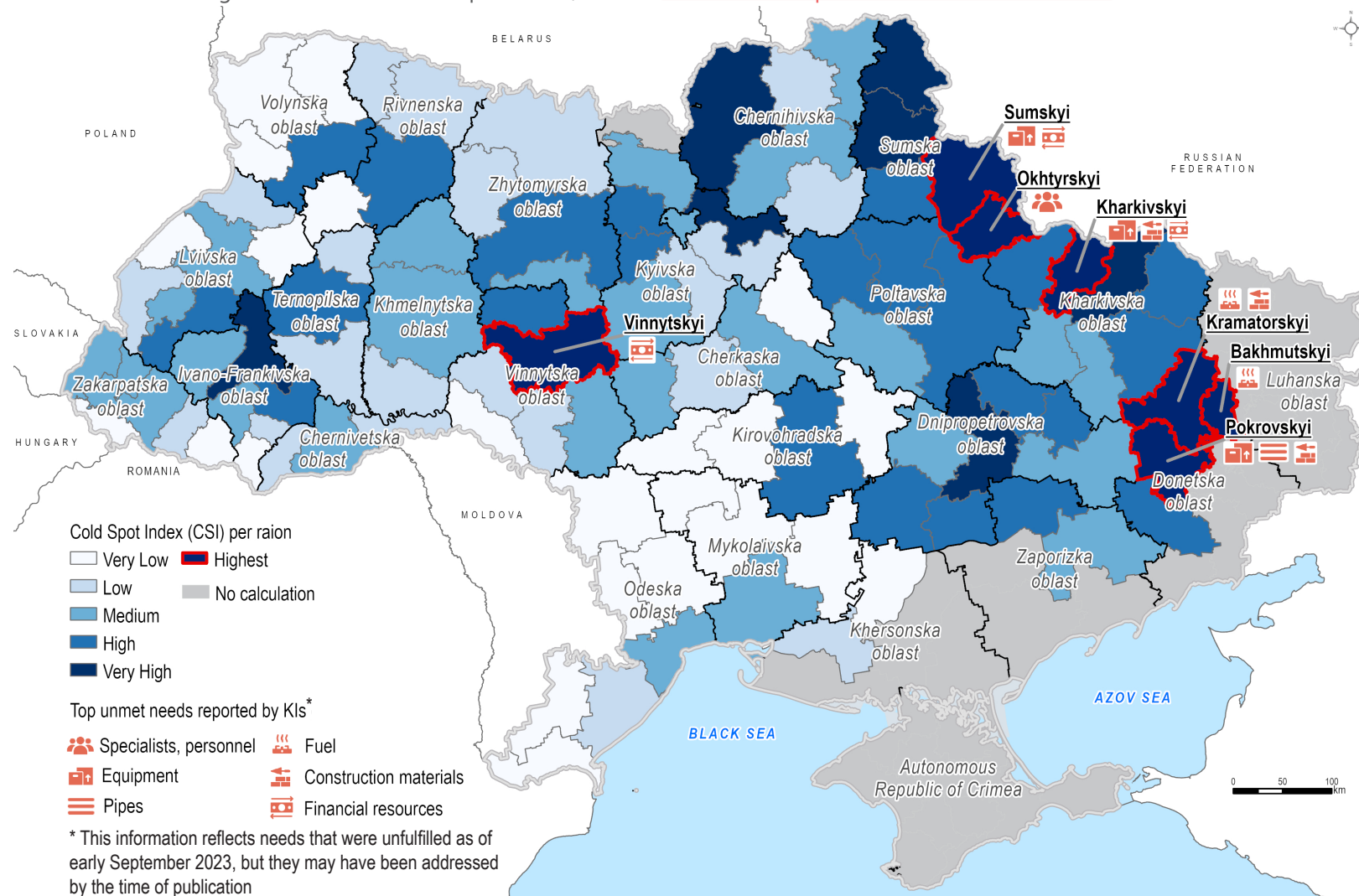
\* Points of Invincibility – the network of locations of humanitarian shelter deployed in 2022 across Ukraine which operates around the clock and free of charge in the format of temporary stay to provide people with heat, water, lighting, mobile communication, Internet, power for mobile devices, places for rest, first aid kits, as well as basic supplies for mothers and children.



**Image 2:** Solar power plant of 48 kW capacity installed at the roof of the hospital in Zhytomyr city to ensure power supply during outages (July 2023). Source: Ecoclub.<sup>16</sup>

## COLD SPOTS FOR THE 2023/24 WINTER

The below map illustrates the pattern of Cold Spots across Ukraine: areas where cold weather (hazard) coincides with exposure, susceptibility and lack of coping capacity. The Cold Spot Index (CSI) supports the identification of areas where populations are likely to be most impacted by winter-related hazards in the context of the ongoing conflict. The seven raions with the highest CSI index (outlined in red on the map) were selected for primary data collection to support the winterisation response through the identification of localised winter-related needs. Notably, the identified raions with the highest Cold Spot Index align with areas prioritised for the provision of solid fuel, and with the distribution of households in need of winterisation assistance during the 2023/24 winter according to the Ministry of Reintegration.<sup>17</sup> Namely, six out of seven raions with the highest CSI (all except Vinnytskyi raion) are within the oblasts with the highest number of households with winter-related needs according to the Ministry's data (Sumska, Kharkivska and Donetsk). For full results and methodological details of the Cold Spots Index, refer to [REACH's Cold Spots Risk Assessment 2023/24](#).<sup>18</sup>





## WINTERISATION RESPONSE 2023/24: INSIGHTS FROM LOCAL ACTORS



### CURRENT STATUS OF POWER SUPPLY PROVISION AND OUTAGES

Most KIs indicated that their area was experiencing some issues with power supply at the time of data collection. More specifically, 8 KIs reported only partial power supply, 5 mentioned regular power outages, and 2 reported that power supply was not functioning at all. It is worth noting that the level of service availability might vary substantially even within one administrative raion depending on the extent of damaged infrastructure, local power grid configuration, and the feasibility of conducting repair works promptly in a given security situation.



### EXPECTED CHALLENGES

In terms of expected challenges for the winter 2023/24, KIs mostly mentioned planned and emergency power outages (12 KIs) and possible shelling (10 KIs). Additionally, 4 KIs anticipated a lack of fuel for heating devices, 3 KIs indicated that potential challenges could be a damaged power system, potential damage or disruptions of heat supply, along with safety factors and weather conditions. Some KIs also noticed a shortage of qualified workers in the heat LUC, decreased number of residents (subscribers to LUC), and lack of heating appliances (2 KIs respectively).



*"Since one heat power plant provides heating for the whole city, we look for possibilities to switch subscribers to another heat power plant to ensure heat supply in the city in case one heat power plant is down." - LA KI, Sumskyi raion*

*"There could be transport issues - lack of serviceable transport and bad road conditions during winter" - LUC, Donetsk oblast*

*"The main challenge is power disruptions, since all heat and water supply, as well as sewage systems, rely on electricity. Many processes depend on power supply." - LUC, Okhtyrskyi raion*

*"The main challenge consists in supplying heating devices for the residents who stayed in the hromada, in particular solid fuel makeshift stoves and solid fuel for them, as well as generators and fuel." - LSG KI, Kramatorskyi raion*

Moreover, REACH's Joint Market Monitoring Initiative's (JMMI) August 2023 Market Overview revealed some critical issues for winterisation 2023/24 in terms of non-solid heating.<sup>19</sup> Donetsk and Kharkivska oblasts have some of the highest projected petrol prices for the coming winter season (59 Ukrainian hryvnias per litre), which is a concern given the relatively high reliance on petrol (50% and 44% of customers reported using petrol, respectively) and the increased costs associated with running generators during outages. By way of comparison, Vinnytska oblast is reportedly the most dependent on gas for heating (98% of customers), making it vulnerable in case of damage to centralised gas supply infrastructure.

It was also reported that there will be no central heat supply available in some settlements of Donetsk oblast, particularly those recently returned under the control of the GoU (e.g. Lyman and Sviatohirsk) or those situated very close to the front line, such as Toretsk, Chasiv Yar and Avdiivka.<sup>20</sup> This means a high dependence on the availability of individual heating appliances, and reliable solid fuel supply over the entire winter season, with the associated supply chains and logistical infrastructure.



### MEASURES CURRENTLY TAKEN

Among the most common winterisation measures currently being taken by local actors, KIs reported repairs to critical infrastructure facilities (7 KIs); cooperation between volunteers, humanitarian organisations, raion and oblast authorities (5 KIs); maintenance works and technical inspections of equipment before the heating period (5 KIs); and stockpiling of fuel (4 KIs) or materials for repairs (3 KIs) for the heating period. KIs also discussed the procurement of generators, fuel for heating appliances (4 KIs) or negotiating with suppliers of fuel/generators (2 KIs), and establishing points of invincibility/shelters equipped with heating appliances and fuel (2 KIs). KIs also highlighted other direct winterisation measures, such as drilling boreholes and insulating buildings, and indirect measures, such as training boiler house operators and collecting data about people in need.



*"A program for wood provision has been developed. We are collecting data on people who need support to determine the scope of such support. We plan to distribute pellets." - LSG KI, Kramatorskyi raion*

*"Emergency repairs of power grid, clearing and creating the emergency stock of materials that were frequently damaged during winter season." - LUC KI, Donetsk oblast*

*"We repair the thermal power plant, replace boilers and perform other works. Heat supply will be provided only in Okhtyrka and Trostianets. Other boiler houses stock up wood." - LA KI, Okhtyrskyi raion*



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## UNMET NEEDS

Additional resources most needed to cope with winterisation challenges include various types of equipment (10 KIs), including soldering systems for heat supply, boiler and conveyor equipment, reinforced rods, perforating machines and tools, backup equipment, sewage cleaning equipment, and accessories for electricity equipment (e.g. wires, automatic circuit-breakers, and semi-automatic devices for electric control rooms), and construction materials such as reinforced concrete blocks, and tarpaulin. KIs also mentioned financial resources (7 KIs); fuel (6 KIs) such as petrol, diesel and solid fuel (e.g. pellets, coal, wood), and transformer oil; and pipes (5 KIs).

Other commonly reported needs were specialists and personnel (4 KIs), generators and charging stations (4 KIs), makeshift stoves (3 KIs), alternative power sources (3 KIs), and transport for repair works and evacuation (2 KIs).

The scale and range of unmet needs may increase in the event of air strikes on energy infrastructure this autumn and winter. For example, a warehouse containing machinery and materials for restoration activities in winter has been struck in Dnipropetrovska oblast on 2 October 2023.<sup>21</sup>



## ASSISTANCE CURRENTLY PROVIDED

Regarding the current status of humanitarian aid provision for winterisation needs, 11 KIs reported a need for assistance but not having obtained it at the time of interview (early September 2023). However, 9 of these 11 KIs mentioned that they had requested or were currently negotiating assistance. A number of KIs reported not being aware of the state of availability of humanitarian aid is equal 6, suggesting a need for enhanced dissemination of information from winterisation actors regarding available support. The same number of KIs (6) reported that their company/hromada/raion was already receiving humanitarian aid for winterisation, including 5 KIs reporting having received winterisation NFIs (fuel, generators, pipes etc.) and 1 KI who reported having received food and water.

One more factor that might hinder timely and adequate provision of humanitarian aid is the risk for warehouses where aid is stored to be impacted by air strikes, as it has occurred several times in Ukraine over this year.<sup>22</sup>

*“A few days ago, we have received three generators. They will serve to provide the backup power for centralised water supply system in the villages that are currently disconnected from centralised power grid.” - LSG KI, Sumskyi raion*



**Image 3:** Wooden panels covering windows to protect them from damage during shelling. Source: REACH.

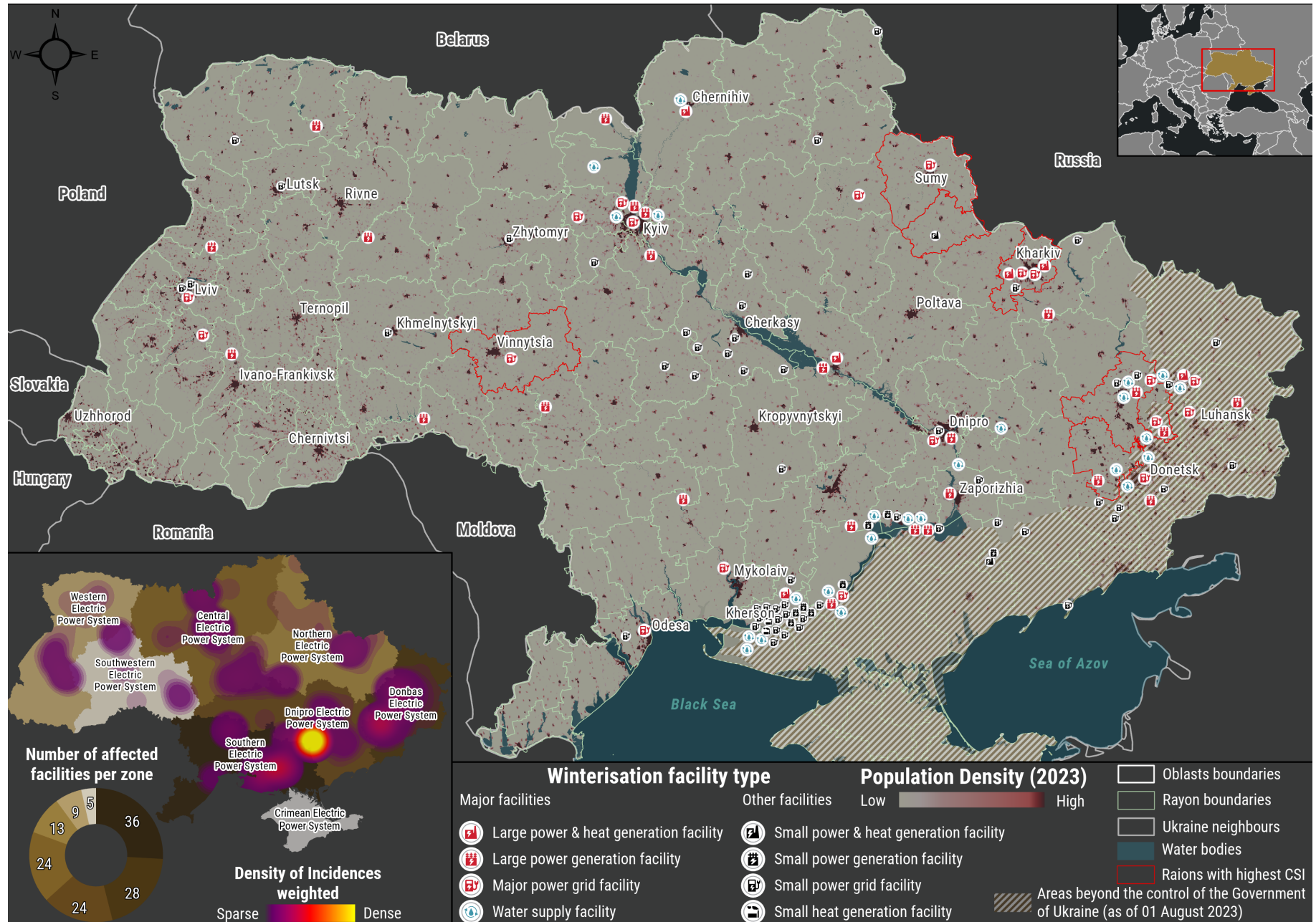


**Image 4:** Central heating appliances in damaged residential building, Kharkiv city. Source: REACH.



## DAMAGE TO CRITICAL INFRASTRUCTURE ACROSS UKRAINE BETWEEN FEBRUARY 2022 AND JULY 2023

This map shows the spatial pattern of damaged critical infrastructure, including power, heat energy, and water facilities across Ukraine from the beginning of the full-scale war to July 2023. This information was used in calculation of the CSI, but may also provide insights into priority areas for support in repair works. Data on infrastructure damage is derived from Zoi Environment Network's Ecodozor platform.<sup>23</sup> Since it is based on media or official reports, some incidents might have not been reported and therefore are not included in the dataset. As such, this map should be treated as providing an indicative picture of infrastructure damage across Ukraine. Analysis of the data suggests that facilities in Southern, Dnipro, and Donbass Power Electric Systems (PES) were impacted the most frequently along with Central PES, which includes Kyiv city and environs.





## CONCLUSION

The challenges that Ukraine faces ahead of the coming winter are underscored by widespread humanitarian needs resulting from a protracted conflict, mass displacement of people, extensive damage to residential and public service infrastructure, and continuing military activities. While seasonal forecasts predict warmer-than-normal weather conditions for winter 2023/24, late winter could see colder conditions than average.<sup>24</sup> Cumulative damage to critical infrastructure has reduced the resilience of power systems, increasing the likelihood of frequent blackouts and brownouts. This situation could worsen if further strikes on energy infrastructure occur. Active fighting near the front line may also lead to additional damage and population displacement.

Local actors in areas identified as the most vulnerable to winter-related hazards highlighted critical challenges and complexities for the 2023/24 winterisation response. Lessons from the previous winter point to the importance of flexible, rapid responses to emergency outages, closer collaboration with humanitarian aid providers, the deployment of heating points, and transitioning to

decentralised heat and power sources where suitable. The main unmet needs include construction and repair materials, equipment, tools, financial resources, solid fuel, as well as a trained, mobile workforce able to address urgent needs, particularly with regards to critical infrastructure repairs.

An effective winterisation response would require close coordination among winterisation actors, engagement with local representatives, and ongoing needs assessments to ensure that support aligns with the specific requirements of different regions. In a longer-term perspective, development of less centralised power systems may help the functioning of key infrastructure more independently. The success of these efforts will much depend on several interrelated factors, which are beyond the control of any winterisation actors, including the potential for further damage to energy production and heating infrastructure, residential buildings, and public utilities, as well as ongoing military activities, population displacement, and evolving humanitarian needs.

## REFERENCES

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<sup>2</sup> World Bank, [Updated Ukraine Recovery and Reconstruction Needs Assessment](#), March 2023.

<sup>3</sup> REACH, [REACH Ukraine MSNA 2023 Dataset](#), August 2023.

<sup>4</sup> IOM, [Ukraine — General Population Survey Round 14 — Snapshot report: Population Figures and Geographic Distribution \(3—25 September 2023\)](#), October 2023.

<sup>5</sup> Copernicus Climate Change Service, [Seasonal forecasts](#), October 2023.

<sup>6</sup> INSO Ukraine, Outlook for winter 2023/24 – challenges to Ukraine's critical infrastructure and considerations for NGOs, 2023.

<sup>7</sup> *ibid*

<sup>8</sup> OCHA, [Revised Ukraine Winter Response Plan, October 2023 – March 2024](#), September 2023.

<sup>9</sup> *ibid*

<sup>10</sup> *ibid*

<sup>11</sup> [Liveuamap](#), August 2023.

<sup>12</sup> REACH, [Cold Spot Risk Assessment: Winterisation 2023/24](#), August 2023.

<sup>13</sup> Ukrainian Helsinki Union, [Without electricity, gas and under fire: how Donetsk cities live after a full-scale invasion](#), February 2023.

<sup>14</sup> Ecoclub Rivne, [Solar Aid For Ukraine](#), September 2023.

<sup>15</sup> Radio Free Europe/Radio Liberty, [Ukraine Adapts To Power Cuts, Blunting Russia's Attacks On The 'Energy Front'](#), December 2022.

<sup>16</sup> Ecoclub Rivne, [The solar power plant at the hospital in Zhytomyr produced the first kilowatts](#), July 2023.

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<sup>21</sup> DTEK, [A warehouse with DTEK power equipment was attacked in the Dnipropetrovsk region](#), October 2023.

<sup>22</sup> UN SC, [Black Sea Grain Initiative Negotiations Continue, But Attacks on Civilians Impact Humanitarian Aid](#), May 2023.

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<sup>24</sup> Copernicus Climate Change Service, [Seasonal forecasts](#), October 2023.

## ABOUT REACH

REACH Initiative facilitates the development of information tools and products that enhance the capacity of aid actors to make evidence-based decisions in emergency, recovery and development contexts. The methodologies used by REACH include primary data collection and in-depth analysis, and all activities are conducted through inter-agency aid coordination mechanisms. REACH is a joint initiative of IMPACT Initiatives, ACTED and the United Nations Institute for Training and Research - Operational Satellite Applications Programme (UNITAR-UNOSAT).