REE-Skill Ukraine

REPORT ON THE STATE OF SKILL SUPPLY AND DEMAND IN THE UKRAINIAN RENEWABLE ENERGY AND EFFICIENCY MARKET

Questionnaire results

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Foreword

Since the full-scale invasion of Ukraine in 2022, the word “resilience” has taken on a new and profound meaning. It is not only the ability to endure. It is the ability to act, adapt, rebuild, and continue creating a future under extraordinary pressure.

Ukraine has demonstrated this capacity throughout the war. It has rapidly developed new capabilities in areas related to defence and security, while at the same time working to keep its energy system functioning despite repeated attacks on critical infrastructure, harsh winters and the increasing aggression. As Russian missiles and drones continue to strike power plants, substations, gas storage facilities and transmission lines, Ukraine’s energy system remains under immense pressure. Energy security has therefore become inseparable from national security.

But reconstruction is not only about replacing what has been destroyed. Ukraine has an opportunity to build a more decentralised energy system based on renewable energy. One that is less vulnerable to attacks, strengthens local communities, and helps ensure a reliable supply of energy. Energy security and the transition towards a decentralised energy system based increasingly on renewable energy can, and must, go hand in hand.

Realising this opportunity will require more than investment in infrastructure and technology. It will require people with the skills to build, maintain, and further develop the energy system. However, this is where a critical challenge is emerging. While investment in renewable energy and infrastructure is increasing, **the shortage of qualified labour is becoming a major implementation gap.**

In the REE-Skill Ukraine alliance, we have united our forces because we believe that people are the foundation of resilience and development. While infrastructure can be developed, technologies can be implemented, and renewable energy projects can be commissioned, none of this can be successful without individuals possessing the right skills. Therefore, building Ukraine’s future also means creating environments where people can establish their lives in the country. This includes meaningful jobs, relevant skills, stability, and the opportunity to live, work and thrive. A skilled workforce is not only essential to the energy transition. It is also part of creating hope, better opportunities, and stronger communities.

With the REE-Skill Ukraine initiative, we aim to contribute by investing in the people who will make this transformation possible. By developing skills, strengthening educational capacity, and creating pathways into employment, we want to help build the workforce needed for Ukraine’s future green and resilient energy system.

In this report, we examine **the supply of and demand for skills in Ukraine’s renewable energy and energy efficiency sectors**. We hope it provides valuable insights into understanding the specific challenges that the renewable energy labour market faces in the times of war, while offering a foundation for addressing them in an effective and sustainable way.

Ultimately, resilience is not only about surviving a crisis. It is about having the capacity to shape what comes next.

Thank you to the Rambøll Foundation for supporting this report and funding the first phase of the project REE-Skill Ukraine.

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Abbreviations

CSO: Civil society organisation

EE: Energy efficiency

EV: Electric vehicles

EU: European Union

HEI: Higher education institution

MTI: Mentor to Impact

NGO: Non-governmental organisation

RE: Renewable energy

SE: Sustainable energy (Umbrella term for renewable energy and energy efficiency)

SES: Sustainable energy system

S&F: Storage and flexibility

TSO: Transmission System Operator

TVET: Technical and vocational education and training

VET: Vocational education and training

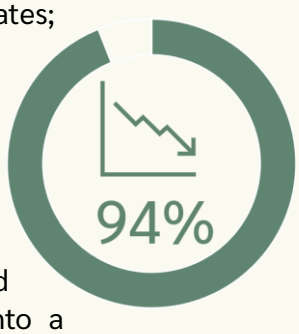
Executive summary

This report presents the results of a questionnaire carried out under the **REE-Skill Ukraine project**, a joint initiative of Mentor to Impact, Rud Pedersen Copenhagen, and the Ukrainian Wind Energy Association that aims to strengthen the workforce needed to rebuild Ukraine's energy, water, and heating systems. Between April and June 2026, 18 companies operating in Ukraine's renewable energy and energy efficiency sector shared their views on skills demand, training supply, and the outlook for the labour market over the next five years.

Across the questionnaire's six thematic sections, one message recurs: **the sector's growth needs and ambitions are running ahead of its workforce.** A striking 83% of companies report that their need for skilled workers has increased since 2022. The hardest roles for employers to fill are technical installation skills (44%), followed closely by electrical and grid expertise, engineering and design, operations and maintenance, and project management (each 39%).

> *"The labour market in Ukraine has become a labour-shortage market: businesses are finding it increasingly difficult to fill vacancies due to war, migration, and mobilisation..."*

This shortage is not simply a matter of too few candidates; respondents describe it as systemic. In an open-ended question on the biggest labour market shifts since 2022, 94% converged on the same underlying theme. Companies describe a **market flipped on its head**: employers no longer select among candidates, but compete for a shrinking pool of workers, intensifying competition that has driven up salaries and pushed reskilling and internal training from a nice-to-have into a strategic necessity. **War-related disruption** is treated not as a temporary dip but as the new baseline companies must plan around.



of respondents mention facing or witnessing a critical talent deficit, driven by brain drain, difficulties attracting skilled professionals, and demand exceeding supply in the sector

On the supply side, the picture is mixed. While **62% of companies believe existing training options broadly match the sector's needs**, this masks a visibility gap: 56% are unaware of existing reskilling or upskilling initiatives, and 61% never reach out to private training providers. Where relevant training does exist, it clusters in western Ukraine and Kyiv, mirroring both the **broader concentration of skilled talent and the war-driven shift of economic activity away from frontline regions**.

The war has also reshaped what workers are looking for. Employees increasingly prioritise **job security, competitive pay, and hybrid work arrangements** over the priorities that mattered before 2022. Despite this pressure, 83% of respondents say they feel fully or partially included in dialogue on skills development. Government is most often named as the actor best placed to set priorities, standards, and funding. Yet, respondents are equally clear that **no single actor** can close the gap alone, and coordinated action across government, employers, or educational institutions, together with donors and civil society, is what the sector needs going forward.

Looking ahead, 83% of companies expect further growth, concentrated in wind energy, storage and flexibility, and solar PV — the very technologies where skill shortages are already most acute. This aligns with findings from outside the survey: **industry estimates predict that the sector workforce needs to grow by 47% by 2032 to meet demand**. Companies are broadly aligned on the way forward: stronger vocational training, easier access to funding for reskilling, and closer cooperation between employers and training providers are the measures most frequently cited as critical to closing the gap.

Introduction

This report is prepared as part of the **REE-Skill Ukraine project**, where REE stands for Renewable Energy and Energy Efficiency. This project responds to a shortage of skilled labour that is holding back Ukraine's energy reconstruction. A **secure, resilient, and decentralised energy system** is central to Ukraine's future. However, rebuilding the infrastructure affected by the Russian attacks and building new, renewable, and sustainable capacities requires both manpower and specialised expertise that are currently in short supply. The project, led by Mentor to Impact and Rud Pedersen Copenhagen together with the Ukrainian Wind Energy Association, aims to strengthen the ability of the Ukrainian workforce to rebuild the country's energy, water, and heating systems. The project follows five phases: Mapping, Analysis, Development, Implementation, and Evaluation, and is currently in the early Mapping phase. Two missions guide the project. **Mission 1** focuses on defining scenarios for the development of a decentralised energy system in Ukraine and identifying the skills these scenarios will require. **Mission 2** focuses on securing stakeholder collaboration, mobilisation, and funding needed to scale the project further.

As part of Mission 1, under the work package focused on anticipating skills demand, the project team has carried out a **targeted questionnaire**. Its purpose was to gather input directly from companies, the key labour market stakeholders driving demand in the sector, to build a tentative picture of the skills that will be needed over the next five years. To deepen the insights, several companies were also additionally interviewed. This work runs alongside a parallel work package that maps out possible scenarios for the development of Ukraine's energy system, so that the skills identified through this survey can be matched against the technologies and pathways the sector is likely to pursue. Together, these two work packages are meant to summarise into a single, most likely scenario for the sector. The findings presented in this report will eventually support future work on developing mobile training units, curricula, and trainer capacity-building programs.

The report is organised around the **six thematic sections** of the questionnaire: the state of skill demand and the job market, skills supply and training, social and systemic change, participation, coordination and inclusion, and a forward-looking section on future skills needs, followed by a set of conclusions and takeaways. Three appendices provide additional details. Appendix 1 sets out the methodology, including how the survey was designed, distributed, and who took part. Appendix 2 contains the full questionnaire as it was disseminated to respondents. Appendix 3 provides a detailed breakdown of the specific skills and professional profiles that respondents identified as most critical over the next two to five years, grouped by category.

Ukraine’s renewable energy market overview

The recovery of the power sector, along with its decarbonisation and further deployment of renewables, is reshaping labour demand. Whereas the centralised system required a comparatively small number of operators at a few large facilities, hundreds of solar, wind and cogeneration installations create dispersed demand for technical personnel and specialists in such areas as maintenance, generation forecasting and digital grid management. These skills, necessary for the new energy landscape, have not been sufficiently developed by traditional energy education, which has historically focused on centralised power systems. Therefore, the pace of the green transition relies not only on the availability of capital and technology but also on the presence of qualified human resources.

The current model of Ukraine’s electricity market was established by the Law of Ukraine on the Electricity Market, which was adopted in 2017 and introduced in July 2019. The ‘single buyer’ model was replaced by a competitive market structure comprising the bilateral contracts market, the day-

ahead, the intraday and balancing markets, as well as the ancillary services market[1,2]. The main energy sector stakeholders include the Ministry of Energy of Ukraine, which formulates the national energy policy; regulation is exercised by the National Energy and Utilities Regulatory Commission (NEURC), and the operational framework is constituted by PrJSC 'NPC 'Ukrenergo' (the transmission system operator), LLC 'Gas Transmision System Operator of Ukraine', JSC 'Market Operator' and JSC 'Guaranteed Buyer'. At the beginning of 2022, the installed capacity of the integrated power system amounted to approximately 55 GW[3]; nuclear power plants provided roughly half of generation, coal-fired generation accounted for 23%, gas-fired generation for 9%, while renewable sources represented 9.6 GW of installed capacity[4].

It was precisely this initial configuration – a large centralised system dominated by nuclear and coal generation - that underwent fundamental change following the outbreak of the full-scale war. In March 2022, the emergency synchronisation of Ukraine's power system with the grid of Continental Europe took place, opening access to European balancing and to imports[5]. At the same time, the Zaporizhzhia NPP, with a capacity of 6 GW, came under Russian control. Losses resulting from occupation and destruction during the first year of the war amounted to 19 GW[6].

Within the structure of these losses, the most telling changes occurred in the renewable energy segment, which had been the most dynamic before the war. Its growth had been driven by the feed-in ('green') tariff pegged to the euro exchange rate: installed solar capacity rose from less than 1 GW in 2015 to approximately 8 GW at the beginning of 2022, while wind capacity exceeded 1.6 GW, primarily through large industrial-scale plants in the south, east and centre of the country[7]. As a result of the occupation of the southern and eastern oblasts and of ongoing shelling, registered solar generation capacity decreased by 2.6 GW (mainly in 2022), and 1.3 GW of wind came under occupation. Consequently, the total RES capacity fell from 9.6 GW in January 2022 to 7.4 GW in October 2025[8].

Notwithstanding the war, new construction also took place in the country: more than 4 GW of solar capacity was commissioned in 2023–2026[9]. According to the Ukrainian Wind Energy Association, 703 MW of new wind capacity was installed between the beginning of the full-scale war and the end of the first quarter of 2026[10], including 414.8 MW (70 wind turbines) in the first half of 2026 alone[11].

The restoration of capacity was accompanied by a change in the structure of electricity generation as well. As of mid-2026, total solar generation capacity stands at approximately 7.3 GW. At the same time,

[1] Law of Ukraine "On the Electricity Market" of 13.04.2017 No. 2019-VIII. Available at: https://zakon.rada.gov.ua/laws/show/2019-19;
[2] International Energy Agency. (n.d.). Ukraine energy profile: Market design. IEA. Available at: https://www.iea.org/reports/ukraine-energy-profile/market-design
[3] International Energy Agency. (2024). Ukraine's energy security and the coming winter: Ukraine's energy system under attack. IEA. Available at: https://www.iea.org/reports/ukraines-energy-security-and-the-coming-winter/ukraines-energy-system-under-attack; Green Deal Ukraïna. (2026). Electricity and gas supply in Ukraine: Winter 2025/26. Available at: https://greendealukraina.org/uk/assets/images/reports/winter-outlook-2025-2026-jan-ukr.pdf
[4] Green Deal Ukraïna. (2026). Electricity and gas supply in Ukraine: Winter 2025/26. Available at: https://greendealukraina.org/uk/assets/images/reports/winter-outlook-2025-2026-jan-ukr.pdf
[5] NPC Ukrenergo. (n.d.). ENTSO-E: Integration of the Ukrainian power system with the power system of Continental Europe. Available at: https://ua.energy/entso_e.html
[6] International Energy Agency. (2025). Ukraine's energy security: A pre-winter assessment. IEA. Available at: https://www.iea.org/reports/ukraines-energy-security/a-pre-winter-assessment
[7] International Energy Agency. (2025). Ukraine's energy security: A pre-winter assessment. IEA. Available at: https://www.iea.org/reports/ukraines-energy-security/a-pre-winter-assessment
[8] The Ukrainian Review. (2026). Power outages as the new reality: The state and prospects of Ukraine's energy system. Available at: https://theukrainianreview.info/power-outages-as-the-new-reality-the-state-and-prospects-of-ukraines-energy-system/
[9] Ekonomichna Pravda (2026). Development of solar and wind energy in Ukraine in 2023–2026. Available at:: https://epravda.com.ua/weeklycharts/rozvitok-sonyachnoji-ta-vitrovoji-energetiki-v-ukrajini-u-2023-2026-rokah-823248/
[10] Ukrainian Wind Energy Association / Enerhoreforma. (2026). Installed wind farm capacity and RES support quotas for 2026. Available at: https://bin.ua/news/economics/faec/347924-v-ukrayini-z-pochatku-povnomasshtabnoyi-vijni.html
[11] UWEA / SEEDS. (2026). Over the half-year Ukraine added 70 new wind turbines with a total capacity of 414.8 MW to the power system. Available at: https://www.seeds.org.ua/ukraina-za-pivrichchya-dodala-do-energosistemi-70-novix-vitroustanovok/

the share of active consumers has grown considerably: the capacity of their generating facilities today accounts for almost one-third of installed solar generation capacity, which is clear evidence of the roll-out of distributed generation in Ukraine. In parallel, to increase power system flexibility, energy storage facilities are being developed: over the course of a year, their aggregate capacity increased to approximately 600 MW, including the BESS facility with a capacity of 200 MW and a storage volume of 400 MWh, commissioned in September 2025[12]. The overall share of renewable energy sources in electricity generation in 2025 stood at 11 percent[13].

Alongside electricity generation, the biomethane segment is developing: in 2025, more than 11.2 million cubic metres were exported for the first time through the gas transmission system, and for 2026, production of approximately 150 million cubic metres is forecast, oriented towards export to the EU[14].

These changes in the generation structure have been accompanied by a shift in the RES support system towards a more market-oriented approach. Legislative changes in 2023 – H1, 2026 encouraged wind power producers to engage in independent trading on the market and enabled renewable energy producers' transition to new support mechanisms such as market premiums and contracts for difference. Today, all wind power producers operate in the commercial electricity market.

It's worth noting that the "green" auctions held from 2024-2025 did not attract significant investor interest; therefore, in February 2026, a transition was made to a one-way contract for difference, a market premium mechanism together with an increase in quotas to 1,000 MW, with priority given to wind: 700 MW. The current industry expectations are linked to the next auctions, which are due to take place in autumn 2026.

Since the beginning of the war, Ukraine's power system integration with the European one has advanced from a March 2022 emergency ENTSO-E grid synchronisation to full NPC 'Ukrenergo' membership in January 2024, and further progressed in April 2026 when the Verkhovna Rada adopted Law No. 4834-IX "On amendments to certain laws of Ukraine concerning the implementation of European law on the integration of energy markets, enhancing security of supply and competitiveness in the energy sector" to couple domestic electricity markets with EU trading zones.

The realisation of both the national RES targets set by the National Energy and Climate Plan to 2030 (a RES share in gross final energy consumption of at least 27%)[15], and the reconstruction of the sector as a whole is determined by its overall scale. According to the fifth Rapid Damage and Needs Assessment (RDNA5), prepared by the World Bank, as of 31 December 2025, direct damage to Ukraine had reached USD 195.1 billion, while the needs for its reconstruction over a ten-year horizon amounted to USD 587.7 billion, with the energy sector ranking among the three most severely affected sectors[16].

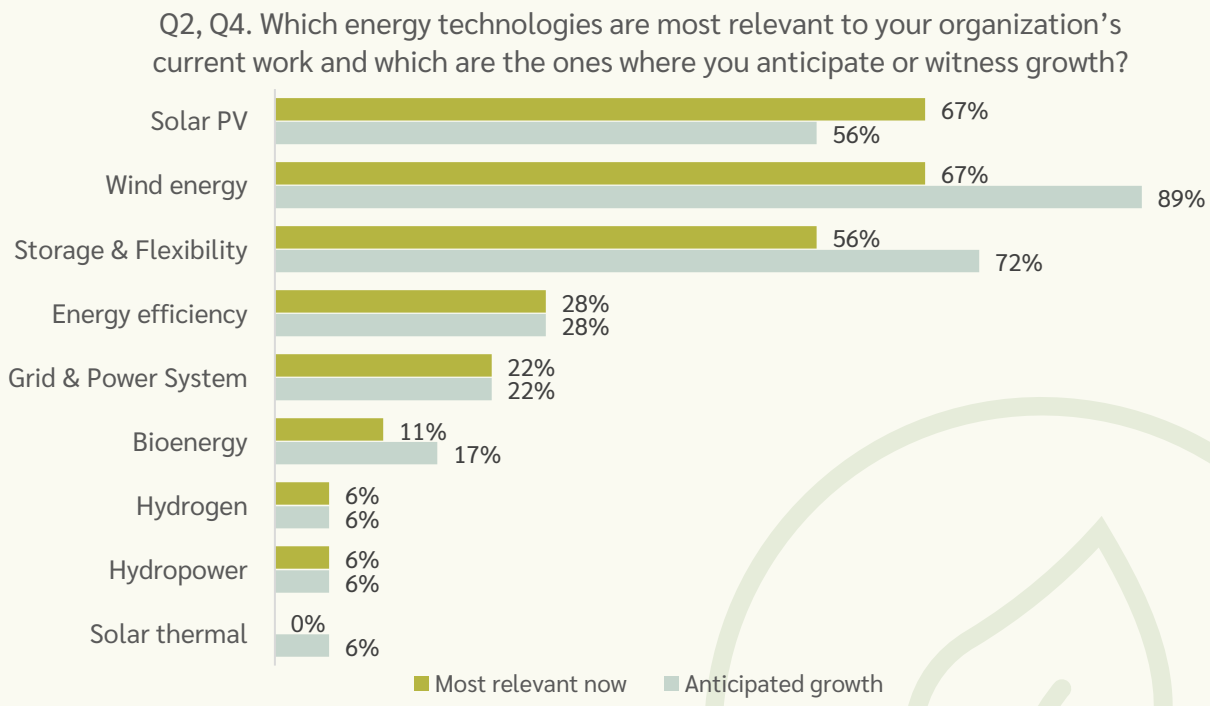
[12] International Energy Agency. (2025). Ukraine's energy security: A pre-winter assessment. IEA. Available at: https://www.iea.org/reports/ukraines-energy-security/a-pre-winter-assessment
[13] NEURC. (2026). The share of renewable energy sources in electricity generation in 2025 stood at 11 per cent. Available at: https://www.nerc.gov.ua/news/nkrekp-chastka-vde-u-vyrobnytstvi-elektroenerhii-u-2025-rotsi-sklala-11
[14] Ministry of Economy, Environment and Agriculture of Ukraine. (2026). Ukraine plans to end 2026 with production of approximately 150 million cubic metres of biomethane. Available at: https://me.gov.ua/News/Detail/19d785ed-0e60-4040-9620-10509cc4ed64
[15] Cabinet of Ministers of Ukraine. (2024). National Energy and Climate Plan of Ukraine for the period to 2030. Available at: https://cdn.climatepolicyradar.org/navigator/UKR/2024/national-energy-and-climate-plan-of-ukraine-2025-2030_ea76443917f9cc51d3a1f3b021a81cba.pdf
[16] World Bank Group, Government of Ukraine, European Commission, United Nations. (2026). Ukraine — Fifth Rapid Damage and Needs Assessment (RDNA5), February 2022 – December 2025. Available at: https://www.worldbank.org/en/news/press-release/2026/02/23/updated-ukraine-recovery-and-reconstruction-needs-assessment-released

State of play in skill demand and job market

This and further sections focus on summarising the results of the survey conducted for the REE-Skill Ukraine project. The questionnaire began with mapping the profiles of respondent companies. Specifically, in questions 2 and 4, they were asked to select energy technologies most relevant to their current work and those where they anticipate or already see growth, based on a pre-defined list. These questions aimed to understand in what areas the respondents' daily operations belong. It is important to note that the target audience of the questionnaire was companies in the renewable energy sector, and the project partner, Ukrainian Wind Energy Association, carried out the outreach campaign.

As Figure 1 below shows, for most companies, **solar PV**, **wind energy**, and **storage and flexibility** (S&F) technologies are most relevant. This is also consistent with the findings of the market snapshot prepared by the Ukraine-Germany Energy Partnership[17]. The same technologies are believed to be on the rise and crucial in the near future, with wind energy being a noticeable leader at 89%. In fact, research shows that, backed by investor confidence and financial support, industry experts anticipate a surge in wind farm commissioning and technical capacity in Ukraine[18]. **Bioenergy** and **S&F** are also expected to grow in importance. Biomass and biogas facilities, in fact, are expected to grow by over 300% towards 2030[19]. A smaller share of participants (below 50%) marked **energy efficiency**, **grid and power systems**, **hydrogen** and **hydropower** as relevant to them. Interestingly, while none of the participants is specialised in **solar thermal** energy right now, some of them (6%) believe it will become more important soon. Overall, 83% of organisations replied that they are experiencing or expect to experience growth, while the remaining 17% were unsure.

Figure 1. Most relevant energy sectors

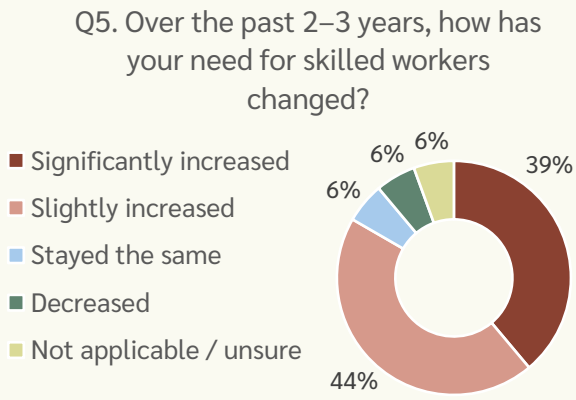


Note: Q2 and Q4. N=18. Respondents could select any number of available options.

[17] Ukraine-Germany Energy Partnership. (2024). Snapshot: Ukrainian Renewables Market. Available at: https://energypartnership-ukraine.org/fileadmin/ukraine/media_elements/250131_Snapshot_Renewables_Market_Ukraine.pdf
[18] Ukraine-Germany Energy Partnership. (2024). Ukraine's 2025 Wind Market Outlook. Available at: https://energypartnership-ukraine.org/milestones/default-title-1/
[19] BDO. (2025). Renewable Energy in Ukraine in 2025: Overview of the Landscape, Challenges and Prospects. Available at: https://www.bdo.ua/en-gb/insights-1/information-materials/2025/renewable-energy-ukraine-2025-overview-challenges-prospects

The next section of the questionnaire gathered views on the skill demand in the Ukrainian energy sector. Overall, participating companies believe that the **demand-supply imbalance** is the defining feature of today's market**.** Across responses, the dominant theme is that the need for skilled workers now substantially exceeds available supply. And this shift has intensified since 2022. Already in 2024, 55% of employers in the sector reported a labour crisis[20]. In response to question 5, a total of 83% of companies responded that their need for skilled workers has increased – significantly or slightly – over the past couple of years (see Figure 2**Error! Reference source not found.**). For only 6%, it remained the same, and only 6% witnessed a decline. These numbers reflect the shared perception of workers' deficit for RE companies in Ukraine, as also illustrated by a quote from one of the respondents below.

Figure 2. Skill needs over recent years

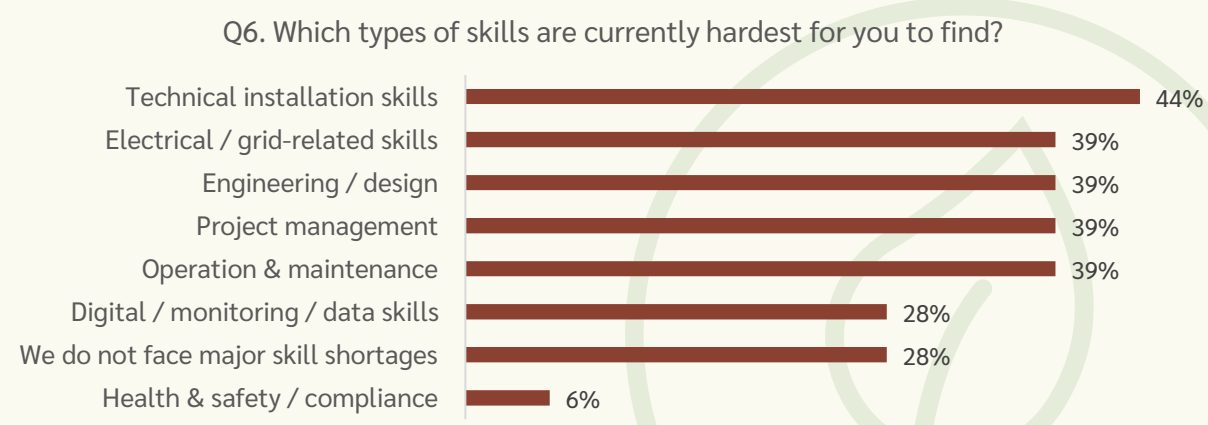


Note: Q5. N=18.

> *"The labour market in Ukraine has become a labour shortage market: businesses are finding it increasingly difficult to fill vacancies due to war, migration, and mobilisation..."*

The gap is not evenly distributed across specific technologies and profiles. Question 6 invited respondents to specify which of the skills are the most difficult to find among workers they hire. As the chart below shows, **technical installation** skills are in deficit for 44% of employers. Equally challenging, at 39%, are also **electrical** and **grid-related** expertise, **engineering and design**, **operation and maintenance**, and **project management**. In question 7, employers elaborated on how they see today's market for energy-related skills, compared to before the full-scale invasion of 2022. Here, many replied that the employee shortage is most acute for highly qualified technical specialists, rather than across the workforce as a whole: particularly in areas such as **power dispatching**, **electrical installation**, and **grid connection**. One of the interviewees adds head engineers with managerial skills and high-voltage substation technicians to this list.

Figure 3. Hardest skills to find



Note: Q6. N=18. Respondents could select up to 3 options.

[20] DIW-ECON. (2024). Renewable energy in Ukraine: Current institutional environment, investment barriers and prospects. Available at: https://diw-econ.de/wp-content/uploads/JT_UA_DIW-Econ-Report_RES-in-Ukraine_v.1.0.pdf

This echoes other existing research: electrical engineers, dispatchers, and specialists in integration, automation, storage, and smart grids are in the highest demand for RE companies; however, these are precisely the areas where too few workers, especially younger ones, have expertise[21]. As the 2026-2035 Development Plan of the transmission system operator, Ukrenergo, highlights, stable operation of the energy system and the restoration of energy transmission system facilities damaged because of hostilities are among the top priorities[22]. This stresses the importance of the abovementioned skills. At the same time, 28% of companies did not report any major talent shortages they would face.

In response to the open-ended question 7, participants have shared numerous insights on changes in the job market for energy-related skills in Ukraine compared to the period before the full-scale Russian invasion in 2022. One of them is a conclusion made by both the survey and interview participants that the **market has become more competitive and salary-driven.** The sector now features comparatively higher salaries and active competition for specialists, a contrast to pre-2022 conditions when such professionals were either scarce or accessible only to select segments of the market. Some respondents report **increased sector activity and greater dynamism** in the labour market, with new entrants, and an interviewed stakeholder notes that there is a growing number of interesting and appealing vacancies. Yet, this growth in demand has not been matched by sufficient supply.

When it comes to specific challenges and factors, several respondents emphasised that **geographic disparity** compounds the shortage. Qualified technical personnel are disproportionately scarce outside major urban centres, creating uneven access to talent in regional operations. A report by the audit company BDO shows that RE generation and consumption are very unequally distributed: for example, the demand for solar power stations is considerably higher in the west and south[23]. In addition, **migration** (both internal displacement and emigration) is a contributing structural factor. Brain drain is identified as a driver of the current shortfall, reflecting how the broader wartime context has reshaped the talent pool, as workers with RE expertise are in high demand abroad as well.

The overall tone is one of strain. Words like "severe," "very tense," and "significantly worsened" recur, signalling that the labour market is under considerable stress. This is shaped by both wartime disruption and the structural demands of Ukraine's energy sector recovery and reconstruction agenda. It is important to note, however, that a part of the respondent organisations launched operations after 2022, limiting their ability to make direct comparisons. Interviewed companies also acknowledge that the lack of qualified specialists occasionally results in delays in project implementation and rising costs, particularly when recruitment for critical positions takes longer than 3 months.

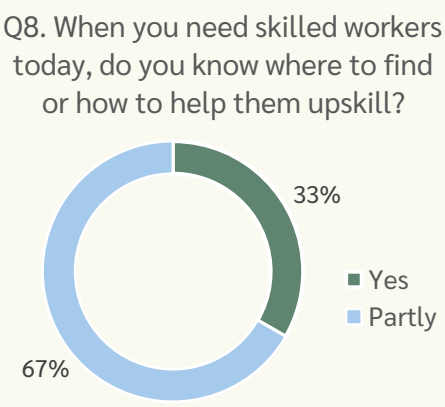
Skills supply & training

The following section of the questionnaire aimed to explore the companies' views on **how well the demand for RE-specific skills is met from the supply side**. When asked in question 8 whether they know where to find skilled workers or how to help them develop the necessary skills, 33% of companies replied positively and 67% said they partially know (see Figure 4). So, while a meaningful minority has a good handle on the talent landscape, the majority operate with incomplete knowledge: they have some sense of where to look, but not a full picture. At the same time, as responses to question 9 show, 56% of respondents are not aware of the existing initiatives for reskilling or upskilling in the sector (see Figure 5). Even if training programs or reskilling initiatives exist in Ukraine, they might not be

[21] IREX. (2025). Ukraine Sector Snapshot: Energy. Available at: https://www.irex.org/sites/default/files/node/resource/Ukraine%20Energy%20Snapshot%20V2.pdf
[22] Energy Community Secretariat. (2026). Ukraine Energy Market Observatory QUARTERLY REPORT Q1 2026. Available at: https://www.energy-community.org/Ukraine/observatory.html
[23] BDO. (2025). Renewable Energy in Ukraine in 2025: Overview of the Landscape, Challenges and Prospects. Available at: https://www.bdo.ua/en-gb/insights-1/information-materials/2025/renewable-energy-ukraine-2025-overview-challenges-prospects

reaching most companies in the sector, as this survey's insights show. It could mean the programs aren't well advertised, aren't targeted at the renewable energy sector specifically, or aren't being communicated through channels that most employers use.

Figure 4. Knowledge of how to find talent



Note: Q8. N=18

Figure 5. Awareness of existing initiatives



Note: Q9. N=18

Of those 33% of participants in the questionnaire who knew of programs and initiatives or took part in them, some named specific examples in response to question 9, highlighted in the box below. The majority of them are located in the West of Ukraine or the capital city of Kyiv. This mirrors both the war-induced redistribution of activities away from the frontline regions and the **geographic disparities** mentioned by participants in the previous questions, as well as in interviews with companies. As a DIW-ECON study of 2024 also acknowledges, due to the same factors, the distribution of vocational education and training (VET) institutions across Ukraine's regions is very uneven, exacerbated also by war damage and destruction – and this is partially being mitigated by the growth in blended learning offers[24]. The use of mobile training units and cross-regional and cross-institutional exchanges within the country could also help bridge the gaps.

[24] DIW-ECON. (2024). Renewable energy in Ukraine: Current institutional environment, investment barriers and prospects. Available at: https://diw-econ.de/wp-content/uploads/JT_UA_DIW-Econ-Report_RES-in-Ukraine_v.1.0.pdf

Box 1. Highlighted training initiatives

* National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"
* Uzhhorod National University
* Perechyn Vocational Lyceum
* I. Puluj Ternopil National Technical University
* Solar Step / Energy Act for Ukraine Foundation
* Power Women 2026 — women's training program in the energy sector
* Unspecified city-level training programs delivered in partnership with community organisations



Note: Q9. N=18

The following questions, 10 and 11, prompted respondents to evaluate to what extent the existing training and **educational opportunities** match their current needs, as well as the role of the private sector. As the chart below shows, a total of 62% of the surveyed companies believe that there is a **good or somewhat good match** between available offers and the sector's need for training. Only 11% think this match is poor (see Figure 6). Nonetheless, previous studies highlight problems with the quality of training provided by VET institutions: namely, **lack of relevance to labour market needs**, **lack of applied training**, **training tools and materials**, **outdated infrastructure and curricula focused on legacy technologies**, and **lagging digitalisation**[25, 26]. As one of the interviewees shared, a few of the universities have well-equipped labs, but those tend to be privately funded by large industry players and concentrate in big educational centres. Besides, adult education institutions often do not actually tailor their approach to adults: lacking flexible schedules and online or evening classes, failing to provide comprehensive and up-to-date information on their websites, and not issuing certificates of completion[27].

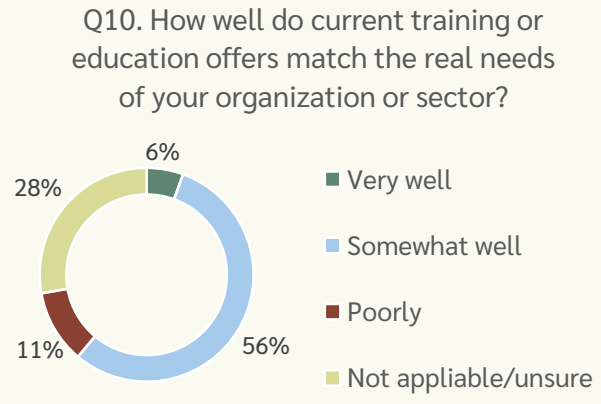
In this context, it is also relevant to highlight the results of a comprehensive study by Zakharova and Usyk, who, in 2023, evaluated the potential of Ukrainian higher educational institutions (HEIs) to satisfy

[25] DIW-ECON. (2024). Renewable energy in Ukraine: Current institutional environment, investment barriers and prospects. Available at: https://diw-econ.de/wp-content/uploads/JT_UA_DIW-Econ-Report_RES-in-Ukraine_v.1.0.pdf
[26] IREX. (2025). Ukraine Sector Snapshot: Energy. Available at: https://www.irex.org/sites/default/files/node/resource/Ukraine%20Energy%20Snapshot%20V2.pdf
[27] RePower Ukraine. (2025). The state of labor market and educational opportunities in the renewable energy sector in Ukraine. Available at: https://repowerua.org/uk/uncategorized-uk/stan-rinku-pratsi-ta-osvitnih-mozhlivostej-u-sferi-vidnovlyuvanoyi-energetiki-v-ukrayini-2025/

the demand for personnel for renewable energy development. Their analysis shows that out of 56 HEIs that prepare electrical engineering specialists, only 15 delivered accredited bachelor's or master's programs specifically in renewable energy[28].

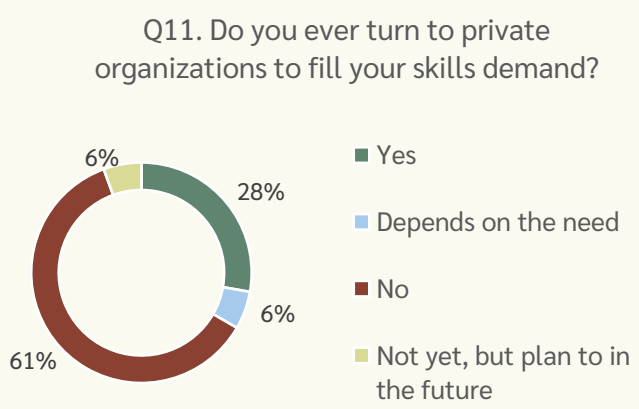
When it comes to **private suppliers of training**, 61% of this survey's respondents do not reach out to them, and 28% do – more than twice as many. For 6%, it depends on their specific needs (see Figure 7). While training providers exist outside of the formal education system, their role is still limited today. RePower Ukraine's examination states that out of almost 25 000 vouchers for professional training issued in 2025 through the State Employment Service, only 199 of them were for energy professions, despite this sector's strategic significance[29].

Figure 6. Demand-supply balance



Note: Q10. N=18

Figure 7. Private sector role



Note: Q11. N=18

As follow-up interviews with the Ukrainian energy companies showed, to mitigate the deficit of employees with the needed competencies, they occasionally **outsource** such specialists. This mainly concerns narrow fields of expertise: for example, technicians and engineers responsible for operating high-voltage substations. Apart from these, companies also hire external consultants for energy trade forecasting, project development, commercial management and upskilling. This is especially relevant for newly established companies and their early stages of operation. For more mature businesses, most of the roles are filled internally. When it comes to **training**, companies mention both organising it in-house and involving third-party education and certification providers. For some of the most complex and safety-related tasks, employees need to obtain specific **government-approved** certificates and regularly renew some of them. However, regardless of the approach, it becomes more challenging under a labour shortage, as releasing specialists for training should not leave critical functions understaffed.

Social & systemic change

Another section of the questionnaire focused on identifying and interpreting the key social and systemic transformations that affect the energy labour market in Ukraine. Participants were invited to share their perspective on the biggest changes in recent years in an open-ended question 12. A **shortage in the available workforce** is marked as the defining and near-universal shift: 94% of respondents mention the declining availability of workers and a critical talent deficit driven by reasons

[28] Zakharova, O. V., & Usyk, L. M. (2023). On the potential of Ukrainian higher educational establishments to satisfy the demand in personnel for renewable energy development. IOP Conference Series: Earth and Environmental Science (Vol. 1254, No. 1, p. 012032). IOP Publishing.

[29] RePower Ukraine. (2025). The state of labor market and educational opportunities in the renewable energy sector in Ukraine. Available at: https://repowerua.org/uk/uncategorized-uk/stan-rinku-pratsi-ta-osvitnih-mozhlivostej-u-sferi-vidnovlyuvanoyi-energetiki-v-ukrayini-2025/

like brain drain, difficulties attracting skilled professionals, and demand exceeding supply in the sector. As other studies also show, sector representatives tend to see conscription as the most impactful factor driving staff shortages, followed by the general demographic situation, mismatch between education and needs, and low attractiveness of the industry to applicants[30]. Existing estimates point to a **40% decrease** in Ukraine's working population between 2021 and 2024 due to migration and mobilisation[31].

Respondents of this survey reckon that the market has moved from one where employers selected among candidates to one where **workers are the scarce resource** and employers compete to attract them. **War, mobilisation, and emigration are the structural drivers** that simultaneously reduced supply and increased instability across sectors, as highlighted in other articles, too[32]. An interesting observation that one respondent flagged is also the proliferation of **fraudulent job postings**. The disruption of normal labour market mechanisms created space for misleading recruitment practices. Still, the imbalance primarily shows in difficulties finding employees[33]. A RePower Ukraine study shows that up to 44% of **vacancies remain unfilled** due to a lack of suitable candidates, and the vacancy-to-jobseeker ratio is especially skewed in electricity generation, transmission, and distribution[34]. Other sources also demonstrate that mobilisation-driven shortages increased companies' readiness to hire younger people of non-conscription age, people with health limitations, and pensioners[35].

Technical and blue-collar professions appear to be under the greatest pressure. The shortage is particularly acute for profiles most critical to energy infrastructure and reconstruction work. Furthermore, we can presume based on the submissions that the structure of demand has shifted toward **recovery-critical sectors**. Respondents note a significant reorientation of the economy, with growing demand for specialists in energy, construction, infrastructure restoration, IT, cybersecurity, and logistics. Some traditional occupational profiles have declined in relevance or require updated competencies. Alongside, **regional imbalances** have deepened. Respondent companies observe that relatively secure regions face acute labour shortages driven by business relocation and internal migration, while frontline and conflict-affected areas contend with higher unemployment. Another factor that lowers the appeal of the vacancies in this sector for young workers is also the remote locations of the energy generation sites, according to an interviewed company representative. Long commute times from major cities are often seen as a substantial disadvantage by job applicants. This further underlines the need for creating more local training opportunities.

Intensified competition for a shrinking talent pool has **driven up salaries**, increasing the cost burden on organisations trying to fill vacancies. Companies noted in the survey that reskilling and internal training have also become **strategic necessities**. With the skills-to-needs gap widening, employers are investing more in staff development and retraining. **Legislative updates** also underpin this need. For example, in 2026, Ukraine's Auction Committee for the Sale of Electricity introduced mandatory training for all participants in electricity sales auctions to boost the quality of bidding participation and

[30] Deloitte. (2024). Human capital challenges in the energy sector - business and local government perspective in Ukraine. Available at: https://www.deloitte.com/ua/en/about/press-room/human-capital-challenges-energy-sector.html
[31] DIW-ECON. (2024). Renewable energy in Ukraine: Current institutional environment, investment barriers and prospects. Available at: https://diw-econ.de/wp-content/uploads/JT_UA_DIW-Econ-Report_RES-in-Ukraine_v.1.0.pdf
[32] Zakharova, O. V., & Usyk, L. M. (2023). On the potential of Ukrainian higher educational establishments to satisfy the demand in personnel for renewable energy development. IOP Conference Series: Earth and Environmental Science (Vol. 1254, No. 1, p. 012032). IOP Publishing.
[33] IREX. (2025). Ukraine Sector Snapshot: Energy. Available at: https://www.irex.org/sites/default/files/node/resource/Ukraine%20Energy%20Snapshot%20V2.pdf
[34] RePower Ukraine. (2025). The state of labor market and educational opportunities in the renewable energy sector in Ukraine. Available at: https://repowerua.org/uk/uncategorized-uk/stan-rinku-pratsi-ta-osvitnih-mozhlivostej-u-sferi-vidnovlyuvanoyi-energetiki-v-ukrayini-2025/
[35] DIW-ECON. (2024). Renewable energy in Ukraine: Current institutional environment, investment barriers and prospects. Available at: https://diw-econ.de/wp-content/uploads/JT_UA_DIW-Econ-Report_RES-in-Ukraine_v.1.0.pdf

reduce violations and technical errors[36]. Also, an **employer itself is increasingly seen as a primary site of skills formation**, rather than the education system. Apart from these changes, **digitalisation** is also accelerating across the economy, as respondents conclude. The adoption of remote work, AI tools, digital management systems, and automated processes is reshaping job requirements, making **digital literacy** a baseline expectation across virtually all sectors.

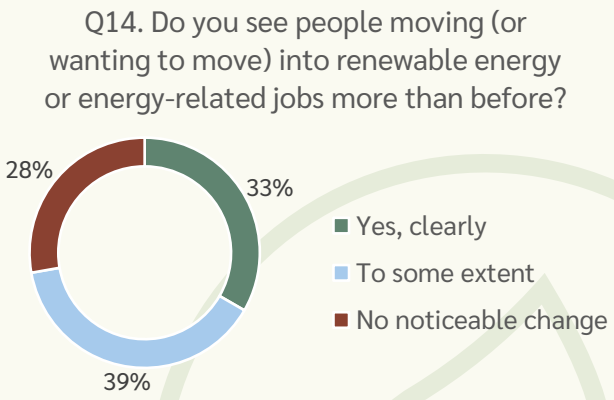
> *"Businesses are actively implementing digital solutions, remote work formats, AI tools, and automated management systems. This is changing requirements for employees and making digital skills a basic necessity in nearly all sectors."*

Next, open-ended question 13 looked into the changes in people's career preferences and professional orientations. Respondents converge on **stability and security** as the primary drivers of career choice. Workers now place significantly greater value on predictable conditions, supportive and empathetic leadership, employee benefits, formal contracts, and roles in sectors with long-term strategic relevance. Still, **compensation** increasingly plays a larger role than working conditions. Workers are not primarily seeking comfortable or fulfilling roles, but rather higher pay. This is a preference shaped by the rising cost of living. Many professionals have been compelled to relocate, change fields, or fully retrain as a direct consequence of the war. As surveyed companies have shared, these staff shortages led to **individual positions absorbing workloads** that would previously have been distributed across teams or departments, without adequate pay increases.

Another tendency mentioned in responses is that **hybrid work arrangements** are a widely expected feature of employment. Candidates actively seek out roles that combine remote and in-office work as a standard condition. Besides, **young professionals** and early-career specialists increasingly view renewable energy and energy efficiency as fields of genuine career potential. This same group of employees also shows higher **readiness to retrain** in line with market demand or personal interest. Survey respondents also note that employees increasingly value **fast onboarding processes** and access to **on-the-job training** over finding an ideal role from the outset.

Finally, question 14 prompted participants to reflect on **employee mobility** between energy and other sectors. In total, 33% clearly see signs of labour movement into RE-related jobs, and 39% noticed it only to some extent. However, 28% saw no change at all. Other studies show that businesses in the energy sector see the **low attractiveness** of this sector as one of the main factors behind shortages in applicants, primarily due to low remuneration levels[37].

Figure 8. Sectoral mobility



Note: Q14. N=18.

In the same study, the need for highly specialised technical knowledge is seen as one of the most deficient skill areas, which **complicates employee mobility** from other fields. Other potential

[36] LCC Ukrainian Energy Exchange. (2026). Mandatory training has been introduced for admission to electricity sales auctions under bilateral contracts. Available at: https://www.ueex.com.ua/eng/presscenter/news/mandatory-training-has-been-introduced-for-admission-to-electric/

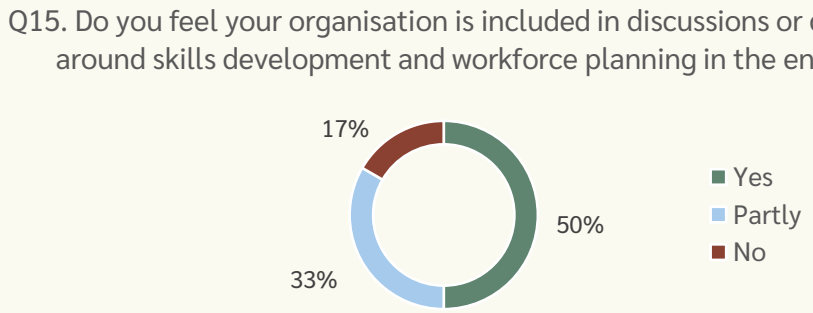
[37] Deloitte. (2024). Human capital challenges in the energy sector - business and local government perspective in Ukraine. Available at: https://www.deloitte.com/ua/en/about/press-room/human-capital-challenges-energy-sector.html

explanations for the sector's low attractiveness, which was also noted by an interviewee, could be the lack of hybrid work opportunities in this field for those who seek them. Besides, as Russia repeatedly attacks Ukrainian energy infrastructure with missiles and drones (which became nearly daily in winter 2026[38]), working in this sector now involves direct physical danger. "Now, working in the energy sector is like being on the front line, except that we don't have weapons in our hands", say energy workers[39]. UNDP also underlines the mental fatigue and **deteriorating well-being** among Ukrainian energy workers caused by chronic stress, fear for personal safety, and the overwhelming responsibility to keep the country's power grid functioning[40]. This naturally lowers these jobs' appeal and increases applicants' interest in office-based rather than on-site jobs. As one interviewee shared, international energy companies in Ukraine used to fill the missing vacancies with foreign skilled workers, such as wind turbine experts. With the full-scale invasion, however, candidates' willingness to relocate to Ukraine has naturally declined. This puts additional pressure on companies that need to fill the vacancies with almost exclusively local talent.

Participation, coordination and inclusion

Question 15 opened this section, asking participants to share to what extent they feel **included in discussions and decision-making processes** that concern RE-related skill development and workforce planning. Only 17% say they do not feel involved, while 83% responded that they are fully or partially included (see Figure 9). This shows the overall satisfaction among companies with the proactiveness of the state and market institutions.

Figure 9. Inclusion in dialogue and decision-making



Note: Q15. N=18.

Question 16 continued this discussion, asking who should play a stronger role in coordinating skills development for the RE sector. An overwhelming majority of respondents cited **the state** or **the government** as the primary coordinator responsible for setting strategic priorities, standards, and funding mechanisms. **Local** authorities are mentioned by several respondents as an additional layer that should be involved. Both of these closely align with the other existing studies, putting government as the primary actor to drive transformation in the sector[41]. **Educational institutions** are the second most commonly named actor, expected to adapt curricula to industry needs. The survey results show

[38] UNHCR. (2026). Energy attacks amid an unusually harsh winter are exposing Ukraine's civilians to extreme hardship UN human rights monitors say. Available at: https://ukraine.ohchr.org/en/Energy-attacks-amid-an-unusually-harsh-winter-are-exposing-Ukraine-s-civilians-to-extreme-hardship-UN-human-rights-monitors-say
[39] Vlasova, S. (2026). The Ukrainian energy workers risking their lives as Russia targets critical facilities | CNN. Available at: https://edition.cnn.com/2026/01/24/europe/ukrainian-energy-workers-russia-strikes-intl-cmd
[40] UNDP. (2024). Gender Equality and Resilience in Ukraine's Energy Sector: Pathways to Transformative Employment and Leadership Amidst War. Available at: https://www.undp.org/sites/g/files/zskgke326/files/2024-11/undp_gender_equality_and_resilience_in_ukraines_energy_sector.pdf
[41] Deloitte. (2024). Human capital challenges in the energy sector - business and local government perspective in Ukraine. Available at: https://www.deloitte.com/ua/en/about/press-room/human-capital-challenges-energy-sector.html

that **market representatives and employers** are also seen as essential contributors, particularly for identifying actual skills demand and developing training content.

> *"The content of training programs should be developed in collaboration with market representatives, since employers are best positioned to identify the actual demand for personnel and skills"*

In addition to these three main groups, **donors and civil society organisations** are flagged by several survey participants as important enablers — particularly for funding pilot programs, international knowledge exchange, and reskilling of vulnerable groups. Finally, **industry associations** and **trade unions** are mentioned by one respondent as relevant coordinating bodies. Overall, a dominant view is that **multi-stakeholder coordination** is crucial. Companies call for government, industry, and educational institutions to act together rather than any single actor taking sole responsibility. This also reflects the findings of an analytical report titled "Green Jobs for Ukraine's Recovery and European Integration". It identifies the lack of coordination between the education system, government policy, and employer needs as the primary reason behind a critical shortage of skilled professionals in technical, engineering, and innovation-oriented fields like RE[42]. As other existing studies also highlight, cooperation between stakeholders is present but not equally distributed: VET institutions (lyceums, colleges, etc.) are less involved, compared to HEIs[43].

Interviewed company representatives share the concern about the insufficient cooperation. While they admit that private companies and educational institutions have multiple signed memoranda and arrange formal meetings with students and administrations, these tend to stay "on paper", and in practice, there is very limited interaction. Where they see the largest potential benefit is the recruitment of apprentices and recent graduates and joint development of curricula that would reflect real businesses' needs. Apart from that, there is a pressing need to cooperate with education providers on upskilling and requalifying the already experienced employees.

Looking into the future

The concluding section of the report examined the companies' views on how the situation will evolve in the coming years in order to take stock of their perception of the near future of this market. As already shown in response to question 3, a total of 83% of respondents expect their organisation to grow, with the majority pointing to the increasing importance of **wind energy**, **energy and flexibility**, and **bioenergy** (see Figure 1). The pressing need for wind turbine specialists was also emphasised during the follow-up company interviews. At the same time, industry estimates predict that the sector workforce needs to grow by 47% by 2032 to meet the demand[44].

Figure 10. Growth expectations

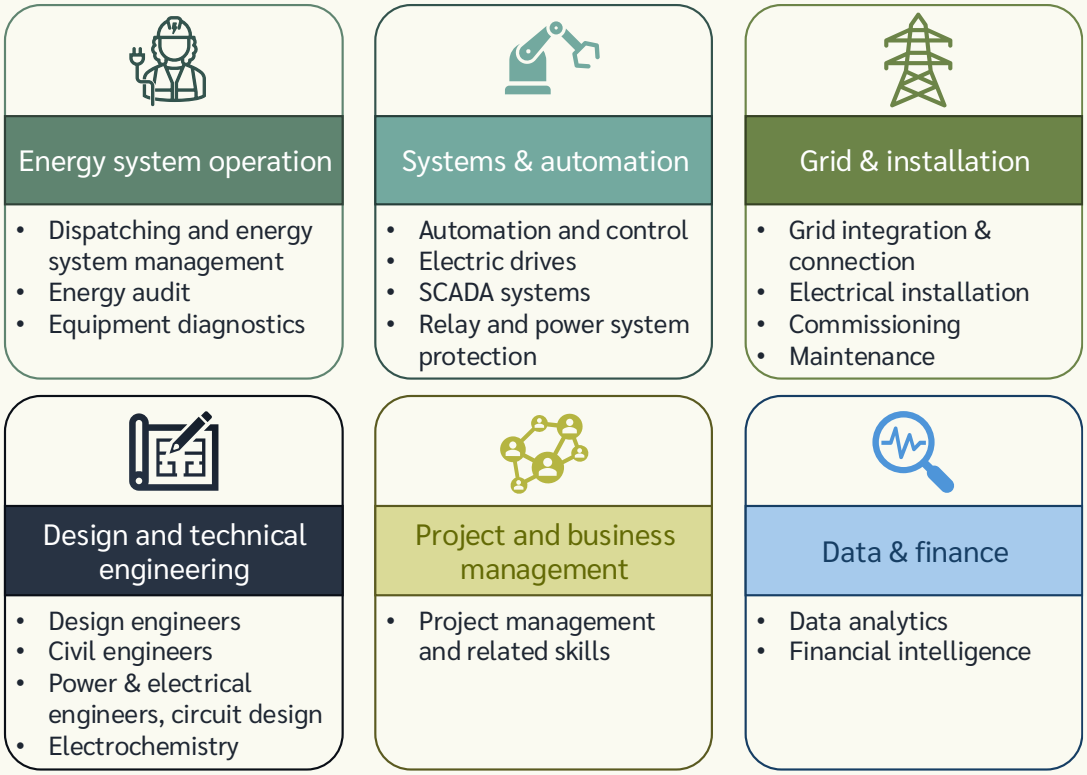


Note: Q3. N=18.

[42] Living Planet. (2025). Green Jobs for Ukraine's Recovery and European Integration. Available at: https://livingplanet.org.ua/images/2025/analytical_report_en.pdf
[43] RePower Ukraine. (2025). The state of labor market and educational opportunities in the renewable energy sector in Ukraine. Available at: https://repowerua.org/uk/uncategorized-uk/stan-rinku-pratsi-ta-osvitnih-mozhlivostej-u-sferi-vidnovlyuvanoyi-energetiki-v-ukrayini-2025/
[44] IREX. (2025). Ukraine Sector Snapshot: Energy. Available at: https://www.irex.org/sites/default/files/node/resource/Ukraine%20Energy%20Snapshot%20V2.pdf

In question 17, the companies were asked to reflect on the skills that they expect to be most critical in their field in the next 2-5 years. Their responses can be generally grouped into six overarching categories, illustrated in the figure below. While it includes examples of specific skills mentioned, the full mapping of responses is presented under Annex 3. In follow-up interviews, stakeholders also shared their expectations that the future years will bring a significant number of international investors, making the competition for a talented workforce even more intense. This, in their view, emphasises the importance of working on finding solutions and developing education already today.

Figure 11. Most relevant skills in the near future (Q17)



Note: Q17, N=18.

The following question 18 asked the companies about the measures they consider the most pertinent and effective to **address the gaps between skills' needs and availability**. More than half of the companies believe that better vocational training programs are essential. Similarly, accessing funding to train and reskill employees is important for 50% of respondents, as is establishing closer cooperation with providers of such training. For one-third of companies, short practical courses and support from the policy and regulatory side are also helpful steps. To facilitate faster transition to distributed energy sources in Ukraine, the International Energy Agency also recommends introducing more certification-based courses in digital technologies, smart grids and cybersecurity, as well as educating more women and boosting their representation[45].

Existing studies also list the following **structural challenges** that VET institutions in the sector face: poor reputation, the war-induced interruption in the education reform, lack of financing, increasing teaching staff shortages, and ineffective management[46]. Addressing this is crucial for improving the skill demand-supply imbalance. Some businesses also see the increase in veteran workforce participation and encouraging the return of those who emigrated as effective strategies to boost

[45] IEA. (2024). Empowering Ukraine Through a Decentralised Electricity System. Available at: https://www.iea.org/reports/empowering-ukraine-through-a-decentralised-electricity-system
[46] DIW-ECON. (2024). Renewable energy in Ukraine: Current institutional environment, investment barriers and prospects. Available at: https://diw-econ.de/wp-content/uploads/JT_UA_DIW-Econ-Report_RES-in-Ukraine_v.1.0.pdf

human capital, as another survey has shown[47]. In follow-up interviews, companies also suggest placing a bigger focus on retraining workforce from declining industries and creating more equal opportunities for women in this sector. Finally, industry experts also recommend setting up **regional training hubs** to reduce geographic imbalances, making recruitment more **targeted**, working on **retention incentives** for experienced technical specialists in critical roles, and establishing **exchange programs** to develop RE expertise and improve curricula[48].

Figure 12. Measures that would help companies address gaps in skills



Note: Q18, N=18.

Finally, in the closing part of the survey, the respondents were encouraged to share any **additional remarks** they had on skills, jobs, or workforce development in Ukraine's energy sector. Their comments broadly focused on the following three themes.

First, **youth retention** is a critical priority. Two respondents flagged the need to keep young professionals in Ukraine. This relates to both preventing emigration and creating visible pathways for career growth within the country. Second, the **military draft exemptions** for energy sector staff are a concern for companies in the sector. For example, respondents raise the issue of officially reserving employees at renewable energy development companies from mobilisation[49]. This reflects the practical staffing pressures facing the sector beyond the general labour shortage. Third, respondents perceive the **government support** for skills or workforce development in the energy sector as **insufficient**.

Conclusions and takeaways

Ukraine's renewable energy sector is expanding faster than its workforce can grow with it. A vast majority of companies that submitted their responses to the survey for the REE-Skill Ukraine project, **83% report a rising need for skilled workers**. But the talent pipeline, from awareness of training options to the relevance of what's on offer, has not kept pace with that demand. The war has reshaped this picture further: it has shrunk the labour pool through mobilisation and migration, while also changing what workers look for when they seek a job. Companies are largely aligned on what needs to happen next. Skills development should be a shared effort across government, educators, and employers, and the sector needs more funding, stronger vocational training, and closer ties between companies and training providers to close the gap.

[47] Deloitte. (2024). Human capital challenges in the energy sector - business and local government perspective in Ukraine. Available at: https://www.deloitte.com/ua/en/about/press-room/human-capital-challenges-energy-sector.html
[48] IREX. (2025). Ukraine Sector Snapshot: Energy. Available at: https://www.irex.org/sites/default/files/node/resource/Ukraine%20Energy%20Snapshot%20V2.pdf
[49] In Ukraine, "reserving" employees refers to the legal mechanism that grants certain employees liable for military service a temporary exemption (deferment) from mobilisation because they perform functions that are critical to the economy, public services, national security, or defence. See more here.

Key takeaways



Growth is concentrated in a few technologies, and so is the pressure on skills. Wind energy, storage and flexibility, and bioenergy are expected to see the most growth in the coming years, compared to today, and these are also the areas where companies feel the skills gap most acutely. This suggests the shortage will keep intensifying in these specific technologies unless training providers align their offerings accordingly.



The hardest skills to find are also the hardest to build quickly. Technical installation tops the list at 44%, followed by electrical and grid expertise, engineering and design, operation and maintenance, and project management, each at 39%. These roles require years of technical training or field experience, so the sector cannot hire its way out of this gap. It has to build these skills over time. Micro-credentials could be one of the solutions to mitigating this problem, boosting labour's specialisation without years of training.



War-driven labour loss is a structural factor, not a temporary disruption. Mobilisation, internal displacement, and emigration have permanently reduced the pool of available workers, and this loss compounds the skills gap rather than sitting apart from it. Training alone will not fix this long-term issue. There is a need for measures that would help mitigate gaps in the availability of critical energy staff, including incentives to reskill and upskill present workers, more lifelong learning initiatives, micro-credential schemes and training.



Companies perceive the availability of training options as reasonably good, but many don't know specific existing initiatives or don't seek them out. 62% of companies believe available training matches the sector's needs reasonably well, yet 56% are unaware of existing reskilling initiatives and 61% never reach out to private training providers. The problem may be less about a shortage of resources and more about weak visibility and underused channels between companies and providers.



Geography compounds every other problem in this sector. Talent, training providers, and the initiatives companies do know about cluster in western Ukraine and Kyiv, leaving other regions underserved. This overlaps with the broader shortage of qualified workers outside major cities. The actions to address these discrepancies need a regional dimension, not a one-size-fits-all approach. Cross-regional and cross-institutional collaboration, as well as agile approaches such as mobile training units, can help ensure the most efficient use of limited resources and costly training materials while providing targeted, practice-oriented training.



What workers want from a job has changed. Job security, fair pay, and flexible or hybrid arrangements now shape where people choose to work, driven by the war and the rising cost of living. Companies that cannot offer these conditions may struggle to attract talent even with strong training investment, since the appeal of a job depends on more than technical growth potential now.



Responsibility for closing the gap is seen as shared, but not equally distributed. Government is consistently named as the actor best placed to set priorities, standards, and funding. Educational institutions and market players, in their turn, are expected to play strong supporting roles. This points to multi-stakeholder coordination as the preferred model, but it also means no single actor, including companies themselves, can be expected to solve this alone.



Companies already know what would help. More than half of the survey respondents would like to see stronger vocational training programs, half wish for easier access to funding for training and reskilling, and a similar share of respondents see a particular value in building closer cooperation with training providers. These are specific, actionable requests, which require follow-through.

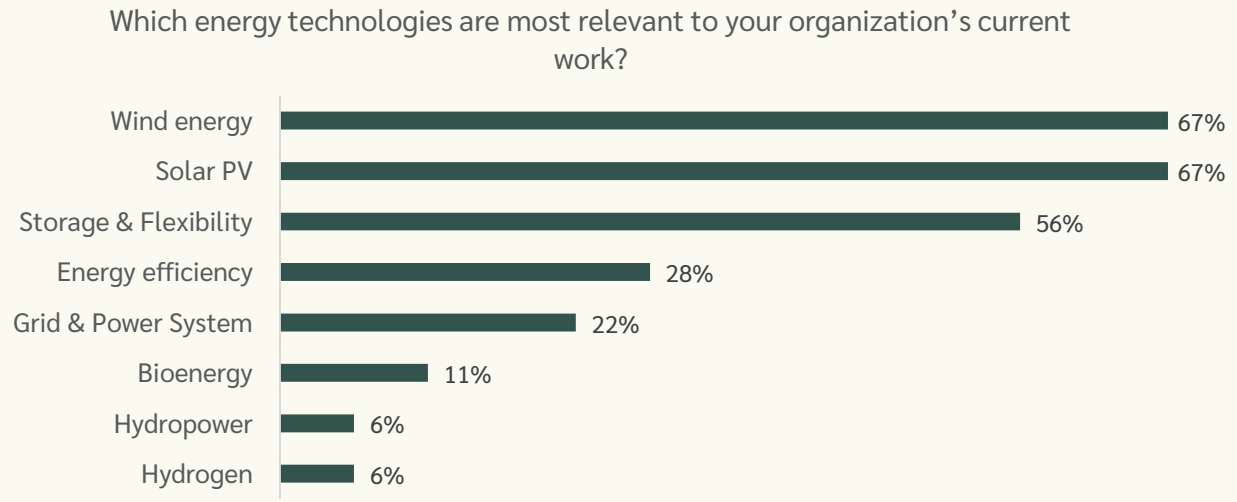
Appendix 1: Methodology

The report builds on the results of a survey conducted among Ukrainian companies in the renewable energy sector. The **questionnaire** was developed by the project team and programmed in an online survey tool to collect the responses electronically. It contained **21 questions**, a mix of single-choice, multiple-choice, and open-ended ones. The questionnaire was divided into **6 thematic sections**: "About the organisation", "Current skills demand & job market", "Skills supply & training pathways", "Social & systemic change", "Participation, coordination & inclusion", and "Looking forward".

A dissemination campaign was launched in late April 2026 and lasted until early June 2026. A total of 80 organisations were contacted throughout the outreach, primarily members of the Ukrainian Wind Energy Association and related stakeholders. As a result, **18 organisations submitted** their responses to the questionnaire.

The profile of companies that participated in the survey is shown in the chart below. The majority of companies operate in the sub-sectors of **wind energy**, **solar PV**, and **storage and flexibility**.

Figure 13. Respondents' profiles



Note: Q2. N=18. Respondents could select any number of available options.

More specifically, the **profiles of the respondents** included the following categories:

- renewable energy developers and investors, spanning solar, wind, biogas, and biomethane;
- engineering, procurement and construction (EPC), technical service providers and construction contractors;
- installation and maintenance service providers;
- energy trading and arbitrage companies;
- companies specialising in energy efficiency;
- public sector organisations;
- other broader or unspecified renewable energy areas.

Additionally, in-depth interviews were held with company representatives, where they shared views on the labour market situation.

Appendix 2: Questionnaire

This appendix contains the questionnaire that was built, programmed and disseminated among Ukrainian energy companies.

Section 1 – About the organisation

0. What is the name of your organisation? (Open-ended)

1. What is your organisation's focus, and what is your role in it? (Open-ended)

2. Which energy technologies are most relevant to your organisation's current work? (Select all that apply)

- Solar PV
- Solar thermal
- Wind energy
- Bioenergy (Biogas/ Biomethane/ CHP/ Biomass CHP)
- Hydropower
- Grid & Power System (Transmission/ Transmission planning & routing/ Cross-border interconnection/ Energy highways (HVDC corridors)/ Distribution/ Protection & control / System restoration/ Inverters /Cybersecurity)
- Storage & Flexibility (Battery/ Thermal/ Hydropower/ Backup generators / Demand-side flexibility/ Microgrids/ Resilience/ System Restoration)
- Energy efficiency (Buildings/ District heating/ Industry)
- Fossil energy (Oil/ Gas/ Coal)
- Hydrogen (Production/ Storage/ Infrastructure/ Power-to-X)
- Nuclear (Existing/ New build)
- Other (please specify)

3. Is your organisation experiencing or expecting to experience growth? (Select one)

- Yes
- No
- Not sure

4. In what technologies are you seeing or anticipating the growth? (Select all that apply) (The same technology list from Question 2)

Section 2 – Current skills demand & job market

5. Over the past 2–3 years, how has your need for skilled workers changed? (Select one)

- Significantly increased
- Slightly increased
- Stayed the same
- Decreased
- Significantly decreased
- Not applicable / unsure

6. Which types of skills are currently hardest for you to find? (Select up to 3)

- Technical installation skills (e.g. PV, wind, biomass)

- Operation & maintenance
- Electrical / grid-related skills
- Engineering / design
- Project management
- Health & safety / compliance
- Digital / monitoring / data skills
- We do not face major skill shortages
- Other (please specify)

7. Compared to before 2022, how would you describe today's job market for energy-related skills in Ukraine? (e.g. availability of workers, competition, wages, profiles) (Open-ended)

Section 3 – Skills supply & training pathways

8. When you need skilled workers today, do you know where to find or how to help them upskill? (Select one)
- Yes
- Partly
- No
- Not applicable/unsure

9. Are you aware of any initiatives or programs focused on skills development or reskilling in energy or green technologies in Ukraine? (Select one)
- Yes – If yes: Please name or briefly describe them. (Open-ended)
- No
- Not appliable/unsure

10. How well do current training or education offers match the real needs of your organisation or sector? (Select one)
- Very well
- Somewhat well
- Poorly
- Very poorly
- Not applicable/unsure

11. Do you ever turn to private organisations to fill your skills demand?
- Yes
- No
- Other (please specify)

Section 4 – Social & systemic change

12. From your perspective, what would you say are the biggest changes within the labour market of Ukraine in recent years? (Open-ended)

13. Have you seen a change in what people's preferences are? (e.g. career shifts, new profiles, increased interest, new actors) (Open-ended)

14. Do you see people moving (or wanting to move) into renewable energy or energy-related jobs more than before? (Select one)
- Yes, clearly

- To some extent
- No noticeable change
- Not applicable/unsure

Section 5 – Participation, coordination & inclusion

15. Do you feel your organisation is included in discussions or decision-making around skills development and workforce planning in the energy sector? (Single choice)

- Yes
- Partly
- No
- Not applicable

16. Who do you think should play a stronger role in coordinating skills development for energy technologies in Ukraine? (e.g. government, industry, NGOs, education providers, donors) (Open-ended)

Section 6 – Looking forward

17. In the next 2–5 years, which skills do you expect will become most critical in your field? (Open-ended)

18. What would help your organisation most in addressing skills gaps? (Select up to 3)

- Better vocational training programs
- Short, practical courses / certifications
- Closer cooperation with training providers
- Funding for training or reskilling
- Better information / coordination
- Policy or regulatory support
- Other (please specify)
- Not applicable/unsure

19. Is there anything else you would like to share about skills, jobs, or workforce development in Ukraine's energy sector? (Open-ended)

20. Would you be open to a short follow-up interview and/or a stakeholder meeting?

- Yes
- No

Appendix 3: Skills mapping

Question 18: Skills and profiles expected to become most critical (next 2–5 years)

- Engineering — design and technical
  - Design engineers (mentioned by multiple respondents)
  - Civil / structural engineers
  - Power / electrical engineers
  - Circuit design engineers
  - Research engineers in electrochemistry
- Engineering — systems and automation
  - Automation and control systems specialists
  - Automated control system (ACS) engineers
  - Electric drives specialists
  - SCADA systems specialists
  - Relay protection / power system protection engineers
- Engineering — grid and installation
  - Grid integration specialists
  - Electrical installation workers
  - Grid connection specialists
  - Commissioning engineers
  - Installers and maintenance specialists
- Energy systems operation
  - Dispatching and energy system management specialists (particularly for wind and BESS)
  - Energy managers
  - Energy auditors
  - Maintenance engineers for modern energy equipment
  - Equipment diagnostics engineers
- Project and business management
  - Project managers
  - Qualified managers / responsible workers
- Data and finance
  - Data analytics
  - Financial literacy