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White Paper on The State Fund for Decarbonisation and Energy Efficient Transformation of Ukraine and the incentive scheme for the Voluntary Agreement Scheme for Energy Efficiency

INCENTIVIZE ENERGY EFFICIENCY IMPROVEMENTS IN THE INDUSTRIAL SECTOR IN UKRAINE (UDEPP 2024, OUTPUT 3.1)  $30^{\text{TH}}$  April 2025











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### 1 Introduction

Energy efficiency is a key pillar in Ukraine's strategy for economic modernization, energy security, and climate action, particularly as the country aligns with EU energy policies and decarbonisation commitments and energy security. However, multiple barriers, including financial constraints, regulatory challenges, technological limitations, geopolitical challenges and limited access to relevant information have hindered the widespread adoption of energy-efficient measures.

In recent years, Ukraine has taken significant steps to establish policy and financial mechanisms that encourage energy savings in the industrial and municipal sectors, helping to reduce reliance on fossil fuels, lower production costs, and enhance competitiveness. These efforts have led to the creation of structured financial incentives and regulatory frameworks, such as the Voluntary Agreement Scheme (VAS) and the State Fund for Decarbonisation and Energy Efficient Transformation of Ukraine<sup>1</sup>, which provide businesses and municipalities with the necessary resources to invest in energy efficiency improvements.

As part of the Energy Partnership Programme between Ukraine and Denmark (UDEPP), this white paper forms a deliverable under the 2024 TORs for Output 3.1 Support the implementation, operation and evaluation of the Voluntary Agreement (VA) scheme, as an initiative under the State Fund for Decarbonisation and Energy Efficient Transformation of Ukraine, to incentivize energy efficiency projects in the industrial sector in Ukraine.

Given the rapid progress during 2024 with respect to launch and operationalization of the State Fund for Decarbonisation and Energy Efficient Transformation of Ukraine and the related Voluntary Agreement Scheme, this document goes beyond the originally intended assessment of barriers and possibilities for upscaling energy efficiency improvement in a targeted industrial sector in Ukraine. Instead, it provides a comprehensive status update on the policy and financial frameworks that have been established, highlighting their role in incentivizing industrial energy efficiency improvements in Ukraine. Furthermore, it presents a detailed description of the key outcomes achieved, including the structure and operational mechanisms of the VAS and the Decarbonisation Fund, their current implementation status, and an assessment of their expected impact based on the projects already supported. Finally, a roadmap for next steps in relation to State Fund for Decarbonisation and Energy Efficient Transformation of Ukraine and the Voluntary Agreement Scheme is outlined with special emphasis on upscaling energy efficiency improvements in targeted industrial sectors in Ukraine.

<sup>&</sup>lt;sup>1</sup> Decarbonisation Fund of Ukraine: <u>AKLIOHEPHE TOBAP/ICTBO ФОНД ДЕКАРБОНІЗАЦІЇ УКРАЇНИ</u>

In addition, Appendix A, includes the whitepaper / policy paper prepared by experts from the Decarbonisation Association 'Cogen Ukraine' within the framework of cooperation with the Ukrainian-Danish Energy Partnership Program. It presents key frameworks for energy efficiency and decarbonisation in Ukraine and introduces a step by step guide for companies interested in applying for state financial assistance, along with key application documents related to the Decarbonisation Fund and the Voluntary Agreement Scheme.

The development of the Voluntary Agreement Scheme for Ukraine has been inspired by the Danish model for industrial energy efficiency, where voluntary agreements between authorities and enterprises, combined with targeted financial incentives, have proven to be an effective approach to driving energy savings<sup>2</sup>. The establishment of the Decarbonisation Fund and the VAS in Ukraine has drawn directly from these experiences, adapting them to the Ukrainian context to ensure their effectiveness and feasibility. The objective has been to create a framework that not only supports enterprises in implementing energy efficiency measures but also provides a key tool in the implementation of Ukraine's strategies in the field of energy efficiency, decarbonisation and energy supply security.

#### 2 International experience with Voluntary Agreement Schemes

Energy efficiency is the cheapest source of clean fuel for industry and many energy efficiency projects in industry have payback times below 4 years.<sup>3</sup>

For enterprises, investments in energy efficiency will help reduce their energy costs, thereby improving their competitiveness. But enterprises implementing energy efficiency investments often realize several additional benefits in terms of reduced maintenance costs, improved process productivity, more efficient raw material use, better product quality control and compliance with supply chain requirements for CO<sub>2</sub> emission reporting and climate action. For the country, energy efficiency investments in industry also mean job creation (plant renovation, equipment installation, energy management, audits), reduction in emissions (CO<sub>2</sub>, NOX, SO2 and PM), reduced investment pressure for new generation, transmission and distribution capacity, as well as increased energy supply security and reduced foreign exchange spent on fuels import.

However, there are also significant challenges for accelerating energy efficiency investments in industry, as many enterprises have limited capacity to identify and implement energy efficiency investments and limited capacity to finance energy efficiency investments.

<sup>&</sup>lt;sup>2</sup> Ellegard & Petersen, 2017: <u>25 years of experiences with Voluntary Agreement Scheme for Large Industries in Denmark</u> <sup>3</sup>The median payback time for more than 17,000 realised energy efficiency projects in industry in the EU is 3 years, based on data

<sup>&</sup>lt;sup>3</sup>The median payback time for more than 17,000 realised energy efficiency projects in industry in the EU is 3 years, based on data collected by the European Commission: <u>https://deep.ec.europa.eu/</u>

To address this, more than 30 countries in EU, North America and Asia have introduced VAS for energy efficiency in large industries. VAS are generally evaluated to be cost-efficient policy measures where the benefits for industries and society are higher than the costs of operating the schemes. The effectiveness and efficiency of VAS has been well documented through evaluations of the Danish VAS<sup>4</sup> and cross-country studies of VAS implementation<sup>5</sup>. The basic mechanism behind a successful scheme is that the government offers participation in a VAS to improve energy efficiency for large industries and that participation is linked to both obligations and incentives.

Obligations required by government for participating enterprises may include carrying out energy audit, setting improvement target, establishing an Energy Management System, installing identified energy saving projects with payback less than a certain number of years, and monitoring and reporting on energy consumption and progress in energy efficiency.

Incentives offered by government for participating enterprises may include access to tools and guidelines, training and information activities, grants for technical assistance, access to investment financing at attractive rates, tax benefits, and investment grant to reduce the payback time for longer term investments.

A key learning from implementing VAS for energy efficiency in industry across many countries are that audits, energy management systems, and systematic working procedures are important cornerstones in all VAS. Furthermore, technology guidance and competence building for energy managers and consultants are important tools to assist companies with knowledge and information on best practices. Finally, energy efficiency is not only a about "quick wins" – it is a long term, continued and systematic effort and voluntary agreements are very well suited to address such a development, allowing enterprises to deliver energy savings year after year. Another key learning is that VAS with strict requirements (saving targets and verification) deliver much more energy savings than schemes with few requirements - but also that VAS with strict requirements must apply incentives to be attractive for the companies.

### **3** Background on the Voluntary Agreement Scheme in Ukraine

In 2020, a project was conducted under UDEC II to assist stakeholders of the VAS (SAEE, enterprises and banks) to prepare for the launch of the VAS in Ukraine. Energy efficiency pilot projects were identified at five enterprises and capacity training sessions were conducted. The

<sup>&</sup>lt;sup>4</sup> Ellegard & Petersen, 2017: <u>25 years of experiences with Voluntary Agreement Scheme for Large Industries in Denmark</u>

<sup>&</sup>lt;sup>5</sup> Price, Lynn, 2005 and Cornelis, Erwin, 2019 <u>https://escholarship.org/uc/item/67c4x06h</u> <u>https://www.sciencedirect.com/science/article/abs/pii/S0301421519303738</u>

aim of the activities was to contribute so that the VAS will become immediately operational when it is approved in the Verkhovna Rada of Ukraine in 2021. During 2020, the VAS became an integrated initiative under the planned Decarbonisation Fund, which was expected to provide financing to support energy efficiency measures across several sectors of society in Ukraine, e.g. industry, buildings, transport.

In the meantime, of the development of the project and different initiatives, Ukraine's energysectors faced a unique and complex set of challenges in the current geopolitical and economic landscape. The ongoing Russian full-scale invasion has had a profound impact on the country's energy infrastructure, with targeted attacks on energy facilities leading to supply disruptions, power shortages, and increased vulnerability in the energy sector. These challenges have underscored the critical need for energy security, decentralization, and resilience, making energy efficiency a key strategic priority for the Ukrainian government. By reducing dependence on external energy sources and improving industrial efficiency, Ukraine can mitigate the economic and societal costs of energy disruptions while strengthening its long-term energy security.

Beyond the immediate security concerns, Ukraine is also undergoing a major transformation in its energy and climate policies, largely driven by its aspirations for EU accession. Since being granted EU candidate status in 2022<sup>6</sup>, Ukraine has taken significant steps to align its regulatory framework with EU climate and energy agenda. The adoption of the Law on Energy Efficiency of Ukraine (LEEU) in November 2021<sup>7</sup> established a legal, economic, and organizational framework for energy efficiency initiatives, while the National Energy and Climate plan (NECP2030)<sup>8</sup> and National Energy Efficiency Action Plan for Ukraine until 2030 (NEEAP2030)<sup>9</sup> outlines clear targets and strategies for improving energy performance across sectors.

These legislative measures reflect Ukraine's commitment to decarbonisation and sustainable industrial development, ensuring compliance with European Union policies and strengthening its position in future accession negotiations.

Another key driver of Ukraine's energy efficiency efforts is the European Union's Carbon Border Adjustment Mechanism (CBAM), which was introduced in late 2023 and is currently being phased in across the EU<sup>10</sup>. As a country with a strong industrial export sector, Ukraine will need to align its production standards with CBAM regulations to maintain access to EU markets. This places additional pressure on Ukrainian industries to implement energy efficiency improvements, reduce carbon emissions, and modernize production processes. Failure to do

<sup>&</sup>lt;sup>6</sup> <u>Ukraine - European Commission</u>

<sup>&</sup>lt;sup>7</sup> Law of Ukraine "On Energy Efficiency" - Verkhovna Rada of Ukraine

<sup>•</sup> National Energy and Climate plan 2030

<sup>&</sup>lt;sup>9</sup> National Action Plan for Energy Efficiency 2030

<sup>&</sup>lt;sup>10</sup> Carbon Border Adjustment Mechanism - European Commission

so could result in higher costs for Ukrainian exporters due to carbon pricing adjustments at the EU border, potentially impacting industrial competitiveness.

The combination of geopolitical instability, rising energy prices, regulatory changes, and decarbonisation goals makes energy efficiency a strategic imperative for Ukraine. Energy efficiency improvements will not only reduce the societal and economic burden of high energy costs but also increase industrial competitiveness and resilience in the face of future challenges. The framework for the Decarbonisation Fund and the VAS, developed as part of the Energy Partnership Programme between Ukraine and Denmark (UDEPP 2024, Output 3.1), are key instruments in addressing these challenges. The implementation of the VAS is grounded in Ukraine's broader energy efficiency and decarbonisation strategy, supported by a solid legislative and institutional framework. The State Agency for Energy Efficiency and Energy Saving of Ukraine (SAEE) oversees the operation of the VAS, evaluating project proposals and ensuring compliance, while the Decarbonisation Fund plays a crucial role in financing the agreed-upon energy-saving measures through preferential loan schemes. By integrating energy efficiency measures into Ukraine's broader industrial and economic strategy, the country is positioning itself for a more sustainable, resilient, and competitive future, ensuring that its industries can meet both short-term energy security needs and long-term EU climate commitments.

# 4 The Voluntary Agreement Scheme and the State Fund for Decarbonisation and Energy Efficient Transformation of Ukraine

#### 4.1 The development of the Voluntary Agreement Scheme in Ukraine

The design of the Voluntary Agreement Scheme (VAS) in Ukraine has undergone fundamental changes since 2020. While the original scheme focused on installing energy-efficient equipment and upgrading industrial processes, the final design has a broader decarbonisation mandate including both energy efficiency and renewable energy and a broader sector mandate with coverage of buildings, industry and municipal utilities. This shift reflects Ukraine's growing commitment to energy security, decarbonisation, and alignment with EU standards, particularly in light of its aspirations for EU accession.

A difference in the final design is the way companies participate and demonstrate progress. Previously, enterprises could receive support based on completed technological upgrades, with limited requirements for demonstrating long-term energy savings. In contrast, the updated VAS requires clear energy efficiency or decarbonisation targets, such as reducing energy intensity or increasing the use of renewable energy sources. Additionally, companies must undergo an energy audit and submit more detailed project documentation, ensuring that state support is directed toward projects that deliver real impact.

The financial structure has also been significantly strengthened. Where the original design relied on loan repayment subsidies through partner banks, the final design includes parallel options for loan interest rate subsidies linked to financing from partner banks and direct lending at subsidized rates through the Decarbonisation Fund. This allows priority projects (e.g. in municipal utilities) to be implemented independent of the beneficiary's ability to access bank financing under normal creditworthiness assessments.

Beyond financial improvements, the monitoring and compliance mechanisms have been enhanced, ensuring that beneficiaries remain accountable for their commitments. Rather than simply reporting energy usage after equipment installation, enterprises are now required to demonstrate ongoing efficiency improvements, reinforcing the link between state support and actual energy savings.

The next sections will explore how the updated VAS and the Decarbonisation Fund function in practice, detailing the mechanisms that will support Ukraine's path toward a more energy-efficient and resilient industrial sector.

#### 4.2 Objective of the Voluntary Agreement Scheme

The primary goal of the VAS is to accelerate energy efficiency improvements in Ukraine's industrial sector by providing state-supported financial mechanisms and establishing clear energy-saving commitments between companies, entrepreneurs, municipalities, enterprises and SAEE. It's the vision, that it should become a catalyst of changes in the implementation of state programs providing loans for businesses and bodies of local self-government and furthermore aligns with the commitment to the European principle "Energy efficiency first" and compliance with the European Green Deal.

The VAS is structured to accommodate different types of agreements, depending on the participating stakeholders and the nature of the state support provided. Financial support under the VAS is provided through two parallel mechanisms: loan interest rate subsidies for financing from partner banks (commercial banks with at least 50% state participation), and direct lending at subsidized rates from the Decarbonisation Fund.

#### The State Fund for Decarbonisation and Energy Efficient Transformation of Ukraine:

The State Fund for Decarbonisation (DFU) is replenished through the revenues of the CO<sub>2</sub> emissions tax (a component of the environmental tax on enterprises), government borrowing, and other revenues according to approved law no. 8433 by Verkhovna Rada of Ukraine<sup>11</sup>.

The Joint Stock Company Decarbonisation Fund of Ukraine (JSC DFU) is a 100 percent government owned state joint-stock company including a Supervisory Board and is dedicated to supporting projects by offering preferential financing for approved energy-saving and decarbonisation measures. Olesia Mishchenko is director chairman of the Board JSC DFU. Additionally, a Supervisory Board of JSC DFU is established and the composition was in place in 2024. Five members were appointed and listed below:

- State Representative Mariia Viktorivna Malaia
- State Representative Nataliia Bohdanivna Holovan
- Independent Member of the Supervisory Board Viktoriia Semenivna Koltun
- Independent Member of the Supervisory Board Yevhen Zhannovych Hutkov
- Independent Member of the Supervisory Board Maksym Andriiovych Komarov

At present, the process of forming a new composition of the Supervisory Board is ongoing. The approval of the new composition of the Supervisory Board is expected by the end of March 2025.

As part of its mandate, DFU provides financial support through a structured loan application. A preferential loan may be provided as a commercial loan from a partner bank with interest rate compensation coordinated by the SAEE. Additionally, the DFU functions as a risk mitigation mechanism, by providing direct loans for projects that may involve higher investment risks and cannot be funded through partner banks. Since 2025 the financial tools have been expanded to include leasing and factoring. By ensuring a stable and structured financing framework, the fund helps reduce uncertainty for businesses investing in energy efficiency improvements and renewable energy, making long-term sustainability projects more viable and financially secure. The loan amount is from UAH 120,000 (EUR 2,750 eq.) to UAH 25 million (EUR 572,000 eq.), where the loan maturity is from 1 to 10 years. As of January 2025 the loan amount is exceeded to 90 million UAH (EUR 1.980,000). Direct loans from DFU have a preferential rate of maximum 9% per annum. The rate is reduced by 2% (to 7%) if more than 70% of the project cost is used in the project of equipment from a national manufacturer. A minimum of 15% cofinancing from the applicant is required.

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<sup>&</sup>lt;sup>11</sup> On amendments to Chapter VI "Final and transitional provisions" of the Budget Code of Ukraine regarding the use of funds from accounts for the support of Ukraine." <u>Картка законопроекту - Законотворчість</u>

#### Partner banks and financial institutions:

Several commercial banks (with at least 50% state ownership) act as financial intermediaries, providing government-backed loans for companies participating in the VAS. Enterprises that secure financing through partner banks must meet predefined loan eligibility criteria, ensuring that their projects align with national energy efficiency and sustainability targets. The banks provide long-term loans (up to 10 years) with compensation of interest, up to 12% compensation, or 14% for projects using Ukrainian-produced equipment. Furthermore, the maximum loan sizes available through different categories of financing provided by commercial banks: 90 million UAH for modernization of communal infrastructure; 60 million UAH for energy modernization of enterprises; and 2 million UAH for thermal modernization of public buildings through Energy Service Companies (ESCO's).

#### 4.2.1 Eligible entities

The recipients of financial support under the VAS can be classified into four main categories, each benefiting from tailored agreements suited to their role in implementing energy efficiency improvements

#### Individual Entrepreneurs

Independent business owners who seek to implement small-scale energy efficiency improvements can enter a VA to receive financial and technical support for upgrading their operations. This could include adopting energy-saving technologies, improving production efficiency, or integrating renewable energy solutions into their business processes.

#### Enterprises

Industrial and commercial enterprises can access financing by committing to reducing energy intensity, implementing energy-efficient technologies, and transitioning to alternative energy sources in exchange for state-backed financial incentives. The agreements define specific energy-saving targets and compliance requirements, ensuring measurable efficiency gains.

#### Local Authorities and Municipalities

Public sector entities, such as local governments and municipal organizations, can enter into VA to improve energy efficiency in public infrastructure. This includes measures such as modernizing district heating systems, upgrading street lighting, and enhancing the energy performance of municipal buildings.

#### Energy Service Companies

These companies specialize in providing energy efficiency solutions and can enter VA to implement projects on behalf of enterprises or municipalities. By working with ESCOs,

businesses and local governments can access specialized expertise and financial structuring for implementing long-term energy-saving measures.

#### 4.2.2 Requirements of the projects

To qualify for state financial support under the Decarbonisation Fund applicants must submit a formal application that complies with the requirements outlined in Appendix A to the Procedure for the Use of Funds, as approved by the Cabinet of Ministers of Ukraine (Resolution No. 761, dated June 21, 2024)<sup>12</sup>. Projects must contribute to energy efficiency improvements, emissions reductions, or the integration of renewable energy sources while meeting eligibility requirements to ensure measurable environmental and economic benefits. One of the requirements is achieving a minimum 15% reduction in the energy intensity of production, ensuring that industrial processes significantly improve their efficiency. Additionally, projects replacing fossil fuels with renewable alternatives must demonstrate that at least 50% of their energy efficiency policies is also mandatory, including alignment with legal requirements for energy-efficient buildings, industrial processes, and public infrastructure, as well as demonstrate their financial viability through secured co-financing or state-backed lending mechanisms.

Projects related to industrial energy efficiency improvements must specify the expected percentage reduction in energy intensity per unit of production or service provision compared to existing levels, as well as the percentage decrease in greenhouse gas emissions (including  $CO_2$ ) and other pollutants.

For projects involving cogeneration plants and heat pumps, applicants must detail the expected reduction in fuel and energy consumption, ensuring that these technologies lead to tangible efficiency gains. Additionally, they must quantify the anticipated reduction in greenhouse gas emissions, demonstrating how the project will contribute to lowering environmental impact.

Projects focused on renewable energy and alternative fuels must clearly define the share of fossil fuel replacement, excluding peat and methane from coal deposits, as well as the proportion of electricity and thermal energy that will be replaced by renewable sources. These projects must also provide estimates of greenhouse gas emissions reduction, proving their effectiveness in transitioning to more sustainable energy sources.

<sup>&</sup>lt;sup>12</sup> Cabinet of Ministers of Ukraine (2024) Thee Decree on establishing the Order of utilisation of the funds of the State Fund for Decarbonisation and Energy Effcient Transformation from the 21st of June 2024 No. 761: https://zakon.rada.gov.ua/laws/show/761-2024- %D0%BF#Text

In the transport sector, projects aiming to replace motor fuel consumption with electricity must specify the percentage of fuel replacement achieved through the adoption of electric-powered transport. Furthermore, they must outline the expected reduction in greenhouse gas emissions, ensuring that the shift to electric mobility aligns with national decarbonisation efforts.

For thermal modernization and energy efficiency improvements in buildings, projects must indicate the expected post-project energy efficiency classification. This classification includes buildings that achieve close to zero energy consumption (highest efficiency), exceed the minimum energy efficiency requirements, meet the national efficiency standard, or are currently below the required threshold but will be brought up to compliance through the project. By ensuring that buildings meet or exceed the energy efficiency benchmarks, the Decarbonisation Fund contributes to reducing energy demand and improving overall building performance.

To verify compliance with these requirements, applicants must submit supporting documents, including a comprehensive project description detailing the expected outcomes, an energy audit report or conclusion of an energy management service identifying efficiency potential, and an energy efficiency certification if the project involves buildings. A list of energy-efficient measures must outline the specific machinery, equipment, and materials required for implementation, while a certificate of origin for equipment may be submitted to qualify for additional financial benefits if using locally produced technology.

#### 4.2.3 Application process and approval steps



Figure 1: Stages of project consideration, agreement and implementation

As illustrated in figure 1, the VAS operates through a structured application and approval process, ensuring that projects meet efficiency and compliance criteria before receiving state support. The process is described more detailed in the following steps:

#### Step 1: Submission of Application

Enterprises, municipalities, or other eligible entities submit an application to SAEE (refer to Appendix A) including:

- A project description, detailing the planned energy efficiency measures and expected impact
- Either 1) An energy audit report, identifying efficiency potential and estimated energy savings; 2) Conclusion of an energy management service of the economic entity regarding the need to introduce energy-efficient measures; or 3) a certificate of energy efficiency (if applicable).
- Proof of financing, depending on the type of agreement:
  - For direct DFU financing: Applicants must confirm eligibility for interest compensation or direct financial support from the fund.
  - For financing through partner banks: A loan agreement with an approved commercial bank or financial institution must be included.

#### Step 2: Evaluation and Approval

Once submitted, applications undergo evaluation by two key entities:

- SAEE reviews the project to assess its alignment with national energy efficiency goals, feasibility, and energy-saving potential
- Decarbonisation Fund's management committee evaluates whether the project qualifies for interest compensation.

#### Step 3: Signing of the Voluntary Agreement

Once approved, the enterprise signs a formal VA with SAEE, establishing:

- <u>The energy efficiency commitments</u>, including target savings and implementation timelines.
- <u>The financial terms</u>, including details of support from the Decarbonisation Fund or financial institutions.
- <u>Monitoring and reporting obligations</u>, ensuring compliance with state-backed funding requirements.
- <u>Penalties for non-compliance</u>, ensuring that support is only maintained for projects that meet performance expectations.

#### Step 4 : Monitoring and Compliance

Once the agreement is signed and funding is allocated, the recipient proceed with the implementation of their energy efficiency project. Throughout the agreement period, SAEE and the financial institutions are involved in the monitoring of project implementation to ensure compliance. Enterprises must:

- <u>Submit annual reports</u> detailing energy savings, implementation progress, and financial expenditures.
- <u>Provide verification</u> of installed equipment and adopted energy efficiency measures.
- <u>Demonstrate compliance</u> with agreed targets (e.g., CO<sub>2</sub> reductions, energy savings).

If the eligible entity fails to meet obligations it may result in financial support reduction or revocation, repayment of improperly used funds or restrictions on future participation in statesupported energy efficiency programs.

#### 4.3 Initial results of the State Fund for Decarbonisation and Energy Efficient Transformation of Ukraine and Voluntary Agreement Scheme

Since its official launch, the Decarbonisation Fund, established under Resolution of the CMU No. 76113, has made significant progress in financing energy efficiency projects and supporting the implementation of the VAS.

With the approval of the operational framework in June 2024, the fund has become fully operational, actively financing projects that align with Ukraine's decarbonisation and energy efficiency goals. The state budget for 2024 allocates approximately 800 million UAH to the fund, with an expected increase to 1.750 billion UAH in 2025, ensuring continued financial support for industrial and municipal energy-saving initiatives.

The first loan under the VAS was issued in September 2024, with UAH 18 million allocated to financing an energy service project for the street lighting network in Voznesensk, Mykolaiv region. This project is expected to reduce electricity consumption, lower carbon dioxide emissions with 37%, and generate savings for local budgets (38%), demonstrating the tangible benefits of the fund's financial support for municipal energy efficiency initiatives<sup>14</sup>.

By February 28, 2025, the fund had already financed 21 energy efficiency projects, allocating a total of UAH 212 million, while additional projects were under review and in preparation for

<sup>&</sup>lt;sup>13</sup> Cabinet of Ministers of Ukraine (2024) Thee Decree on establishing the Order of utilisation of the funds of the State Fund for Decarbonisation and Energy Effcient Transformation from the 21st of June 2024 No. 761:

https://zakon.rada.gov.ua/laws/show/761-2024- %D0%BF#Text

<sup>&</sup>lt;sup>14</sup> First voluntary agreement in Annex B

financing, demonstrating a strong pipeline of upcoming initiatives. To date, projects have been funded in Mykolaiv, Odessa, Kyiv, Dnipropetrovsk and Lviv regions.15

The total value of projects assessed so far amounts to UAH 320 million, reflecting a growing interest from industries and municipalities in leveraging the fund's financial mechanisms. The expected impact of these projects includes a planned reduction in electricity consumption by 531 MWh per year, resulting in an estimated UAH 5 million in annual savings, as well as a  $CO_2$  emissions reduction of approximately 20% per project, equivalent to 620 tons annually. The expanding project pipeline positions the fund to further scale up its impact, driving deeper energy savings and contributing to Ukraine's long-term climate strategy and energy security goals. The different projects are illustrated below, showing the expected (ex ante) energy consumption savings per year (MW) and  $CO_2$  emission savings (tCO<sub>2</sub>) under the Voluntary Agreement, for the individual approved projects. The graphs are further differentiate projects with savings above and below 200 MW (to facilitate reading).



Energy consumption savings in MW per year (plan) under the Voluntary Agreement
 CO2 emission savings (plan), tCO2 under the Voluntary Agreement

Figure 2: Energy consumption savings per year (MW) and  $CO_2$  emission savings (t $CO_2$ ) under the Voluntary Agreement (below 200 MW)

<sup>&</sup>lt;sup>15</sup> Intervies with Chairman of the Board of DFU (2025): Interview with the Head of the Decarbonisation Fund Olesia Mishchenko | EcoPolitic







In terms of energy consumption savings most projects achieve savings below 1,500 MW per year, with a few ranging between 50–700 MW. However, two exceptionally large projects stand out with 14,408 MW (Installing an exhaust gas economizer) and 15,984 MW (replacement of natural gas for heating with wood chips) in annual savings.

The energy consumption savings and  $CO_2$ -emission savings vary significantly depending on the scope of the individual project. Some projects with relatively high energy savings achieve only moderate  $CO_2$  reductions, while others with more modest energy savings result in disproportionately high  $CO_2$  reductions. This suggests that factors such as the type of energy replaced, the efficiency of the implemented measures, and differences in baseline emissions play a role in determining the overall impact of each project. For example, project 6 (on the above charts) involves the installation of a solar PV station, which achieves both significant energy savings and high  $CO_2$  reductions. In contrast, project 3 focuses on installing an individual heating point at a school resulting in greater energy savings than  $CO_2$ - reductions. Another common reason for the differentiation is that some projects within the same company portfolio involve smaller operations, such as project 17: the installation of a steam superheater (144 t $CO_2$ ) or project 16: an ash remover (144 t $CO_2$ ). These are minor compared to major projects like project 20: installing an 8 MW steam boiler and project 21: installing an exhaust gas economizer, yet they are still considered separate projects.

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The table below shows the cost efficiency of the 21 funded projects (please note that the ordering is based on the project applicants and is therefore different from the charts above).

Project description	Total project cost, UAH	Expected energy consump tion savings in MW per year	Invest ment per KWh saving per year (UAH/k Wh)	Assumed invest- ment lifetime (years)	Abatement cost - Investment per KWh saved over investment lifetime (EURcent/ kWh)
ESCO - Street lighting network	27 104 075	608 0	E2 2	15	7.0
ESCO - Heating of pre-school	642.588	55,5	11,6	15	1,7
ESCO - Heating of pre-school	652.268	80,8	8,1	15	1,2
ESCO - Heating of pre-school	622.268	86,1	7,2	15	1,1
ESCO - Heating of pre-school	682.268	51,6	13,2	15	2,0
ESCO - Heating of pre-school	622.268	71,0	8,8	15	1,3
ESCO - Heating of pre-school	622.268	76,5	8,1	15	1,2
Replacement of inefficient natural gas boiler (wholesale trade)	30.000.000	15.984,0	1,9	15	0,3
Waste heat recovery from flue gas (wholesale trade)	29.411.765	14.407,6	2,0	15	0,3
Installation of a steam superheater for a steam boiler (wholesale trade)	29.700.000	720,4	41,2	15	6,1
Installation of an air supply system with equipment and a multicyclone (wholesale trade)	31.300.000	200,0	156,5	15	23,2
Installation of an ash removal system and emergency cooling system (wholesale trade)	31.255.000	720,4	43,4	15	6,4
Installation of solar power plant at a critical infrastructure facility (food industry)	31.251.000	1.436,0	21,8	10	4,8
ESCO - Solar power plant station at critical infrastructure facility (WWTP)	2.863.050	123,9	23,1	10	5,1
ESCO - Solar power plant station at critical infrastructure facility (water pumping)	5.714.550	74,3	76,9	10	17,1
ESCO - Solar power plant station at critical infrastructure facility (water pumping)	3.380.490	247,8	13,6	10	3,0

ESCO - Solar power plant					
(government building)	2.500.000	69,5	36,0	10	8,0
Hybrid Solar power plant					
integrated into the power grid	3/ 071 035	1 378 0	25.4	10	5.6
(office and warehouse complex)	54.571.555	1.578,0	23,4	10	3,0
ESCO - Solar power plant at					
critical infrastructure facility	2 081 212	527	56.6	10	12.6
(water pumping station)	2.301.212	52,7	50,0	10	12,0
ESCO - Solar power plant at					
critical infrastructure facility					
(sewerage water pumping	3.860.556	105,3	36,7	10	8,1
station)					
ESCO - Solar power plant at					
critical infrastructure facility		105.2	27.6	10	0 0
(water treatment plant)	5.950.500	105,5	57,0	10	0,3
Total project portfolio	284.094.927	36.744,7	7,7		1,3

Table 1: DFU Project portfolio - total investment and energy saving

It is noteworthy that the DFU project portfolio is very cost efficient:

- The average total investment need is 7,7 UAH/kWh saved per year
- The abatement cost (comparable to the LCOE for renewable energy) expressed as the investment per KWh saved over investment lifetime at a conservative project lifetime of 10-15 years is 1.3 Eurocent/kWh, reflecting that many good investment opportunities exist in energy efficiency and renewable energy in Ukraine<sup>16</sup>

Figure 4 illustrates the expected (ex-ante)  $CO_2$  emission savings (t $CO_2$ ) under the Voluntary Agreement, distributed across the 21 projects. In total the projects are planned to save15.284 t $CO_2$  per year under the Voluntary Agreement Scheme. The majority of projects report reductions between 20 and 1,500 t $CO_2$ . However, a few projects, particularly two major ones, achieve 2,889 t $CO_2$  (Installing an exhaust gas economizer) and 8,739 t $CO_2$  (replacement of natural gas for heating with wood chips), setting them apart as the most impactful in terms of emission reduction.

Viegand Maagøe

<sup>&</sup>lt;sup>16</sup> For reference, the 37,000 projects in the EU Derisking Energy Efficiency Database (DEEP) have a median abatement cost of 2.0 Eurocent/kWh (<u>https://deep.ec.europa.eu/</u>)



Figure 4: CO<sub>2</sub> emission savings (tCO<sub>2</sub>) under the Voluntary Agreement

Looking at expected  $CO_2$  emission savings compared to the baseline, most projects fall within a reduction range of 10% to 20%, with some achieving a 20–25% decrease in emissions. However, a few standout projects demonstrate much higher efficiency, with reductions of 38% (replacement of natural gas for heating with wood chips) and 70% (solar power integrated in the power grid), highlighting their significant impact on decarbonisation efforts. It is important to note once again that some projects are smaller initiatives within the same company's portfolio and, as a result, fall below the 10% threshold.



Figure 5: CO2 emission savings compared to the baseline (plan)%.

Viegand <u>Maag</u>øe These early results highlight the fund's effectiveness in processing financial resources for energy efficiency improvements, confirming that the VAS and the Decarbonisation Fund could become essential instruments in Ukraine's green transition. However, the revenue of the DFU is currently limited to the CO<sub>2</sub> tax and a further utilization of its potential could require mobilization of additional funds to be channelled through the established mechanism. In this context, the DFU received UAH 13.5 million from UNDP in 2024. These funds were allocated to support the implementation of energy efficiency projects through the ESCO mechanism in the form of discounted loans and to cover expenses for obtaining a factoring license. The financial support from UNDP was used to facilitate the installation of a solar power plant at the treatment facilities and water pumping station of the utility "Boyarka-Vodokanal". Meanwhile, negotiations are ongoing with GIZ to secure additional funding and there are dialogues with Turkey and Japan.

The plan is to attract further grants and international credit funds for the implementation of projects to improve energy efficiency and energy independence. This is a key objective for 2025.

Sourcing additional funds would allow supporting Ukraine's 2030 energy and climate goals which focus on reducing greenhouse gas emissions, increasing energy efficiency, integrating renewable energy, and strengthening energy security. The country aims to achieve a 65% reduction in emissions compared to 1990 levels, where the goal is supported by the industrial energy efficiency improvements and low-carbon technologies promoted under the VAS. Additionally, at least 27% of gross final energy consumption should come from renewable sources, which the Decarbonisation Fund facilitates by financing projects that transition industries and municipalities away from fossil fuels toward alternative and renewable energy sources. Efforts to modernize public infrastructure include achieving energy savings of at least 24.9 GWh per year in government buildings, which also is a priority within the fund. At the same time the VA directly support Ukraine's National Energy Efficiency Action Plan (NEEAP) 2030 by contributing to its primary and final energy consumption reduction targets. The national goal aims to limit primary energy consumption to 91.5 million toe and final energy consumption to 50.5 million ton, representing a 22.3% reduction in primary energy use and 17.1% in final energy use compared to the baseline. The VAS helps achieve these targets by requiring participating enterprises and municipalities to implement energy-saving measures, including energy audits, modernization of industrial processes, and efficiency improvements in public infrastructure.

# Progress of the State Fund for Decarbonisation and Energy Efficient Transformation of Ukraine and Voluntary Agreement and next steps in 2025

5

The progress made so far under the Decarbonisation Fund and VAS underscores their growing role in driving Ukraine's energy transition. With an increasing number of projects financed and a strong pipeline of new projects under consideration, these mechanisms are already delivering measurable energy savings, emissions reductions, and financial relief for industries and municipalities.

As Ukraine continues to align its energy policies with EU standards and its 2030 and 2050 climate and energy goals, the fund's expansion and ongoing support will be crucial in ensuring a more sustainable, resilient, and competitive energy sector. Moving forward, scaling up these initiatives and maintaining a strong policy and financial framework will be essential in securing long-term environmental and economic benefits, reinforcing Ukraine's commitment to energy efficiency and decarbonisation.

With the DFU and VAS well established as a mechanism to source and finance decarbonisation projects, the next natural steps would focus on accelerating fund disbursement, expanding financial resources, and refining the mechanisms of the VA Scheme to maximize impact.

Building on the impressive results of 2024 with the launch and operationalization of Decarbonisation Fund and the VAS, it is suggested that the focus for 2025 could include three parallel tracks:

- 1. Support for the continued development of the Decarbonisation Fund and the VAS, including
  - Further developing DFU/VAS supporting documentation, e.g., guidelines, technology catalogues, best practice cases
  - Develop reporting towards the public to ensure transparency, e.g. a yearly report showing numbers of applications, loan grated/credits and examples of projected implemented.
- 2. Engagement with potential sources of complementary financing for the DFU and the VAS, including for:
  - Scaling up available loan funds and guarantees channeled through the DFU and intensify to secure additional financial contributions both nationally and internationally e.g. new strategic partnerships with international financial institutions, climate funds, and private investors.

- Blended finance models could also be explored to attract private sector investments
- Provision of Technical Assistance for development the EE project pipeline for selected sectors of strategic importance (e.g. food industry).
- 3. Collecting implementation experience and feedback from implemented projects on:
  - Establish structured feedback loop between enterprises, financial institutions, and policymakers established to capture lessons learned and make data-driven adjustments to strengthen the scheme
  - Identifying successful replicable projects in key sectors (street lighting, public building renovation, industrial energy efficiency, decarbonisation of public utilities) that can inspire future applications.

Appendix A – White Paper / Policy Brief by the Decarbonisation Association "Cogen Ukraine"

Appendix B – Voluntary agreement No. 1/24-AT on Energy Efficiency

Voluntary agreements on energy efficiency (decarbonization) are a key element of the partnership between the state and business in achieving the goals of energy efficient transformation of Ukraine

State support and cooperation for the future

This document was prepared by experts of the Decarbonization Association "Cogen Ukraine", within the framework of cooperation with the Ukrainian-Danish Energy Partnership Program, and is designed to emphasize the importance of increasing the partnership between the state and business in order to achieve common goals in the direction of energy-efficient transformation of Ukraine and joint movement towards building a carbon-neutral economy.

#### Lebedev V., Kamishan K., Kovalenko G.

"Voluntary agreements on energy efficiency (decarbonization) are a key element of partnership between the state and business in achieving the goals of energy efficient transformation of Ukraine" / — Kyiv, 2025. — 31 p.

**The Decarbonization Association "Cogen Ukraine"** is an all-Ukrainian association whose purpose is to promote the formation of better conditions in Ukraine for the implementation of the principles of energy efficiency and decarbonization, the elimination of administrative, regulatory and market barriers to building a carbon-neutral economy.

Website: adcu.com.ua



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#### Entry

According to the "European Green Deal", Europe plans to become climate neutral by 2050. To achieve this goal, a broad development strategy is planned to decarbonize the economy, reduce CO2 emissions along with improving people's health and quality of life. Ukraine, in turn, declared its unwavering movement in the direction of European integration and interest in joining the implementation of this course.

The "Energy Efficiency First" principle is a concept that emphasizes the priority of energy efficiency measures over the consideration of other options for meeting energy needs and is key in European energy and climate policy. In particular, this is enshrined in Directives 2009/125/EU, 2010/31/EU, 2012/27/EU, 2023/1791/EU, etc.

The russian invasion of Ukraine and the deliberate attacks on civilian energy infrastructure by the aggressor country have highlighted the role of energy efficiency for Ukraine.

Per <u>Data</u> According to the Ministry of Energy of Ukraine, since the beginning of the full-scale invasion, russia has occupied about 18 GW of Ukraine's capacities, including the Zaporizhzhia nuclear power plant, which is the largest in Europe. Since February 2022, Ukraine's energy system has withstood almost 30 massive attacks, to which daily local attacks are added.

2024 was the most difficult year - the russians began to use combined strikes using a large number of cruise missiles, ballistic missiles, and cluster munitions. Massive attacks of this magnitude caused much more damage and destruction than in previous years. Attacks by russian troops led to significant destruction of energy infrastructure, including shunting generation. We are talking about the loss of about 10 GW of generating capacity in 2024. In addition to generation, the russian federation also regularly struck critical nodes of power grids in order to destabilize the energy system and limit the ability to transmit electricity within the country, as well as complicate its import.

Per <u>data from the analytical center</u> Dixi Group and <u>Portal</u> Energy Map, due to the actions of the russian federation, electricity was absent in the residential buildings of Ukrainians for 1951 hours, or 81 days and 7 hours. In Ukraine, hourly blackout schedules were introduced. In some places, the average duration of power outages for an average resident of some regions was approximately 9 hours a day.

Given the complexity of energy supply, many Ukrainians have come to the realization that energy efficiency is not only about "modern trends", but also about survival in wartime. This is about the minimum comfort for the lives of ordinary citizens.

Ensuring energy efficiency of the economy is one of the key national priorities of any state. And the events of the last three years have emphasized the relevance of this statement for Ukraine more than ever.

As a legacy from the Soviet Union, Ukraine received a powerful, but extremely outdated and inefficient energy complex, characterized by poor quality of management, cost, deterioration, and unprofitability. This was compounded by the high energy intensity of the entire industrial and production complex.

Unfortunately, the issues of energy efficiency remained secondary for a long time, and neither the public sector nor the business included it in the circle of their top priorities. At the same time, the energy sector was and is the backbone of the Ukrainian economy. Thus, according to analytical data provided in the "National Energy Efficiency Action Plan until 2030" and the "National Energy and Climate Plan until 2030", the energy sector is the first in terms of taxes in Ukraine. At the same time, Ukraine still remains among the outsiders in the world in terms of energy consumption efficiency (energy intensity of GDP). In Ukraine, this figure is four times higher than the average of countries with a similar demographic situation. With the outbreak of the russian-Ukrainian war after the full-scale invasion in 2022, the situation has deteriorated significantly. Including due to the systemic loss of energy sources and generating capacities in Ukraine.

At the same time, it is worth noting that in addition to the significant impact of factors related to the large-scale russian invasion, Ukraine's European integration aspirations influenced the increase in the role of energy efficiency. The negotiation process on Ukraine's accession to the EU, which includes screening of legislation for compliance with EU law, gave an additional impetus to the implementation of the best practices of the European Union, including in the issues of incentives and state support for the implementation of energy efficiency measures, both in the public sector and in industry. Taking into account the need for a constantly replenished and sustainable source of financing for energy efficiency measures and the fulfillment of Ukraine's obligations to reduce energy consumption and CO2 emissions, the issue of establishing partnerships between the state and stakeholders in this direction has become acute. Based on this, the experience of the European Union countries in introducing such a mechanism as "Voluntary Energy Efficiency Agreements" has become of great importance for the energy efficient transformation of Ukraine and the fulfillment of its European integration obligations.

The following information relates to the functioning of the mechanism of state support for energy efficiency measures at the expense of the State Fund for Decarbonization and Energy Efficient Transformation of Ukraine and the consolidation of obligations for recipients of state aid through "Voluntary Energy Efficiency (Decarbonization) Agreements".

#### 1. Coordinate System: Energy Efficiency and Decarbonization

Today, the European Union (EU) is actively working to improve energy efficiency, and in this context, a number of Directives are in force, in particular, updated Directives: the Energy Efficiency Directive (EU) 2023/1791 and the EU Directive on the promotion of the use of energy from renewable sources (EU) 2018/2001. These Directives are important guidelines for achieving the EU's energy efficiency and climate change targets. These Directives enshrine the EU's legally binding target of reducing energy efficiency final energy consumption in the EU by 11.7%, achieving 55% of energy from renewable sources in final energy consumption and reducing CO2 emissions by 42.5% by 2030.

Ukraine, which is on its way to joining the European Union, has also adopted a number of strategic documents that are designed to implement the norms of European legislation in the national legislative field. In particular, we are talking about the "Energy Strategy of Ukraine until 2050", "National Energy Efficiency Action Plan until 2030" and "National Energy and Climate Plan until 2030". These documents enshrine Ukraine's strategic goals: reducing primary energy consumption by 22.3%, achieving 27% of energy from renewable sources in final energy consumption, and reducing CO2 emissions by 65%.

Taking into account that a number of other relevant laws have been adopted and are functioning in Ukraine, such as the Law of Ukraine "On Energy Efficiency" and the Law of Ukraine "On Energy Efficiency of Buildings", it can be confidently stated that significant "planning" work has been carried out in Ukrainian legislation, which defines strategic national goals in the direction of energy efficiency and reduction of CO2 emissions, which correlate with the relevant EU directives.

However, until recently, from the point of view of direct implementation in the field of energy efficiency of Ukraine, there were certain gaps, in particular, in the circulation of information, popularization, dissemination and implementation of appropriate mechanisms and practices for improving energy efficiency in all spheres of life and functioning of the country. It is in this context that the use of the experience of European countries in the implementation of "Voluntary Energy Efficiency (Decarbonization) Agreements", which offer the implementation of energy efficiency and its principles on a voluntary basis at various levels of state organization – from local authorities, to industry, to private business entities and citizens, has become very relevant.

### 2. Ukraine's potential for energy efficiency (reduction of energy consumption)

To date, the most energy-intensive sectors of the Ukrainian economy (according to the State Statistics Service of Ukraine) are industry, the household sector and transport.

At the same time, according to the "National Energy Efficiency Action Plan until 2030" and the "National Energy and Climate Plan until 2030", it is in these sectors that Ukraine has a huge potential for energy saving.

#### In industry:

- energy consumption per year is estimated at  $\sim \in 9.4$  billion;
- energy saving potential of more than 30% from  $\notin 2.8$  billion per year;
- expected emission reductions by 2030 equivalent to 12.5 million tons of CO2;
- investment need for the period until  $2030 \sim \notin 11.9$  billion;

#### In transport:

- energy consumption per year is estimated at  $\sim \notin 9$  billion;
- energy saving potential of 5-10% from  $\notin 0.9$  billion per year;
- expected emission reductions by 2030 equivalent to 2.3 million tons of CO2;
- investment requirement for the period up to  $2030 \sim \notin 15$  billion;

#### In the domestic/residential sector:

- energy consumption per year ~ in  $\in$  3.6 billion;
- energy saving potential of 50-60% up to  $\in$  2.2 billion per year;
- expected emission reductions by 2030 equivalent to 3.5 million tons of CO2;
- investment needs for the period up to  $2030 \sim \notin 13.4$  billion;

Thus, the payback period of investments in these sectors of the economy, on average, can be from 4 to 15 years. And a complete energy-efficient transformation and modernization of only these sectors can lead to savings of  $\sim \in 6$  billion per year.

According to rough estimates, about €50 billion is needed to achieve energy efficiency goals in Ukraine by 2030. investments.

Significant potential in the direction of energy efficiency and energy saving also requires consolidation of efforts and partnerships between the state and the private sector. Therefore, in this context, the implementation of the mechanism of "Voluntary Energy Efficiency (Decarbonization) Agreements" is an important step towards achieving progress towards building a low-carbon economy.

# **3.** A sustainable and constantly replenished source of financing for energy efficiency measures in Ukraine

On January 1, 2024, amendments to the Budget Code of Ukraine came into force, providing for the creation of the State Fund for Decarbonization and Energy Efficient Transformation of Ukraine. The relevant proposals were initiated and prepared by the State Agency on Energy Efficiency and Energy Saving at the beginning of 2023 and, as a result, the relevant Law was adopted in April 2023 (Article 24 - 6 No. 3035-IX of 11.04.2023).

The State Fund for Decarbonization and Energy Efficient Transformation was created as part of a special fund of the State Budget of Ukraine. The sources of formation of the state fund for decarbonization and energy efficient transformation were determined: environmental tax for carbon dioxide emissions from stationary installations; government borrowing to support energy efficiency and reduce carbon emissions.

The creation of the Fund was a signal to international partners that Ukraine, despite military aggression, is developing according to European principles. This includes reducing harmful CO2 emissions and investing in energy efficiency. Recommendations on the creation of a separate source of financing for energy efficiency have been provided to the Government of Ukraine by European partners over the past ten years. This Law, for the first time at the legislative level, fixes the principle of "polluter pays".

It is envisaged that the funds of the State Fund for Decarbonization and Energy Efficient Transformation are directed to:

- 1) financial support of measures and state target programs in the field of energy efficiency, increasing the use of renewable energy sources and alternative fuels and reducing carbon emissions;
- 2) financial support for compensation, reimbursement, reduction of the cost of obligations of individuals and legal entities under loan and leasing agreements concluded for the implementation of energy efficiency measures, implementation of energy services, increase in the use of renewable energy sources and alternative fuels and reduction of carbon emissions.

# **4.** Volumes of the State Fund for Decarbonization and Energy Efficient Transformation of Ukraine

Despite the ongoing military aggression by the russian federation, in 2024, about UAH 1 billion 400 million was mobilized to the State Fund for Decarbonization and Energy Efficient Transformation.

The volume of mobilized financial resources for 2025, according to the forecasts of the Ministry of Finance of Ukraine, should amount to about UAH 1 billion 750 million. In 2026 - about UAH 1 billion 867 million.

The main source of filling the fund remains the environmental tax, which, as you know, is one of the lowest "carbon" taxes in Europe (set at the level of 30 UAH/t of carbon dioxide emissions). Accordingly, the effective functioning of the fund will require a gradual increase in taxation of emissions and fossil fuels in Ukraine, which is also envisaged by the National Revenue Strategy until 2030. However, further revenues received as part of the operation of the Emissions Trading System (ETS), which is under development with plans to launch in 2026, should also be an important element of revenues.

Also, the State Agency on Energy Efficiency and Energy Saving is working to attract additional funding, which is not prohibited by the current legislation. In particular, the Budget Code of Ukraine provides for the possibility of attracting additional financial revenues within the framework of cooperation with international technical assistance projects.

Given that the insufficiency of financial resources is one of the significant obstacles to the rapid and massive implementation of energy efficiency measures and technologies in industry, communities and the private sector, the availability of additional cheap and affordable financing will become an additional incentive for large-scale energy-efficient transformation of Ukraine.

# 5. Mechanisms for providing state support for the implementation of energy efficiency measures.

In order to ensure the transparent allocation of budget funds for energy efficiency measures, it was decided to develop a mechanism for allocating funds to energy-efficient institutions that will meet European standards.

On June 21, 2024, the Government of Ukraine adopted Resolution No. <u>761</u> "On Approval of the Procedure for the Use of Funds of the State Fund for Decarbonization and Energy Efficient Transformation".

This document defines the procedure for allocating the fund's funds to applicant projects, which can be carried out on the basis of approved state programs, as well as on the basis of selection by the state-owned JSC "Decarbonization Fund of Ukraine" or by state banking institutions that will distribute the fund's funds.

The Resolution provides for a mechanism and conditions for providing financial state support for the implementation of measures in the field of energy efficiency, increasing the use of renewable energy sources and alternative fuels and reducing carbon emissions.

The current resolution provides that state financial support to its recipients for the implementation of measures in the field of energy efficiency, increasing the use of renewable energy sources and alternative fuels and reducing carbon emissions is provided by:

- lending for energy efficiency measures, increasing the use of renewable energy sources and alternative fuels and reducing carbon emissions;
- financial leasing of equipment necessary for the implementation of measures in the field of energy efficiency, increasing the use of renewable energy sources and alternative fuels and reducing carbon emissions, in accordance with the concluded financial leasing agreements;
- factoring financing of borrowers on loans in the field of energy efficiency, increasing the use of renewable energy sources and alternative fuels and reducing carbon emissions or energy service providers.

This state support (reduction in the cost of obligations under loan agreements) can be provided through the joint-stock company "Decarbonization Fund of Ukraine" (a financial institution 100% of the shares of which belongs to the state, Annex No. 1 of the Resolution of the Cabinet of Ministers of Ukraine No. <u>761</u>) and through state banking institutions (authorized banks) - banks in the authorized capital of which more than 50 percent of the shares belong to the state (Annex No. 2 of the Resolution of the Cabinet of Ministers of Ukraine No. <u>761</u>).

The Resolution provides that the recipient of state financial support can be:

- an individual entrepreneur registered in accordance with the procedure established by law (authorized banks and JSC "Decarbonization Fund of Ukraine");
- a legal entity, the ultimate beneficial owners (controllers) of which are a resident of Ukraine (authorized banks and JSC "Decarbonization Fund of Ukraine");
- association of co-owners of an apartment building (JSC "Decarbonization Fund of Ukraine");
- housing and construction cooperative (JSC "Decarbonization Fund of Ukraine");
- service cooperative (JSC "Decarbonization Fund of Ukraine");
- an enterprise of state or municipal ownership (authorized banks and JSC "Decarbonization Fund of Ukraine");
- local self-government body (JSC "Decarbonization Fund of Ukraine").

In order to receive state financial support (reduction in the cost of obligations under loan agreements) for the implementation of energy efficiency measures and the implementation of the relevant project, a business entity must submit an appropriate application, which includes:

- project description;
- a report on the energy audit of the facility (building, technical facility, technological stage, unit and/or process) where energy efficiency measures are planned to be implemented, and/or the conclusion of the energy management service of the business entity on the need to implement energy efficiency measures, and/or a certificate of energy efficiency of the building;
- a list of energy-efficient measures (indicating the characteristics of the necessary machinery, equipment, equipment, materials), for the implementation of which it is planned to receive state support.

Terms of lending for the implementation of energy efficiency measures through JSC "Decarbonization Fund of Ukraine", according to the Resolution of the Cabinet of Ministers of Ukraine No. <u>761</u>:

1) the interest rate is up to 9 percent per annum inclusive, and for projects using nationally produced equipment - up to 7 percent per annum inclusive;

2) the minimum loan amount is from 120 thousand UAH. hryvnia, the maximum loan amount is up to 90 million. inclusive (to finance one project);

3) the maximum loan term is up to 10 years inclusive;

4) the minimum contribution paid by the borrower is set at least 15 percent of the cost of goods, works and services provided for the implementation of energy efficiency measures, the introduction of energy services, the increase in the use of renewable energy sources and alternative fuels and the reduction of carbon emissions.

Terms of lending (reduction of the cost of obligations under loan agreements) for the implementation of energy efficiency measures through authorized banking institutions, according to the Resolution of the Cabinet of Ministers of Ukraine No. <u>761</u>:

- 1) The loan is provided in national currency;
- 2) The maximum amount of the loan under which state support is provided by reducing the cost of loans to a business entity does not exceed UAH 60 million. hryvnias, except:
- a loan provided to an individual entrepreneur that does not exceed UAH 5 million. hryvnias;
- credit provided to enterprises producers of thermal energy, water supply and sewerage enterprises, which does not exceed 90 million UAH. hryvnias;
- of a loan provided to energy service providers, including an energy service provider an individual entrepreneur, which does not exceed UAH 20 million. hryvnias.
- 3) The maximum lending term for loans under which state support is provided should not exceed 10 years inclusive.
- 4) The maximum interest rate on the loan is no more than 21 percent per annum. Where the cost of loans is carried out by compensating interest on a loan to a business entity in order to reduce its actual costs of paying the interest rate on loans of authorized banks. Compensation can reach up to 14 percent per annum.

		JSC ''Fund'' decarbonization of Ukraine''	Commercial banks (with a state share of 50% or more)
Modernization Communal Infrastructure	<ul> <li>SES</li> <li>heat pumps</li> <li>Cogeneration</li> <li>Bio-boiler houses</li> </ul>	Amount: up to 90 million.	Amount: up to 90 million. UAH Term: up to 10 years Rate: compensation 12-14%
Energy modernization Business	<ul> <li>Electric transport</li> <li>energy-efficient equipment</li> </ul>	Term: up to 10 years Rate: up to 7-9% Instrument: credit,	Amount: up to 60 mln. UAH Term: up to 10 years Rate: compensation 12-14%
Thermal modernization public buildings through ESCO	Other Energy Efficiency Projects	leasing, factoring	Amount: up to 20 mln. UAH Term: up to 10 years Rate: compensation 12-14%

It should be noted that one of the key conditions for receiving state financial support (reducing the cost of obligations under loan agreements) for the implementation of energy efficiency measures is the condition for the mandatory conclusion of a voluntary agreement on energy efficiency (decarbonization).

# 6. Voluntary agreement on energy efficiency (decarbonization) as a mechanism for combining the efforts of the state and business on the way to achieving the goals of energy efficient transformation of Ukraine.

Voluntary agreement on energy efficiency (decarbonization) is an agreement concluded between the State Agency on Energy Efficiency and Energy Saving of Ukraine and a business entity that receives state support on the achievement of energy efficiency indicators determined by the agreement and reduction of carbon emissions as a result of the implementation of energy efficiency measures, the introduction of energy services, the increase in the use of renewable energy sources and alternative fuels and the reduction of carbon emissions.

This mechanism was successfully used by many countries of the European Union and promoted the idea of implementing energy efficiency and its principles on a voluntary basis at various levels of state organization – from local authorities and industry, to private business entities and citizens.

In the context of the functioning of the mechanism of state support for energy efficiency measures at the expense of the State Fund for Decarbonization and Energy Efficient Transformation of Ukraine, a voluntary agreement is an individual contract between the government structure - the State Agency on Energy Efficiency and Energy Efficiency, which is the manager of the Fund's budget funds, and individual business entities that have expressed a desire to receive state support for the implementation of energy efficiency measures. This agreement includes agreed objectives and timetables of actions to be carried out by the recipient of state aid in order to fix its contribution to the achievement of national goals for reducing final energy consumption and reducing greenhouse gas emissions (reduction of CO2 emissions).

It should be noted that voluntary agreements on energy efficiency are currently applied at the national, regional and local levels in many European countries. Taking into account the fact that there are no clear scenarios for the implementation of this type of management documents, as well as their standardized or established structure, the State Agency on Energy Efficiency and Energy Saving of Ukraine took as a basis the experience of countries such as Denmark, Finland and Sweden, when they started with intermediate steps, preparing the relevant environment of stakeholders for the correct perception of the mechanism of voluntary agreements.

During the development and adoption of Resolution No. <u>761</u> "On Approval of the Procedure for the Use of Funds of the State Fund for Decarbonization and Energy Efficient Transformation", a number of key factors were clearly foreseen and recorded that should be taken into account when drawing up and signing a voluntary agreement on energy efficiency (decarbonization).

Accordingly, the essential terms of the voluntary agreement on energy efficiency (decarbonization) are defined:

1. Setting Energy Efficiency and Decarbonization Commitments for Candidates:

- reducing the energy intensity of the production of a unit of relevant products (provision of services);

- substitution of combustible minerals for national purposes with alternative fuels and alternative (renewable) sources;

- reducing the volume of pollutant emissions, increasing the energy efficiency of buildings.

- 2. Terms of achievement of established obligations;
- 3. Deadlines for the candidate to submit reports on the fulfillment of obligations;
- 4. Responsibility of the candidate for non-fulfillment of established obligations.

All these indicators are recorded in accordance with the application for state support. Classically, the process of preparation for the signing of a voluntary agreement should begin with an assessment of the energy saving potential of the party to the agreement, technical and economic capabilities, the feasibility of applying certain energy efficiency measures and the establishment of the task and goals of the agreement. That is why one of the elements of the application for state support for the implementation of energy efficiency measures is defined as a report on the energy audit and/or the conclusion of the energy management service of the business entity on the need to introduce energy efficiency measures. In addition, a list of energy efficiency measures for which state support is planned is also requested.

It is important to emphasize that in order to establish the most effective and realistic tasks/goals, and mutually beneficial conditions, a voluntary agreement must be based on the principles of mutual transparency, openness, interest and trust. Therefore, there should be an effective exchange of relevant information between the parties to the transaction.

For convenience and speed up decision-making on the part of candidates for state support for the implementation of energy efficiency measures, the State Agency on Energy Efficiency and Energy Saving of Ukraine, in close cooperation with Danish experts (Viegand Maagøe) and specialists of the Danish Energy Agency (DEA), developed a template for the Voluntary Agreement on Energy Efficiency (Decarbonization) and relevant annexes to it. The key indicators recorded by these documents are the decrease inthe volume of energy consumption in energy units (MWh) and the reduction of carbon emissions (greenhouse gases - tCO2) in the corresponding period.

Main structural sections of the voluntary agreement on energy efficiency (decarbonization)

- Definition of terms
- Subject of a voluntary agreement
- Rights and obligations of the parties
- Liability for non-fulfillment of established obligations
- Term of Voluntary Agreement, Conditions for Amendment, Supplement and Termination
- Dispute resolution procedure
- Force majeure circumstances
- Anti-corruption clause

#### **Template of the Voluntary Agreement on Energy Efficiency (Decarbonization) – Annex 1.** Annexes to the voluntary agreement:

- 1) Energy efficiency measures for the implementation of the project (Annex 2);
- 2) Schedule for the implementation of energy efficiency measures (Annex 3);
- 3) Plan a schedule for the implementation of energy efficiency (decarbonization) obligations (Annex 4);
- 4) Report on the status of implementation of energy efficiency measures for the specified period (Annex 5);
- 5) Report on the level of achievement of the planned energy efficiency indicator for the project for the specified period (Annex 6).

# 7. Stages of the process of obtaining state support for the implementation of energy efficiency measures and a "road map" for applicants for state financial assistance.

In the process of preparing for the provision of financial state support for the implementation of measures in the field of energy efficiency, increasing the use of renewable energy sources and alternative fuels and reducing carbon emissions, the following stages can be distinguished:

- 1. The applicant decides to receive state support for the implementation of energy efficiency measures;
- 2. The applicant submits an application for a project review and an application for a loan;
- 3. The financial institution through which the provision of state financial support for the implementation of energy efficiency measures will be carried out assesses the potential borrower for creditworthiness;
- 4. The State Agency on Energy Efficiency and Energy Saving evaluates the project for compliance with the criteria for achieving indicators of reducing energy consumption and reducing carbon emissions;
- 5. The business entity and the State Agency on Energy Efficiency and Energy Saving sign a Voluntary Agreement on Energy Efficiency (Decarbonization);
- 6. The business entity receives a soft loan and implements the project.

After receiving state financial support for the implementation of energy efficiency measures, the achievement of energy reduction and decarbonization indicators, which are fixed in the voluntary agreement, is monitored.

An application for consideration of a project for the implementation of measures in the field of energy efficiency, increasing the use of renewable energy sources and alternative fuels and reducing carbon emissions is submitted in the prescribed form.

The submitted application must necessarily include a **description of the project** for the implementation of energy efficiency measures, which is submitted in the prescribed form, which indicates, among other things: geography of the project implementation; social impact of the project; risks; timing of the project implementation; terms of the project life cycle; expected results of the project; basic indicator of the EE of the project; planned indicator of the EE of the project; description of energy efficiency measures; planning of the project implementation; information about project partners; total project budget; financial indicators of the project.

In addition, the submitted application must also contain a report on the energy audit/conclusion of the energy management service and a **list of energy efficiency measures** in the prescribed form, which indicates the characteristics of the necessary machinery, equipment, equipment and materials.

# Roadmap of the process of obtaining state financial support

	Steps	Notes
1	Initial consultation on the basic conditions for receiving state support	A candidate for state support shall familiarize himself with the conditions for its provision and submit a package of documents for consideration.1. Statutory documents; 2. Financial documents; 3. Documents for the State Agency for Energy Efficiency (application for state support, project description, energy manager's conclusion or energy audit, list of energy efficiency measures, calculations of economy or feasibility study)
2	Processing of documents by the services of the financial institution and provision of preliminary conclusions	The relevant structural subdivisions of the financial institution (banking institution) process a package of documents and provide preliminary conclusions. If necessary, the Candidate is sent written requests for clarifying or additional documents.
3	Sending a request to Derzhengergoefficiency	After receiving preliminary positive conclusions from the services of the financial/banking institution, regarding the possibility of providing state support, a request is sent to the State Agency for Energy Efficiency and Energy Saving of Ukraine regarding the feasibility of financing and approving the terms of the future voluntary agreement on energy efficiency (decarbonization).
4	Assessment of the project from the point of view of the prospect of achieving energy efficiency indicators and making preliminary conclusions on the feasibility of providing state support	The State Agency on Energy Efficiency and Energy Saving considers the relevant materials and adopts preliminary conclusions on the feasibility of financing the project and the possibility of signing a voluntary agreement on energy efficiency (decarbonization) with defined parameters of obligations to reduce energy consumption and reduce carbon emissions.
5	Decision of a financial/banking institution on the possibility of providing state support	A financial/banking institution, after receiving preliminary conclusions of the State Agency on Energy Efficiency and Energy Saving of Ukraine, considers the possibility of providing state support and convenes an internal commission to make a decision.
6	Consideration of the project by the commission of a financial/banking institution	The issue of providing financial support for the project is submitted to the meeting of the relevant commission. A decision is made on the recommendations for providing state support to the candidate and submitting the issue to the Board meeting for final approval.
7	Consideration of the draft by the Board of a financial/banking institution	After receiving the minutes of the Commission, the parameters of the agreement, covenants and other recommendations of the project are approved by the minutes of the Board of the financial/banking institution.

8	Informing the Candidate about the decision made and the conditions for providing state support	After the approval of the final terms by the Board of the financial/banking institution, a proposal is prepared that contains the main terms of the future agreement: the type of support, the amount of support, the purposes of using state support, the term of state support, etc.
9	Making a decision by the Candidate on the readiness to receive state support on the proposed terms and signing the Voluntary Agreement on Energy Efficiency	Subject to a positive decision and approval of the commercial offer of a financial/banking institution, the Candidate enters into a Voluntary Agreement on Energy Efficiency (Decarbonization) with the State Agency on Energy Efficiency and Energy Saving of Ukraine, which stipulates all the conditions in accordance with the requirements for the Voluntary Agreement on Energy Efficiency.
10	Conclusion of a loan agreement	The candidate submits a signed voluntary agreement to a financial/banking institution and enters into a loan agreement and receives financing.
11	Monitoring of project implementation and targeted use of funds	The recipient of state aid reports to the State Agency on Energy Efficiency and Energy Saving and the financial/banking institution on the stages of project implementation, the date of completion of the project, provides the necessary documents confirming the intended use of funds.
12	Monitoring the achievement of energy efficiency and decarbonization targets	The recipient of state aid reports to the State Agency on Energy Efficiency and Energy Saving and the financial/banking institution on the energy efficiency and decarbonization indicators obtained within the agreed timeframe.

# 8. Results of the launch of the mechanism for providing state financial support for the implementation of energy efficiency measures

For six months since the launch of the process of providing state support for the implementation of energy efficiency measures, at the expense of the State Fund for Decarbonization and Energy Efficient Transformation of Ukraine, 21 business entities have received financial support for the implementation of measures in the field of energy efficiency, increasing the use of renewable energy sources and alternative fuels and reducing carbon emissions. The total amount of financial support provided through the Decarbonization Fund of Ukraine JSC amounted to UAH 212 million.

Among the projects that received state financial support:

- 5 projects measures to replace the consumed energy by installing equipment using renewable energy sources;
- 11 projects measures to apply ESCO mechanisms aimed at reducing energy consumption;
- 5 projects replacement of units using fossil fuels with units operating using alternative fuels.

According to 21 signed voluntary agreements on energy efficiency (decarbonization), the expected reduction in energy consumption should be 36.744 MW/hour, and the expected reduction in carbon emissions should be 15.284 tons/CO2.

#### Conclusions

Today, the described mechanism of state support is quite promising and timely. In the face of russia's military aggression, financial support can be used not only to achieve the national goals of energy efficiency and sustainable development, but also to support the country's energy system, which is under daily missile and drone attacks.

The launched tool, with the help of which the state and business jointly achieve energy efficiency and decarbonization goals, in contrast to strict regulatory norms, is based on mutually beneficial cooperation. Businesses commit to reducing energy consumption in exchange for some government support.

The challenges that Ukraine is currently facing go far beyond repairing destroyed facilities and achieving national results on national obligations. In this context, the Government, represented by the Ministry of Energy of Ukraine, has identified a path in wartime conditions – the development of distributed generation. In July 2024, the Government approved the relevant strategy. It provides for strengthening the resilience and flexibility of the energy system through the development of distributed generating capacities, including gas turbines, gas pistons, cogeneration plants, renewable energy facilities (SPPs) and energy storage systems.

And this can be achieved, including thanks to the launched mechanism of state financial support, because projects that meet the criteria for financing at the expense of the State Fund for Decarbonization and Energy Efficient Transformation of Ukraine can be in the field of:

- Development of distributed generation a decentralized network of power plants that makes the system more flexible and less vulnerable to attacks.
- Increasing the share of renewable energy sources solar, wind and bioenergy, which allows diversifying the production of electricity and heat.
- Development of alternative fuels that can partially replace traditional energy resources.

Of course, in the context of this, energy efficiency is given increasing priority. Today, for Ukraine, energy efficiency is not only about comfort and a tribute to time, it is about survival in difficult conditions. In response to modern challenges (lack of electricity, emergency and hourly outage schedules), we are forced to change our habits, consciously implement energy-saving solutions in everyday life.

The introduction of such a mechanism as voluntary agreements on energy efficiency (decarbonization) in Ukraine, in addition to stimulating the implementation of energy efficiency measures, should make a significant contribution to changing the behavior of state institutions, businesses, communities and ordinary citizens, raise the issue of energy efficiency transformation of the country to a higher level and lay the foundation for the country's recovery based on the principles of energy efficiency.

#### VOLUNTARY AGREEMENT ON ENERGY EFFICIENCY (DECARBONIZATION)

Kyiv

''\_\_\_'' \_\_\_\_ 2024

**The State Agency for Energy Efficiency and Energy Saving of Ukraine** (EDRPOU code - 37536010) (hereinafter referred **to as Party 1**), represented by the Head, acting on the basis of the Regulation on the State Agency for Energy Efficiency and Energy Saving of Ukraine, approved by the Resolution of the Cabinet of Ministers of Ukraine dated 26.11.2014 No. 676, on the one hand, and \_\_\_\_\_\_\_\_\_\_ (EDRPOU code -

\_\_\_\_\_) (hereinafter referred to as Party 2), represented by \_\_\_\_\_\_ acting on the basis of \_\_\_\_\_\_, on the other hand, are collectively referred to as the Parties, and each separately – the Party, guided by Articles 627, 638 of the Civil Code of Ukraine and the Procedure for the use of funds of the State Fund for Decarbonization and Energy Efficient Transformation, approved by the Resolution of the Cabinet of Ministers of Ukraine dated 21.06.2024 No. 761 (hereinafter referred to as the Procedure No. 761), in order to implement the project\_\_\_\_\_\_ (hereinafter referred to as the Project)

(project name)

concluded this Voluntary Agreement on Energy Efficiency (Decarbonization) (hereinafter referred **to as the Voluntary Agreement**) on the following:

#### 1. **DEFINITION OF TERMS**

**JSC "FDU"** is a joint stock company "Decarbonization Fund of Ukraine", which provides lending for measures in the field of energy efficiency, increasing the use of renewable energy sources and alternative fuels and reducing carbon emissions at the expense of budget funds received in accordance with the Procedure No. 761.

**Basic energy efficiency indicator** is an energy efficiency (decarbonization) indicator in terms of consumption in energy units and the volume of carbon (greenhouse gas) emissions, which is indicated in the project description for 4 quarters preceding the day of application for Financial State Support, and for newly created Facilities - in accordance with the project of its construction (reconstruction).

**Verification** is the collection and verification of the authenticity of documents and information confirming the fulfillment by Party 2 of the Schedule and the Schedule and the achievement of the Planned Energy Efficiency Indicator, including with the right of face-to-face inspection of the Facility by representatives of Party 1.

**The schedule** is the timing of the implementation of the Measures, for the implementation of which JSC "FDU" is provided with Financial State Support through lending in accordance with the Procedure No. 761.

**Request of Party 1** – a written request of the State Agency on Energy Efficiency and Energy Saving prepared for the Verification process and sent to the correspondence address and/or e-mail address of Party 2 specified in Section 11 of this Voluntary Agreement.

**Measures -** energy efficiency measures / (*implementation of energy service*) defined in Annex No. 1 to this Voluntary Agreement.

**Obligations -** achievement of the Planned Energy Efficiency Indicator in relation to (the *criteria specified in paragraph 1 of paragraph 15 of Annex 1 to the Procedure 761 are indicated, for* 

*example: reducing the energy intensity of production (technical facility, technological stage, unit and/or production process) of a unit of relevant products (provision of services)* and reducing carbon emissions, compared to the Basic Energy Efficiency Indicator given in the project description.

**Monitoring** – the collection, including with the use of electronic communication means, of collecting and processing information on the implementation of the Schedule and the Schedule by Party 2.

Object – a building (its part) or premises (part thereof), a technical object, a technological stage, a unit and/or a production process in relation to which the Measures are carried out.

**Schedule** – terms of fulfillment of the Obligation as a result of the implementation of Activities, for the implementation of which JSC "FDU" is provided with Financial State Support through lending in accordance with the Procedure No. 761.

**Energy efficiency target** is an energy efficiency (decarbonization) indicator in terms of consumption in energy units and carbon (greenhouse gas) emissions in the relevant period, which is specified in the project description and is to be achieved or exceeded by Party 2 in accordance with the Schedule.

Actual energy efficiency indicator is an energy efficiency (decarbonization) indicator in terms of consumption in energy units and the volume of carbon (greenhouse gas) emissions in the relevant period, which is determined and confirmed by the Parties after the implementation of the Monitoring and Verification processes in accordance with the Schedule.

**Financial state support** – provision of a loan to JSC "FDU" to Party 2 for the implementation of measures in the field of energy efficiency, increasing the use of renewable energy sources and alternative fuels and reducing carbon emissions at the expense of budget funds received by JSC "FDU" in accordance with the Procedure No. 761.

Other terms are used in the meaning given in the Procedure No. 761 and other legislation.

#### 2. SUBJECT OF VOLUNTARY AGREEMENT

2.1. The subject of this Voluntary Agreement is the implementation by Party 2 of the Measures and the fulfillment of the Obligations in full and within the terms specified in this Voluntary Agreement, as a recipient of Financial State Support.

2.2. Party 2 undertakes to implement the Measures in accordance with the Schedule specified in Annex No. 2 to this Voluntary Agreement and to fulfill the Obligations in accordance with the Schedule specified in Annex No. 3 to this Voluntary Agreement.

2.3. The term of fulfillment by Party 2 of the established Obligations shall be set for the term of this Voluntary Agreement.

2.4. Monitoring of the implementation of the Schedule and the Schedule by Party-2 is carried out by the State Agency on Energy Efficiency and Energy Saving (with the right to involve third parties in these actions) on the basis of quarterly reporting by Party 2:

before the implementation of the Measures, reports on the status of the implementation of the Measures are submitted in the form established in Annex No. 4;

after the implementation of the Measures, reports on the level of achievement of the Planned Energy Efficiency Indicator are submitted in the form established in Annex No. 5.

The information shall be submitted by Party 2 by the 10th day of the month following the reporting quarter in writing by a cover letter to the correspondence address of Party 1.

2.5. Verification of the implementation of the Schedule and the Schedule by Party-2 and the achievement of the Planned Energy Efficiency Indicator is carried out by the State Agency on Energy Efficiency and Energy Saving (with the right to involve third parties in these actions) on the basis of the following duly certified copies of documents submitted by Party 2, at the request of Party 1:

on confirmation of the intended use of credit funds (act of acceptance and transfer, sales receipt, invoice);

on confirmation of the fact of installation (implementation) of energy-efficient equipment and/or materials (act of work performed (services provided));

a copy of the energy audit report;

a copy of the building's energy certificate;

copies of contracts with energy suppliers and invoices for their use;

documentation on internal monitoring of energy consumption (if there is a certified EMS);

a copy of the statistical reporting form 11ICP (annual) "Report on the supply and use of energy" sent to the territorial statistics service;

copies of tax invoices;

certificate of conformity;

photographs of the Object before the start of work;

photographs of the Object in the process of performing work;

photos of the Object after the completion of work;

a copy of the report of Party 2 on compliance with the conditions of the emission permit and the implementation of measures to control compliance with the established maximum permissible emissions of pollutants;

a copy of the statistical reporting form No. 2-TP "Report on emissions of pollutants and greenhouse gases into the atmosphere from stationary emission sources" sent to the territorial statistics service;

a copy of the environmental tax return; other documents.

#### 3. RIGHTS AND OBLIGATIONS OF THE PARTIES

#### **3.1.** Party 1 is obliged to:

3.1.1. To determine the responsible representatives who will carry out Monitoring and Verification of the implementation of the Schedule, the Schedule and the achievement of the Planned Energy Efficiency Indicator.

3.1.2. In case of change of details, name or legal address within 5 (five) calendar days, notify Party 2 of such changes.

3.1.3. Properly comply with the terms of this Voluntary Agreement.

#### **3.2.** Party 1 has the right to:

3.2.1. To demand the proper fulfillment by Party 2 of the terms of this Voluntary Agreement.

3.2.2. During the validity of this Voluntary Agreement, to carry out Monitoring and Verification of the fulfillment by Party 2 of the Schedule, the Schedule and the achievement of the Planned Energy Efficiency Indicator.

3.2.3. Process and use the personal data of Party 2 and its representatives authorized to conclude this Voluntary Agreement, including with the right to transfer them to third parties engaged by Party 1 to fulfill the terms of this Voluntary Agreement.

3.2.4. Terminate this Voluntary Agreement unilaterally ahead of schedule, including, but not exclusively, in the following cases:

- non-fulfillment or improper fulfillment of the Obligations assumed by Party 2;
- failure by Party 2 to comply with the Schedule or the Schedule in any period;
- failure of Party 2 to achieve the Energy Efficiency Target in any period;
- violation of the conditions for the targeted use of Financial State Support funds;

- in the event of circumstances that carry restrictions determined by Article 13 of the Law of Ukraine "On Development and State Support of Small and Medium-Sized Businesses in Ukraine";
- termination (termination) of the loan agreement on the provision of Financial State Support to Party 2.

#### **3.3.** Party 2 is obliged to:

3.3.1. Implement the Measures in accordance with the Schedule.

3.3.2. To fulfill the Obligations in full and as a result of the implementation of the Measures, to achieve the Planned Energy Efficiency Indicators, within the terms specified in the Schedule of this Voluntary Agreement.

3.3.3. At the request of Party 1, provide in full the documents and information necessary for the implementation of this Voluntary Agreement within the terms specified therein, as well as allow a representative of Party 1 to the Facility to carry out Verification.

3.3.4. Maintain confidentiality regarding information and/or documents received from Party 1 that contain a written warning about their confidentiality.

3.3.5. In case of change of details, name or legal address within 5 (five) calendar days, notify Party 1 of such changes.

3.3.6. Properly comply with the terms of this Voluntary Agreement.

#### **3.4.** Party 2 has the right to:

3.4.1. After concluding this Voluntary Agreement, apply to JSC "FDU" to receive Financial State Support for the implementation of the Measures.

3.4.2. In case of a significant change in operating conditions compared to the basic ones (significant increase/decrease in load, generation, introduction of other equipment/modernization/reconstruction), which led to a decrease/increase in energy consumption, Party 2 may initiate a revision of the Baseline and Planned Energy Efficiency Indicators before Party 1 by concluding an appropriate additional agreement to this Voluntary Agreement.

#### 4. LIABILITY FOR NON-COMPLIANCE ESTABLISHED OBLIGATIONS

4.1. Failure to implement the Measures in accordance with the Schedule, non-fulfillment or untimely fulfillment of the Obligation and/or failure to achieve the Planned Energy Efficiency Indicators within the time limits specified in the Schedule-Schedule shall be the basis for early termination (termination) of this Voluntary Agreement.

Termination (termination) of this Voluntary Agreement shall be the basis for termination of contractual relations between Party 2 and FDU JSC regarding the provision of Financial State Support and the application of appropriate penalties determined by the loan agreement.

4.2. Compensation for damages, payment of penalties and/or penalties shall not release the Parties from fulfilling their obligations under this Voluntary Agreement.

4.3. The Parties are fully responsible for the correctness of the details specified by them in this Voluntary Agreement and undertake to timely notify the other Party in writing about their change, and in case of failure to notify, they bear the risk of adverse consequences associated with it.

#### 5. TERM OF VALIDITY OF THE VOLUNTARY AGREEMENT, TERMS OF CHANGE, ADDITIONS AND TERMINATIONS

5.1. This Voluntary Agreement shall enter into force from the moment of its signing by the authorized representatives of the Parties and shall be valid until the expiration of the loan agreement concluded between JSC "FDU" and Party 2 regarding the receipt of Financial State Support for the implementation of the Measures.

5.2. The terms of this Voluntary Agreement may be changed and/or supplemented by mutual consent of the Parties by drawing up an additional agreement to this Voluntary Agreement, which shall be signed by the authorized representatives of the Parties and sealed (if there is a seal) and shall be an integral part of this Voluntary Agreement.

5.3. This Voluntary Agreement shall be terminated after Party 2 fulfills its Obligations, by mutual consent or in case of its early termination by Party 1.

5.4. In case of early termination of this Voluntary Agreement, Party 1 shall notify Party 2 in writing no later than 10 (ten) calendar days before the date of termination of this Voluntary Agreement. This Voluntary Agreement shall be considered terminated (terminated) from the date specified in the notification of Party 1. Party 2 shall notify JSC "FDU" about the early termination (termination) of this Voluntary Agreement.

5.5. This Voluntary Agreement may be amended or terminated by a court decision at the request of one of the Parties in case of a material violation of the provisions of this Voluntary Agreement by the other Party. Such a violation by a Party of this Voluntary Agreement is material, when, as a result of the damage caused by this violation, the other Party is largely deprived of what it counted on when concluding this Voluntary Agreement.

5.6. The expiration of this Voluntary Agreement does not release the Parties from liability for violation of contractual obligations that occurred during the validity of this Voluntary Agreement.

#### 6. DISPUTE RESOLUTION PROCEDURE

6.1. All disputes and disagreements that may arise regarding the interpretation and application of this Voluntary Agreement or in connection with it shall be resolved by the Parties through negotiations and consultations.

6.2. If it is impossible to reach an agreement between the Parties in the process of negotiations and consultations, the interested Party has the right to apply to the court for the protection of its violated rights in the manner prescribed by the legislation of Ukraine, and such a dispute is resolved in court.

#### 7. FORCE MAJEURE CIRCUMSTANCES

7.1. The Parties shall be released from liability for non-fulfillment or improper fulfillment of obligations under this Voluntary Agreement in the event of force majeure circumstances that did not exist at the time of concluding this Voluntary Agreement and arose outside the will of the Parties (accident, catastrophe, natural disaster, epidemic, epizootic, etc.).

7.2. The Party that is unable to fulfill its obligations under this Voluntary Agreement due to force majeure circumstances must notify the other Party in writing no later than within 5 (five) calendar days from the date of their occurrence.

7.3. The proof of the occurrence of force majeure circumstances and the term of their validity are the relevant documents issued by the Chamber of Commerce and Industry of Ukraine and the regional chambers of commerce and industry authorized by it.

#### 8. OTHER CONDITIONS

8.1. This Voluntary Agreement is concluded in two copies in Ukrainian, one copy for each of the Parties.

8.2. The Parties have agreed that all documents and letters relating to this Voluntary Agreement shall be sent by the Party to the other Party by mail (registered letter or valuable letter) with a description of the attachment or handed over against receipt to the authorized representative of the Party.

8.3. Party 2 and its representatives authorized to conclude this Voluntary Agreement have agreed that their personal data, which became known to Party 1 in connection with the conclusion of this Voluntary Agreement, may be included in personal data databases. By signing this Voluntary Agreement, Party 2 and its representatives grant the right to process and use their personal data for the purposes of Monitoring and Verification by Party 1 or third parties determined by it of the effectiveness of the fulfillment of the Obligations, and confirm that they have been notified of their rights and obligations in accordance with Article 8 of the Law of Ukraine "On Personal Data Protection". The Parties shall ensure the protection of personal data of the Parties' representatives in accordance with the legislation on personal data protection.

8.4. The Parties are aware that the conclusion of this Voluntary Agreement is not a decision to receive Financial State Support from FDU JSC.

8.5. This Voluntary Agreement is governed by the legislation of Ukraine on energy efficiency, the Civil and Commercial Codes of Ukraine.

8.6. After the signing of this Voluntary Agreement by the Parties, all preliminary negotiations, agreements and correspondence on issues related to its provisions in one way or another shall lose their legal force.

#### 9. ANTI-CORRUPTION CLAUSE

9.1. In fulfilling their obligations under this Voluntary Agreement, the Parties, their affiliates, employees or intermediaries do not pay, offer to pay or allow the payment of any money or valuables, directly or indirectly, to any persons to influence the actions or decisions of these persons in order to obtain any unlawful advantages or other unlawful purposes.

9.2. When fulfilling their obligations under this Voluntary Agreement, the Parties, their affiliates, employees or intermediaries do not perform actions qualified by law, such as giving/receiving a bribe, commercial bribery, as well as actions that violate the requirements of the legislation of Ukraine and international acts on combating the legalization (laundering) of proceeds from crime.

9.3. Each of the Parties to this Voluntary Agreement refuses to stimulate in any way the employees of the other Party, including by providing sums of money, gifts, free performance of works (services) in their favor and in other ways not specified in this paragraph, which put the employee in a certain dependence and are aimed at ensuring that this employee performs any actions in favor of the Party stimulating him/her.

The actions of the employee carried out in favor of the stimulating Party are understood:

providing unjustified advantages compared to other candidates for financial state support;

provision of any warranties;

acceleration of existing procedures;

other actions performed by the employee within the framework of his/her official duties, but run counter to the principles of transparency and openness of relations between the Parties.

9.4. If the Party suspects that a violation of any anti-corruption conditions has occurred or may occur, the relevant Party undertakes to notify the other Party in writing. Upon written notification, the relevant Party has the right to suspend the fulfillment of obligations under this Voluntary Agreement until confirmation is received that the violation has not occurred or will not occur. This confirmation must be sent within 5 (five) business days from the date of sending the written notification.

9.5. In a written notification, the Party is obliged to refer to the facts or provide materials that reliably confirm or give reason to assume that a violation of any provisions of these terms has occurred or may occur by the Party, its affiliates, employees or intermediaries expressed in actions that are qualified by law, such as giving or receiving a bribe, commercial bribery, as well as actions that violate the requirements of the legislation of Ukraine and international acts on counteraction legalization of proceeds from crime.

9.6. The Parties to this Voluntary Agreement recognize the implementation of procedures to prevent corruption and monitor their compliance. At the same time, the Parties shall make efforts to minimize the risk of business relations with the Business Entity that may be involved in corrupt activities, as well as assist each other in order to prevent corruption. At the same time, the Parties shall ensure the implementation of procedures for conducting inspections in order to prevent the risks of involvement of the Parties in corrupt activities

9.7. The Parties acknowledge that their possible unlawful actions and violation of the anti-corruption terms of this Voluntary Agreement may have adverse consequences - from lowering the reliability rating of the Business Entity to significant restrictions on interaction with the Party, up to termination of this Voluntary Agreement, in cases established by law.

9.8. The Parties guarantee proper consideration of the facts presented within the framework of the implementation of this Voluntary Agreement, in compliance with the principles of confidentiality and the application of effective measures to eliminate practical difficulties and prevent possible conflict situations.

9.9. The Parties guarantee complete confidentiality on the fulfillment of the anticorruption conditions of this Voluntary Agreement, as well as the absence of negative consequences, both for the Party as a whole and for specific employees of the Party who reported the fact of violations.

#### **10. ANNEXES TO THE VOLUNTARY AGREEMENT**

10.1. An integral part of this Voluntary Agreement are the annexes specified in the text of this Voluntary Agreement.

#### 11. ADDRESSES AND DETAILS OF THE PARTIES

Голова	]	Ле								
		1)W2 RI	Всьо	:	ω	2	1			
Lanna BAMA		не агентство з енері	010					проекту	Найменування енергоефективного захолу згілно	
	України	Сторона 1 пефективності та енеп						впровадження енергосфективного заходу	Найменування техніки, обладнання, устаткування та матеріалів для	
		гозбереження						устаткування, матеріалів	Основні характеристики техніки, облалнання.	
								ВНН	Загальний строк впповалже	
								я/ poбir	Загальна вартість обладнанн	
		Стор						Обсяг, тис. грн	Власні	Вне
		она 2						частка, %	кошти	эсок у фіна
4								Обсяг , тис. грн	Кред кон	нсування
								част ка, %	итні Іти	-

Енергоефективні заходи з впровадження проекту

від\_\_ \_\_ року

Додаток №1 до Добровільної угоди (декарбонізації)

Appendix 2

27

### Appendix No. 2 to the Voluntary Agreement (Decarbonization) from \_\_\_\_\_

# Schedule Implementation of Measures

		Name of	Stages of implementation of an energy efficiency measure				
Nos/ P	Name of the energy efficiency measure	machinery, equipment, equipment and materials for the implementation of an energy efficiency measure	Name of the implementatio n phase	Deadline for the implementation of the stage Implementation	Name of the type of work (services) for the implemen tation of the energy efficiency measure	Progress bar	
1							
2							

Side 1
State Agency for Energy Efficiency and Energy
Saving of Ukraine

Side 2

\_\_\_\_\_

Head

Head \_\_\_\_\_ full name

#### Appendix No. 3 to the Voluntary Agreement (Decarbonization) from \_\_\_\_\_

Basic energy efficiency indicator for the period: quarter of 202 quarter of 202							
Consumption volume in en	Consumption volume in energy units, MWh Volume of greenhouse gas emissions,						
		tC	O2				
quarter 2020		quarter 2020					
quarter 2020		quarter 2020					
Total for the annual		Total for the annual					
period:		period					

# Plan – schedule for the fulfillment of Obligations

		Planned energy efficiency indicator						
No. s/p	Period of Fulfillment of Obligations	The volume of consumption in energy units, MWh	Percentage ratio of the Planned Energy Efficiency Indicator to the Basic Energy Efficiency Indicator, %	Volume of greenhouse gas emissions, tCO2	Percentage ratio of the Planned Energy Efficiency Indicator to the Basic Energy Efficiency Indicator, %			
1	quarter 2020							
2	quarter 2020							
3	quarter 2020							
4	quarter 2020							
5								

#### Side 1 State Agency for Energy Efficiency and Energy Saving of Ukraine

Side 2

Head

Г

Head

full name

#### Appendix No. 4 to the Voluntary Agreement (Decarbonization) from \_\_\_\_\_

### Report for \_\_\_\_ quarter of 202\_\_\_ About the state Implementation of Measures

		Name of machinery, equipment,	Stage(s) of implements	y efficiency measure lule	
Nos/ P	Name of the energy efficiency measure	equipment and materials for the implementation of an energy efficiency measure	Name of the implementation phase	Name of the type of work (services) for the implementation of the energy efficiency measure	Status of execution
1					
2					

*(position of the head) surname)* 

(signature)

(initials,

Side 1 State Agency for Energy Efficiency and Energy Saving of Ukraine

Side 2

Head

Г

Head

full name

Appendix No. 5 to the Voluntary Agreement (Decarbonization) from \_\_\_\_\_

## Report for \_\_\_\_ quarter of 202\_\_\_ About the level of achievement Planned energy efficiency indicator for the project

Energy Efficiency Baseline for quarter of 202		Planned ener indic for quar	gy efficiency ator ter of 202	Actual energy efficiency indicator For quarter of 202		
Consumption volume in energy units, MWh	Volume of greenhouse gas emissions, tCO2	Consumption volume in energy units, MWh	Volume of greenhouse gas emissions, tCO2	Consumption volume in energy units, MWh	Volume of greenhouse gas emissions, tCO2	

The level of achievement of the energy efficiency indicator for the reporting quarter is:

- in energy units, consumption was reduced/replaced by \_\_\_\_\_ MWh, \_\_\_\_ % \*;

- greenhouse gas emissions <u>reduced</u> by \_\_\_\_\_ tCO2, \_\_\_\_ % \*;

\* percentage ratio of the actual energy efficiency indicator to the basic energy efficiency indicator for the reporting quarter

(position of the head)	(signature)	(i	initials,
Side 1 State Agency for Energy Efficiency and Energy Saving of Ukraine	7	Side 2	
Head			
	Head		full name

#### VOLUNTARY AGREEMENT No. 1/24-AT ON ENERGY EFFICIENCY (DECARBONIZATION)

Kyiv

#### September 15, 2024

The State Agency for Energy Efficiency and Energy Saving of Ukraine (EDRPOU code - 37536010) (hereinafter referred to as Party 1), represented by the Head of the State Agency for Energy Efficiency and Energy Saving of Ukraine, acting on the basis of the Regulation on the State Agency for Energy Efficiency and Energy Saving of Ukraine, approved by the Resolution of the Cabinet of Ministers of Ukraine dated 26.11.2014 No. 676, on the one hand, and

Limited Liability Company "P Confidential information" (EDRPOU code - 353 Confidential information reinafter referred to as Party 2), represented by the director V Confidential information vych, acting on the basis of the Charter, on the other hand, are collectively referred to as the Parties, and each separately as the Party, guided by Articles 6, 627, 638 of the Civil Code of Ukraine and the Procedure for the Use of Funds of the State Fund for Decarbonization and Energy Efficient Transformation, approved by the Resolution of the Cabinet of the Ministers of Ukraine dated 21.06.2024 No. 761 (hereinafter referred to as the Procedure No. 761), in order to achieve energy efficiency indicators and reduce carbon emissions as a result of the implementation of the project: "Energy service of the street lighting network, which is accounted for on the balance sheet of the Department of Housing and Communal Services and Capital Construction of the Voznesensk City Council, according to the energy service contract dat Confidential information 2" (hereinafter referred to as the Project) have entered into this Voluntary Agreement on Energy Efficiency (Decarbonization) (hereinafter referred to as the Voluntary Agreement) on the following:

#### 1. DEFINITION OF TERMS

JSC "FDU" – Joint Stock Company "Decarbonization Fund of Ukraine" (code according to the EDRPOU 38519070), which lends to the Activities at the expense of budget funds received in accordance with the Procedure No. 761.

**Basic energy efficiency indicator** is an energy efficiency (decarbonization) indicator in terms of consumption in energy units and the volume of carbon (greenhouse gas) emissions, which is specified in the project description, and which is determined in accordance with the requirements of the legislation on the energy service procurement procedure, effective on the day of submitting an application for financial state support for an energy service procurement project.

**Verification** – collection and verification of the authenticity of documents and information confirming the fulfillment by Party 2 of the Schedule and the Schedule and the achievement of the Planned Energy Efficiency Indicator, including with the right of face-to-face inspection of the Facility by representatives of Party 1.

The schedule is the timing of the implementation of the Measures, for the implementation of which JSC "FDU" is provided with Financial State Support through lending in accordance with the Procedure No. 761.

**Request of Party 1** – a written request of the State Agency on Energy Efficiency and Energy Saving prepared for the Verification process and sent to the correspondence address and/or e-mail address of Party 2, the details of which are specified in Section 11 of this Voluntary Agreement.

2

**Measures -** energy-efficient measures for the implementation of energy service, defined in Annex No. 1 to this Voluntary Agreement.

**Obligation** – achievement of the Planned Energy Efficiency Indicator to reduce the energy intensity of production (technical facility, technological stage, unit and/or production process) of a unit of relevant products (provision of services) (reduction in energy units of energy consumption) and reduction of carbon emissions, compared to the Baseline Energy Efficiency Indicator given in the project description.

**Monitoring** – the collection, including with the use of electronic communication means, of collecting and processing information on the implementation of the Schedule and the Schedule by Party 2.

**Object** – a network of street lighting, which is accounted for on the balance sheet of the Department of Housing and Communal Services and Capital Construction of the Voznesensk City Council, in respect of which the Measures are carried out.

**Schedule** – terms of fulfillment of the Obligation as a result of the implementation of Activities, for the implementation of which JSC "FDU" is provided with Financial State Support through lending in accordance with the Procedure No. 761.

**Energy efficiency target** is an energy efficiency (decarbonization) indicator in terms of consumption in energy units and carbon (greenhouse gas) emissions in the relevant period, which is given in the project description and is to be achieved or exceeded by Party 2 in accordance with the Schedule.

Actual energy efficiency indicator is an energy efficiency (decarbonization) indicator in terms of consumption in energy units and the volume of carbon (greenhouse gas) emissions in the relevant period, which is determined and confirmed by the Parties after the implementation of the Monitoring and Verification processes in accordance with the Schedule.

**Financial state support** – provision of a loan to JSC "FDU" to Party 2 for the implementation of Measures at the expense of budget funds received by JSC "FDU" in accordance with the Procedure No. 761.

Other terms are used in the meaning given in the Procedure No. 761 and other legislation of Ukraine.

#### 2. SUBJECT OF VOLUNTARY AGREEMENT

2.1. The subject of this Voluntary Agreement is the implementation by Party 2 of the Measures and the fulfillment of the Obligations in full and within the terms specified in this Voluntary Agreement as a recipient of Financial State Support.

2.2. Party 2 undertakes to implement the Measures in accordance with the Schedule specified in Annex No. 2 to this Voluntary Agreement and to fulfill the Obligations in accordance with the Schedule specified in Annex No. 3 to this Voluntary Agreement.

2.3. The term of fulfillment by Party 2 of the established Obligations shall be set for the term of this Voluntary Agreement.

2.4. Monitoring of the implementation of the Schedule and the Schedule by Party-2 is carried out by Party 1 (with the right to involve third parties in these actions) on the basis of quarterly reporting by Party 2:

before the introduction of the Measures, reports on the status of the implementation of the Measures shall be submitted in the form established in Annex No. 4 to this Voluntary Agreement;

after the introduction of the Measures, reports on the level of achievement of the Planned Energy Efficiency Indicator shall be submitted in the form established in Annex No. 5 to this Voluntary Agreement.

3

The information shall be submitted by Party 2 by the 25th day of the month following the reporting quarter in writing by a cover letter to the correspondence address of Party 1 specified in Section 11 of this Voluntary Agreement.

2.5. Verification of the implementation of the Schedule and the Schedule by Party 2 and the achievement of the Planned Energy Efficiency Indicator is carried out by Party 1 (with the right to involve third parties in these actions) on the basis of duly certified copies of one or more documents submitted by Party 2, at the request of Party 1:

on confirmation of the intended use of credit funds (act of acceptance and transfer, sales receipt, invoice, etc.);

on confirmation of the fact of installation (introduction) of energy-efficient equipment and/or materials (act of work performed (services provided));

energy audit report;

energy certificate of the building;

contracts with energy suppliers and invoices for their use;

documentation on internal monitoring of energy consumption (if there is a certified EMS);

statistical reporting forms 11 ICP (annual) "Report on energy supply and use" sent to the territorial statistics service with evidence of their submission;

tax invoices;

certificate of conformity;

photographs of the Object before the start of work (services provided);

photographs of the Object in the process of performing work (services provided);

photos of the Object after the completion of work (services provided);

the report of Party 2 on compliance with the conditions of the carbon emission permit and the implementation of measures to monitor compliance with the established maximum permissible emissions of pollutants;

statistical reporting form No. 2-TP "Report on emissions of pollutants and greenhouse gases into the atmosphere from stationary emission sources" sent to the territorial statistics service with evidence of their submission;

environmental tax return with evidence of its submission; and others.

#### 3. RIGHTS AND OBLIGATIONS OF THE PARTIES

#### 3.1. Side 1 of the goiter:

3.1.1. To determine the responsible representatives who will carry out Monitoring and Verification of the implementation by Party 2 of the Schedule, the Schedule and the achievement of the Planned Energy Efficiency Indicator.

3.1.2. In case of change of details, name or legal address within 5 (five) calendar days from the date of such changes, notify Party 2 of such changes.

3.1.3. Properly comply with the terms of this Voluntary Agreement.

#### **3.2.** Party 1 has the right to:

3.2.1. To demand the proper fulfillment by Party 2 of the terms of this Voluntary Agreement.

3.2.2. During the validity of this Voluntary Agreement, to carry out Monitoring and Verification of the fulfillment by Party 2 of the Schedule, the Schedule and the achievement of the Planned Energy Efficiency Indicator.

3.2.3. Process and use the personal data of Party 2 and its representatives authorized to conclude this Voluntary Agreement, including with the right to transfer them to third parties engaged by Party 1 to fulfill the terms of this Voluntary Agreement.

3.2.4. Terminate this Voluntary Agreement unilaterally ahead of schedule, including, but not exclusively, in the following cases:

- failure by the Party to introduce 2 Measures;
- failure by Party 2 to achieve the annual (in total for every four consecutive quarters after the introduction of the Measures) Planned Energy Efficiency Indicator;
- violation of the conditions for the targeted use of Financial State Support funds;
- in the event of circumstances that carry restrictions determined by Article 13 of the Law of Ukraine "On Development and State Support of Small and Medium-Sized Businesses in Ukraine";
- termination (termination) of the loan agreement on the provision of Financial State Support to Party 2.

#### 3.3. Party 2 of the goiter is associated with:

3.3.1. Implement the Measures in accordance with the Schedule.

3.3.2. To fulfill the Obligations in full and as a result of the implementation of the Measures, to achieve the Planned Energy Efficiency Indicators.

3.3.3. At the request of Party 1, to provide in full the documents and information necessary for the implementation of this Voluntary Agreement within the terms specified therein, as well as to allow responsible representatives of Party 1 to the Facility to carry out Verification.

3.3.4. Maintain confidentiality regarding information and/or documents received from Party 1 that contain a written warning about their confidentiality.

3.3.5. In case of change of details, name or legal address within 5 (five) calendar days from the date of occurrence of such changes, notify Party 1 of such changes.

3.3.6. Properly comply with the terms of this Voluntary Agreement.

#### 3.4. Party 2 has the right to:

3.4.1. After concluding this Voluntary Agreement, apply to JSC "FDU" to receive Financial State Support for the implementation of the Measures.

3.4.2. In case of a significant change in operating conditions compared to the basic ones (significant increase/decrease in load, generation, introduction of other equipment/modernization/reconstruction), which led to a decrease/increase in energy consumption, Party 2 may initiate a revision of the Energy Efficiency Target before Party 1 by concluding an appropriate additional agreement to this Voluntary Agreement.

#### 4. LIABILITY FOR NON-COMPLIANCE ESTABLISHED OBLIGATIONS

4.1. Failure to achieve the annual (in total for every four consecutive quarters after the introduction of the Measures) Planned Energy Efficiency Indicator determined by the Schedule-Schedule shall be the basis for consideration of the issue of early termination (termination) of this Voluntary Agreement.

Termination (termination) of this Voluntary Agreement shall be the basis for termination of contractual relations between Party 2 and JSC "FDU" regarding the provision of Financial State Support and the application by JSC "FDU" to Party 2 of the relevant penalties determined by the loan agreement.

4.2. Compensation for damages, payment of penalties and/or penalties shall not release the Parties from fulfilling their obligations under this Voluntary Agreement.

4.3. The Parties are fully responsible for the correctness of the details specified by them in this Voluntary Agreement and undertake to timely notify the other Party in writing about their change, and in case of failure to notify, they bear the risk of adverse consequences associated with it.

#### 5. TERM OF VALIDITY OF THE VOLUNTARY AGREEMENT, TERMS OF CHANGE, ADDITIONS AND TERMINATION (TERMINATION)

5.1. This Voluntary Agreement shall enter into force from the moment of conclusion of the loan agreement between JSC "FDU" and Party 2 regarding the receipt of Financial State Support for the implementation of the Measures.

5.2. The terms of this Voluntary Agreement may be changed and/or supplemented by mutual consent of the Parties by drawing up an additional agreement to this Voluntary Agreement, which is signed by the authorized representatives of the Parties and sealed (if any) and is an integral part of this Voluntary Agreement.

5.3. This Voluntary Agreement shall be terminated after Party 2 fulfills its Obligations, by mutual consent or in case of its early termination (termination) by Party 1.

5.4. In case of early termination (termination) of this Voluntary Agreement by Party 1 unilaterally, Party 1 shall notify Party 2 in writing no later than 10 (ten) calendar days before the date of termination of this Voluntary Agreement. This Voluntary Agreement shall be considered terminated (terminated) from the date specified in the notification of Party 1. Party 1 shall notify JSC "FDU" about the early termination (termination) of this Voluntary Agreement.

5.5. This Voluntary Agreement may be amended or terminated by a court decision at the request of one of the Parties in case of a material violation of the terms of this Voluntary Agreement by the other Party. Such a violation by a Party of this Voluntary Agreement is material, when, as a result of the damage caused by this violation, the other Party is largely deprived of what it counted on when concluding this Voluntary Agreement.

5.6. The expiration of this Voluntary Agreement does not release the Parties from liability for violation of their obligations under this Voluntary Agreement and which occurred during the validity of this Voluntary Agreement.

#### 6. DISPUTE RESOLUTION PROCEDURE

6.1. All disputes and disagreements that may arise regarding the interpretation and application of this Voluntary Agreement or in connection with it shall be resolved by the Parties through negotiations and consultations.

6.2. If it is impossible to reach an agreement between the Parties in the process of negotiations and consultations, the interested Party has the right to apply to the court for the protection of its violated rights in the manner prescribed by the legislation of Ukraine, and such a dispute is resolved in court.

5

#### 7. FORCE MAJEURE CIRCUMSTANCES

7.1. The Parties shall be released from liability for non-fulfillment or improper fulfillment of obligations under this Voluntary Agreement in the event of force majeure circumstances that did not exist at the time of concluding this Voluntary Agreement and arose outside the will of the Parties (accident, catastrophe, natural disaster, epidemic, epizootic, etc.).

7.2. The Party that is unable to fulfill its obligations under this Voluntary Agreement due to force majeure circumstances must notify the other Party in writing no later than within 5 (five) calendar days from the date of their occurrence.

7.3. The proof of the occurrence of force majeure circumstances and the term of their validity are the relevant documents issued by the Chamber of Commerce and Industry of Ukraine and the regional chambers of commerce and industry authorized by it.

#### 8. OTHER CONDITIONS

8.1. This Voluntary Agreement is concluded in two copies in Ukrainian, one copy for each of the Parties.

8.2. The Parties have agreed that all documents and letters relating to this Voluntary Agreement shall be sent by the Party to the other Party by mail (registered letter or valuable letter) with a description of the attachment or handed over against receipt to the authorized representative of the Party.

8.3. Party 2 and its representatives authorized to conclude this Voluntary Agreement have agreed that their personal data, which became known to Party 1 in connection with the conclusion of this Voluntary Agreement, may be included in personal data databases. By signing this Voluntary Agreement, Party 2 and its representatives grant the right to process and use their personal data for the purposes of Monitoring and Verification by Party 1 or third parties determined by it of the effectiveness of the fulfillment of the Obligations, and confirm that they have been notified of their rights and obligations in accordance with Article 8 of the Law of Ukraine "On Personal Data Protection". The Parties shall ensure the protection of personal data of the Parties' representatives in accordance with the legislation on personal data protection.

8.4. The Parties are aware that the conclusion of this Voluntary Agreement is not a decision to receive Financial State Support from FDU JSC.

8.5. This Voluntary Agreement is governed by the legislation of Ukraine on energy efficiency, the Civil and Commercial Codes of Ukraine.

8.6. After the signing of this Voluntary Agreement by the Parties, all preliminary negotiations, agreements and correspondence on issues related to its provisions in one way or another shall lose their legal force.

#### 9. ANTI-CORRUPTION CLAUSE

9.1. In fulfilling their obligations under this Voluntary Agreement, the Parties, their affiliates, employees or intermediaries do not pay, offer to pay or allow the payment of any money or valuables, directly or indirectly, to any persons to influence the actions or decisions of these persons in order to obtain any unlawful advantages or other unlawful purposes.

9.2. When fulfilling their obligations under this Voluntary Agreement, the Parties, their affiliates, employees or intermediaries do not perform actions qualified by law, such as giving/receiving a bribe, commercial bribery, as well as actions that violate the requirements of the legislation of Ukraine and international acts on combating the legalization (laundering) of proceeds from crime.

9.3. Each of the Parties to this Voluntary Agreement refuses to stimulate in any way the employees of the other Party, including by providing sums of money, gifts, free performance of works (services) in their favor and in other ways not specified in this paragraph, which put the employee in a certain dependence and are aimed at ensuring that this employee performs any actions in favor of the Party stimulating him/her.

The actions of the employee carried out in favor of the stimulating Party are understood:

providing unjustified advantages in comparison with other candidates for receiving Financial State Support;

provision of any warranties;

acceleration of existing procedures;

other actions performed by the employee within the framework of his/her official duties, but run counter to the principles of transparency and openness of relations between the Parties.

9.4. If the Party suspects that a violation of any anti-corruption conditions has occurred or may occur, the relevant Party undertakes to notify the other Party in writing. Upon written notification, the relevant Party has the right to suspend the fulfillment of obligations under this Voluntary Agreement until confirmation is received that the violation has not occurred or will not occur. This confirmation must be sent within 5 (five) business days from the date of sending the written notification.

9.5. In a written notification, the Party is obliged to refer to the facts or provide materials that reliably confirm or give reason to assume that a violation of any provisions of these terms has occurred or may occur by the Party, its affiliates, employees or intermediaries expressed in actions that are qualified by law, such as giving or receiving a bribe, commercial bribery, as well as actions that violate the requirements of the legislation of Ukraine and international acts on counteraction legalization of proceeds from crime.

9.6. The Parties to this Voluntary Agreement recognize the implementation of procedures to prevent corruption and monitor their compliance. At the same time, the Parties shall ensure the implementation of procedures for conducting inspections in order to prevent the risks of involvement of the Parties in corrupt activities

9.7. The Parties acknowledge that their possible unlawful actions and violation of the anticorruption terms of this Voluntary Agreement may have adverse consequences - from lowering the reliability rating of Party 2 to significant restrictions on interaction with the Party, up to termination (termination) of this Voluntary Agreement, in cases established by the legislation of Ukraine.

9.8. The Parties guarantee proper consideration of the facts presented within the framework of the implementation of this Voluntary Agreement, in compliance with the principles of confidentiality and the application of effective measures to eliminate practical difficulties and prevent possible conflict situations.

9.9. The Parties guarantee complete confidentiality on the fulfillment of the anti-corruption conditions of this Voluntary Agreement, as well as the absence of negative consequences, both for the Party as a whole and for specific employees of the Party who reported the fact of violations.

#### **10. ANNEXES TO THE VOLUNTARY AGREEMENT**

10.1. An integral part of this Voluntary Agreement is:

10.1.1. Energy efficiency measures for the implementation of energy service (Annex 1 to this Voluntary Agreement);

10.1.2. Schedule of implementation of the Measures (Annex 2 to this Voluntary Agreement);

10.1.3. Plan – a schedule for the fulfillment of Obligations (Annex 3 to this Voluntary Agreement);

10.1.4. Form of the report on the status of the implementation of the Measures (Annex 4 to this Voluntary Agreement);

10.1.5. Form of the report on the level of achievement of the Planned Energy Efficiency Indicator for the project (Annex 5 to this Voluntary Agreement).

#### **11. ADDRESSES AND DETAILS OF THE PARTIES**



### Appendix No. 1 to the Voluntary Agreement (Decarbonization) No. <u>1/24-</u>AT of September 15, 2024

		Name of machinery, Main characteristics Total		Contribution to funding					
No. s/p	Name of the energy efficiency measure according to the project	equipment, equipment and materials for the implementation of an energy efficiency	of machinery, equipment, equipment,	period after implement	project period after mplement Total cost of the project		unds	Loan f	unds
		measure	materials	ation of measures		Volume, UAH	Fraction, %	Volume, UAH	Fraction, %
1	Energy service of the street lighting network, which is accounted for on the balance sheet of the Department of Housing and Communal Services and Capital Construction of the Voznesensk City Council, according to the energy service contract dated	LED street lamps	LED- Lamps: Power 30 Watts - 1369 Piece; 40 watts - 1200 Piece; 50 W - 576 Piece; 100 watts - 275 pcs.	15 years	37 104875,20	18604875,20	50,1	18500000,00	49,99

### **Energy Efficiency Measures for the Implementation of Energy Service**



### Appendix No. 2 to the Voluntary Agreement (Decarbonization) No. <u>4/24-</u>AT of September 15, 2024

### Schedule

# **Implementation of Measures**

	Name of the energy efficiency	Name of machinery, equipment,	Phase(s) of	Phase(s) of implementation of the energy efficiency measure			
s/P	measure according to the project	equipment and materials for the introduction of an energy- efficient measure	Name	Implementa tion period	Name of the type of work (services)	Progress bar	
	Energy service of		Design	September – October 2024	Development Project Documentation	A project Documentation	
1 (	the street lighting network, which is accounted for on the balance sheet of the Department of Housing and Communal Services and Capital Construction of the Voznesensk City Council, according to the energy service contract dat	LED street lamps	Installation	November 2024 – January 2025	Dismantling of lamps DNAT and installation of LED lamps, organization of the process of transferring the dismantled lamps to the Energy Service Customer	Lamps dismantled DNAT and mounted LED- Lamps, passed on dismantled lamps to the Customer of Energy Service	
			Commissioning	December 2024 – January 2025	Performance of work on the launch of street lighting, its connection to the power supply system, test work	Work was carried out to launch street lighting, connect it to the power supply system, and test work was carried out	



## Appendix No. 3 to the Voluntary Agreement (Decarbonization) No. $\frac{1/24-47}{0}$ of September 15, 2024

<b>Basic energy efficiency indicator for the period:</b> Average value of indicators for 2019 and 2021 (quarterly)								
Consumption volume in energy units, MWh Volume of greenhouse gas emissions,								
		tCO2						
1st quarter	350,06	1st quarter	306,69					
Q2	218,13	Q2	191,10					
3rd quarter	216,86	3rd quarter	189,99					
4th quarter	323,18	4th quarter	283,14					
Total for the annual		Total for the annual						
period:	1 108,23	period:	970,92					

# **Plan – schedule for the fulfillment of Obligations**

		Planned energy efficiency indicator						
No. s/p	Period of Fulfillment of Obligations	Volume of consumption in energy units, MW*year	Percentage ratio of the Planned Energy Efficiency Indicator to the Basic Energy Efficiency Indicator, %	Volume of greenhouse gas emissions, t. CO2	Percentage ratio of the Planned Energy Efficiency Indicator to the Basic Energy Efficiency Indicator, %			
1	1 sq. m. 2025	220,54	37	193,21	37			
2	2 sq. m. 2025	137,42	37	120,39	37			
3	3 sq. m. 2025	136,62	37	119,70	37			
4	4 sq. m. 2025	203,60	37	178,38	37			
5	1 sq. m. 2026	220,54	37	193,21	37			
6	2 sq. m. 2026	137,42	37	120,39	37			
7	3 sq. m. 2026	136,62	37	119,70	37			
8	4 sq. m. 2026	203,60	37	178,38	37			
9	1 sq. m. 2027	220,54	37	193,21	37			

10	2 sq. m. 2027	137,42	37	120,39	37
11	3 sq. m. 2027	136,62	37	119,70	37
12	4 sq. m. 2027	203,60	37	178,38	37
13	1 sq. m. 2028	220,54	37	193,21	37
14	2 sq. m. 2028	137,42	37	120,39	37
15	3 sq. m. 2028	136,62	37	119,70	37
16	4 sq. m. 2028	203,60	37	178,38	37
17	1 sq. m. 2029	220,54	37	193,21	37
18	2 sq. m. 2029	137,42	37	120,39	37
19	3 sq. m. 2029	136,62	37	119,70	37
20	4 sq. m. 2029	203,60	37	178,38	37
21	1 sq. m. 2030	220,54	37	193,21	37
22	2 sq. m. 2030	137,42	37	120,39	37
23	3 sq. m. 2030	136,62	37	119,70	37
24	4 sq. m. 2030	203,60	37	178,38	37
25	1 sq. m. 2031	220,54	37	193,21	37
26	2 sq. m. 2031	137,42	37	120,39	37
27	3 sq. m. 2031	136,62	37	119,70	37
28	4 sq. m. 2031	203,60	37	178,38	37



\_Anna ZAMAZEEVA



Appendix No. 4 to the Voluntary Agreement (Decarbonization) No.  $\frac{1/24-47}{0}$ of 15 September 2024

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# **Report form**

# Report for \_\_\_\_ quarter of 202\_\_\_

## About the state

# **Implementation of Measures**

Name of the energy		Name of machinery, equipment,	Phase(s) of implementation of the energy efficiency measure according to the Schedule			
P	efficiency measure according to the project	materials for the implementation of an energy efficiency measure	Name	Name of the type of work (services)	Status of execution	
1	Energy service of the street lighting network, which is accounted for on the balance sheet of the Department of Housing and Communal Services and Capital Construction of the Voznesensk City Council, according to the energy service contract Confidential information	LED street lamps				

(position of the head) NAME)	(signature)	(First name and LAS)	
Side 1 State Agency for Energy Efficien Energy Saving of Ukraine Hanna ZAMAZ	cy and L Director LEIEVA	Side 2 imited Liability Company Confidential information	
		S S S S	

Appendix No. 5 to the Voluntary Agreement (Decarbonization) No. <u>4/24-</u>AT of 15 September 2024

### **Report form**

# Report for \_\_\_\_\_ quarter of 202\_\_\_

## About the level of achievement

# Planned energy efficiency indicator for the project

Energy Efficiency Baseline for quarter (average value of indicators for 2019 and 2021)		Planned en ind for qu	ergy efficiency licator arter of 202	Actual energy efficiency indicator for quarter of 202		
Consumption volume in energy units, MWh	Volume of greenhouse gas emissions, tCO2	Consumption volume in energy units, MWh	Volume of greenhouse gas emissions, tCO2	Consumption volume in energy units, MWh	Volume of greenhouse gas emissions, tCO2	

The level of achievement of the energy efficiency indicator for the reporting quarter is:

- in energy units, consumption was reduced by \_\_\_\_\_ MWh, \_\_\_\_ %\*;
- greenhouse gas emissions <u>reduced</u> by \_\_\_\_\_ tCO2, \_\_\_\_% \*;

\* percentage ratio of the actual energy efficiency indicator to the basic energy efficiency indicator for the reporting quarter

(position of the head) (signature) (First name and LAST NAME)